Fertility Awareness-Based Methods of Avoiding and Achieving Pregnancy: An Effective Means of Family Planning and Promoting Women’s Empowerment

Introduction

Fertility awareness-based methods (FABM) or natural family planning (NFP) methods are natural, non-hormonal, non-invasive methods of contraception that require a woman to understand the phases of her monthly cycle and the physiological changes of each phase. These methods employ fertility markers to determine the most fertile phase of the cycle. Couples abstain from sexual relations on fertile days but can have intercourse at any point during the infertile time. According to Pyper and Knight (2001), commonly observed fertility markers include changes in basal body temperature, cervical mucus, position and relative hardness or softness of the cervix, and amount of estrogen and luteinizing hormone in urine. There are a number of different NFP methods based on fertility markers that are designed to meet couples' needs including sympto-thermal methods, cervical mucus observation-based methods, and even fertility monitor methods. Some methods use only one fertility marker, such as temperature or mucus, but many newer methods incorporate more than one for greater accuracy.

Fertility markers reflect fluctuations in hormone levels and the measurable changes in fertility markers are brought on by these fluctuations. Pyper and Knight (2001) explain that cervical mucus changes based on what point a woman is at in her cycle. Estrogen increases during the pre-ovulation phase and causes increases in the salt, sugar, and amino acid content of cervical mucus to nourish sperm, causing mucus to change from a thick, white, sticky consistency to a clear, wet, slippery and stretchy consistency, the latter indicating peak fertility. Some methods, such as the Billings method, Creighton model, and Ovulation method use only cervical mucus as a fertility marker. Another marker is basal body temperature, the temperature
before rising or after three hours of resting. Immediately following ovulation, progesterone causes a 0.2°C increase in the basal body temperature which remains elevated until progesterone decreases prior to menstruation. The sympto-thermal method of NFP incorporates basal body temperature as well as cervical mucus observations for increased accuracy. Changes in the cervix can be detected by cervical palpation at the same time each day; the cervix remains low, firm and closed during the infertile part of the cycle and becomes high, soft, and open during the fertile phase. Finally, a fertility monitor can detect changes in the levels of estrogen and luteinizing hormone. A woman collects a urine sample and uses a disposable urine test strip to collect information about her hormone levels, which the monitor reads and interprets to determine whether she is fertile or infertile (Pyper & Knight, 2001). Some methods do not incorporate fertility markers at all; for example, the Standard Days method is designed for women with cycles between 26 and 32 days in length and days 8 through 19 are considered potentially fertile days (Germano and Jennings, 2006).

NFP or FABM provide a number of physiologic, psychological, and economic advantages over hormonal contraceptives or barrier methods. According to Pyper and Knight (2001) they are non-invasive, low cost, do not use artificial hormones, increase fertility awareness, can be used to plan or avoid pregnancy, increase communication between couples, have no side effects, are ethically acceptable, and effective. In a prospective longitudinal study that examined the efficacy of the sympto-thermal method, results indicated that this NFP method rivaled the effectiveness of hormonal methods with an unintended pregnancy rate of only 0.4% with correct use (Frank-Hermann et al., 2007). Besides the advantages of efficacy, psycho-social benefits exist. Pallone and Bergus (2009) report improved sexual interactions among NFP users and that the divorce rate in this demographic is lower than that of couples in the general US population.
Economically, this method is ideal for women who have limited access to health care. Some American women are not eligible for governmental assistance programs but to do not earn enough to afford their own health care, and are thus overlooked by the system. For example, Alhuwalia, Harrison, D’Angelo, and Morrow (2009) state that in order to qualify for Medicaid benefits a pregnant woman cannot make more than 133% of the federal poverty level. According to McGovern (2007), only 7% of reproductive age women in Florida are Medicaid recipients. Three million women in Florida have workplace insurance but the state government does not require reproductive health services to be part of their healthcare plans. Furthermore, in 2006 Florida cut back on its family planning funding and poor women who made more than the required income for eligibility lost access to the contraceptive services and supplies they previously relied on. Natural family planning methods, such as cervical mucus methods and the Standard Days method, could be highly advantageous for these women as they are completely free. Many basal body temperature thermometers are inexpensive as are some barriers such as condoms, but the cost of a basal thermometer is comparable to that of a package of condoms; because it will last much longer the thermometer would be a more economically feasible option. Hormonal contraceptives, which are arguably more convenient to use than barrier methods, can be quite costly without insurance and are thus beyond the reach of many economically challenged women. Knowledge of NFP can empower these women to avoid unwanted pregnancy, preventing the economic burden of an inopportune birth.

Besides empowering women to avoid unintended pregnancies, NFP or FABM can promote greater equality in a relationship and promote improved reproductive health. VandeVusse et al. (2003) state that couples who used natural family planning methods reported greater respect for and feeling less objectified by their partner as well as decreased selfishness
and greater sensitivity to their partner’s needs. Even outside of relationships, NFP is a useful tool for women who wish to detect abnormalities in their cycles or reproductive system. According to Barron (2004), gynecological charting methods used in NFP are effective in detecting abnormally long or short cycles, “absence of cervical mucus, cervicitis, vaginitis, ovarian cysts, polyps, symptoms of irritable bowel syndrome, and the pattern of migraines” (p. 82). Charting is useful for monitoring and tracking polycystic ovary syndrome, a condition affecting 5-10% of women in the United States, as well as luteal phase defects, which contribute to decreased fertility and increased miscarriage. Knowledge of one’s cycle and the ability to interpret gynecological charts improves women’s health.

Background

Natural family planning (NFP) or fertility awareness based methods (FABMs) are an effective means of avoiding and achieving pregnancy, although they are seldom promoted by the medical profession. Such methods are beneficial in that many are low cost or free, they promote communication and cooperation between couples, and they allow a woman to become more in tune with her body, fertility cycle, and sexuality. There are a number of reasons couples choose to use fertility awareness-based methods or natural family planning methods, including economic, religious, and health concerns. It is well-documented in literature that hormonal contraceptives have many side effects and are contraindicated for women with clotting disorders, high blood pressure, and history of migraine headache with aura; smokers over the age of 35, breastfeeding women, and women suffering from end-organ damage due to diabetes (Spencer, Bonnema, and McNamara, 2009). The only option these women are left with is barrier methods, which not all feel comfortable using. Some women are uncomfortable touching the intimate areas of their bodies and would therefore dislike a female condom or diaphragm. Additionally,
both female condoms and diaphragms must be placed before sex, which can reduce spontaneity or even cause a woman not to use it. Still others are reluctant to use condoms due to the perception of reduced sexual pleasure (Philpott, Knerr, and Maher, 2006). In spite of these issues, healthcare providers seldom offer FABM as an alternative due to perceptions of inefficacy or beliefs that couples will not be interested.

Attitudes of couples regarding NFP have changed over the years from mostly negative to overwhelmingly positive as methods have improved (VandeVusse, Hanson, Fehring, Newman, & Fox, 2003). Early research indicated couples using NFP found it harmful to the marriage but they were using older, less effective methods like calendar or basal body temperature. Compared to the results of the older studies, couples had far more positive things to say (in this study, three quarters of the comments were positive). Because methods are improving, many couples have become more open to the idea of exploring NFP. Essentially, whether NFP will be a satisfactory choice for a couple depends very much on their attitudes and whether or not they are willing to cooperate in avoiding or achieving pregnancy (VandeVusse et al., 2003).

When 450 certified nurse midwives were surveyed on their perceptions of the efficacy of NFP methods, their estimated average for efficacy of FABM was around 88% for correct use, rather than the actual 97-99% (Fehring, Hanson, and Stanford, 2001). According to Pallone and Bergus (2009), newer methods of NFP have similar effectiveness to traditional contraceptives. The lowest pregnancy rates in NFP users are among those who were properly instructed in the method, and poverty also seems to be a positive factor in correct use in this particular study (Pallone & Bergus, 2009).

Often, the reason so few providers promote NFP is because it is difficult to gauge the level of commitment in a relationship. The majority of NFP studies in the United States were on
women in committed relationships; most of the users in the studies were Catholic, Caucasian, had a high school education or higher, and made more than $20,000 per year. Hence, this method would probably not be ideal in uncommitted relationships. Contraceptive methods have become extremely medicalized, ignoring the potential of alternative methods such as FABM.

It is apparent that couples choose to use the methods without any urging from their providers, but clients would be better served if they collaborated with their providers rather than working alone. Considering the fact that NFP is widely used in foreign countries, one wonders why it is seldom promoted in the United States. Research suggests a lack of provider knowledge of NFP or even mistrust of the methods, indicating a need for further research and education among health care providers.

Problem

Previous studies indicate that few providers understood or would recommend NFP for family planning, and that the average amount of preparation nurses and physicians received in nursing or medical school on NFP methods was less than one hour even though the efficacy of NFP, as well as high user satisfaction with the methods, has been proven in multiple studies (Fehring, 2004). In a study that examined certified nurse midwives' attitudes on lactational amenorrhea (LAM) as a means of avoiding pregnancy, they found that CNMs and physicians both have decent knowledge of NFP and LAM, but neither professional would readily recommend them to avoid pregnancy. NFP requires extensive teaching and many midwives may not be sufficiently prepared to teach it (Fehring, Hanson, & Stanford, 2001). The lack of knowledge among medical providers is a huge barrier to NFP use in the United States. This seems to indicate that providers are not familiar or comfortable enough with a woman's monthly cycle, or that they think couples would be unwilling to practice abstinence.
Physicians, nurse practitioners and nurses receive extensive training in traditional birth control and are able to counsel women using these methods, but training in FABM is largely neglected. Fehring (2004) explains that when women are provided with information on NFP, as many as 40% have an interest in using it. He also states that NFP effectiveness studies have confirmed that as long as there are motivated couples, good teachers, and programs, NFP can be highly effective in both avoiding and achieving pregnancy (Fehring, 2004). In spite of this, providers continue to be skeptical of and even unsupportive of fertility awareness-based methods. Currently, 1 to 3 percent of women in the United States use NFP to avoid pregnancy and of these, only 1 percent used NFP because a healthcare provider had told them about it (Pallone and Bergus, 2009).

Purpose

The purpose of this literature review is to outline nursing interventions to increase knowledge of FABM among American health care providers, using these alternative methods to promote women’s empowerment.

Method

An initial literature review for nursing interventions was performed in the databases CINAHL, Medline, PsycInfo and Academic Search Premier using key search terms of “natural family plan*” OR “fertility awareness” OR “fertility aware*” AND strate*, limiting results to peer reviewed research articles between 2001 and 2009. This search yielded 177 hits. Of these, 102 did not meet inclusion criteria leaving 75 for more detailed review. After further review, 35 more were excluded due to incompletely meeting inclusion criteria, leaving 40 relevant studies that met inclusion criteria. Figure 1 illustrates the search method.
References


Potentially relevant citations from a search of the databases CINAHL, PsychInfo, Academic Search Premier, and Medline
n=177

Citations failing to meet inclusion criteria
n=102

Studies retrieved for more detailed review
n=75

Studies failing to meet inclusion criteria after a more detailed review
n=35

Relevant studies included that met all the inclusion criteria
n=40

*Figure 1.* Search method employed to gather relevant articles.