

Women's Interest in Natural Family Planning

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BACKGROUND. In the United States, approximately 4% of women of reproductive age use natural family planning (NFP) to avoid pregnancy. It is unclear whether this low number is related to a lack of available information, women's lack of interest, or other factors. Our study examined women's interest in using NFP either to become pregnant or to avoid it.

METHODS. A questionnaire was mailed to 1500 women, aged 18 to 50, who were randomly selected from driver's license renewal records in Missouri for the year beginning July 1991 and ending June 1992.

RESULTS. Of the 747 returned questionnaires, 484 were from women who were still potentially fertile. Of these women, 22.5% indicated that they would be likely or very likely to use NFP in the future to avoid pregnancy, and 37.4% indicated that they would be likely or very likely to use NFP in the future to become pregnant. Only 2.8% were currently using a method of NFP. Past use of any method of NFP (including the outdated calendar rhythm method) to avoid pregnancy was associated with interest in future use of modern methods of NFP to avoid pregnancy. Past use of NFP to become pregnant and the possible desire for future pregnancy were associated with interest in future use of NFP to conceive.

CONCLUSIONS. Many women who are not currently using NFP indicated that they are interested in doing so in the future, either to avoid pregnancy or to conceive. Interest in future use of NFP is associated with, but not limited to, those who have previously used NFP.

KEY WORDS. Natural family planning [non-MeSH]; rhythm method; family planning; physician, family. (*J Fam Pract* 1998; 46:65-71)

In the United States, approximately 4% of all sexually active women of reproductive age use a form of natural family planning (NFP) to prevent pregnancy.¹ Natural family planning, as defined by the World Health Organization, consists of "methods for planning and preventing pregnancies by observation of the naturally occurring signs and symptoms of the fertile and infertile phases of the menstrual cycle, with the avoidance of intercourse during the fertile phase if pregnancy is to be avoided."² Modern methods of NFP include the ovulation method (also known as the Billings method), based on the observation of vaginal discharge of cervical

mucus, and the symptothermal method, based on the observation of both vaginal mucus discharge and of basal body temperature.³

Most of the women in the United States who are practicing NFP are using the outdated calendar rhythm method.⁴ The available information about the characteristics of women using NFP to avoid pregnancy suggests a variety of motivations, including religious or moral reasons, medical reasons, and the desire to use a family planning method that does not have side effects and does not interfere with the natural processes of the body.^{5, 6} The motivations of women who use NFP to try to conceive are less clear.

Total pregnancy rates from NFP studies (excluding calendar rhythm studies) range from 2% to 40%.^{2, 7-12} Method-related pregnancy rates for perfect use (also known as biologic failure rates) range from 0.1% to 3%.^{7, 8, 10, 13-15} When modern NFP is used by couples of normal fertility for conception, the available evidence suggests that about two thirds of women will become pregnant within one cycle of use.^{14, 16}

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LITERATURE REVIEW

Little information is available on women's interest in NFP. One population-based survey of 1267 women in Germany, which included a brief explanation of NFP, found that although only 4% of respondents were already using NFP, 47% of women were interested in using it, and 20% indicated a high probability of future use.¹⁷ The reasons given by women for their interest in NFP ($n = 380$) included health reasons (44%) and the desire not to use "chemistry" for contraception (23%). There was no mention of religious or moral reasons for choosing NFP. In a telephone survey of 266 women in 6 American cities, almost half of the women (49%) had heard of NFP; primarily the calendar rhythm method.¹⁸ After a brief explanation of modern methods of NFP, 43% responded affirmatively to the question, "Would you consider using NFP if it were easy, available, and acceptable to your partner?"

We completed a pilot study in the clinical setting to determine the level of interest in NFP. We interviewed 60 female patients at a family medicine clinic and found that 43% of these women were interested in learning more about NFP; 24% reported they would be likely to use NFP to avoid pregnancy; 32% reported they would be likely to use NFP to become pregnant.¹⁹ This suggested that many women might be interested in NFP, but the nature of our sample limited the generalizability of these findings. We conducted the present study to determine the level of interest in NFP among potentially fertile women in Missouri. We used a population-based sample to maximize the generalizability of our findings.

METHODS

A two-page written questionnaire was constructed, based on the results from our pilot study. The questionnaire requested demographic information; reproductive history and past use of all forms of family planning, including artificial contraception and NFP; reproductive intentions; and attitudes toward possible future use of NFP. A brief explanation of modern NFP was included in the questionnaire.

The questionnaire was mailed to 1500 women, aged 18 to 50, who were randomly selected from driver's license renewal records in Missouri for the year beginning July 1991 and ending June 1992. This rep-

TABLE 1

Sociodemographic Characteristics of Respondents*

Characteristic	%
Age, years (range 18 to 49, mean 31.4)	
<30	49.3
>30	50.7
Education	
No high school degree	1.5
High school graduate	61.1
College degree	25.9
Graduate degree	9.4
Other	2.1
Household income, per year	
<\$20,000	28.9
\$20,000 to \$40,000	36.9
> \$40,000	34.2
Race	
White	92.9
African American	5.2
Other	1.8
Religious affiliation	
Catholic	27.2
Major Protestant	41.5
Other Christian	22.7
Jewish	2.0
Other non-Christian religion	1.2
No religious affiliation	5.5
Marital status	
Married	58.2
Single	22.9
Single in a committed relationship with male partner	13.4
Other	5.3
Lifetime pregnancies (range 0 to 7, mean 1.7)	
0	29.2
1	21.3
2 or more	49.5
Previous livebirths (range 0 to 7, mean 1.6)	
0	37.6
1	24.3
2 or more	38.2

*Although there were 484 total respondents who qualified as "potentially fertile," some did not answer one or more of the demographic questions. The number of responses varied from 441 to 479 among the different demographic questions.

resents approximately 0.1 % of the total female population of Missouri in this age range according to the 1990 census.²⁰ Second and, eventually, third mailings were sent to those who did not respond to the initial questionnaire.

We used the χ^2 statistic for determination of factors associated with interest in NFP by univariate

analysis,²¹ and we used logistic regression for multivariate analysis.²²

RESULTS

After three mailings, a total of 747 (49.8%) women returned questionnaires. Of these women, 4.6% were postmenopausal, 24.8% had undergone tubal ligation, 11.2% had undergone hysterectomy, and 5.3% reported that they were permanently unable to get pregnant because of other conditions, such as previous ectopic pregnancy. That left 484 potentially fertile women (64.8% of respondents). Except where noted otherwise, the results are analyzed for these women only, since they are the ones who might use NFP. The sociodemographic characteristics and reproductive history of the potentially fertile respondents are shown in Table 1.

About one third (35.3%) of the women reported that they did not want to ever become pregnant; 48.1% were interested in having a child sometime in the future; 6.2% were currently trying to get pregnant. The women's past use of methods of family planning are presented in Table 2. A small number of women (2.8%) were currently using a method of NFP. We did not specifically ask for information on current use of other methods of family planning.

After a brief explanation about modern methods of NFP, we asked, "How likely do you think it is that you would ever use natural family planning to avoid pregnancy?" 34.3% answered that this was very unlikely, 21.2% unlikely, 22.1% unsure, 11.8% likely, and 10.7% very likely. We also asked, "How likely do you think it is that you would ever use natural family planning to try to get pregnant?" 32.5% answered that this was very unlikely, 9.9% unlikely, 20.2% unsure, 21.7% likely, and 15.7% very likely. Combining the categories likely and very likely, 12.7% of women indicated that they were interested in the future use of NFP both to avoid pregnancy and to conceive.

In response to the open-ended question of what women find appealing about NFP, 36.6% indicated that it is "natural," 17.8% wrote that it has no side effects, 12.6% noted that it is convenient or easy, 12.2% cited the low cost, 6.2% noted that it is reliable or effective, 5.8% indicated that it helps one to understand one's own body, and 3.3% referred to the religious or moral acceptability of NFP. When asked what women find disagreeable about NFP, 36.6%

TABLE 2

Family Planning Methods Ever Used by Respondents, by Type and Purpose

	Family Planning Method	
	to avoid pregnancy, %†	to become pregnant, %†
Contraceptives (n = 471)*		
Oral contraceptives	87.9	
Norplant	1.3	
IUD	7.0	
Condom	75.6	
Spermicide	41.0	
Diaphragm	12.5	
Withdrawal	34.2	
Douche	6.2	
NFP methods (n = 458)*		
Calendar rhythm	17.0	18.8
Basal body temperature	3.9	17.2
Vaginal discharge/ cervical mucus	7.4	9.2
Symptothermal	0.4	0.7

*Although there were 484 total respondents who qualified as "potentially fertile," some did not answer these questions.

†Percentages add up to more than 100% because many women reported past use of more than one method of family planning. The range of number of methods used was 0 to 6 not including NFP methods, and 0 to 10 including NFP methods. The mode number of methods used was 3, both with and without NFP methods. Twenty-one women reported that they had never used any contraceptive; of these women, 18 reported that they had also never used any NFP method to avoid pregnancy.

stated that it is not reliable enough, 30% indicated that it is not easy or convenient, 6.2% had reservations that the self-observation of NFP is messy or unnatural, 4.5% wrote that they were concerned about the required abstinence, 4.3% indicated that NFP interferes with spontaneity, and 0.6% stated that NFP would be unacceptable to their partner.

FACTORS ASSOCIATED WITH INTEREST IN NFP

Factors that were associated with interest in the use of modern NFP are listed in Table 3. In this table, "likely" and "very likely" to use NFP are collapsed into the single response "likely." Younger women, women who had no previous live births, women who indicated that they may desire future pregnancy, and women who had previous difficulty achieving pregnancy were more likely to be interested in using NFP to become pregnant. There was no association between the previous use of any method of contraception and interest in future use of NFP. However, women who had used any

previous method of NFP to conceive (including the outdated calendar rhythm method) were much more likely to be interested in using modern NFP for the same purpose. Similarly, women who had previously used any method of NFP to avoid pregnancy (including calendar rhythm) were much more likely to be interested in using modern NFP to avoid pregnancy. The following characteristics were not significantly associated with interest in using NFP for either purpose: education, income, marital status, religion, and strength of identity with religion.

We used logistic regression models to determine which factors were independently associated with

TABLE 3

Characteristics Associated with Women's Interest in Using Natural Family Planning (NFP)

Characteristics	No.	Likely to Use NFP to Avoid Pregnancy, %	Likely to Use NFP to Become Pregnant, %
Responding Sample	465	23	37
Age, in years			
<30	233	19	45*
>30	227	26	30
Previous number of live births			
0	173	20	47**
1	111	22	42
2 or more	171	27	24
Previous difficulty becoming pregnant			
Yes	98	24	51*
No	357	23	35
Previous use of any method of NFP to avoid pregnancy†			
Yes	90	42**	45
No	374	18	36
Previous use of any method of NFP to become pregnant‡			
Yes	119	28	55**
No	348	21	32
May desire future pregnancies §			
Yes	244	22	53**
No	163	22	16

* P < .01 by chi-square.

** P < .001 by chi-square.

† Includes calendar rhythm (78 women), basal body temperature (18 women), mucus method (34 women), and symptothermal (2 women); some women had previously used multiple NFP methods to avoid pregnancy.

‡ Includes calendar rhythm (86 women), basal body temperature (79 women), mucus method (42 women), and symptothermal (3 women); some women had previously used multiple NFP methods to become pregnant.

§ Includes women who indicated they may desire to get pregnant in the future (214 women) and women who indicated they were currently trying to conceive (30 women). Of the 30 women currently trying to conceive, 21 (70%) were interested in using NFP to do so.

likelihood of using NFP. The only factor independently associated with interest in using NFP to avoid pregnancy was the previous use of NFP to avoid pregnancy (odds ratio [OR] = 3.4; 95% confidence interval [CI] = 2.1 to 5.5). The following factors were independently associated with interest in using NFP to become pregnant: previous use of NFP to become pregnant (OR = 4.3; 95% CI = 2.4 to 7.6); possible desire for future pregnancy (OR = 4.9; 95% CI = 2.7 to 8.9); and two or more previous live births (OR = 0.5; 95% CI = 0.3 to 0.9).

DISCUSSION

The results of this study indicate that a substantial proportion of the women in Missouri are interested in using NFP. Combining the top two levels of interest (likely and very likely) indicates that 22.5% of potentially fertile respondents are potential users of NFP to avoid pregnancy, while 37.4% are potential users of NFP for conception. These results are quite similar to those found in the non-random sample studied by Klaus and coworkers,¹⁸ the German survey by Freundl and colleagues,¹⁷ and our own pilot study of female family practice patients.¹⁹ Ours is the first study to utilize a random, population-based sample within the United States. However, approximately half (50.2%) of the women eligible for the study did not respond to the mailed questionnaire. If all of the nonresponding women are assumed to be uninterested in NFP, and if the proportion of potentially fertile women among the nonresponders is the same as among the responders, then approximately 11% of potentially fertile women aged 18 to 50 may be interested in NFP to avoid pregnancy, and 19% may be interested in using NFP to get pregnant.

Religious affiliation was not associated with a woman's interest in using NFP in the future, nor were education level or income. However, it is known that current users of NFP are more likely to be Catholic and of higher socioeconomic status in developed countries.²³ This may be because Catholic women have more awareness of and access to NFP than other women.

We did not collect information about which method of artificial contraception, if any, the women were currently using. We therefore cannot state whether current users of any particular method of artificial contraception would be more or less inter-

ested in using NFP. However, the previous use of any method of NFP (including calendar rhythm) was associated with interest in future use of modern methods of NFP.

Our study suggests that women who are trying to become pregnant may be particularly interested in using NFP. Some of these women have had previous difficulty conceiving, but from our data, we cannot tell how many have medically defined infertility. Of the women who have used NFP to become pregnant previously, most had used calendar rhythm or basal body temperature methods. Both of these methods are less precise and presumably less effective than modern NFP methods for conception; the calendar rhythm method because it gives such wide estimates for the fertile period, and the basal body temperature method because the rise in basal body temperature usually happens after ovulation.^{24,25}

SAMPLE RELIABILITY

The source of our sample, driver's license renewal records, while population-based, excludes women who do not have a driver's license. To evaluate the possible effects of this, we made the following comparisons from our entire sample (including women who have been sterilized or who were otherwise not fertile) with statistics available from the Missouri census²⁶: 92.1% white and 5.6% African Americans in our sample compared with 87.7% and 10.7% for persons of both sexes and all ages in the Missouri census; 23.7% of households in our sample with income of more than \$50,000 per year compared with 19.0% of households of all ages; 98% high school graduates and 31.1% college graduates in our sample for women aged 25 to 34 years compared with 86.8% and 21.5%, respectively. Our sample's religious affiliations were comparable to the overall Missouri population; for example, 23.5% Catholics and 23.8% Baptists in our sample and 20.3% and 24.9% in the Missouri.²⁷

Thus, our sample appears to be biased somewhat toward more educated and, possibly, more affluent women. It is also possible that women with more education may have returned the questionnaire at a disproportionately higher rate than women with less education. Within these constraints, this study represents a reasonable population-based sample from Missouri. The applicability to other parts of the United States is less certain.

The self-reported interest or motivation reported

by women in this study does not necessarily mean that any of them will actually use NFP. A variety of other factors are likely to be important in the actual choice to learn NFP; these include the availability of accurate information about modern methods of NFP,²⁸ the availability of qualified NFP teachers,²⁹ the support of health care providers for women who choose to use NFP,³⁰ personal contacts with others who use NFP,³¹ and feedback from significant others about NFP.³² In particular, the support and participation of the male partner are crucial to the success of NFP, and obviously play a significant role in a couple's decision to use NFP.³³ Future research should address men's interests in NFP and the experiences of both women and men who begin to use NFP, including their continuation rates.

Despite these limitations, these results strongly suggest that a substantial number of women in the United States are potentially interested in NFP. NFP has many advantages as a family planning method, including low cost, competitive effectiveness when used correctly, lack of side effects, the promotion of communication and shared responsibility between both partners for family planning issues, and compatibility with the religious or philosophical values of those who may be uncomfortable with artificial contraceptive technologies.^{2, 7, 34} Another important benefit in educating women and men about NFP, whether or not they choose to use it for family planning, is the basic knowledge that they receive about their own bodies and the processes of human fertility.

Because NFP is not integrated into mainstream culture, the current low rate of utilization of NFP in the United States may be explained by a lack of familiarity with it. Our data suggest that women who have some past experience with NFP (even an outdated method of NFP) are more interested in future use of NFP.

CONCLUSIONS

We feel that our findings have three immediate implications for practicing clinicians. First, since there is a substantial number of women potentially interested in NFP, clinicians should routinely include modern NFP methods in all of their discussions with women about family planning options. Even for those women who have not previously used any method of NFP, up to one fifth may be interested in

using NFP to avoid pregnancy. Second, women who have previously used NFP to avoid pregnancy (including the outdated calendar rhythm method) are very likely to be interested in modern methods of NFP and should definitely be informed about them. And, third, women who are interested in becoming pregnant are also very likely to be interested in modern methods of NFP and should likewise be especially informed regarding the availability of NFP methods based on vaginal mucus discharge to help them conceive.

Potential barriers to making NFP available may include the physician's lack of knowledge or negative attitude regarding modern methods of NFP, and in some cases, a lack of well-trained teachers in a geographic area. Competent instruction in NFP takes more time than can be provided in a standard visit to a physician. Future research should help quantify such barriers and define ways to overcome them in order to make modern natural family planning an option that is truly available to all women and their partners.

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