The Influence of Contraception on Abortion among Women of Reproductive Age in the United States

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ABSTRACT: There is a common notion that contraception is necessary for women (and couples) to avoid unwanted pregnancies and abortions. The thesis of this paper is that contraception actually will lead to more (not less) abortions. On the other hand, the use of natural family planning (NFP) and the acceptance of fertility lend itself to the openness to life. The specific purpose of the paper is to describe the influence of contraceptive use and NFP on the likelihood of having an abortion among United States (US) women of reproductive age as found in Cycle 7 of the National Survey of Family Growth (NSFG). There were 7,625 women of reproductive age in cycle 7 of the NSFG, and of these 6,265 were sexually active. Likelihood Odds Ratios (OR) were used to determine the likelihood that ever use of common contraceptive methods and NFP correlates with ever having an abortion and having an abortion in the past 12 months. According to data from Cycle 7 of the NSFG, the ever use of methods of contraception (outside of surgical female sterilization) coincides with a likelihood of every having an abortion up to 209% with ever use of the male condom and 85% with use of the birth control pill. In a like manner ever use of contraceptive methods also imparts a likelihood of having an abortion in the 12 months with an extremely high likelihood of abortion with female sterilization and the use of the male condom. As a contrast, the ever use of NFP among US women does not have any significant likelihood of ever having an abortion nor of having an abortion in the past year. The conclusion is that the NSFG data provides evidence

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that contraception contributes to the likelihood of having an abortion and NFP prevents that likelihood. Promotion of the use of NFP among married couples and chastity among adolescents are ways of contributing to the culture of life.

AMILY PLANNING HEALTH PROFESSIONALS and population researchers have been promoting the use of contraception as a means to decrease unwanted pregnancies and in turn abortions for many years. The statistic commonly cited is that approximately half of all abortions in the United States (US) are among women who are not currently using contraception. The thinking is that if we can get more reproductive age women to use contraception – especially contraceptive methods that do not involve too many behaviors and can be used and forgotten (i.e., sterilization and the intrauterine contraceptive device) – the more likely there will be less unplanned pregnancies and abortions. The use and promotion of emergency contraception also has been seen (and continues to be seen) as a means to decrease unwanted pregnancy and abortions. Emergency contraception is promoted as a backup contraceptive (e.g., when a condom slips off) or after an occasional act of "unprotected" intercourse.

The proposition that more contraception, easily available contraception, and emergency contraception as a back-up contraceptive will lead to less abortion makes sense at first look. I propose, however, that a deeper understanding of human sexually actually renders this proposition false and that real life evidence supports my proposal. For example, population researchers have found that while the use of contraceptive methods increased significantly in Spain from 49.1% of the participants in 1997 to 79.9% in 2007 among women of reproductive age, the rate of voluntary interruption of pregnancy (abortion) also rose from 5.52 per 1000 women in 1997 to 11.49 per 1000 women in 2007

¹ R. B. Gold, *Abortion and Women's Health: A Turning Point for America?* (New York: The Alan Guttmacher Institute, 1990) 1-74.; H. W. Ory, J. D. Forrest, and R. Lincoln, *Making Choices: Evaluating the Health Risks and Benefits of Birth Control Methods* (New York: The Alan Guttmacher Institute, 1983) 1-72.; K. Cleland, J.F. Peipert, C. Westhoff, S. Spear, and J. Trussell, "Family Planning as a Cost-Saving Preventive Health Service," *The New England Journal of Medicine* 364 (2011): e37.

² J. Trussell, F. Stewart, F. Guest, and R.A. Hatcher, "Emergency Contraceptive Pills: A Simple Proposal to Reduce Unintended Pregnancies." *Family Planning Perspec-tive* 24 (1992): 269-73.

(i.e., from 49,578 in 1987 to 112,138 in 2007).³ Researches on the Spanish population speculated that the increased use and availability of contraception resulted in more abortions because there is a younger age of Spanish adolescents initiating sexual intercourse than in the past, there is an inconsistent use of contraception (in particular the pill and the condom), and the increased number of immigrants to Spain have a lower education level and have more babies. The Spanish population researchers suggested (without good evidence) that increased use of emergency contraception might help reduce the rate of abortions in Spain.

Other researchers reviewed the parallel rise in the use of contraception and abortion rates in thirteen countries around the world. They found that in seven countries, i.e., Kazakhstan, Kyrgyz, Uzbekistan, Bulgaria, Turkey, and Switzerland, abortion rates decreased as the prevalence of modern contraception rose. But in six other countries (Cuba, Denmark, the Netherlands, the United States, Singapore and the Republic of Korea) the levels of contraception availability and prevalence also resulted in increased use of abortion. The researchers explained that the reason that abortion increased in these countries was that the amount of fertility increased and overwhelmed the contraceptive system. Increased fertility is a result of younger population, earlier initiation of intercourse by adolescents, and immigration of reproductive age women.

The use of emergency contraception seems to have been a big failure in the reduction of the abortion rates in this country and others. For example, in a study conducted in Scotland, demographic researchers determined that a massive media promotion of emergency contraception and making it readily available to sexually active women showed no decrease in abortion rates compared to counties that did not promote it.⁵ Similar studies in China and in the United States also found no decrease in abortion rates with the introduction

³ J. L. Dueńas, I. Lete, and R. Bermejo, et al., "Trends in the Use of Contraceptive Methods and Voluntary Interruption of Pregnancy in the Spanish Population during 1997-2007," *Contraception* 83 (2011): 82-87.

⁴ C. Marston, J. Cleland, "Relationships between Contraception and Abortion: A Review of the Evidence," *International Family Planning Perspectives* 29 (2003): 1-12.

⁵ A. Glasier, K. Fairhurst, and S. Wyke, et al., "Advanced Provision of Emergency Contraception Does Not Reduce Abortion Rates," *Contraception* 69 (2004): 361-66.

of emergency contraception.⁶ A trio of researchers from Family Health International, the Office of Population Research at Princeton University, and the Department of Family and Reproductive Health at Johns Hopkins Bloomberg School of Public Health systematically investigated the published literature to determine if increased access to emergency contraception pills influenced the use of the pills and unintended pregnancy rates.⁷ After conducting an extensive search from four literature data sets there were 23 articles (published between1998 and 2006) that met their selection criteria. Of these, ten were randomized control trials, four were cohort studies, and the others were population-based studies. The results from the studies convincingly showed that greater access to emergency contraception increased the use of such pills. But there was no evidence that increased access led to decreased unintended pregnancy or abortion rates. They concluded that further research is needed to explain the best ways to use emergency contraception in order to produce a public health benefit.

Although it seems logical that the greater availability of contraception and more use of contraception would lower unintended pregnancies and the abortion rate, this might not be true. Several ethicists and philosophers have provided reasons why contraceptive availability and use might actually increase the abortion rates. For example, Janet Smith mentioned that most abortions occur with unwanted pregnancy by sexual activity outside of marriage, which is facilitated by contraception. Cohabitating couples who wish to be sexually active and childless use contraception, but abortion is used when an unintended pregnancy occurs. Richard Doerflinger from the U.S. Conference of Catholic Bishops speculated that the reason that contraception is linked to abortion is

⁶ X. Hu, L, Cheng, X. Jua, and A. Glasier, "Advanced Provision of Emergency Contraception to Postnatal Women in China Makes No Difference in Abortion Rates: A Randomized Controlled Trial," *Contraception* 72 (2005): 111-16.

⁷ J. Trussell, E.B. Schwartz, K. Guthrie, and E. Raymond, "No Such Thing as an Easy (or EC) Fix," *Contraception* 78 (2008): 31-354.: C.B. Polis, E.G. Raymond, and J. Trussell, "Facing the Facts on Advance Provision of Emergency Contraception," *Contraception* 82 (2010); 579-580.

⁸ J. Smith, *The Connection Between Contraception and Abortion*. Downloaded from One More Soul Web site, June 3, 2011. http://onemoresoul.com/contraception/risks-consequences/the-connection-between-contraception-and-abortion.html.

because abortion is viewed as a needed back up to failed contraception.9

Saint John Paul II called contraception and abortion fruits of the same tree. ¹⁰ My interpretation of his writings is that contraception is a rejection of and separation of fertility from human sexuality and abortion is a rejection of the unborn child. Contraception looks upon fertility as the enemy to be avoided. If "sexually responsible" women/couples get pregnant with contraception, they feel that it was not their fault and as a result they do not feel responsible for the child. On the other hand, use of natural family planning (NFP) involves the acceptance and appreciation of one's fertility and the mutual and responsible cooperation of the husband and wife in living with their fertility. As such, couples who use and believe in NFP will not readily resort to abortion when an unintended pregnancy occurs.

One way of determining if there is a connection between contraception and abortion – i.e., whether contraception facilitates or prevents abortion – is to analyze evidence of contraception and NFP use among sexually active women of reproductive age and then access the likelihood of them having an abortion. The purpose of this paper is to determine the influence of the ever use of common forms of contraception (i.e., the pill, male and female sterilization, male condom, withdrawal, Depo Provera/hormonal injections, or emergency contraception) on the likelihood of having an abortion among women between the ages of 18 and 44 in the United States. A second purpose is to determine the influence of NFP on the likelihood of ever having an abortion among U.S. women of reproductive age. The more specific research questions to be answered are:

- (1) What is the likelihood of ever having abortion among sexually active US women who ever used common forms of family planning?
- (2) What is the likelihood of ever having abortion among sexually active US women who ever used NFP?
- (3) What is the likelihood of ever having an abortion in the past year among sexually active US women who ever used common forms of family

⁹ R.M. Doerflinger, *The Prevention Deception: How Not to Reduce Abortions*. Secretariat for Pro-Life Activities: United States Conference of Catholic Bishops, Washington, DC, 2007.

¹⁰ Pope John Paul II, The Encyclical "*Evangelium vitae*" (The Gospel of Life) in Origins 24/42 (April 6, 1995) 694-95.

planning?

(4) What is the likelihood of ever having abortion in the past year among sexually active US women who ever used NFP?

Methodology

The National Survey of Family Growth (NSFG) has been conducted by the National Center for Health Statistics (NCHS) and the Center for Disease Control and Prevention (CDC) approximately every 5 to 7 years since 1973. The NSFG includes factors that help explain trends in contraception use, infertility, sexual activity, and pregnancy outcomes. Researchers at the NCHS provide the data for legislatures and policy makers to plan health services and health education programs. The NSFG is also available to researchers, who may use the data set to determine trends in family health, contraception use, infertility, and sexual health choices.

The NSFG is conducted by demographic researchers at the University of Michigan using a nationally representative, randomly selected sample of women (and since 2002 men) aged 15 to 44 in the U.S. Interviews are conducted in person and take approximately 80 minutes to complete. Sensitive questions (such as the use of abortion) are asked through a self-paced computer-assisted interview program. The response rates of these surveys range from 75% to 80%. In 2010, data sets were released from Cycle 7 of the NSFG, which was conducted from January of 2006 through June of 2010. There are 7,356 women participants in the 2006-2008 Cycle 7 of the NSFG and 3,577 variables in the data set.

The variables analyzed from this data set for this study were: (1) the "current use" of the hormonal contraceptive pill, vasectomy, female sterilization, male condom, intrauterine device (IUD), withdrawal, and NFP, (2) the "ever use" of the pill, vasectomy, female sterilization, male condom, withdrawal, IUD, and NFP, (3) if the respondent ever had an abortion, and (4) whether the respondent had an abortion in the past 12 months. NFP included

¹¹ W.D. Mosher and J. Jones, "Use of Contraception in the United States: 1982-2008," *Vital and Health Statistics Series* 23, Number 29 (2010): 1-771.: W.D. Mosher, "Use of Contraception and Use of Family Planning Services in the United States: 1982-2002," *Advanced Data* 10 (2004): 1-36.; L.J. Piccinino and W.D. Mosher, "Trends in Contraceptive Use in the United States: 1982-1995," *Family Planning Perspectives* 30 (1998): 4-10, 46.

the use of temperature or cervical mucus monitoring. Use of the IUD was only in the past twelve months.

Descriptive statistics were used to determine the demographic makeup of the sample, including age, marital status, race, and religion. Chi square and relative risk odds ratios (OR), i.e., likelihood to have an abortion by ever use a method of contraception (with 95% confident intervals) were calculated. Statistical significance was set at the 0.05 probability level. To control for increased error rates with multiple testing, the Bonferonni average of .006 was determined. Statistical analysis was performed by use of the Statistical Package for Social Sciences (SPSS version 17). Only those women who indicated that they were hetero-sexually active were included in the data analysis.

The NSFG Cycle 7 data set is available through the NCHS and is downloadable through the Internet into SPSS files. The data set does not contain any identifying variables and is intended for public use. Some very sensitive variables like whether the respondent had an abortion or not are handled through a computer-assisted interview and not in-person. Use of this data set was reviewed by the Office of Research Compliance at Marquette University and received exempt status.

Results

Demographics

Of the 7,356 women participants in the Cycle 7 NSFG data set, 6,329 indicated that they were sexually active. The mean age of these women was 30.17 (range 15–45), 39% of whom were married, 13% cohabitating, and 36% never married. The majority (67%) were of the Caucasian race, 22% were listed as Black, and 11% Other. The majority (46.4%) listed their religion as Protestant, 26% as Catholic, 8.7% as other, and 18.9% as none.

Current and Ever Use of Family Planning Methods

The frequency (and percentage) of current and ever use of family planning methods among the sexually active participants in the NSFG Cycle 7 Data Set is presented in Table 1. The most frequent current method of family planning (for combined female and male partners) among sexually active women in the U.S. is sterilization, followed by the hormonal birth control pill and the male condom. The most frequent methods of family planning that these women "ever used" were the male condom, the pill, and withdrawal. Current use of NFP by U.S. women is only 0.2% and ever use is 3.8%. The percentage of

abortions in the past year was only 1.3%, but ever use of abortion was 15.3%.

Likelihood of Abortion with Ever Use of Family Planning Methods

Table 2 shows the likelihood odds ratios (OR) of ever having an abortion based on ever use of a method of contraception and NFP. The highest likelihood of ever having an abortion is 209% among those women who indicated use of the condom with their male sexual partner. The only method of family planning that had a lower likelihood of having an abortion is surgical sterilization, i.e., a 17% lower likelihood. There was no greater likelihood of having an abortion among those women who ever used natural family planning methods.

Likelihood of Abortion in past 12 Months with Ever Use of Family Planning Methods

Table 3 provides the likelihood odds ratios (OR) of having an abortion in the past 12 months based on ever use of methods of contraception and NFP. The highest likelihood of having an abortion in the past 12 months is 1,660% among women who have been surgically sterilized, followed by the male condom with a 577% likelihood, and emergency contraception with a 225% likelihood of having an abortion in the past 12 months. All methods of contraception had some level of likelihood of having an abortion in the past year, except for the use of the IUD, which did not meet the level of significance. The ever use of NFP did not have any greater likelihood of an abortion in the past 12 months.

Current Use of the Pill and Condom and Abortion Rate

The rate of abortion among those currently using the birth control pill was 1.9% and among those currently using the male condom 2.7%. These percentages are almost double compared to the percentage (0.9%) of those who were sexually active and not currently using a method of family planning.

Discussion

The number one "current" method of family planning among sexually active U.S. women between the ages of 15-44 years is sterilization (male and female), followed by the pill and condom. These figures reflect an inability to live with and accept one's fertility among sexually active women and couples of reproductive age in the U.S. According to the data from Cycle 7 of the

NSFG, the "ever use" of methods of contraception (outside of surgical female sterilization) coincides with a significant likelihood of ever having an abortion (for example, a high of 209% with ever use of the male condom and a low of 85% with use of the birth control pill). In like manner, ever use of contraceptive methods also imparts a likelihood of having an abortion in the past 12 months. There is an extremely high likelihood of abortion with female sterilization and the use of the male condom. As a contrast, the ever use of NFP among U.S. women does not have any increased likelihood of ever having an abortion nor of having an abortion in the past year.

The current abortion rates among U.S. women of reproductive age is about 19 per 1,000 women and about one-third of all U.S. women have had an abortion.¹² The rate in Cycle 7 of the NSFG is about 13 per 1,000 women, which does indicate an under-reporting of abortion. But even with underreporting of abortion, the consistency of abortion being a likelihood of ever use of contraception is remarkable. The Center for Disease Control and Prevention (CDC) reported that induced abortions usually result from unintended pregnancies, which often occur despite the use of contraception.¹³ Even the Allen Guttmacher Institute (AGI), considered to be the most accurate in regards to abortion rates among U.S. women, indicated that 54% of women having abortions used a contraceptive method during the month they became pregnant. 14 Among those women, 76% of the hormonal birth control pill users and 49% of male condom users reported using the methods inconsistently, while only 13% of pill users and 14% of condom users reported correct use. Only 8% of women having abortions have never used a method of birth control and 9 in 10 women at risk of unintended pregnancy are using a contraceptive

¹² R.K. Jones. L.B. Finer, and S. Singh, "Characteristics of U.S. Abortion Patients," *Allen Guttmacher Institute* (2008); Henshaw, Stanley K., and Kathryn Kost, August 2008, "Trends in the Characteristics of Women Obtaining Abortions, 1974 to 2004," *Guttmacher Institute*, on line [http://www.guttmacher.org/pubs/2008/09/18/Report_Trends_ Women_Obtaining_Abortions.pdf].; Johnston, W. R., 4 June 2008, "Historical Abortion Statistics: United States," on line, *Johnston's Archive* [http://www.johnstonsarchive.net/policy/abortion/ab-unitedstates.html]; Alan Guttmacher Institute, Jan. 2008, "An Overview of Abortion in the United States," *Guttmacher Institute*, on line (http://www.guttmacher.org/media/presskits/2005/06/28/abortionoverview.html); Henshaw, Stanley K., 1998, "Unintended Pregnancy in the United States," *Family Planning Perspectives* 30(1):24-29, 46.

¹³ L.M. Koonin and J.C. Smith, "Legal Induced Abortion. From Data to Action," *CDC's Public Health Surveillance for Women, Infants and Children*, 1994.

method (AGI).14

The AGI also reported that 46% of women who have abortions had not used a contraceptive method during the month when they became pregnant. Of these women, 33% had perceived themselves to be at low risk for pregnancy, 32% had had concerns about contraceptive methods, 26% had had unexpected sex, and 1% had been forced to have sex. Furthermore, only 8% of U.S. women who have had an abortion have never used a method of birth control. The continuation rate of hormonal contraception is about 67%. There are many physical problems that explain why women do not like taking hormonal contraception, including bone loss, unusual uterine bleeding, weight gain, and other more risky problems, such as thromboembolism. Non-use of contraception is greatest among those who are young, poor, black, Hispanic, or less educated. About one-half of unintended pregnancies occur among the 11% of women who are at risk for unintended pregnancy but are not using contraceptives. Most of these women have practiced contraception in the past.

As mentioned earlier, Doerflinger indicated that one of the reasons that contraception contributes to abortion rates is that abortion is often looked upon as a backup to failed contraception. ¹⁹ This seems to be the case in studies that show that emergency contraception does not reduce abortions and unintended pregnancies. Although emergency contraception was intended as a back-up to the back-up of "traditional" contraception, it has been found ineffective to do so. One would also expect higher abortion rates among less effective methods of contraception like condoms and withdrawal. This is supported by the evidence that shows that the greatest likelihood for having an abortion are among those women who ever reported using condoms, emergency contracep-

¹⁴ R.K. Jones, J.E. Darroch, and S.K. Henshaw, "Contraceptive Use among US Women Having Abortions in 2000–2001," *Perspectives on Sexual and Reproductive Health* 34 (2002):294–303.

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ J. Trussell, "Contraceptive Failure in the United States," *Contraception* 83 (2011): 397-404.

¹⁸ L.B. Finer and S.K. Henshaw, "Disparities in Rates of Unintended Pregnancy in the United States, 1994 and 2001," *Perspectives on Sexual and Reproductive Health* 38(2006):90–96; W.D. Mosher, "Use of Contraception and Use of Family Planning Services in the United States: 1982-2002," *Advanced Data* 10 (2004): 1-36.

¹⁹ R. Doerflinger, *The Prevention Deception: How Not to Reduce Abortions*. 2007.

tion, and withdrawal. In fact, this is recognized by contraceptive providers and policy makers who promote the use of what is called "forgettable" contraceptive methods, e.g., sterilization, the IUD, and the injectable Depo Provera. These methods are "more effective" because they do not involve behaviors like taking the pill on a daily basis or inserting a diaphragm. The intent is that not only does this allow for forgetting the contraceptive method but also forgetting the need to deal with or live with fertility.

The reason that there was such a high likelihood of abortion in the past 12 months with female sterilization seems to be contrary to this notion of high rates of abortion among less effective methods of contraception. But what most likely is happening is that failed contraception leads to abortion, and then abortion leads to making infertility "final" through sterilization. That is why the data shows no increased likelihood of ever having an abortion compared to the great likelihood of having an abortion in the past 12 months with female sterilization.

Smith indicated that another reason that contraception might lead to more abortions is that it facilitates couples living together without being married.²¹ Such unstable relationships would tend to seek abortion when the contraception fails. Furthermore, most women who have an abortion are single and not married. I did not find a relationship with cohabitation and abortion in the analysis of the current NSFG data set. But in the study that analyzed the abortion and contraceptive rates in Spain, some of the characteristics associated with greater likelihood of having an abortion included being 25 and older, cohabiting, having high income, having experienced first intercourse before turning 18, the number of births, and having used no contraceptive method at first sex.²² The availability of elective abortion appears to decrease the level of responsibility felt by those engaging in sexual activity.

Those who use contraception for family planning purposes usually view fertility as something to be controlled. Contraceptive methods do so by suppressing fertility with chemicals, blocking with devices, or, more likely, destroying with surgery. Fertility is essentially treated as the enemy that is not

²⁰ J. Trussell, "Contraceptive Failure in the United States."

²¹ J. Smith, *The Connection Between Contraception and Abortion*.

²² J.L. Dueńas, I. Lete, R. Bermejo, et al. "Trends in the Use of Contraceptive Methods and Voluntary Interruption of Pregnancy in the Spanish Population during 1997-2007."

a wanted part of self and a relationship (unless trying to achieve a pregnancy) when the woman is sexually active. The wish is to detach fertility from human sexuality. This is a non-integrative dualistic notion. Most women do not wish to use any method of contraception and in particular those that interfere with the sexual act,. This could be why sterilization is so popular after having one to two children, and the family size is regarded as complete. Family planning researchers found by interviewing sexually active teens that they did not use condoms or emergency contraception because they thought that it was not natural and felt that the condom separated them from a true sexual embrace.²³

The values inherent in the "contraceptive mentality," which is very different from responsible parenthood and learning to live with fertility in which the full truth of the conjugal act is manifested, are such that they in fact strengthen the temptation to use abortion as a back up when an unwanted pregnancy is conceived. Saint John Paul II mentioned that contraceptive use implies a self-centered concept of freedom, which regards procreation as an obstacle to personal fulfillment.²⁴ The life that could result from a sexual encounter (especially outside of a strong marriage) thus becomes an enemy to be avoided at all costs, and abortion becomes what they take to be the only decisive response to failed contraception. As he proclaimed in *Evangelium vitae*, procreation then becomes the "enemy" to be avoided in sexual activity. If it is welcomed, this is only because it expresses a desire, or indeed the intention, to have a child "at all costs," and not because it signifies the complete acceptance of the other and therefore an openness to the richness of life that the child represents.²⁵

With NFP, on the other hand, fertility is accepted. Although difficult at times, fertility remains part of the relationship and the conjugal act is respected and remains whole. Although couples can view NFP as just another method of family planning and be selfish in doing so, there is a less likelihood in doing so since on a day-to-day basis couples need to struggle with, to understand, and to live with their fertility. There is a realization of their fertility and a realization that new life is a possibility. Although an unintended pregnancy with use of NFP can be a disappointment, and for some, a real hardship, the

²³ L.H. Keogh, "Understandings of the 'Natural' Body: Comparison of the Views of Users and Providers of Emergency Contraception," *Sexual Health* 2 (2005): 109-15.

²⁴ John Paul II. Evangelium vitae, 1994.

²⁵ Ibid.

temptation to resort to abortion is lessened by a sense of responsibility to life and the maintenance of the integrity of the marital relationship.

Limitations of the Study

One limitation of the NSFG data set that has been reported in the literature is the potential for under-reporting abortion. ²⁶ It could be that the lower use of abortion among Christians, Catholics, and those using NFP (who are mostly Catholic) would be an embarrassment in admitting to any use of abortion, which is a grave matter for people of faith. There is also some question as to whether the population sampling technique truly represents the U.S. population, and especially among the Hispanic population. According to the U.S. Census, about 68% of Hispanics in the U.S. consider themselves Catholic, while the NSFG only indicates 57%. ²⁷ There are relatively few couples who list NFP as their method of family planning. This limits the statistical power and the ability to make definite comments on NFP and its relation to abortion practices. Finally, this study did not analyze the wantedness and intendedness of the pregnancies that ended in abortion.

Implications

According to John Paul II in *Evangelium vitae*, the trivialization of sexuality in society and the separation of sex from fertility are among the principal factors that have led to contempt for new life. ²⁸ Only a true love is able to protect life. He felt that is was a duty to offer adolescents and young adults, an authentic education in sexuality and in love – education that involves training in chastity. He also mentioned that it is precisely this respect that makes legitimate, at the service of responsible procreation, the use of natural methods of regulating fertility, i.e., NFP. He called for centers for natural methods of regulating fertility should be promoted as a valuable help to responsible parenthood, in which all individuals, and in the first place the child,

²⁶ R. Jagannathan, "Relying on Surveys to Understand Abortion Behavior: Some Cautionary Evidence," *American Journal of Public Health* 91 (2001): 1825-31; L.B. Smith, N.E. Adler, and J.M. Tschann, "Underreporting of Sensitive Behaviors: The Case of Young Women's Willingness to Report Abortion," *Health Psychology* 18 (1999): 37-43.

²⁷ R. K. Jones, L.B. Finer, and S. Singh, "Characteristics of U.S. Abortion Patients."

²⁸ Pope John Paul II, Evangelium vitae, 1994.

are recognized and respected in their own right, and where every decision is guided by sincere gift of self. He felt that all married and engaged couples should learn NFP. With these approaches I would also include the defense of marriage between a man and woman, the promotion of marriage, and the encouragement of the means that help to build strong marriages.

In order to help build a culture of life among health professionals, it would be recommended that healthcare providers (physicians and professional nurses) become familiar with natural methods of family planning and offer them as viable options for their patients. Perhaps health professionals could learn several methods of NFP or refer their patients to institutions that teach the method. A study of nurse midwives' knowledge and use of NFP found that 92% of the sample felt that they were minimally prepared to teach NFP.²⁹ Natural family planning should be included in the curriculum of both medical schools and nurse midwives in order for the care providers to be able to offer a natural and effective option.³⁰ Health professionals (especially those in primary care and pediatrics) could be involved with developing, providing, and researching chastity-based programs of human sexuality. A recent randomized comparison study of a chastity-based program in comparison to a contraceptive promotion sexual health program among African-American teens showed that the chastity-based program was more effective in decreasing sexual activity and unwanted pregnancy.31

Recommendations for Future Research

Recommendations for future research include comparing the findings from Cycle 6 (2002) and Cycle 7 (2006) of the NSFG data sets. Comparing the results would allow analysis of trends in contraception and the relationship with abortion. Another recommendation is to look at Cycle 7 as was done in

²⁹ R. Fehring, "The Future of Professional Education in Natural Family Planning," *Journal of Obstetric Gynecological and Neonatal Nursing* 33 (2002): 34-43.

³⁰ R. Fehring, L, Hanson, and J. Stanford, "Nurse-Midwives' Knowledge and Promotion of Lactational Amenorrhea and Other Natural Family Planning Methods for Child-Spacing," *Journal of Nurse Midwifery and Women's Health* 46 (2001): 68-73; R. Fehring, "Physician and Nurses' Knowledge and Use of Natural Family Planning," *The Linacre Quarterly* 62 (1995): 22-28.

³¹ J. B. Jemmott, L.S. Lammott, and G.T. Fong. "Efficacy of a Theory-Based Abstinence-Only Intervention over 24 Months." *Archives of Pediatric and Adolescent Medicine* 164 (2010): 152-59.

this study, but to break down the analysis with special sub-populations of interest and especially different ethnicities (e.g., Hispanics) and races such as Caucasian, African American, and other races. Another point of interest is to investigate those women who were provided chastity education and to calculate their abortion rates, i.e.,to determine whether the practice of chastity is related to reduced abortion rates. Finally, the influence of faith (i.e., religion) on family planning patterns and abortion (as expressed in the importance of religion and the frequency of Church attendance) would be interest. These religious variables are available in the NSFG data sets and have been studied in the past by this author.³²

Conclusion

I have been a professional nurse involved with health care for almost forty years. In that time, I have heard over and over again the same notion that more contraception and more available contraception are needed in order to decrease unwanted pregnancy and abortion. It seems that it is only through contraception that women can have control of their lives and their careers. Furthermore, the consensus among health professionals is that there is a great need to provide unmarried sexually active adolescents with the pill, the condom, and more recently the Depo injection, emergency contraception, and when women regard themselves as done with their fertility, sterilization.³³ Yet these approaches are not solving the problem of unwanted pregnancy and abortion. This will only happen with a true understanding of human sexuality and marriage, so that the conjugal act can be effectively communicated and lived. The only way to decrease abortion is through chastity-based human sexuality programs for teens and their parents, marriage preparation that includes the use of NFP, under-

³² R. Fehring and J.M. Ohlendorf, "The Relationship between Religiosity and Contraceptive Use among Roman Catholic Women in the United States," *The Linacre Quarterly* 74 (2007): 135-144.

³³ R.E. Lawrence, K.A. Rasinski, J.D. Yoon, and F.A. Curlin, "Obstetrician-Gynecologists' Views on Contraception and Natural Family Planning: A National Survey." *American Journal of Obstetrics and Gynecology* 203 (2010):E-Published ahead of Print; R.E. Lawrence, K.A. Rasinski, J.D. Yoon, and F.A. Curlin, "Factors Influencing Physicians' Advice about Female Sterilization in USA: A National Survey." *Human Reproduction* 26 (2011):106-111.; M. Guiahi, M. NcNulty, G. Garbe, S. Edwards, and K. Kenton, "Changing Depot Medroxyprogesterone Acetate Access at a Faith-Based Institution," *Contraception* 83 (2011): 367-372.

standing that women's roles and careers do not depend on eliminating their fertility, and promoting and defending marriage between a man and woman The pro-life movement needs to embrace these methods. Not seeing the link between contraception and abortion is blinding the pro-life movement and eliminates strategies for effective change in our culture to one of accepting life.

Table 1: Frequency (and Percentage) of Current and Ever Uuse of Common Family Planning Methods and Abortion among the Sexually Active Women (N=6329) in the NSFG Cycle 7 Data Set.

	Current Use Frequency/(Percentage)		Ever Us	se
Method			Frequency/(Percentage)	
Pill (OC)	1138	18.0%	5029	79.5%
Female Sterilization	1061	16.8%	788	14.5%
Condom (Male)	768	12.1%	5850	92.4%
Sterilization (Male)	328	5.2%	695	11.0%
IUD	240	3.8%	236	4.2%
Withdrawal	229	3.6%	3710	58.6%
Depo-Provera	212	3.3%	1601	25.3%
NFP	11	0.2%	242	3.8%
Emergency Contrace	ption 6	0.1%	704	11.1%
Abortion Last 12 Mo Ever Abortion	onths 83	1.3%	972	15.3%

^{*} There is an under-reporting of abortions in the NSFG data set. The 15.3% is based on 6,329 women as the numerator. However, there were 1,900 participants who did not respond to the question of ever having an abortion.

Table 2: Odds Ratio of Ever Having an Abortion by Family Planning Methods among Sexually Active US Women in Cycle 7 of the NSFG

Method	Odds Ratio	o 95% CI	Significance
Condom (Male)	3.089	2.10 – 4.54	< .001
Withdrawal	2.047	1.79 - 2.34	< .001
Emergency contraception	1.860	1.62 - 2.14	< .001
Pill	1.852	1.54 - 2.22	< .001
Vasectomy	1.472	1.26 - 1.72	< .001
IUD*	1.720	1.39 - 2.13	< .001
Depo-Provera	1.668	1.48 - 1.88	< .001
Surgically Sterile	0.832	.721960	< .013
NFP	0.996	0.74 - 1.35	0.979

^{*} IUD used in the past 12 months.

Table 3: Odds Ratio (OR) of Having an Abortion in the Past 12 Months by Family Planning Methods among Sexually Active US Women in Cycle 7 of the NSFG

Method	Odds Rati	io 95% CI	Significance
Surgically Sterile	17.594	2.45 - 126.24	< .001
Condom (Male)	6.770	.945 - 48.52	< .026
Emergency contraception	3.254	2.06 - 5.39	< .001
Withdrawal	3.244	1.86 - 5.66	< .001
Pill	2.125	1.07 - 4.23	< .028
IUD*	2.098	.977 - 4.51	< .097
Vasectomy	1.010	1.00 - 1.02	< .028
Depo-Provera	1.727	1.11 - 2.68	< .014
NFP	0.931	0.30 - 2.93	0.902

^{*} IUD used in the past 12 months.