

MILITARY PHYSICIAN AND ADVANCED PRACTICE NURSES'
KNOWLEDGE AND USE OF MODERN NATURAL FAMILY PLANNING

1996

SPENCER

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ABSTRACT

Modern Natural Family Planning (NFP) is safe, effective family planning. A provider's knowledge of NFP influences whether or not they recommend it to patients. The purpose of this study was to determine the knowledge level military physicians and Advanced Practice Nurses had of modern NFP. A convenience sample of physicians and APNs was selected from a military medical center. Of the 86 questionnaires distributed, 36 were returned by physicians, 5 by APNs, and one by a physician assistant. Thirty four percent of the respondents did not recommend NFP to patients when discussing contraception. If they did, most described a Calendar Rhythm approach. Thirty two percent of respondents reported they did not assess women's cultural values when prescribing family planning. Most greatly underestimated NFP's theoretical and use effectiveness. Almost 50% of the respondents did not know what NFP resources are available. Many participants were unfamiliar with modern NFP, underestimated it's efficacy, and either did not recommend NFP, or did so with reservations.

MILITARY PHYSICIAN AND ADVANCED PRACTICE NURSES' KNOWLEDGE
AND USE
OF MODERN NATURAL FAMILY PLANNING

by

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DEDICATION

I dedicate this thesis to my Lord and Savior, Jesus Christ, and to His Blessed Mother. I also dedicate it to my most precious wife, Dawn. Without their undying love and constant support I could not have accomplished this thesis. To my parents, George and Noella Spencer, I give my most gracious thanks. To my children, Ben, Ann, Dan, Mark, and Mary I say, “Yes, my thesis is done”. Thanks for your patience. I love you.

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CHAPTER ONE:

Introduction

This thesis presents the results of a study about active duty military Advanced Practice Nurses (APNs) and Physicians concerning Natural Family Planning (NFP) methods. Limited prior studies have examined physician knowledge of NFP. One recent research study examined physician and nurses' knowledge and use of NFP (Fehring, 1995). The present study is the first to specifically attempt to include APNs in the sample.

Investigation of modern methods of Natural Family Planning is extremely relevant because of the relative lack of current research into this and other women's health care issues. The October, 1995 Conference on Women, held in Beijing China, highlighted women's health needs, including reproductive care as a key concern (Mufson, 1995). Some women prefer NFP to artificial birth control methods for cultural, personal, religious, or health reasons (Lethbridge, D. J., 1991). A health care provider well versed in modern methods of NFP can be the key to whether patients receive the care they desire and deserve. The study results clearly reveal a lack of knowledge by many providers.

One way to help educate health care providers is through continuing education. This can either be provided in written or didactic format. With increased awareness and knowledge of modern NFP, physicians and APNs should be able to offer a family planning option that is effective, consumer responsive, culturally sensitive, and respectful of a woman's religious beliefs. Due to the age of the active duty military force, many females using military health care facilities have family planning concerns. Women who use NFP are not dependent on a continuous supply of medications. This may offer significant benefits to active duty females in field environments, such as desert storm.

The military is comprised of people with many diverse cultural and religious backgrounds. Some methods of family planning lend themselves more readily to some people than others. Some reasons why certain military members may choose NFP include, religious or cultural proscriptions about family planning; preference for natural health care; and aversion to medication side effects. Providing NFP services gives more family planning options to military women or couples. Provision of quality NFP services is dependent upon provider knowledge of NFP.

Background

Before prior studies of physicians and nurses' knowledge of NFP are reviewed, it is helpful to describe what NFP is, its effectiveness, who uses it, and why.

The World Health Organization (WHO) states that;

Methods of natural family planning (NFP) are based on observation of naturally occurring signs and symptoms of the fertile and infertile phases of the menstrual cycle. Awareness of the fertile phase can allow a couple to time intercourse, either to avoid or to achieve pregnancy. Natural family planning thus provides an alternative for those who, for any reason, cannot or do not wish to use pharmacological or mechanical contraceptives (WHO, 1988, p. v).

This definition excludes the Rhythm or Calendar methods as modern methods of NFP since they do not employ observation of the naturally occurring signs and symptoms of fertility. Other current definitions of NFP are similar and focus on the recognition of naturally occurring signs and symptoms of the menstrual cycle (Spieler & Thomas, 1989).

Modern methods of NFP are frequently referred to as "periodic abstinence" and "fertility awareness" (Queenan & Labbok, 1988; Spieler & Thomas 1989). These terms are similar to, but not synonymous with, NFP. Periodic abstinence (PA) is used by some family planning experts to describe natural family planning methods. The fertility awareness method of family planning allows for use of barrier methods of contraception on fertile days which decreases the effectiveness rate (Scalone, 1990). Modern methods of NFP do not involve the use of barrier methods.

Modern NFP includes the cervical mucus method, also known as the Billings or Ovulation method (OM), and the symptothermal method (STM). The cervical mucus method is based on a woman's observation during the menstrual cycle of the characteristic cervical mucus pattern that is noticed at the vaginal opening. The presence and quality of cervical mucus acts as a sign of either fertility or infertility (Hume, 1991; Klaus, Labbok & Barker, 1988). The symptothermal method is based on cervical mucus discharge, basal body temperature, and other possible signs of ovulation including breast tenderness, abdominal pain, cervical changes, and mid-cycle bleeding (Ponzetti & Hoefler, 1988; WHO, 1988). The basal body temperature is based on the fluctuations of a woman's

temperature throughout the menstrual cycle and engaging in intercourse accordingly (Ponzetti & Hoefler, 1988). Most of the physicians in one multi-national study associated periodic abstinence with calendar-rhythm and had less knowledge of other PA methods (Snowden, et al., 1988). Whether this belief prevails in the military medical provider population is unknown.

In discussing family planning it is important to recognize two types of effectiveness; method and use effectiveness. Method effectiveness, also known as perfect use, refers to the effectiveness of family planning when taught correctly and used according to instructions. Use effectiveness involves the actual use of the method and includes errors made in teaching and in use (Fehring, Lawrence, & Philpot, 1994; Hatcher et al., 1994; Hilgers, 1991). In interpreting effectiveness statistics of modern NFP, it is crucial to recognize that NFP is used to both achieve and avoid pregnancy. Consequently, while a pregnancy equals a failure when evaluating artificial methods, it may be an indication of success for an NFP method. A consumer of NFP does not cease to use the method just because she decides to get pregnant. She is using the method to achieve a pregnancy instead of avoiding one. User intent, whether to avoid or achieve pregnancy, is germane to understanding effectiveness of NFP. This distinction is usually recognized in current studies of modern NFP. Unfortunately, popular medical literature doesn't always identify user intent when comparing statistical efficacy of NFP and artificial methods (Hatcher, 1994). Consequently, the achievement of pregnancy by an NFP user may be incorrectly interpreted as a method failure.

An estimated 5% of fertile women in the United States use NFP methods to prevent pregnancy (Davis-Szmania, 1992). On an international scale, this figure ranges from 0.6% in Liberia to 17.7% in Peru (Spieler & Thomas, 1989, p. 138). Life Table Analysis and the Pearl Index are methodologies used to evaluate the use effectiveness of a family planning method (Lichtman & Papera, 1990). Both of these methods attempt to predict the efficacy of a method by calculating how many pregnancies will occur for 100 women using the method. The Pearl Index uses information from women using a method for a short or long period of time to determine an efficacy rate. This rate may be lower because long term users are involved in the formula. Life table analysis only uses data from women

in the first year of use. In controlled studies using life table analysis, method failure rates ranged from 27.0% in 1981 to 2.5% in 1990 (Kambic, 1991, p. 2047). Also, study results during 1986 to 1991 range from 2.0% to 4.4% using the Pearl Index. In a 1993 European trial, the symptothermal method had a method failure rate of 2.5% by the Pearl formula (Freundl, 1993, p. 272).

Most recently, a study of 242 couples utilizing the Creighton Model Method of NFP (a specialized form of the ovulation method) showed an annual use effectiveness rate of 98.0% (Fehring, et. al., 1994, p. 307). High use effectiveness results with the Creighton Model Method of NFP are consistent with previous studies conducted separately in the 1980s by Hilgers (1980), Doud (1985), and Howard (1989) (Hilgers, 1991). Kambic (1991) postulated that the higher effectiveness rates in recent studies are probably due to advanced scientific knowledge and improved NFP services, including better teaching methodology.

People choose NFP for a variety of reasons including: fear of medication side effects; dissatisfaction with artificial methods; desire to be in control (self care); to achieve pregnancy; philosophy of personal health; convenience; desire to share responsibility of family planning; and religious reasons (WHO, 1988; & Snowden et al., 1988). Mormonism, Catholicism, and Orthodox Judaism are specific religious denominations that proscribe artificial means of birth control (Spector, 1991). This proscription may influence and guide members of these faiths to use natural methods to plan their families. However, NFP users are a diverse group. A cross cultural study by Klaus, Labbok, and Barker (1988, p. 301) showed 53% of the 1,017 participants were Catholic and 32% were either Hindu, Muslim, or Protestant. In her study, Klaus also discovered that between 82% of participants wanted to limit or space pregnancy and 3% wanted to achieve pregnancy (p. 302). The other 15% did not give this information. Meng and Cho (1989, p. 32) found 23% of NFP users in their study were non-Catholics. A study by Kambic and colleagues of 444 women revealed that 16.9% of women being taught NFP at an NFP clinic were not married, 6.8% were younger than 20, and 12.2% were older than 35 (Kambic, Kambic, Brixius, & Miller, 1981 p. 1256).

Concerns about who can learn to use NFP have been raised by the health care

community. A multi-center, cross-cultural study of the ovulation method (OM) by Benagiano and Bastanelli (1989, p. 92) examined 869 women and their ability to learn NFP. Results showed that only 1.3% of the women failed to learn how to interpret changes in cervical mucus, a critical variable in effective OM use. They concluded that with proper instructions and motivation, a woman should be able to learn the techniques of this method, regardless of her education or background.

In addition to their use to avoid or achieve pregnancy, modern NFP methods are also helpful in determining and treating gynecologic problems (Scalone, 1990). In particular, the Creighton Model Method of NFP is now used in conjunction with the emerging science of NaProTechnology to identify and treat endometriosis, infertility, chronic vaginal discharge, ovarian dysfunction, premenstrual syndrome, ovarian cysts, unusual bleeding, cervical eversion, miscarriage, ectopic pregnancy, dating of pregnancy, and hormone imbalance (Hilgers, 1991). NaProTechnology is defined as

... a science which devotes it's medical, surgical and allied health energies to cooperating with the natural procreative mechanisms and functions.

This includes when this system works properly or when they function abnormally. NaProTechnology cooperates with the procreative mechanisms in producing forms of treatment which correct the dysfunction, maintain the human ecology and sustain the procreative potential (Pope Paul VI Institute, 1992, p. 2).

Modern NFP educational requirements are far more extensive and scientifically substantiated than the older Rhythm method. Though the current primary purpose of modern NFP is to avoid or achieve pregnancy, it is exciting to recognize emerging uses and future potential.

APNs and physicians pride themselves on providing scientifically based, culturally sensitive medical information so that patients may make informed decisions about their health care. Common sense dictates that patients are more apt to follow medical advice that agrees with their cultural value system. Marshall has clearly identified that physicians do have a real impact on a patient's choice of a family planning method (1977). Also, the patient has the ethical right to make self-determined and independent decisions about health

care treatments (Aiken & Catalano, 1994). The health care provider has the obligation to offer the option of NFP to the family planning client so that she can make an informed choice according to her value system whether to use or refuse this method.

Family planning education and intervention is a primary APN responsibility and is a priority issue of "Healthy People 2000". The main goal of Healthy People 2000, as promoted by the Department of Health and Human Services, is to increase the number of Americans who live healthy and long lives (Burns, 1994). APNs can use their expertise to educate patients about or refer them for NFP services. Including APNs in this study is relevant because past research has shown that provider knowledge and attitudes influence their decision to either offer or recommend NFP to their patients (Snowden et al., 1988). It follows that adequate provider knowledge and willingness to offer NFP are primary determinants as to whether or not patients have an opportunity to choose this method. The onus is on the provider, due to his or her expertise and because many clients may not mention their desire for a "natural", "alternative", or "religiously" based form of family planning. Patients are less likely to discuss family planning with their provider if they believe that their concerns will be trivialized, or that they'll be perceived as ignorant. A family planning method will not be used correctly or consistently if it contradicts a person's lifestyle, culture, or religious beliefs (Hatcher et al., 1994). In a study on attitudes and professional use of NFP, Fehring found that out of 166 study participants, 63% of the nurses and 52% of the physicians wouldn't recommend NFP to avoid pregnancy (1995, p. 25). Unless providers are willing to discuss NFP as an option, the patient can't make an informed decision that is congruent with her cultural, personal, or religious preferences.

Statement of the Problem

This thesis explores answers to two general questions. First, do physicians and APNs have comprehensive knowledge about NFP that is accurate enough to meet the diverse family planning needs of their patients? Fehring's survey revealed that the average lecture time spent on NFP in medical or nursing school was less than one hour (Fehring, 1995, p. 22). Over 50% of the physicians (n = 48) and almost 50% of the nurses n = 118)

who responded to his survey did not learn about NFP in their generic professional program, and their current knowledge of NFP was outdated. Results from the same study found that if a patient wanted to use NFP, most physicians would attempt to teach the patient themselves, even though only 4 were certified to teach NFP. When presented with a similar situation, most of the nurses in the same study would give reading material and/or refer to a qualified NFP instructor.

Another study of 375 physicians showed that their objective knowledge of NFP methods was far less than their subjectively claimed knowledge (Snowden, et al, 1988). From this limited research there seems to be a void in accurate knowledge concerning NFP among medical professionals. Without current and accurate knowledge the provider is hard pressed to fulfill their obligation to educate the patient.

Second, do physicians and APNs seek to provide options that are medically reasonable and respectful of the patients' culture or lifestyle? Spector (1991) contends that the provider knows too little about a clients' self-perception and beliefs regarding health and illness. In assessing a patient's health care desires she proposes that the provider ask these questions: "How does the client view life? What are the client's beliefs, values, and norms? What is the cultural background and how does it influence behavior? How do such factors affect the meanings of 'health' and "illness"" (p. xiv). Answers to these questions can direct a provider to offer both effective and culturally sensitive family planning options.

The following specific research questions were developed for this thesis.

- 1) Is there a difference in APN and physician knowledge/use of NFP methods?
- 2) What do military APNs and physicians working in a military medical center discuss about NFP when a patient asks for help in choosing a contraceptive method?
- 3) How do these health care providers respond when a patient asks about information concerning natural methods of family planning?
- 4) What cultural, religious, or personal values do they assess when prescribing family planning?
- 5) What do these providers think the perfect use effectiveness rate of modern NFP

is (excluding calendar rhythm)?

6) What do these providers think the effectiveness rate is with modern NFP is (excluding calendar rhythm) under ordinary conditions?

7) What initial steps do military health care providers recommend for a woman or couple who are having difficulty achieving pregnancy and who have had no previous medical evaluation?

8) What referral sources for NFP do these providers utilize?

9) What are the demographic characteristics of these providers?

Conceptual Framework

The present research framework is derived from the field of medical ethics, specifically the Beneficence Model, informed consent, and the concept of cultural sensitivity. Cost effectiveness, self-care, and alternative health care were appropriate framework alternatives but weren't as comprehensive as the one chosen. This thesis framework centers on the rights of health care consumers and the duties of health care providers.

Patients are becoming more educated as health care consumers. Today more than ever, they are active participants in their health care decisions. As individuals, they deserve personalized care. The new military approach to health care called Tricare, allows patients greater in choosing their care (Nelson, S. 1996). Tricare is the military's approach to managed care. It offers several different medical plans from which military health care users can choose. These options for health care allow the patient to choose a provider who offers NFP services.

Autonomy, an integral principle of medical ethics, "...is firmly grounded in the dignity of human persons and the claim they have on each other to privacy, self-direction, the establishment of their own values and life plans based on information and reasoning, and the freedom to act on the results of their cogitations" (Pellegrino & Thomasma, 1988, p. 12). It is enlightening to juxtapose this concept with that of paternalism.

Paternalism centers on the notion that the physician - either by virtue of his or her superior knowledge or by some impediment incidental to the patient's

experience of illness - has better insight into the best interests of the patient than does the patient, or that the physician's obligations are such that he is impelled to do what is medically good, even if it is not "good" in terms of the patient's own value system (p. 7).

The Beneficence Model of medical ethics addresses physician - patient relationships and seeks to transcend, but not abandon, the above principles. Although the model refers specifically to physicians, it is equally applicable to Advanced Practice Nurses. For this reason, this model will be adapted for this study.

The nursing profession has its' own ethical code which also addresses the rights and obligations of patients and providers and is consistent with the Beneficence Model to be used in this research (Aiken, 1994). The six major principles of this model are (Pellegrino & Thomasma, 1988, p. 32 - 35):

1. The aim of medicine is beneficent and has three specific obligations:
 - a. The patient's problems and needs are the provider's primary concern.
 - b. Harm must be avoided because the provider cannot fulfill the promise of helping if he or she intentionally harms the patient for any reason.
 - c. Both autonomy and paternalism are superseded by the obligation to act beneficently.

2. Primacy of the existential condition of the patient:

This refers to the patient's ability to make rational choices about care, the nature and past values of the patient, the age of the patient, the values of the provider who must make rational choices about care, and the clinical setting.

3. No automatic ranking of values:

Each patient must be handled individually not only for medical, but also for moral reasons. No ethical stance, other than acting in the patient's best interest, is applied beforehand. This requires that patients and providers become able to identify, rank, discuss, and negotiate values, and define the particular good of the patient. This is not to say, however, that general ethical axioms applied to more

than one patient are invalid.

4. Consensus:

The health care provider should not impose his/her values, or make decisions in the best interest of patients without their participation. A consensus with the patient and other members of the health care team is needed.

5. Prudential moral object:

An attempt must be made to resolve difficult ethical situations by preserving as many values of the patient and provider as possible.

6. Axioms: Just as the physician examines each patient in light of generalized theories or categories of disease and health, his or her judgment about each patient must adhere to a series of more general ethical axioms or moral rules. This model has four axioms:

- a) Both the provider and patient must be free to make informed decisions and to act fully as moral agents. The values of both the doctor and patient must be respected since each is a person deserving of respect. Value consensus results only if each can, without coercion or deception, express his or her own values in discourse and action. Neither can impose his or her values on the other; neither can "use" the other for selfish ends; each must be free to withdraw from the relationship if value conflicts are not resolvable.
- b) Providers have the greater responsibility in the relationship because of the inherent inequality of information and power between themselves and those who are ill. Providers are obliged, therefore, to provide the information patients need to make genuinely informed decisions, and to use their power with due regard to the vulnerability and exploitability of the sick. These obligations are rooted in the special nature of the healing relationship. The self-imposed moral aims of the profession and the expectations of society derive their force from this fact as well.
- c) Providers must be persons of personal moral integrity.
- d) Providers must respect and comprehend moral ambiguity yet

not abandon the search for what is right and good in each decision.

This model strongly emphasizes the tenet that patients have the moral and ethical right to actively participate in their health care, either choosing to accept, refuse, or modify it in accordance with their values and beliefs. This can only be realized where the concept of informed consent, with all its moral and legal ramifications, is consistently practiced.

In the context of family planning, the above cited principles 2, 3, 4, and 6 clearly imply the provider's ethical responsibility to remain informed of modern methods of NFP for the sake of their patients. Fulfilling this obligation allows the provider to offer current information on NFP, including advantages and disadvantages, or an appropriate referral. This information can empower the patient to make an informed family planning choice which is commensurate with her own values.

Axiom (a) of Principle 6 justifies a culturally sensitive, non-paternalistic approach because the individual values of each patient should be respected. Providing value sensitive information that allows the patient to participate in informed decision making may help improve compliance, satisfaction, and may avert unnecessary conflict development or possible legal action. A practical look at how the Beneficence Model impacts decisions about family planning is used in summary.

Women or couples may undertake any number of family planning methods to space or delay childbearing. A value conflict may ensue for some patients if they choose a family planning method that causes the loss of the developing human being. This may occur with intrauterine devices, oral contraceptives, injectable contraceptives, and implantable contraceptives (Hatcher et al., 1994). For a number of reasons, this outcome may be in direct contradiction to that patient's cultural, religious, or personal beliefs. Informed consent empowers the woman to choose a family planning method, like NFP, that prevents this conflict. It also fulfills some of the principles of the Beneficence model. Also in compliance with this model, if a provider can not or will not deliver this service, ethics demands an appropriate referral to one who can.

The principle of informed consent has generally been discussed in relation to emergency treatment, surgery, experimentation, and issues of patient incompetence. It also directly impacts the framework of this research and a brief review of informed consent is

appropriate. McMullen and Philipsen (1993) claim the principle of informed consent strives to ensure that the patient will be the ultimate decision maker in his or her care. In order to accomplish this, the patient has to fully understand, to the extent they are capable, the treatment, surgery, or procedure that is proposed. Lichtman and Papera (1990, p. 56) state that, "Informed consent is particularly important in the area of birth control because, unlike most medical treatments, family planning involves long and short-term use of chemicals, hormones, and devices by perfectly healthy people". What kind of information is required for informed consent? McMullen & Philipsen further state that it must at least include:

1. Nature of the procedure, surgery, or treatment.
2. Likely risks and complications of the proposed surgery, treatment, or procedure.
3. Alternative therapies or treatments.
4. Possible outcomes if nothing further is elected (1993, p. 42).

Merger of the Beneficence Model with the concept of informed consent can help the provider establish rapport with patients. Such care is culturally sensitive and identifies potential value conflicts before they materialize.

The investigator incorporated the concepts of informed consent and cultural sensitivity into this study's framework because these principles are directly related to the issue of family planning. After literature review, no framework could be found that addressed the principles of beneficence, informed consent, and cultural sensitivity. In order to provide truly beneficent care, the provider must be aware of the patient's cultural background and provide health care options that are based on this information.

Culture is "... the sum of beliefs, practices, habits, likes, dislikes, norms, customs, rituals, and so forth that we have learned ..." (p. 50). How can the provider assess cultural influences which might impact a patient's family planning decisions? Lichtman & Papera (1990) suggest that the provider ask the woman or couple the following questions.

Does she value the "natural", for example, and thus reject chemical methods of birth control? Does she have certain religious beliefs that make some methods more or

less acceptable? Does the woman have convictions about the beginning of life that affect her attitude toward certain methods? Is she uncomfortable with a contraceptive whose mechanism of action is unclear? Does her cultural background proscribe certain methods or make their side effects, such as break-through bleeding, undesirable? (p. 57)

According to this model of health care, the provider is obliged to assess the patient's cultural values regarding various family planning methods, inform and offer options, and respect her right to make an informed family planning decision. The provider can fulfill this duty by incorporating the principle of cultural sensitivity and informed consent with each patient contact.

Modern NFP is a complete form of family planning that allows users the ability to avoid or achieve pregnancy. Hatcher (1994) insists that users themselves should be empowered to make decisions about the family planning method they choose, in consideration of the desires, feelings, and attitudes of their partners. Even Planned Parenthood, which historically has not endorsed NFP as effective family planning, now supports this method because it allows more options for the individual or couple to practice their "right to family planning" (Kopp, 1990). This principle of patient empowerment is also a germane tenet of modern NFP methods.

Definition of Terms

Active duty military.

Persons serving active duty in the Air Force, Army, or Navy.

Advanced Practice Nurse (APN):

Any nurse currently practicing legally as a Certified Nurse Midwife (CNM), Family Nurse Practitioner (FNP), Adult Nurse Practitioner (ANP), or Woman's Health Nurse Practitioner (WHNP).

Cultural Sensitivity.

Attitudes or set of behaviors displayed by a health care provider that manifest awareness of and respect for patient's values, beliefs, and customs (Spector, 1991).

Ethics.

The enterprise of disciplined reflection of the moral intuitions and moral choices that people make (Pellegrino & Thomasma, 1988).

Medical Ethics.

The analysis of choices in medicine. It also covers choices made by providers and patients (Pellegrino & Thomasma, 1988).

Modern Natural Family Planning.

A term used to describe methods of planning or preventing pregnancy based on observation of naturally occurring signs and symptoms of the fertile and infertile phases of the menstrual cycle (WHO, 1988).

Periodic Abstinence.

(PA) A term often used to describe NFP methods when they are used to avoid pregnancy (Spieler & Thomas, 1989).

Physician.

A licensed medical doctor providing health care services to women.

Provider.

A physician or Advanced Practice Nurse.

Respondent/Participant.

Any provider who received a study questionnaire, answered at least one of the questions, and returned the questionnaire to the investigator.

Years in Practice.

This refers to the number of years the participant has been legally acting as a provider.

Limitations

Time.

The study was limited to approximately one year in length. The brevity of time didn't allow for the use of a larger sample due to the extensive time-consuming requirements associated with securing study review and approval by Clinical Investigations and the Institutional Review Board.

Budget.

The military investigator was limited to his own funds. He was responsible for distributing the questionnaire and paying for its return via the postal service. No funds were provided by USUHS, the Graduate School of Nursing, National Naval Medical Center, or any other source.

Sample.

The sample was a convenience sample from a national teaching, military medical center. The sample may not represent the military at large, or any particular medical speciality. Time and funding constraints forced selection of a smaller, non-random sample.

Distribution of tool.

Since the questionnaire was anonymous a second follow-up could not be sent to sample members who did not respond to the questionnaire. However, one participant requested that the term "modern Natural Family Planning" be defined. Not all questions were answered by each participant.

The Tool.

The investigator accidentally left off the fourth option, "81 - 90%", for questions # 4 & 5. This decreased the sensitivity of these particular questions.

Generalizability.

The study has limited generalizability. The small, non-random sample limits broad generalizations of the data.

Access to National Naval Medical Center.

The primary military investigator did not have access to do research at NNMC because he wasn't assigned to that facility, and this delayed initiation of the data

collection. An active duty member of the United States Naval Nurse Corps, unknown to this student investigator, had to be appointed as the “principle investigator” for the study. Joan Huber, CAPT, USN nurse corps, graciously accepted this role. Though not actively participating in the study, her cooperation expedited the approval process by the National Naval Medical Center Clinical Investigations Department and thus facilitated continuance of the research process. Her assistance was much appreciated.

Prior studies.

Dr Stanford’s study of Missouri physicians’ attitudes towards Natural Family Planning wasn’t published prior to institution of this research, so a critical analysis of it could not be performed for inclusion in this study.

Assumptions

The following were assumptions about the study methodology and sample:

1. Sample participants would know what modern Natural Family Planning was.
2. Each respondent would answer the questions completely and truthfully.
3. Mail delivered to each participants’ clinic mailbox would be received by that respondent.
4. Envelopes containing questionnaires with unbroken seals that were still in the participants clinic mailbox after six weeks were not seen by the participants due to temporary duty, leave time, or permanent change of station.
5. Respondents would at least occasionally interact with patients seeking or needing family planning services.

CHAPTER TWO:

Review of Literature

In light of this information, and against the backdrop of the thesis framework, a logical question arises. That is, what do physicians and Advanced Practice Nurses know about modern methods of NFP? How is NFP utilized in their practice? This chapter will review the relevant, but limited, literature specifically related to provider knowledge of, and attitude towards NFP.

A review of the literature reveals a paucity of research that has examined the knowledge and attitudes that physicians have of NFP. Only three studies concerning these, or very similar variables, were found. One of these research papers uses data from another study, and so, will not be critiqued. These three papers present data that was researched overseas. One was conducted in Germany and the other was a four country study conducted in Peru, Mauritius, Sri Lanka, and the Philippines. This investigator learned from his thesis committee about a fourth study, done by Stanford and colleagues in 1993. The Stanford study looked at Missouri physicians' attitudes towards NFP. The tool used in his research was adapted and used for the present study. Unfortunately, only the preliminary results were available and therefore a critique of Stanford's study could not be done. The results of the German study were published solely in German, and therefore had to be translated. This arduous process was graciously accomplished by Mr Nicklaus Philipsen. No study could be found that addressed these variables in the Advanced Practice Nurse population.

One study by Fehring (1995) did examine physician and nurses' knowledge and use of NFP. It did not discriminate for APNs, but the results of the research are interesting.

Stanford's study was most consistent with the aims of this current study, and so his tool was used with some modifications. He did his research with a sample of 800 Missouri physicians. The physicians specialized in Family practice, General Practice, Internal Medicine, and Ob/Gyn. With a double mailing, there was a 66% response rate. Results of

his research showed that when asked for information about natural methods of family planning, 24% of the study respondents would refer a patient to a NFP instructor (33% indicated that instructors were available in their area). In response to this same question, 37% of the respondents would give information about calendar rhythm and 43% would give information about basal body temperature. Twenty percent of the physicians in this study indicated that they never had a patient ask them for information about NFP. Five percent of these study physicians would refer to an NFP instructor a woman or couple who was having problems achieving a pregnancy, compared to 63% who recommended intercourse during mid-cycle. He also found that most of the physicians in his study didn't offer their patients updated information about modern NFP methods. They also substantially underestimated the method and use effectiveness of NFP methods found in current medical literature. Hopefully, this study will soon be published and available for a more indepth critique.

In a four country study, Snowden and colleagues (1994), researched physicians' views of periodic abstinence. These investigators pursued this study because of the dearth of previous research relating to the subject. They hypothesized that the attitudes and knowledge that physicians have about periodic abstinence will influence the patients' perception of periodic abstinence (PA). The study sought to determine the knowledge physicians had of PA methods and whether or not they passed this information on to their patients. This study attempted to identify those issues that were critical in determining a doctor's willingness, or lack thereof, to refer patients for periodic abstinence services. In their study, periodic abstinence referred to four different methods: the Billings or ovulation method; the basal body temperature method; the symptothermal method; and the calendar-rhythm method. The investigators acknowledged that in accordance with the WHO definition, calendar-rhythm is not a true form of NFP, but they included it because most of the physicians in the study equated PA with calendar-rhythm. Three hundred and seventy-five physicians were solicited from four countries via a face to face questionnaire. The four countries in question, Sri Lanka, Mauritius, the Philippines, and Peru were chosen because of the assumption that they had a high prevalence of PA use for family planning. The convenience sample of physicians, including general practitioners, gynecologists, and

clinicians, were chosen based on their high likelihood to have some knowledge or experience with PA methods. The sampling plan seemed to vary from country to country based on unique variables. Two of six economic zones in Sri Lanka couldn't be sampled at the time of the study due to civil unrest. In Peru, only the city of Lima was sampled because about 3/4 of the country's physicians practice there. Because Mauritius is so small, the whole island was used for sampling. All qualified physicians of Mauritius were interviewed. Finally, in the Philippines, six of the thirteen political regions were randomly sampled. The Sri Lanka sample and the Peruvian sample were convenience samples. So, it appears that the sample from these two countries may or may not be representative. The researchers stated that the results were not representative of the views of all physicians in these countries. Because of the uniqueness of the sample, the investigators also acknowledge that the study results should be generalized with "considerable caution" to physicians in other developing countries. With this in mind, it would seem reasonable that the findings could not be generalized to more developed countries, like the USA. The results, however, do show that some clear biases exist against NFP and further research is certainly necessary.

The 30 item questionnaire employed in the Snowden study was developed in conjunction with family planning experts in each country, with consideration given to the cross-cultural ambiguities of different words. Although face validity was implied, tests for instrument reliability and validity were not evident from the research report. The interview was conducted by the principal investigator in each country. However, the study didn't specifically address this as a potential confounding variable. The investigators did receive training and all study members participated in study development from beginning to end. The study found that physicians who were older, female, and held strong Catholic religious beliefs were more likely to provide periodic abstinence services for their patients. It is clear that physicians in this study who had heard of a specific PA method were more likely to provide that method to their patients. An important and interesting finding of the study was that the physicians' actual knowledge level of PA methods was less than their subjectively claimed knowledge of these same methods. Although interested in more information about other PA methods, only about ten percent of the physicians in the study

would accept the offer to be trained to provide PA services.

Results of a recent survey by Fehring provide insightful data on how nurses and physicians were educated about NFP, their knowledge level, and how they use NFP in their professional practice (1995). Fehring developed an eleven point survey to discover how nurses and physicians learned about NFP, and how they use it in their current practice. Validity and reliability of this tool was not yet established. A convenience sample was selected from a large perinatal health conference in the Midwest. A one-time mailing of 450 questionnaires, to 300 nurses and 150 physicians was performed. Forty eight physicians and 118 nurses returned the completed the questionnaire, for a 37% return rate (p. 22). Almost twice as many of the physicians were male as female. The mean age was about 40 years old and most completed medical school after 1970. All nurses who responded to the questionnaire were female, averaging 38 years old, and had completed a basic nursing program since 1970. Although the sample was not a random one, limited generalizations can be made.

Almost 50% of the Fehring study respondents did not receive education on NFP in their basic professional program (p. 24). More than 80% learned about NFP via self-education and on the job training. Findings like these lead one to question whether the nurse or physician can adequately fulfill their role to educate their patients about NFP. This obligation is in accordance with the theoretical framework of this thesis and arises from the provider's professional education and presumed superior knowledge of family planning methods.

The study methodology was not discussed in depth, so whether or not threats to validity exist is uncertain. Using a convenience sample may be viewed as a threat to validity. However, a reasonable assumption is that sample respondents should have an expert level of knowledge on family planning methods. The author does substantiate the findings with supporting evidence from studies with established reliability. The results of this study lend credence to the claim that health care professionals have minimal, antiquated, and biased knowledge of NFP methods. Can the results be generalized to the larger population of health care providers prescribing family planning? Replication of this study could better establish the validity and reliability of these findings. A key

recommendation arising from the data is that “Health professionals need to know about the modern methods of NFP and the proper qualifications to provide NFP services” (p. 27). I would add, this is needed, a priori, to provide comprehensive and culturally sensitive family planning services.

CHAPTER THREE:

Methodology

This chapter will discuss the study design and methodology, including sampling, data collection, instrumentation and process, and ethical considerations. Data analysis will be discussed briefly.

The impetus for pursuing this research came from the investigator's own professional and personal experiences with NFP. As a Labor/Delivery and Postpartum nurse for two years at an Air Force medical facility he frequently witnessed post partum instructions given to patients about family planning. It interested him that discussions between the provider and patient on family planning were cursory at best. This was true for all methods of family planning. The investigator never witnessed a provider assess a patient's cultural or religious values regarding particular family planning methods. There were no personal observations where NFP was ever discussed with a patient by the obstetrician or midwife. Obviously, just because these were not witnessed doesn't mean they didn't happen. The logical question arose as to whether this situation occurred elsewhere. What did these health care providers actually know about NFP? The opportunity to pursue these questions arose during graduate education at USUHS.

On a personal level, the investigator and his wife successfully used NFP to achieve their family planning goals for 13 years. After the birth of their last child, at her 6 week postpartum exam, his wife was pressured by a Woman's Health Nurse Practitioner to accept a prescription for oral contraceptives. She couldn't leave the clinic without accepting this prescription. This occurred without informed consent, without evaluation of her personal values, and against her wishes. The reasons this happened are speculative, but the investigator postulated it may have been due to this provider's knowledge and attitude toward modern NFP methods. The investigator also found that many professional medical personnel are unfamiliar with the concepts, uses, and efficacy of NFP. It is upon this backdrop that this research was done; to examine and describe provider's knowledge and use of modern NFP.

Study Design

A survey design was chosen because of the sparse documented research in this area. No studies of Advanced Practice Nurses and NFP were located in literature reviews. The initial intent was also to do comparative analysis between responses of physicians and APNs. However, the small number of APNs participating in this study precluded a definitive comparative analysis.

Sampling

A convenience sample of 98 physicians and APNs working at National Naval Medical Center was selected because of its' close proximity to the USUHS campus and large number of military health care providers. After approval from USUHS Investigational Review Board and National Naval Medical Center Clinical Investigations Department, data collection ensued. The Ob/Gyn department, Emergency Department, Medical Ambulatory Clinic, and the Military Medical Clinic were chosen as sample sites because of the large number of female patients seen in these departments. Also, the largest number of APNs worked in these locations. Approval was granted to sample the Internal Medical Department staff, but this wasn't pursued because of their lack of primary care services. A list of providers' names was obtained from the secretary or charge nurse of each department studied.

Instrument

The research questionnaire titled "A Brief Physician Opinion Questionnaire on Natural Family Planning (NFP)", was developed by Dr. Joseph Stanford, an expert in modern Natural Family Planning methods. The original instrument was employed in Dr. Stanfords' 1993 study which examined the attitudes of Missouri physicians towards Natural Family Planning. Although no reliability and validity statistics were generated, Stanford did obtain expert review for content validity from other NFP experts. Based on

an extensive literature review, Stanford's instrument was modified for the present study to include one question that addressed the personal and cultural values of family planning patients. Additional information was added to elicit demographic data unique to the military setting and to Advanced Practice Nurses. The resulting instrument was a one page questionnaire consisting of 7 items related to Natural Family Planning and one item soliciting demographic information (Appendix A). Face validity for this modified instrument was obtained from four experts in women's health, including two obstetricians, a Certified Nurse Midwife, and a Women's Health Nurse Practitioner. The older term for a Women's Health Nurse Practitioner is Ob/Gyn Nurse Practitioner.

Data Collection Process

The questionnaire was put in a manila envelope along with a cover letter (Appendix B) and a self-addressed stamped envelope. This envelope was addressed to each participant and hand delivered to 65 Ob/Gyn Department providers, 18 ER Department providers, 9 Medical Ambulatory Clinic providers, and 5 Military Medical Clinic providers. A box labeled "NFP Questionnaires" was placed in each department's mail room where respondents could place completed questionnaires. No box was placed in the Military Medical Clinic because of the small number of participants there. The participants could also use the self-addressed envelopes to send the questionnaire back to the investigator. The boxes were checked each week for returns. Over the next four weeks 42 questionnaires were received from the boxes and via the mail. After another two weeks, all boxes were rechecked. No questionnaires were received during this time so, data collection was presumed to be complete, and the NFP boxes in each of the departments were retrieved. Also at this time, all envelopes whose seal was unbroken that were still found in the participants mailboxes were collected. No attempt was made to redistribute these questionnaires to the original or different participants. One completed questionnaire was received in the mail the seventh week after distribution. It was completed by a RN, not a APN, so the results weren't included in this study.

Ethical Considerations

The thesis proposal was approved by the investigator's thesis committee. Approval for this research was sought and granted from the Uniformed Services University of the Health Sciences Institutional Review Board and the Clinical Investigations Department at National Naval Medical Center.

Participation in this study was completely voluntary. Informed consent was presumed when a respondent returned a completed questionnaire. Participants were never at any risk and the questionnaire took approximately 5 minutes to complete. Confidentiality was insured at all times. At no point were the participants identified by name. The roster of participants' names was destroyed after the questionnaires were distributed. All the study results are reported in aggregate form. A copy of the research findings for participants to review is filed in the Learning Resource Center at the Uniformed Services University of the Health Sciences.

CHAPTER FOUR:

Results

This chapter will present the findings obtained from the data collection. A narrative presentation of the data will begin with questionnaire return rate, demographic information, and then proceed through each of the 7 other questions. Summary tables are then presented.

Return Rate

Forty three questionnaires were returned to the investigator, 50% of a total of 86 sent out and received by participants. One was excluded from the study because the respondent was not a physician or an Advanced Practice Nurse. Of the 42 questionnaires, five were APNs, 36 were physicians, and one was a Physicians Assistant. Five weeks after distribution, 12 unopened questionnaires were picked up from each department mail room by the investigator. Thus, accounting for these 12 unopened envelopes, the total number distributed to participants was 86. This gives a 50% return rate, including the one exempt questionnaire.

DATA

Age

Age of the respondents ranged between 25 and 60 years with a mean age of 38.5 years. The youngest participant was 25 years old and the oldest was 60 years old. Twenty two percent were 21 to 30 years old and 7% were 51 to 60 years of age. (Refer to Table 1)

Sex

Twenty four (57.1%) of the respondents were male. Eighteen (42.9%) of the respondents were female. All five of the Advanced Practice Nurses that responded were female. The only Physicians Assistant who participated in the study was female. Twenty

four (66%) of the 36 physicians participants were male and 12 (33%) were female. (Refer to Table 1)

Branch of Military Service

Participants responded with 7 different answers to this prompt. Seventeen of the 42 participants (40.5%) served in the United States Navy. Thirteen of the 42 (31%) served in the United States Army. Five of 42 (11.9%) were civilians employed to work at National Naval Medical Center. Two of 42 (4.8%) served in the United States Air Force and 2 (4.8%) served in the United States Public Health Service. The remaining 3 study participants (7 %) did not give this information. (Refer to Table 1)

Years in Practice

Forty of the 42 (95.2%) participants gave this information. Of those participants that responded to this prompt, the number of years they had practiced at the time of this study ranged from a minimum of one year to a maximum of 35 years. The mean number of years in practice was 9.9. The median was 8 years, and the mode was 3 years. Two of the 42 participants, or 4.8%, did not respond to this question. (Refer to Table 1)

Physician Board Certification and Speciality

Thirty six of the 42 study participants (85.7%) were physicians. Twenty-one of 36 physicians (58.3%) were board certified, and 9 (25%) were not. Six of the study participants (16.7%) did not give this information. Sixteen of the 21 physicians that identified themselves as board certified were Ob/Gyn specialists and 3 of 21 (14.%) were Internal Medicine specialists. Two of 21 that said they were board certified did not identify their specialty. Twenty nine of the 36 physicians (80.6%) in the study identified their speciality, but 7 of the 36 (19.4%) did not give this information. Of the 29 physicians that gave this information, 24 identified themselves as Obstetric/Gynecologic specialists, 4 as

Internal Medicine specialists, 1 as both an Emergency and Internal Medicine specialist. (Refer to Table 1)

Advanced Practice Nurse Specialty, Education, and Board Certification

Five of the 42 respondents (11.9%) identified themselves as Advanced Practice Nurses. Two of these 5 (40%) identified themselves as Adult Nurse Practitioners, 1 of 5 as a Certified Nurse Midwife, 1 of 5 as an Women's Health Nurse Practitioner, and 1 identified herself as both a Certified Nurse Midwife and a Women's Health Nurse Practitioner (WHNP). All of the Advanced Practice Nurses held a Masters of Science in Nursing. Two of 5 (40%) of the APNs identified themselves as board certified, and the other 3 didn't answer this question. The CNM-WHNP and the WHNP both said they were board certified. The ANPs may not have answered this question because they might have believed this information only pertained to the physicians. It was assumed that those APNs that were CNMs or WHPNs specialized in the obstetric/gynecologic discipline. The two Adult Nurse Practitioners in the study did not identify a particular area of specialization. (Refer to Table 1)

Physicians Assistant Participant

Only one Physicians Assistant (2.4%) participated and identified herself as board certified and a Emergency Medicine specialist. (Refer to Table 1)

Table 1.
Demographic Data

Item	Number (42)	Percent (100)
<u>Profession</u>		
Physicians	36	86
APNs	5	12
Other	1	2
<u>Speciality</u>		
Physician		
Ob/Gyn	24	57
Internal Medicine	4	10
Emergency Medicine	1	2
Unknown	7	17
APNs		
Adult Nurse Practitioner	2	5
CNM	2	5
WHNP	1	2
Other	1	2
<u>Sex</u>		
Male	24	57
Female	18	43
<u>Age</u>		
21 - 30	9	22
31 - 40	18	43
41 - 50	12	29
51 - 60	3	6
<u>Branch of Military Service</u>		
Navy	17	40
Army	13	31
Air Force	2	5
U. S. Public Health Service	2	5
Civilian	5	12
Unknown	3	7
<u>Years in Practice</u>		
0 - 10	24	57
11 - 20	11	26
> 21	5	12
Unknown	2	5
<u>Board Certified</u>		
Yes	23	55
No	9	21
Unknown	10	24

Table 2.
Provider's Responses to Patient Questions Concerning Contraceptive Use

Item	N=42 responses	Percent (100)
Don't mention NFP	14	34
Mention NFP with reservations	11	26
Mention NFP as option to select patients	15	36
Mention as option to most or all patients	1	2
No Answer	1	2

Table 3.
Providers Responses When Asked About NFP Methods

Item	N=85 responses	Percent (100)
Tell her NFP doesn't work and recommend something else	0	0
Describe use of Calendar Rhythm	20	25
Describe use of Cervical Mucus method	17	20
Describe use of Basal Body Temperature	17	20
Give written information on NFP	8	10
Refer her to another physician or provider	2	2
Refer her to an NFP instructor	6	6
No one has ever asked about NFP	8	10
Other	6	6
No answer	1	1

Table 4.
Provider's Routine Practice of Assessing Cultural Values When Prescribing Family Planning

Item	N=54 responses	Percent (100)
Don't routinely assess a patient's cultural/personal values	17	32
Ask if she prefers natural methods to artificial/chemical ones	9	17
Ask if she has religious beliefs that make some methods more acceptable than others	10	18
Ask if she has convictions about the beginning of life that affect her attitude toward certain methods	1	2
Ask if cultural background proscribes certain methods	4	7
Ask if need to touch self will alter acceptability of the method	3	6
Other	8	15
No answer	2	3

Table 5.
Providers Belief of Theoretical Effectiveness of Modern NFP
(not calendar rhythm)

Item	N=42 responses	Percent (100)
Less than 50%	3	7
51 - 70%	11	26
71 - 90%	19	45
91 - 95%	6	14
Greater than 95%	2	5
No answer	1	3

Table 6.
Provider's Belief of Actual Effectiveness of Modern NFP
(not calendar rhythm)

Item	N=42 responses	Percent (100)
Less than 50%	6	14
51 - 70%	18	43
71 - 90%	12	29
91 - 95%	1	2
Greater than 95%	0	0
Other	2	5
No answer	3	7

Table 7.
Initial Steps Recommended to Achieve Pregnancy for Patients Who Have
Had No Previous Work-Up

Item	N=75 responses	Percent (100)
Recommend mid-cycle intercourse (day 10 -16)	27	36
Recommend observation of vaginal discharge to determine timing of intercourse	8	11
Recommend use of basal body temperature to determine timing of intercourse	20	27
Refer to another physician	9	11
Refer to a NFP Instructor	1	2
Other	10	13

Table 8.
Availability of NFP instruction in area

Item	N=47 responses	Percent (100)
Books or pamphlets are available	13	30
Volunteer instructors with little formal training are available	0	0
Professionally trained instructors are available	6	13
Don't know/Unsure	22	47
Other	3	6

RESPONSES TO NFP ITEMS ON QUESTIONNAIRE

It is important to recognize the following limitations and characteristics. First, there were only 42 participants in this study. Second, not all participants chose to answer each question. Third, questions (2), (3), (6), and (7) gave the participant the option to choose multiple responses. Consequently, for these four questions, there are more responses given than there were participants in the study.

Question Number One

The responses to this question are outlined in Table 2. All but one of the participants answered this question. The non-responder to this question was a board certified physician. This non-responder wrote the following in the margin next to this question, "I don't conduct in depth discussion about either contraception choices or family planning in the E.D. setting which is my exclusive work site".

The participants could choose one of the following four options.

1. "I don't mention NFP as an option".

Fourteen of 42 (33.3%) of the participants picked this choice, and did not mention NFP as an option.

2. "I mention NFP with reservations".

Eleven of 41 (26.2%) mentioned NFP with reservations.

3. "I mention NFP as a viable option to selected patients".

Fifteen of 41 (35.7%) chose (c) and mentioned NFP as a viable option to selected patients. This option was similar to option (b).

4. "I mention NFP as a viable option to most or all patients".

Only 1 out of the 41 participants (2.4%) who responded to this question mentioned NFP as viable option to most or all patients.

Question Number Two

The responses to this question are outlined in Table 3. Participants could choose more than one answer to the question. There were 85 responses from 41 of 42 participants who answered this question.

Only one of the 42 participants did not answer this question. This participant was the same non-responder to the first question. The 41 (97.6%) participants who responded to this question gave a total of 85 responses. Eighteen of these 41 respondents (44%) chose two or more answers each and gave a total of 52 responses (73% of the responses). The remaining 23 respondents (56%) gave only one answer each for a total of 23 responses (27% of the responses). The participants chose one or more of the following nine responses to this question.

1. "I tell her NFP doesn't work and recommend something else".

None of the 41 participants who answered the second question chose this response.

2. "I describe the use of calendar rhythm".

Twenty of the 85 total responses (24.7%) to this question checked this option. Three of the participants chose this as their only response to the question. All of these three were physicians aged 30 or less. None of this group had more than 3 years in practice.

3. "I describe the use of the cervical mucus method".

This option constituted 17 of the 85 (20%) responses. None of the participants chose this as their only response to question (2). All who chose this option also chose at least one of the other offered options.

4. "I describe the use of basal body temperature".

Again, 17 of the 85 (20%) responses were for this option. None of the participants chose this as their sole response to question (2). All who chose this option also chose at least one of the other offered options.

5. "I give written information about NFP".

Eight of 85 (9.4%) of the responses were for this option. One participant chose this as their sole response.

6. "I refer her to another physician or health care provider".

Only 2 of 85 (2.4%) of the responses were this option. This was the sole response of two participants.

7. "I refer her to a natural family planning instructor".

8. "No one has ever asked me for information about natural methods of family planning".

This option represents 8 of the 85 (9.4%) total responses. This was the sole response to this question by 8 participants.

9. "OTHER" - This option was intended to give participants an opportunity to write in comments other than the ones offered.

- a) "NFP is not very effective - must use another method if truly does not want preg." She mentioned NFP with reservations and said theoretical effectiveness was between 51 - 70%.
- b) "Since I don't initiate this type - most patients who discuss it with me have a reference for education".
- c) "Inform her of statistically greater failure rate than other methods for MOST patients, do not recommend".
- d) "I also inform her that ovulation may not be predictable".
- e) "I discourage it based upon higher failure rate and assess what her response to an unexpected/unplanned pregnancy would be".
- f) "I also thoroughly counsel patients that there is a failure rate and that they must be careful of taking various meds that may be teratogenic such as Retin A, tetracycline, etc.".

In general, these comments seem to indicate the participant's belief that NFP is not effective, or that users of NFP will probably become pregnant.

Question Number Three

The responses to this question are outlined in Table 4. Although the option was not offered to select more than one response, participants did do this. Forty of 42 participants (95.2%) answered this question and gave a total of 52 responses. Two of the 42 participants (4.8%) did not answer this question. One non-respondent was the same one who didn't answer the first two questions. The percentages noted refer the to total number of responses to the question and not to the number of study participants.

1. "I don't routinely assess a woman's cultural or personal values when prescribing family planning".

A full 17 of 54 (31.5%) of the responses were this option. For 15 participants, this was their sole response.

2. "I ask if she, for any reason, prefers natural methods more than artificial or chemical methods of birth control".

Nine of the 54 responses (16.7%) were for this option. For 4 of these 9, this was the sole response.

3. "I ask whether she has certain religious beliefs that makes some methods more or less acceptable than others".

Ten of 54 (18.5%) of the responses were this option.

4. "I ask if she has convictions about the beginning of life that makes some methods more or less acceptable than others".

Only one of the 54 responses (1.9%) were this option. This participant made a continuous line straight through 5 of the responses, (b - f), to this question.

5. "I ask if her cultural background proscribes certain methods".

Four of 54 (7.4%) responses were this option. For only one of the four was it the sole response to the question.

6. "I ask if the need to touch herself will alter the acceptability of the method".

Three of 54 (5.6%) of the responses were this option. For none of these three was this the sole response to the question.

7. “ OTHER” - This option was given to offer participants the opportunity to write comments other than the ones provided. Eight of the 54 (14.8%) of the responses were this option. For 6 of 8 participants, this was their sole response to this question. The following comments were written.

- a) “Most of our patients are post menopausal”. Another of this participant’s responses to this question was that he doesn’t routinely assess a woman’s cultural/personal values when prescribing family planning. He also said that no one had ever asked him for information about natural methods of family planning.
- b) “All of the above are factors in selection of contraceptive method”.
- c) “Women generally are informed about the type of contraception they desire when they are seen”.
- d) “I ask if she did become pregnant with this method, how that will affect her life”.
- e) “I present option of BC with instructions on use, pros and cons of use and allow patient to decide, without ‘judgment’ of their values”.
- f. “Ask her , her preference for BC”.
- g. “Ask about prior experience with contraception, likes/dislikes in general terms”.
- h. “I ask what she uses for family planning currently and what she would like to use”.

Question Number Four

The responses to this question are outlined in Table 5. This question was formulated to determine what each participant believed the perfect use, or theoretical effectiveness of modern NFP was. The percentage ranges refer to the percent of patients who do not become pregnant after using the method for one year. The investigator acknowledges that “failure rate” is a more scientific term, but that “effectiveness” rates are still commonly used in current texts and literature. This research does not propose to examine failure rate.

Forty of the 42 participants (95.2%) chose one of the options provided. One participant chose one of the options and also wrote a comment in the margin. One participant chose none of the options but did write in comment. From the 42 participants there were 41 responses to the offered options and two comments written in. In response to this question, the participant could choose any of the following options.

1. under 50%

Three of the 42 participants (7.1%) chose this as their response.

2. 51 - 70%

Eleven of the 42 participants (26.2%) chose this as their response.

3. 71 - 90%

Nineteen of the 42 participants (45.2%) chose this as their response.

4. 91 - 95%

Six of the 42 participants, (14.3%), chose this as their response.

5. > 95%

Two of 42 participants (4.8%) chose this response. One wrote, “effectiveness rate is generally measured as the number of unplanned pregnancies that occur during a specific period of time - so effect.(iveness) usually measured in terms of ‘failure’”.

1. Only one participant did not answer this question, but instead wrote a comment. He wrote, “I don’t know”.

Question Number Five

The responses to this question are outlined in Table 6. This question is similar to #4, but it seeks to determine what the participant thinks the actual, or use effectiveness, of modern NFP is. Thirty seven of the 42 participants (88.1%) chose one of the offered options.

1. less than 50%

Six of the 42 participants (14.3%) chose this response.

2. 51 - 70%

Eighteen of 42 (42.9%) of the participants chose this response.

3. 71 - 90%

Twelve of the 42 participants (28.6%) chose this option. . One participant wrote in the margin, "If using, percent not becoming pregnant - but this is not used in scientific literature". Another participant commented in the column, "depends on individual interpretation".

4. 91 - 95%

Only 1 of the 42, (2.4%), chose this response. This participant was an APN.

5. over 95%

Not one participant chose this response.

6. Five of the 42 participants (11.9%) did not choose one of the offered options, but 2 of these 5 wrote comments. One participant who commented of question # 4 that "he did not know", also responded to this question, "I don't know". The other participant wrote, "Can not answer because it is highly dependent on patient (couple) motivation, compliance and self control".

Question Number Six

The responses to this question are outlined in Table 7. All 42 of the participants answered this question and gave a total of 75 responses. Several participants wrote comments next to their answer. These will be addressed as they arise.

1. "I recommend intercourse during mid-cycle (e.g. days 10 - 16)".

Twenty seven of the 75 responses (36%) were for this option. For 11 of these participants, this was their sole response to this question. Two participants wrote comments on the side. One comment was, "if cycles are 28-day and regular". Another participant wrote, "depending upon current practices - if regularly having intercourse 2 - 3x/week x > 1 year, I refer to our infertility dept."

2. "I recommend the observation of vaginal discharge to determine timing of intercourse".

Eight of the 75 responses (10.7%) were for this option. No one chose this as their sole response to the question. Most also selected options (a) and (c).

3. "I recommend the use of basal body temperature to determine timing of intercourse".

Twenty of the 75 responses (26.6%) were this option. Fourteen of these 20 also either chose options (a), (b), or both. One participant added at the end of the question, "and menstrual pattern to assess ovulatory status". For 4 of the participants, this was their sole response to this question.

4. "I refer her to another physician".

Nine of 75 responses (12%) were this option and for 5 participants this was there sole response.

5. "I refer her to a natural family planning instructor".

This option was chosen only once. This participant wrote at the end of the question, "If desired". She also said that professionally trained NFP instructors were available in the local area.

6. "OTHER". This option was given to offer participants the opportunity to write comments other than the ones provided.

Ten of the 75 responses (13.3%) were to this option. For three of the participants,

this was their sole response to this question. All respondents employing this option were physicians. The following comments were written in for this option.

- a). "If having regular cyclic menses, recommend intercourse around time of ovulation ; ie 14 days prior to menses - day 14 in 28 day cycle". This response is very similar to option (a) above.
- b) "After baseline workup - referral to Infertility Clinic".
- c) "Intercourse every 2 -3 days throughout cycle".
- d) One wrote, "recommended trial of Ovukit x 1 - 2 cycles".
- e) "Ovukit".
- f) Another wrote "education regarding conception/fertility etc."
- g) "Need to be seen by Ob/Gyn and accurate history obtained".
- h) "Ask how long been trying - history of STDs - and how often
- have intercourse".
- i) "Diary of menstrual cycle (if regular ovulatory cycles)".
- j) "Lab data base - TSH, PR> if appropriate; Reassurance: semen analysis". This comment is the only one that offers reassurance to the patient.

Question Number Seven

The responses to this question are outlined in Table 8. This question was posed to find out participant's awareness of NFP educational resources in the local area. There were a total of 47 responses. Forty of the 42 participants (95.2%) answered this question.

1. "Books or pamphlets are available".

Fourteen of the 47 responses (29.8%) were this option. For 8 of the study participants, this was their sole response to this question.

2. "Volunteer instructors with little formal training are available".

None of the 42 participants chose this option.

3. "Professionally trained instructors are available".

Six of the 47 responses (12.8%) were to this option. Only 2 of these participants refer a patient to an NFP instructor when asked about information on NFP methods.

4. "I don't know/Unsure".

For 22 of the 42 participants (46.8%) this was their sole response to this question.

5. "OTHER". This option was given so that participants could write in options other than the ones provided. Three of the 47 responses (6.4%) were to this option.

a) One participant wrote, "not much".

b) Another commented, "Very little info available - I have my own "handout" for NFP".

c) One responded that she "refers to 'Couple to Couple'".

CHAPTER FIVE:

Conclusions & Recommendations

Before entering into discussion, the investigator acknowledges that the sample size of this study precludes any major generalizations of the findings to the larger population. This chapter will present the study findings and attempt to answer each one of the research questions. Interpretation of the findings and conclusions will be given in reference to the conceptual framework of the thesis. The significance of the results, specifically who this information will help and how the information can be shared, will be discussed. Recommendations based on the findings will be made. Based upon the findings of this study, suggestions are given for further research on NFP.

Question One

1. What do military APNs and physicians working in a military medical center discuss about NFP when a patient asks for help in choosing a contraceptive method?

Most of the participants would mention NFP with reservations or as a viable option to selected patients. One third of the participants in this study do not mention NFP when discussing family planning with a patient. Why does this occur? Why don't they mention NFP? Do they lack sufficient knowledge to do so? Are they uncomfortable doing so? Do they harbor biases against this method? Are there time constraints which serve as barriers to discussion of NFP? Do they think the method won't work? Do they think no patients are interested in this method? Do any of these participants use NFP themselves?

The majority of participants who didn't mention NFP also believe the use effectiveness of NFP to avoid pregnancy to be less than 70%, but there were several who thought it greater than this. Data seems to show that in the population served by these providers, NFP may not be discussed as a family planning option by 1/3 of the providers. The informed consent mandate to discuss alternative therapies or treatments is not fulfilled. More research is needed to explain this finding.

Another remarkable finding is that only one participant mentioned NFP as a viable option to most or all patients. A majority of the participants were obstetrical specialists. All APNs specializing in obstetrics or midwifery mentioned NFP as an option in some situations. Due to the sample size and number of APNs in the study, comparison statistics were not generated. However, considering the education of APNs and their emphasis on patient education, one could postulate that they may be educated to address family planning methods that involve these principles. This is not a conclusion based on the study's data, but a hypothesis that can only be validated or refuted by future research. In reference to the Beneficence Model and family planning, it is incumbent upon the provider to initiate the dialogue on NFP.

Question Two

2. How do these health care providers respond when a patient asks for information about natural methods of family planning?

None of the participants tell their patients that NFP does not work. Twenty one of the 42 participants (48%) suggest calendar rhythm, which by definition isn't a form of NFP. Seventeen of 42 participants, about 40%, describe the ovulation method, and the same amount describe BBT. In Stanford's (1994) study, 37% of the sample would recommend Calendar Rhythm, and 43% would give information about BBT. The results from this study appear consistent to Snowden's (1988) in that most providers seem to associate NFP with the Calendar Rhythm method.

Written information about NFP isn't utilized very much. Less than 20% of the participants utilized pamphlets or handouts. A worthy question is how many of these providers are certified to teach NFP? Standardized teaching by certified teachers is important for NFP efficacy. Are the participants aware that the success of NFP is dependent on rigorous teaching methodology and follow up? Patient education materials can be very helpful but inadequate substitutes for a certified NFP teacher. It could be possible that patient education materials are not available.

Two of the participants that referred out to an NFP instructor, didn't know whether

professionally trained instructors were available. One of these participants said they didn't know or were unsure of the availability of NFP instruction in the area.

Only 6 of 42, about 14%, of the participants would refer the interested patient to a NFP instructor compared to 24% of the physicians in Stanford's study (1994). Two of these participants give conflicting answers because they also stated they would refer interested patients to another physician. Neither of these two recommend NFP as a family planning option. It's unknown, but both of these participants may not deal with family planning issues that frequently, and they therefore make what they deem an appropriate referral. Also, their knowledge of modern NFP methods may be deficient. If such is the case, one could conclude that their referral to a physician instead of a NFP instructor is understandable.

One participant discouraged the use of NFP and asked patients that use it how they would feel about an unexpected pregnancy. This shows his concern for family planning effectiveness. A logical question arises. Since pregnancy is a possible outcome with all family planning methods, does this participant routinely determine what a patient's response to an unexpected pregnancy would be?

Another participant counseled patients that NFP had a failure rate and they need to be careful about taking teratogenic medications. Again this seems to reflect genuine provider concern. Does this provider counsel patients on failure rates of other family planning methods? Does she tell patients using any family planning method to be careful taking teratogenic medications?

The study findings appear to reflect a lack of knowledge by participants of available NFP resources. They also could reflect a dearth of qualified NFP instructors locally. The fact that most of the participants don't know what's available locally and grossly underestimate NFP efficacy indicates a need for further NFP education in this population. Time constraints may also be a concern. Because of the educational nature of NFP, a routine 15 minute appointment may not be sufficient for these patients. A future research question is how much time do providers spend with NFP patients? How can patients learn about NFP as a viable family planning option? How can patients electing to use NFP receive the most comprehensive services?

In general, the written comments indicate the participants believe that NFP is not an effective family planning method to avoid pregnancy because it is too difficult for patients to use. This finding is comparable to Fehring's (1995) finding that most participants in his study would not recommend NFP because they believed it was ineffective and too difficult to learn. Educating patients about family planning issues, like effectiveness and failure rate, is the provider's obligation, but the information must be accurate and not outdated. It would be nice to know what the participants' level of knowledge is of other family planning methods. Each family planning method has a failure rate, and in many methods this rate is dependent upon patient compliance.

Question Three

3. What cultural, religious, or personal values do they assess for when prescribing family planning?

Almost a full third of the study participants did not elicit this information from their patients. There were six other options, including a space for written comments. Why these providers did not try to find out this information remains unanswered. Are time constraints a barrier? Does this reflect a paternalistic approach? Are providers themselves uncomfortable discussing this issue? Within the framework of this study's conceptual framework, obtaining this information is absolutely imperative to ethical health care. One could postulate that these participants were unaware of individual patient needs. In any case, providers have a professional obligation to the patient. They should be encouraged to provide unbiased, accurate, culturally and religiously sensitive information about NFP so the patient can make an informed family planning decision. It's important to note that this question was not specific for NFP, but directed at all methods of family planning.

Patient's have a broad spectrum of religious backgrounds, cultural experiences, and individual needs. It remains unknown why these providers would not seek this information when prescribing family planning. Two participants that asked their patients about religious beliefs and the acceptability of family planning methods also said they don't mention NFP as an option. How would these participants treat a patient with cultural or

religious proscriptions to artificial birth control if NFP wasn't an option?

Only one provider asked the patient about convictions about the beginning of life. Considering the fact that providers have more knowledge of how family planning methods work, including preventing implantation of the embryo, and that many patients have convictions about the beginning of life, it remains unclear why only one participant would assess a patient's beliefs in this area. The provider can not assume that each patient has a thorough working knowledge of how each family planning method works. The provider is the expert charged with patient education in order to promote informed decision-making. This knowledge can be crucial in patient's choice of family planning. This concept is consistent with the informed consent principle to discuss the nature of the treatment (McMullen, 1993). When providers inform patients of how each method works, the patient can make an informed decision regarding this matter.

One provider commented that she presented options of birth control, its use, pros and cons. She said she let the patient decide without 'judgment' of their values. The question arises, which options does the participant present to patients? How is she defining "pros and cons"? What she perceives as a "pro" might be a "con" to a patient, and visa versa. Also, she may have misinterpreted the question by implying that there was some "judgment" of a patient's values. This participant was the only one who mentioned 'judgment' and what she meant by the statement remains unclear. However, it does bring up an interesting point. Most would agree that judgment of a patient's values is paternalistic. However, eliciting them is not. Attempting to assess a patient's cultural and personal values before prescribing family planning is not judging those values. On the contrary, it is a great service to the patient to do so. In accordance with the framework of this research, it is important to determine a patient's values regarding any health care intervention, so that she or he can make a choice in accordance with those values.

In contrast, a considerable portion of participants that do a limited assessment of cultural and personal values when prescribing family planning. Over half approached this subject in one manner or another. Only 2% of participants ask the patient their beliefs about the beginning of life. It could be that the participants group this under personal values. This finding may reflect the participants's presumption that patients thoroughly

understand the mechanism of action of all methods of family planning. It also could reflect a provider's reluctance to discuss this controversial issue. Does a gap exist between a patient's acceptance and their understanding of a family planning method? Until more research is accomplished addressing this concern, it would seem ethically reasonable for the provider to elicit this information when prescribing family planning.

Some participant's seek the patient's preferences for birth control. Seeking a patient's preferences is half of the equation. A patient or couple may use a family planning method that they do not understand. It is up to the provider to educate and inform on these options. Again, further research is necessary.

Question Four

4. What do these providers think the theoretical effectiveness rate of modern NFP is (excluding calendar rhythm)?

Responses to this question indicate that participants overwhelmingly underrated method effectiveness rates of modern methods of NFP. More than 75% of the participants rated the effectiveness below the rates reported in current literature. It seems unlikely that the participants didn't understand this question because the terminology was straight forward and common. The method effectiveness for NFP is greater than 95% (Fehring, 1994; Hatcher, 1994). Less than 5% of the study participants knew this. The majority of participants estimate the effectiveness far below data found in current medical literature. If providers believe a family planning method is not effective it seems reasonable that they wouldn't suggest this method to patients to prevent pregnancy. If the information provided to patients is erroneous, false conclusions will be reached. Sound decisions come from sound data. This finding is consistent with Fehring's findings (1995). He found that most participants in his study did not recommend NFP because they thought it was ineffective or unnatural. He concluded that this perception may be due to their outdated information on NFP. Does the same hold true for participants in this study? Is their incorrect knowledge of NFP based upon antiquated data?

Question Five

5. What do these providers think the use effectiveness rate of modern NFP (excluding calendar rhythm) is under ordinary conditions?

A methodological problem with the tool was that it gave too broad a range for one particular response. One option gave a statistical range between 71 - 90%. This should have been broken down into two separate categories; 71 - 80% and 81 - 90%. These options were on Stanford's original tool but not included in this study due to oversight. Giving these options would have elicited more specific information for questions four and five. Even with this consideration, over 2/3 of the study participants vastly underestimated the use effectiveness of modern NFP. This finding is comparable to the preliminary results by Stanford (1994). This finding seems to further support the assertion that a obvious lack of NFP knowledge exists in this study population. This vast under-rating of NFP effectiveness by the participants may be one reason why the medical community views it as an unfavorable family planning method.

One participant said that NFP was dependent on patient motivation, self-control, and compliance. It is well accepted that many methods of family planning are dependent on patient motivation and compliance. It is unclear what this participant meant by "self control".

Interestingly, one physician thought that the use effectiveness of NFP was greater than the theoretical effectiveness. This investigator wonders whether she understood the question or whether her knowledge of family planning concepts is incomplete.

A hypothesis that warrants further research is whether there is a relationship between assumptions about use effectiveness and whether a participant does or does not mention NFP as option.

Question Six

6. What initial steps do military health care providers recommend for a woman or couple who are having difficulty achieving pregnancy and who have had no previous medical evaluation?

The majority of participants recommend a calendar rhythm approach or use of basal body temperature. More participants would refer patients to a NFP instructor to learn pregnancy avoidance than to achieve pregnancy. Only one participant (2%) would refer the patient to a NFP instructor compared to 5% of the physicians in Stanford's study (1994). This could reflect the participants belief that there aren't instructors available. It also could mean that the participants don't understand the role of modern NFP as a family planning method that is successfully used to both avoid and achieve pregnancy. It also brings into question what their concept of 'who' an NFP instructor is. Is this another physician? Is it an APN specializing in Women's Health Care? It also could reflect the participant's belief that they could teach NFP to their patients themselves.

Question Seven

7. What referral sources for NFP do these providers utilize?

Some of the participants recommended books or pamphlets. A couple say they have their own handout. Six of the participants (14%) said professional instructors are available. These percentages are less than the results found by Stanford (1994). Thirty three percent of the physicians in his study said that an NFP instructor was available. Some questions arise. Who are these professional NFP instructors? Why are the other study participants unaware of them? Do these six participants consider other physicians as professionally trained instructors of modern NFP?

Although one third of the participants reported books and pamphlets on NFP were available as educational sources for their patients, only 20% said they used them. Unfortunately this research can't give data on the qualities of the literature provided by participants. One participant said 'Couple to Couple League' is available for persons interested in NFP. Are 'Couple to Couple' educators professionally trained, or perceived that way by this provider?

A minimal number of participants apparently use professionally trained instructors. Again, this research data can't answer how the participants define 'professionally trained instructors'. This limitation of the findings deserves further research. Almost one half of the study participants did not know what NFP resources are available locally. Some of the

participants may be new to NNMC and may not have had time to learn of available resources. Is it probable that half of the study participants fall into this category? Without further research, one can only guess. It appears that a substantial portion of these providers do not know what NFP resources are available for their patients. A question for further research is, what impact does frequency military transfers have on the provider's knowledge of available NFP services?

What the data from this study does reveal is that, for whatever reason, almost half of the study participants can't offer necessary information on NFP to their patients because they don't know what's available. Do these providers know what similar kinds of resources are available for their patients seeking information on artificial methods? A reasonable question arises. That is, is a national foundation warranted for NFP? One that could act as a clearinghouse of accurate information? Fehring (1995) recommends that the American Academy of Natural Family Planning could provide NFP expertise and materials to nursing and medical education programs to fill the void of accurate information. The medical and nursing professions could then provide more up to date and accurate information to their patients. If a provider is going to recommend a modern NFP method they have to be knowledgeable of local educational resources. It is interesting that many of the study participants, who practice in close geographic area, had a wide disparity of suggestions for patients wanting to learn about NFP. There appears to be a general lack of consensus as to what NFP resources are available, and who qualifies as an "NFP expert".

Question Eight

8. What are the demographic characteristics of these providers?

This information was discussed above in Chapter Four. It is relevant to recall that the vast majority of participants were physicians. The majority of these physicians specialized in Ob/Gyn. The fact that this population had a pronounced lack of NFP knowledge is noteworthy. These providers are the ones who are expected to have the greatest and most accurate knowledge of modern NFP and available resources.

Question Nine

9. Is there a difference between APN and physician knowledge/attitude on NFP methods?

It's obvious that the sample size was not large enough to accurately answer this question. There was some difference between ANPs and CNMs. The ANP responses were more consistent with the physician responses, across the board. They were more likely to underestimate the perfect use and typical use effectiveness of modern NFP. Both CNMs in the study estimated NFP effectiveness closer to what is reported in current medical literature than physicians or Adult Nurse Practitioners. Both CNMs said there weren't many NFP resources available locally. In contrast, most physicians did not know what was available. The numbers aren't conclusive and more research is needed to determine if CNMs have more current and accurate knowledge of NFP than physicians and Adult Nurse Practitioners. Does the philosophy of APNs lend itself to a more educational approach to family planning, like NFP? Are CNMs more open to NFP as a family planning method because it is based on patient education, naturalness, and patient autonomy? Is NFP more congruent with the philosophy of CNM practice (eg. that childbirth is a natural and not a medical process)? Does the traditional medical approach to health care, that is pharmacopoeia and interventional treatments, hinder it's acceptance of NFP for family planning? This investigator in the future hopes to accrue a larger and more inclusive sample to attempt to answer this and other questions raised by this research. There really didn't appear to be any difference between how APNs and physicians assess a patient's cultural and personal values regarding family planning.

Summary of Findings

Although the results of this questionnaire can't be generalized to the larger population, the findings are significant for the study population. Based on these findings, the majority of study participants vastly underestimated the efficacy of modern NFP to avoid pregnancy. When discussing family planning options, the majority of participants

did not mention NFP or mentioned it with reservations. Only one participant would recommend NFP to most or all patients. To avoid or achieve pregnancy, participants are more likely to recommend a calendar rhythm approach to NFP than either the cervical mucus method, BBT, or referral to another provider. More than one third of the participants did not ask the patient about her cultural or religious values regarding different family planning methods. About one half of the participants were unaware of local NFP resources. For those participants with a limited understanding of NFP and a lack of awareness of NFP resources, one could conclude that their choice to refer the patient to another provider is quite understandable.

Implications of Findings for Military Nursing/Health Care

First and foremost, more research with a larger, more representative sample needs to be done. A main recommendation of the study is to improve providers' knowledge and awareness of modern NFP. This could be done using information from an expert NFP organization, such as the American Academy of Natural Family Planning. The results of this study need to be made available to the chief of Nursing and Department heads in Ob/Gyn and Primary Care. Continuing education on NFP could be provided to both APNs and physicians. This continuing education could also address the issues of cultural sensitivity and informed consent regarding family planning. This could be provided at the base or command level. Written articles on the modern methods of NFP should be published in military health journals and newsletters. NFP information could be disseminated through professional military physician or APN organizations. Consideration could be given to educate a military physician or APN as an expert in the area of NFP. This person could then organize continuing education, as needed.

Recommendations for Further Research

Without a doubt, more studies examining the different aspects of NFP delivery and use need to be accomplished. An assessment of patient interests and needs about NFP should be done.

A hypothesis for future research is that, a patients' decision to use NFP is directly related to their providers' knowledge of NFP. If providers don't know about NFP and available resources, they can't intelligently and correctly discuss this method with patients. If patients believe that providers are disinterested and don't value NFP as effective family planning, they may be inclined to believe likewise.

Another area of future research deals with cultural sensitivity. Which approach to this issue works best when assessing the family planning wishes and needs of individual patients? What is a comprehensive, yet efficient way to do this? What type of cultural assessment do providers currently utilize? Do patients feel that their cultural values and needs are addressed? How can providers assure that they are?

Some of the questions that arise from this study could be addressed in further research. Why don't participants recommend NFP? What are their reservations about NFP? How do providers select patients for whom they believe NFP is a viable option? What are the characteristics of providers that mention NFP as a viable option for most or all patients? Is there any connection between physicians' recommendation to use NFP and their understanding of the Calendar Rhythm method? How do providers define "natural family planning"? How do providers define a "natural family planning expert" or "instructor"? Why do so few providers refer patients to an NFP instructor? How is the provider-patient relationship affected when the provider does not assess for cultural or personal values? How do providers solicit the patient's concerns regarding family planning? Do providers believe it is their role to assess what the patient's cultural and personal values are? If so, why? If not, why not? Does the provider's reticence to recommend NFP convey an attitude that discourages the patient from inquiring about NFP? Do providers who practice cultural sensitivity towards patients more likely to support the use of NFP as a viable family planning option? Does the physical environment in the provider's clinic or exam room have information about NFP? Does he or she have posters

reflecting accurate information on modern methods on NFP? Are there pamphlets or videos available with accurate, unbiased information that would stimulate patient questions about NFP? How many of these patient education materials on family planning are produced and distributed freely by pharmaceutical companies? It is well known that they have more than a passing interest in this area. Are economics an issue with NFP? What is providers' actual knowledge of OM, STM, BBT, and the Calendar Rhythm method? Do cultural, personal, or religious values impact a patient's choice of a family planning method? Would more patients choose modern NFP if it was more available? Would more people with religious proscriptions against artificial birth control choose modern NFP if it was more available to them? Do providers explain the specific mechanism of action of family planning methods in terminology the patient understands? What do providers use to educate their patients about modern NFP? How do they instruct them? Does a lack of knowledge of local NFP resources influence whether a provider will mention NFP as a family planning option?

Recommendations for Replication of This Study

Sample: The study should be repeated using a larger, more random sample of military physicians and APNs. It should include a larger portion of APNs. For the benefit of the participants, the cover letter should include a working definition of modern NFP.

Questionnaire: On the questions examining NFP efficacy, the questionnaire should include the range 81 - 91%. The issue of "quality" should be dropped from question #7. The questionnaire should seek to define the participant's understanding an "NFP expert", or "NFP instructor". The questionnaire should be coded so a second mailing could be done if needed. Further studies should designate APNs as nationally certified or not. Questions should seek to find out why providers do or don't recommend NFP. For future research, the option of "I don't know" should be given for questions 4, 5, along with 7.

Framework: Could include the issue of cost. Review of literature could be broadened to include the ethics of prescribing family planning.

APPENDIX A

Brief Provider Questionnaire on Natural Family Planning (NFP)

BRIEF PROVIDER QUESTIONNAIRE ON NATURAL FAMILY PLANNING (NFP)

Which of the following best describes your response concerning natural family planning (NFP) when a patient asks you to help her make a decision about contraceptive use?

Please check one

- ☐ I don't mention NFP as an option.
- ☐ I mention NFP with reservations.
- ☐ I mention NFP as a viable option to selected patients.
- ☐ I mention NFP as a viable option to most or all patients.

Which of the following best describes your response when a patient asks you for information about natural methods of family planning?

Please check all apply.

- ☐ I tell her NFP doesn't work and recommend something else.
- ☐ I describe the use of calendar rhythm.
- ☐ I describe the use of the cervical mucus method.
- ☐ I describe the use of basal body temperature.
- ☐ I give her written information about NFP.
- ☐ I refer her to another physician or health care provider.
- ☐ I refer her to a natural family planning instructor.
- ☐ No one has ever asked me for information about natural methods of family planning.
- ☐ OTHER: _____

Which statement best describes your routine practice to assess a woman's cultural or personal values when prescribing family planning?

- ☐ I don't routinely assess a woman's cultural or personal values when prescribing family planning.
- ☐ I ask if she, for any reason, prefers natural methods more than artificial or chemical methods of birth control.
- ☐ I ask whether she has certain religious beliefs that makes some methods more or less acceptable than others.
- ☐ I ask if she has convictions about the beginning of life that affect her attitude toward certain methods.
- ☐ I ask if her cultural background proscribes certain methods.
- ☐ I ask if the need to touch herself will alter the acceptability of the method.
- ☐ OTHER: _____

What do you think is the best possible effectiveness rate of modern natural family planning methods, excluding calendar rhythm, when used exactly as directed to avoid pregnancy? Please circle.

under 50% 51 - 70% 71 - 90% 91 - 95% over 95%

What do you think is the actual effectiveness rate of modern natural family planning methods, excluding calendar rhythm, when used in ordinary circumstances to avoid pregnancy? Please circle.

under 50% 51 - 70% 71 - 90% 91 - 95% over 95%

Which of the following do you usually recommend as initial steps for a woman or couple who are having difficulty achieving pregnancy and who have had no previous medical evaluation?

Please check all that apply.

- ☐ I recommend intercourse during mid-cycle (e.g. days 10 - 16).
- ☐ I recommend the observation of vaginal discharge to determine timing of intercourse.
- ☐ I recommend the use of basal body temperature to determine timing of intercourse.
- ☐ I refer to another physician.
- ☐ I refer her to a natural family planning instructor.
- ☐ OTHER: _____

What is the availability and quality of natural family planning instruction in your area?

- ☐ Books or pamphlets are available.
- ☐ Volunteer instructors with little formal training are available.
- ☐ Professionally trained instructors are available.
- ☐ I don't know/Unsure.
- ☐ OTHER: _____

Please fill or circle the following appropriate demographic information about yourself:

AGE _____ SEX: male female BRANCH OF MILITARY SERVICE _____ YEARS IN PRACTICE _____

PROFESSION: physician nurse practitioner PA BOARD CERTIFIED: yes no Speciality _____

IF AN NP, LEVEL OF EDUCATION: 2 yr RN with certificate BSN with certificate MSN

NP ANP CNM OB/GYN NP OTHER _____

APPENDIX B

Study Cover Letter

TO: Study Participants

RE: Information for NFP Study

REPLY TO ATTN OF: Captain Patrick Spencer

I am a Family Nurse Practitioner student in the Graduate School of Nursing at the Uniformed Services University of the Health Sciences (USUHS), Bethesda, Md. My masters curriculum requires completion of a research project. Because of my past professional and personal experience, I've selected the area of Natural Family Planning (NFP). This research will seek to describe the knowledge of active duty military Advanced Practice Nurses (APNs) and physicians of modern Natural Family Planning methods. Limited prior studies have examined physician knowledge of NFP, but this is the first conducted with APNs.

The study tool was developed and used by Stanford and Associates in a 1993 research project.

Please complete the enclosed questionnaire and you can either:

1. Return it in the self-addressed stamped envelope; or
2. Put it in the box labeled "NFP Questionnaires" that I placed in your duty section lounge or distribution room. I will pick them up weekly.

It should only take a few minutes of your time. Feel free to add comments or write on the back if you wish. Completion of the questionnaire is completely voluntary. Your consent will be assumed upon completion and return of the form. At no time will you be identified by name. The study results will be reported in aggregate form. Approval has been granted by the USUHS and National Naval Medical Center Internal Review Boards.

The sample size is relatively small so your participation is extremely important! If you have any questions please call me at (301) 972-6953. A copy of the study results for your review will be filed in the Learning Center, USUHS, and the Research Department at NNMC. Thank you so very much for your valuable time and making this research a success.

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