Context and Effects of Contraception
Pleasure-Seeking at the Cost of Intimacy

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I. Introduction
The purpose of contraception is the prevention of pregnancy. When pregnancy occurs despite the use of contraception, some women choose to give birth and raise their child, but unintended pregnancies that are carried to term are associated with an increased risk of detrimental prenatal behaviors, such as smoking and drinking, and negative health and social outcomes for both mother and child. About half of unintended pregnancies end in abortion in the United States.¹

Among American women aged 15 to 24, overall use of contraceptives rose 10 percent from 1995 to 2002. Use of other reproductive health services (such as pap smears, STD testing and treatment, and pelvic exams) did not vary. Sexually active women who were foreign-born, lacking insurance, less educated, or who had a less educated mother saw a smaller increase or no increase in their receipt of clinical contraceptives.² Oral contraceptives are commonly used in Europe. Thirty percent of the population currently uses them and 45 percent has used them in the past.³

II. Social Effects of Contraception

A. Abortion
Abortion is intrinsic and necessary to the family planning ideology built on universal modern contraceptive use; its proponents say contraceptive use reduces the number of abortions while being unable to replace it or stand without it.
Abortion is said to complete the range of fertility control options and increase trust in the whole family planning system.iv

Abortion, however, is less a capstone of a family planning system than a symptom of deeper social illness. Because many women are willing to contracept or abort, fewer men may plan to marry in the case of a pregnancy, leaving many young women to feel as if their only options are single motherhood or abortion, in the case of pregnancy.v Faced with this choice, many mothers abort.
That contraceptive use fosters an unwillingness to bear a child is seen in contraceptive failure statistics: only 40.3 percent of children conceived as a result of contraceptive failure are carried to term and born. Fifty-seven percent are aborted.\textsuperscript{vi} Abortion rates following contraceptive failure also differ by type of contraceptive: 80.2 percent of children conceived condom-failure pregnancies are aborted, compared to 75.3 percent of those conceived with oral contraceptives, 50.1 percent with IUDs, and 32.9 percent with sterilization.\textsuperscript{viii} (Unintended pregnancies proceed more and more from failed contraception.\textsuperscript{viii}) Among abortion-seeking adult women, 55\textsuperscript{ix} to 62 percent (perhaps up to 64 percent\textsuperscript{x}) conceive despite contraceptive use.\textsuperscript{x} Women who use emergency contraception unsuccessfully are five times more likely to choose abortion than women who do not use emergency contraception.\textsuperscript{xii}

Teenagers seem to use less reliable contraception. Among teenagers seeking abortions, 44.5 percent had relied on condoms to avert pregnancy, 35.6 percent on luck, and 10.9 percent on oral contraceptives.\textsuperscript{xiii} Among abortion-seeking teenagers in Sweden, a country often held up as an ideal among promoters of contraception, approximately half conceive despite using contraception.\textsuperscript{xiv}

In general, contraceptive use is a strong predictor of abortion or attempted abortion. Also, a Danish study found that women with complaints about contraceptive problems or side effects are much more likely to request abortions, especially if a partner disapproves of the contraceptive method.\textsuperscript{xv} The side effects of contraception are greater for women who obtain multiple abortions. Although
one study found similar levels of contraceptive use among women seeking repeat abortions,\textsuperscript{xvi} another study found that they were more likely than women seeking their first abortion to have ever used birth control and to have used contraception when they conceived.\textsuperscript{xvii}

These findings dovetail with another: Abortion has been found to correlate with discontinuing oral contraception. Though the writers of the study suggest that the abortion was the result of discontinuing contraceptive use, the abortions could just as well have occurred before discontinuing use of contraceptives, suggesting that these women intend to rely on abortion rather than contraception.\textsuperscript{xviii} An Australian study found that women who had aborted showed a significant increase in choosing not to contracept.\textsuperscript{xix} Far from making abortion rarer, studies in Spain\textsuperscript{xx} and in Bangladesh\textsuperscript{xxi} have demonstrated that increased contraceptive use correlated with an increase in abortion rates. An Indian study found this to be the case whether women have many or few unintended pregnancies.\textsuperscript{xxii}

Other studies have found that contraceptive use and abortion clinic access are unrelated,\textsuperscript{xxiii} or that a correlation between the two has not been significantly proven.\textsuperscript{xxiv} Still another study found that contraception decreased abortion rates. Teenage abortions in the Netherlands decreased from 100 per 1000 in the 1960s to 16 per 1000 in 1989, due largely to increases in teenage contraceptive use.\textsuperscript{xxv} Yet another found that abortion and contraception follow two patterns based on a nation’s fertility climate: When fertility fluctuates, both abortion and contraceptive use rise. When fertility is stable, abortion falls as contraceptive use rises.\textsuperscript{xxvi}

**B. Adoption**

Women who are noncontraceptively sterile adopt at a rate of 9 percent, compared with only 2 percent of contraceptively sterile women.\textsuperscript{xxvii}

Because contraceptives and abortion became widely available at roughly the same time, such a large portion of unwanted children are now being aborted, rather than adopted, that the number of babies available for adoption has considerably declined. It is difficult to assess the impact of contraceptive use on adoption, but parents who conceive despite using contraception are more likely than their noncontracepting counterparts to abort.

**C. Divorce**

The divorce rate among couples that use artificial methods of contraception is substantially higher than among couples that do not. Among women who practice NFP and have not used artificial contraception, the divorce rate is an astoundingly low 0.2 percent.\textsuperscript{xxviii}
In fact, 50 percent of the increase in U.S. divorce rates from the 1960s through the 1970s has been directly attributed to increased use of contraception.xxx The increased availability of oral contraceptives was likely an even greater causal contributor to the divorce-rate boom than the institution of no-fault divorce laws.xxx

Contraception substantially disrupts the husband-wife relationship and distorts their views of their own sexuality, although disagreement yet exists concerning the manner in which contraception contributes to divorce. One explanation cites the alteration of women’s preferences in sexual partners due to the use of oral contraceptives.xxxi

D. STDs
The availability of emergency contraception may actually increase STD rates by making teenagers more willing to engage in risky sexual behavior. The authors of one study examined annual pregnancy and STD reports in 147 U.K. localities from 1998 to 2004. Many local authorities, seeking to decrease teen pregnancy, made emergency contraception available to teenagers free of charge. The large sample size, varying policy implementation dates, and juxtaposition of enacting and non-enacting districts enabled researchers to estimate with unprecedented precision the effect that this policy had on teen pregnancy and STDs. They found that, while the pregnancy rate was unaffected by the policy, the policy had increased the STD rate by 5 percent. The researchers attributed this counterintuitive result to teenagers’ increased willingness to engage in risky sexual behavior due to the availability of emergency contraception.xxxii

Even UNAIDS, which has historically advocated the distribution of condoms, has acknowledged that “prevention campaigns relying primarily on the use of condoms have not been responsible for turning around any generalized epidemic.”xxxiii Likewise, while countries such as South Africa focused primarily on encouraging condom use only saw their rates of HIV infection rise, while countries like Uganda and Kenya focused on promoting abstinence and saw a two-thirds decline in casual sex and a two-thirds decline in HIV infection.xxxiv Similarly, from 1996 to 2007, Zimbabwe witnessed a nearly 50 percent drop in the number of people living with AIDS; the national prevalence of condom use remained stagnant, but casual, commercial, and extra-marital sex all declined considerably.xxxv

III. Sexual Effects of Contraception
The following section will evaluate the relationship between contraceptive use and sexual morality, satisfaction, desire and arousal, erotic behavior, frequency of sex, number of sexual partners, age at first intercourse, and sexual disorders.
A. Sexual Moral Norms
Oral contraceptive users have less restrictive sexual moral norms on marriage, premarital sexuality, and social expressions of sexuality. Oral contraceptive users were more likely to condone and practice premarital sexual activity. The converse is also true: women not using oral contraception have significantly more restrictive sexual moral norms.

B. Sexual Satisfaction
Some studies found that contraceptive use did not affect sexual satisfaction. One study found that 97.7 percent of oral contraceptive users reported no change in their level of sexual satisfaction after beginning use of oral contraceptives. A Chinese study also found no significant change in sexual satisfaction after three months of using oral contraceptives, injectables, or intrauterine devices. One study found that users of non-hormonal contraceptives reported the highest scores on the Female Sexual Function Index, ahead of contraceptive non-users, oral contraceptive users, and hormonal contraceptive users (respectively), indicating greater satisfaction and sexual functioning. (The Female Sexual Function Index is a survey that categorizes sexual function and dysfunction by desire, arousal, lubrication, pain, orgasm, satisfaction.)

Other studies found a strong positive correlation between sexual satisfaction and oral contraceptive use. One study found women rated their sex lives as better after three cycles of oral contraceptive use. Sexual enjoyment and satisfaction with sexual activities increased with oral contraceptive use. The partner of a user of oral contraceptives may play a smaller role in providing sexual satisfaction; sexual satisfaction decreases more for non-users than for users when their partner becomes disinterested in them.

Finally, some found that contraceptive use diminished sexual satisfaction. One study found that women experienced a decrease in sexual satisfaction and enjoyment in their third, sixth, and ninth months of oral contraceptive use, compared to their baseline report. A study of Turkish women found that condom users reported a negative impact on sexual satisfaction, desire, and frequency of intercourse but the difference was non-significant.

C. Sexual Desire and Arousal
Some changes in sexual interest may exist only in perception. Oral contraceptive users reported a significantly greater frequency of sexual thoughts and fantasies, as well as self-reporting higher sexual interest, than sexually active non-users. However, an objective scale found no significant difference in sexual interest levels. Another study found that 66.6 percent of women experienced no change in sexual desire after beginning oral contraceptive use. Some studies actually indicated that oral contraceptives decreased sexual desire after extended use.
Studies suggest that hormonal contraceptives disrupt the chemical signals by which we transmit and recognize instinctive mating information. During normal ovulation, a woman’s voice rises, she flirts more, dresses more attractively, and seeks out men who look more masculine and have immunity genes that would provide her children with greater pathogen protection. Correspondingly, men are more attentive to her and more attracted to her scent. Oral contraceptive use, however, disrupts these chemical signals, decreasing users’ attractiveness to men and lowering their own desire for traditionally masculine men and for partners with immunities beneficial to their children.\textsuperscript{ii}

Many studies associate contraceptive use with greater sexual desire. The use of a hormonal intrauterine device was significantly correlated with greater sexual desire.\textsuperscript{iii} Oral contraceptive users experienced more interpersonal sexual attraction than non-users.\textsuperscript{iii} At specific points in the menstrual cycle, oral contraceptive users reported higher levels of sexual desire than non-users.\textsuperscript{iv} Before menstruation, women using oral contraceptives reported a greater increase in sexual interest than non-users.\textsuperscript{iv}

Age may affect these results. Women over age 30 express a decrease in sexual interest during their first six months of oral contraceptive use.\textsuperscript{v} Teenagers in another study reported no change in sexual interest upon initiating oral contraceptive use, but experienced decreased sexual interest upon ceasing to use oral contraceptives for three months.\textsuperscript{vi}

The evidence is mixed regarding contraceptives’ effect on sexual arousal, as well. One study indicates that condom use does not predict arousal, erection or lubrication difficulty, pain, or orgasm occurrence for either partner.\textsuperscript{vii} Another indicates that women using oral contraception experienced decreased arousal and psychosexual arousability.\textsuperscript{ix} Oral contraceptive users feel less lubricated than non-users when aroused, but during intercourse, users and non-users have similar complaints. This may perhaps be due to lubrication loss from condoms, which would decrease lubrication during sex but not during arousal.\textsuperscript{x}

D. Sexual Behavior

Studies have found that oral contraception users are able to be more sexually explicit,\textsuperscript{xii} more frequently engage in sexual behaviors that do not result in intercourse,\textsuperscript{xiii} report more sexual interaction, and enjoy increased attachment levels in their relationship due to their partners’ sexual performance.\textsuperscript{xiv} They are also more drawn to psychosexual stimuli such as erotic images,\textsuperscript{xv} which, if they have a widespread effect, will have many negative sexual consequences.\textsuperscript{xvi}

E. Age at First Sexual Intercourse

An early sexual debut is correlated with low use of contraception,\textsuperscript{xvii} which increases as a person ages.\textsuperscript{xviii} This dynamic may result from the common perception that condom use, in particular, diminishes physical pleasure.\textsuperscript{xix}
However, one study found that boys who delay sexual debut are less likely to always use contraception\textsuperscript{lxv} and that girls with later sexual debuts who had not used contraception in their first relationship were less likely to have ever used contraception.\textsuperscript{lxvi}

F. Frequency of Sexual Intercourse

Some studies show that oral contraception users engage in more frequent sexual activity\textsuperscript{lxvii} and sexual intercourse.\textsuperscript{lxviii} Furthermore, after an aggressive condom-promoting AIDS campaign in Switzerland, the number of sexually active teens remained consistent but the report of regular sexual activity (weekly or more) increased from 1987 to 1990.\textsuperscript{lxix} Another study found the converse to be true: Oral contraception users in a recent study of Turkish women reported less frequent intercourse and lower desire.\textsuperscript{lxv}

One study found that different kinds of contraceptives affected frequency of intercourse differently. Oral contraceptives, IUDs, and sterilization increased the frequency and spontaneity, and pleasure of sexual activity, condoms negatively influenced all categories, and natural family planning decreased the frequency and spontaneity of sex while increasing pleasure and sex drive.\textsuperscript{lxvi}

G. Number of Sexual Partners

Many studies have found little or negative association between number of sexual partners and contraceptive use. In general, a greater number of sexual partners may be associated with inconsistent\textsuperscript{lxvii} or reduced\textsuperscript{lxviii} contraceptive use. Having had sexual relations with more partners correlates with lower likelihood of condom use.\textsuperscript{lxix} A study in New England found that women with multiple sexual partners in the previous month were less likely to use oral contraceptives and more likely to use condoms or no method at all, but women with the same partner for the last month or six months were more likely to use oral contraceptives.\textsuperscript{lxx}

Among teenaged girls, contraceptive use decreases as the number of sexual partners increases.\textsuperscript{lxxi} Teenagers who used a condom at first intercourse were not more likely to have more sexual partners than non-users.\textsuperscript{lxxii} However, one study of Swedish college women found that emergency contraceptive use had increased by more than 100 percent, as had number of sexual partners, more sexually risky behavior, higher incidence of STDs, and more “unprotected” intercourse on first dates.\textsuperscript{lxxiii}

H. Sexual and Reproductive Disorders

One study found that the risk of vulvar vestibulitis seemed to increase with longer duration of oral contraceptive use and that beginning oral contraceptive use at a young age appeared more strongly related to the development of vulvar
vestibulitis. The specific hormonal composition of oral contraceptives may also affect the risk. \textsuperscript{lxxxiv}

In another study, male sterilization and female hormonal contraceptive use correlated with sexual disorders in 20 percent of participants and with other sexual problems in 16 percent. Contraception was cited as the main cause of the negative effects. \textsuperscript{lxxxv}

Use of certain IUDs has been found to relieve the pelvic pain of endometriosis, although it is not certain whether the benefits can be sustained for extended periods of time. \textsuperscript{lxxxvi}

**IV. Relational Context and Effects of Contraception**

**A. Abusive Relationships**

The use of contraception by women can elicit violence from some men, depending on the men’s needs and intentions. Contraceptive use can increase in violent relationships, and a significant positive correlation has been found between spousal abuse and contraceptive use. \textsuperscript{lxxxvii} Women who have ever experienced partner violence are 30 percent more likely to use contraceptives. \textsuperscript{lxxxviii} Contraception-using husbands are moderately more likely to force their wife to have sex, even if she is unwilling. \textsuperscript{lxxxix}

Violence can also decrease contraceptive use. Teenage girls are half as likely to use regular contraception when in an abusive relationship. \textsuperscript{xc} Partner violence is significantly associated with partners who are unwilling to use contraception or who want the respondent to become pregnant, with partners who make it difficult to use contraception, and with emergency contraceptive use to prevent pregnancy. \textsuperscript{xi} Women whose partners refuse to use condoms or attempted to prevent them from using contraception are also more likely to experience partner violence. \textsuperscript{xii}

**B. Parent-Child Relationships**

Teenagers' relationships with their parents determine the effectiveness of a parent-child discussion of contraception. Teenagers who have sexuality discussions with their parents and feel that their parents are responsive have a significantly increased likelihood of having used a condom both at their last intercourse and over a lifetime. \textsuperscript{xciii} Forty-nine percent of teenagers who consistently use contraception have frequent discussions with their parents, compared to 38 percent of teenagers who used contraception inconsistently and 31 percent of abstinent teenagers. \textsuperscript{xciv}
Parents are more likely to discuss contraception with their teenager if they believe their teenager is in a romantic relationship or if a daughter has already become pregnant.

Parent-child discussions may influence a teenager’s decision about contraception. Teenagers are more likely to use condoms if they have talked to their parents about condoms and are less likely to be influenced by their peers’ condom habits. Most parent-child discussions of sexuality do include discussions of condom use, especially among parents who encourage their daughters to use clinic services. These parents are also more likely to discuss other contraceptive choices, where to find more contraceptive information, and the use of condoms for the prevention of HIV/AIDS and STDs. Another study, however, found no relationship between consistent condom use and parental communication.

Strong relationships between teenagers and parents may also minimize sexually risky behavior “including early initiation of sexual activity, frequent sexual intercourse, multiple partners, and inconsistent use of reliable birth control.” Adolescents who have a better relationship with their father exhibit fewer risky sexual behaviors and those who have better relationships with their mothers and who have a mother that disapproves of sexual activity are more likely to consistently use contraceptives. Another study, however, found that satisfying parent-child relationships did not influence a child’s likelihood to engage in risky sexual behavior.

Parental monitoring is significantly related to a child’s sexual activity. Adolescents who think their parents do not monitor their activities are more likely to have had sexual intercourse. Adolescents who engage in sexually risky behaviors (intercourse without contraception, frequent intercourse, and intercourse with many partners) report that their parents know less about their friends and activities. Boys who do not talk with their parents or who perceive their relationship with their parents to be weak are more likely to engage in risky sexual behavior.

Results are mixed as to the role that family structure plays in teenagers’ likelihood to use contraception. Adolescents living with a stepparent or a single parent are less likely to use contraception than are adolescents living with both biological parents. Another study found that women living only with their fathers are 2.6 times more likely to use contraception, while women living only with their mothers are 0.5 times less likely to use contraception. Other studies have found that teenagers in single-parent homes adopt more effective contraceptives more quickly and that parental divorce and living with stepparents, a single parent, or cohabiting parents increase an adolescent’s likelihood of contraceptive use.
C. Adolescent Relationships

Adolescent condom use is increased as the use of other contraceptive methods decreases, although youth often move from condoms to oral contraceptives over the first few years of sexual activity. After a large condom-promoting campaign entitled STOP AIDS, a poll of Swiss adolescents found that 34 percent of boys and 27 percent of girls regularly use condoms.

Age is an important factor in contraceptive choice and use. Among unmarried respondents, girls aged 15 to 19 are twice as likely as women aged 30 to 44 to report regular condom use. Similarly, 73 percent of unmarried teenage men used a condom at last sexual intercourse, compared to 55 percent aged 20 to 24 and 29 percent aged 35 to 39. Fifteen percent of unmarried teenage men used withdrawal during their last sexual intercourse, compared with 4 percent of unmarried men aged 40 to 44. Compared to older women, teenagers requesting abortions are less likely to use reliable contraception, with 44 percent relying on condoms, 36 percent on chance, and 11 percent on oral contraceptives.

Education and educational attainment correlate with varying degrees of contraceptive use. Abstinent teens are more likely than consistently contracepting teens, and much more likely than inconsistently contracepting teens, to report receiving As and Bs at school. At sexual debut, however, girls who have better grades or have received education about contraception are more likely to use contraception.

A similar dynamic appears when measuring for religious upbringing. Being raised in a religious home is not related to contraceptive use at first intercourse, but very religious girls are less likely to have intercourse, which changes with frequency of religious attendance. Among boys who are already sexually active, those with more frequent religious attendance and higher cognitive test scores are more likely to use contraception.

Contraceptive use may indicate increased levels of commitment and care for a partner. For boys, but not girls, being in love increases likelihood of condom use. Teenage girls are more likely to always use contraception when they share ethnicities, social networks, friends, and especially ages with their partner. Teenagers are more likely to use condoms when they are in a romantic relationship longer than six months in duration. Girls are increasingly likely to use contraception with every month of the relationship. Interestingly, polyandry is also correlated with increased contraceptive use.

Young men and women are more likely to use a condom if they have discussed doing so. Potential shame may play a role in whether such a conversation takes place. Among young men who have had intercourse, 82 percent say there is little or no chance they would be embarrassed to discuss condom use with a new partner. Nine percent say it is likely or certain that they would be embarrassed.
Virgins reported much higher potential embarrassment about the subject. Thirty-six percent of virgins reported “a 50-50 chance” of embarrassment or greater, compared with only 18 percent among the sexually experienced.

Surprisingly, among young, sexually active black women, a history of STDs or pregnancy does not influence contraceptive behavior.

D. Marriage
Married and cohabiting women have more influence than dating women over choosing a contraceptive method. In contraceptive decisions, women's opinion of oral contraception is more influential than men's, while men's opinion of condom use is more influential than women's. Overall, there is no significant gender difference. Married men are more than twice as likely as unmarried men to believe that decisions about contraception are female-dominated, and previously married men are more likely to have an egalitarian view of contraception. When considering a transition from oral contraceptives, both husbands and wives base the decision on their own preferences more than their spouse's. Almost the opposite is true among diaphragm and condom users. Men place more emphasis on their wife's preferences, and women show equal concern for their own and their husband's preferences.

The use of very effective contraceptive methods is increasing among every marital status group except never-married cohabiting couples. Among highly educated women, never-married cohabiting women are more likely than married women to use very effective contraception. Among women with 12 or fewer years of education, cohabiting women are less likely than women in their first marriages to use effective contraception.

Contraceptive preference and regularity varies by sex, age, and personality, among other characteristics. Self-described high achievers report consistent use of every contraceptive method category. Very orderly husbands are likely to ensure the use of oral contraceptives, condoms, and diaphragms consistently in their marriage; very orderly wives are likely to use diaphragms consistently. Highly autonomous husbands are likely to use condoms regularly, and highly autonomous wives are likely to use diaphragms regularly. Very socially oriented wives report regular condom use, and being older is a predictor for regular oral contraceptive use for wives.

E. Other Romantic Relationships
Condom use seems to decrease as partners become more comfortable with one another. Both men and women report that they would feel more hurt and suspicious if their partner suggested a transition from oral contraception to condoms than from condoms to oral contraception.
Condom use is higher in casual sexual relationships, with friends, with new acquaintances, and with purchased partners than with long-term relationship partners. Women are 28 percent less likely to use a condom after having intercourse with a partner three to 10 times, and men are 17 percent less likely to use a condom with after having had intercourse with a partner 10 times. Women who know their partner has had other sexual partners in the last six months are less likely to use a condom than women who report that their partner had been having sex exclusively with them. Additionally, never-married, non-cohabiting women were more likely than other women to use condoms. Forty-eight percent of unmarried women with multiple sexual partners in the past year had used a condom at last intercourse, whereas 32 percent of those with only one partner in the past year had done so.

Women are more likely to share responsibility for birth control if they are younger, monogamous, and in a relationship less than two years old. They are less likely to share responsibility when they have a partner who has an increased risk for sexually transmitted diseases. Overall, men's influence is equal to women's regarding contraceptive method, but men's commitment to a dating relationship is related to less influence on contraceptive choices, while women's commitment is related to more influence over condom use.

V. Contraceptive Methods and their effects

Twenty-two percent of non-Hispanic white women currently use oral contraception, making it the most common contraceptive method among that racial demographic, whereas female sterilization is the most common method among Hispanic (20 percent) and black women (23 percent). Among black, Hispanic, and white women, condoms are the third most common contraceptive method. Female sterilization is the most common contraceptive method among married and formerly married women.

Many factors affect a couple’s or individual’s decision regarding contraceptive use and which method to employ. The opinions of medical personnel and friends are among these factors.

American women were more likely to receive contraceptive services if they were born in the United States, were non-Hispanic and white, were more educated, had a more educated mother, or if they had trouble with ovulation or menstruation. White women are more likely to use contraception at their sexual debut, regardless of age. Black and white women who are older at their sexual debut are also more likely to use contraception. Young women who had never had intercourse only used contraceptive services if they had trouble with ovulation or menstruation.
Men vary in their use of contraceptives at sexual debut. Hispanic or non-Hispanic black men, men whose mothers did not complete high school, and men whose mothers gave birth first as teenagers are less likely to report that they or their partner used contraception at their sexual debut.\(^{\text{ii}}\)

Having one or more sexual partners in the last year was the strongest predictor that a woman would receive contraceptive services. In Spain, for example, contraceptive nonuse dropped from 50 percent to 20 percent from 1997 to 2007. In both survey years, lack of sexual relationships was the most common reason for nonuse.\(^{\text{iii}}\) Of those who do use contraceptives, women are more likely to report consistent contraceptive use than men (87 percent v. 76 percent).\(^{\text{iv}}\) A study of members of the United States Army found that sexually active male soldiers and their partners were 51 percent more likely to use “highly effective” birth control (such as Depo-Provera, sterilization, or intrauterine devices) than sexually active female soldiers and their partners.\(^{\text{v}}\)

One study found that the level of education attained by a woman and her parents played little part in the woman's decision to contracept,\(^{\text{vi}}\) although if a woman was exposed to social change by living near a school during childhood or adulthood, her chances of using contraception increased. However, another study found that children’s enrollment in school increased their odds of using permanent contraception by 40 percent and that women married to educated husbands had odds of using permanent contraception 41 percent higher than women married to husbands who had no education. Each additional year of a husband’s education correlated with a 2 percent increase in a wife’s likelihood of using permanent contraception.\(^{\text{vii}}\)

Employed women are more likely to use oral contraceptives and less likely to use condoms than unemployed women,\(^{\text{viii}}\) and women in the “professional and managerial class” are about 50 percent more likely to use contraception than “semiskilled and unskilled manual” women.\(^{\text{ix}}\) However, the availability of women’s jobs and participation of women in the labor force in an area is not related to the use of effective contraceptives.\(^{\text{x}}\)

One study found that the most common reasons not to use contraception are unplanned intercourse, alcohol consumption, “taking a chance,” and not being concerned about becoming pregnant.\(^{\text{x}}\) Another study found that choosing not to contracept is not related to religion, frequency of religious attendance, or the “importance of religion in daily life.”\(^{\text{xi}}\) Moreover, sexually active, religiously oriented students do not differ significantly in condom use at last intercourse from non-religiously oriented students.\(^{\text{xii}}\) More effective contraceptive use, on the other hand, is associated with religious affiliation and concentration of religious individuals in a given community.\(^{\text{xiii}}\)
Discontinuation of oral contraceptives is most likely within the first month of use. Eleven percent of women discontinued their use of oral contraceptives within the first month, and 15 percent did so by the end of the second month. Thereafter, the discontinuation rate was very small. New users were more likely to discontinue their use than women merely switching oral contraceptive methods. Of the 29 percent of oral contraceptive users who discontinued use, 65 percent did so because of the its side effects, 13 percent because of worry about side effects, and 13 percent because they were unhappy with changes in their menstrual cycle.

In one study, four variables explained 87 percent of the variance in predicting contraceptive discontinuation: emotional side effects, variation of sexual thought, the effect of the pill on pre-menstrual syndrome, and change in psychosexual stimulation. Women are more likely to discontinue pill use if they experience drops in sexual thought frequency, sexual arousal, increases in PMS pain, or emotional side effects. Moreover, a greater initial desire for pregnancy predicts inconsistent contraceptive use six months later. Contraceptive use also declines after a woman's first pregnancy due to contraceptive-caused illness or perceived danger.

Women report the least dissatisfaction with sterilization (4 percent), followed by oral contraception (14 percent), natural family planning (33 percent), IUDs (34 percent), and condoms (42 percent). Women better at remembering and performing planned actions are more satisfied with the pill and less likely to report stress while using it.
A. Barriers

Condoms, diaphragms, cervical caps, and contraceptive sponges are all examples of barriers, though condoms are by far the most common. Many individuals choose barrier contraceptive methods because of negative perceptions of hormonal and surgical contraception. Condoms are designed to protect against sexually transmitted diseases as well as prevent pregnancy. (Couples that discuss “safer sex” before engaging in intercourse are almost seven times more likely to use a condom.) Diaphragms, which are designed to cover the cervix, may also prevent sexually transmitted diseases, but contraceptive sponges do not.

One study found that neither fear of consequences nor internal or external emotional influences actually influenced condom use. Concerns about HIV, STDs, possible pregnancy, sexual arousal, and intoxication of either partner were not influential in predicting condom use. Self-efficacy, the feeling of power over oneself to influence condom use, however, is a significant indicator of condom use, making condom use 1.29 times more likely with a regular partner and 1.58 times more likely with a casual partner.

Older respondents to one study on contraceptive use reported being less likely to habitually use condoms or to report peer influence on condom use. (Sixty-eight percent of 15- to 19-year-old men reported using a condom every time they had intercourse during the four weeks prior to the survey, whereas 26 percent of 40- to 44-year-old men did so.) Furthermore, stable relationships are associated with less condom use. Thirteen percent of married men, 18 percent of cohabiting men, 34 percent of non-cohabiting formerly married men, and 63 percent of never-married men use condoms.

Among college students, men are more likely than women to use condoms, and women with sensation-seeking personalities are more likely than other women to
use condoms. Many condom users complain of decreased sensation during sex both for themselves (77.2 percent of men and 39.6 percent of women) and their partners (33.7 percent of men and 58.3 percent of women). Both men and women dislike the smell and the process of applying condoms, and nearly one third of users among both sexes (29.1 percent of men and 30.2 percent of women) reported “it just didn’t feel right.”

One study found that many young women do not use condoms because they disrupt sex, decrease their physical enjoyment, cause pain, or are awkward to use. Women reported more discomfort with a condom, indicated that condoms signify a lack of trust, and complained about the taste of condoms. Some reported that condoms interfered with their arousal and ability to orgasm, or that condoms made them feel “distant” from their partner. Only a low percentage indicated the use of condoms suggests disease. Age, education, and marital status all had moderating effects on various findings.

Desire for sexual closeness discourages men and women from physical, active methods of contraception. Additionally, contraception that impedes the natural progression of sex is often considered disruptive and because of this has a bad reputation among users and non-users. The disruptive nature of many barrier methods can also easily lead to contraceptive misuse.

The choice of condom or oral contraceptive is indicative of more than mere prevention of pregnancy among contracepting couples. Couples in one study perceived the transition from condoms to oral contraception positively; those who did so were presumed to have “a more enduring relationship.” By contrast, couples perceived a transition from oral contraception to condoms more negatively. The movement to condoms from oral contraception was associated with STDs, infidelity, and lessened love.

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*Had had sexual intercourse in the three months preceding the interview.
B. Hormonal Contraceptives

Hormonal contraceptives are administered in a variety of manners, but their unifying characteristic is the fact that no physical barrier is applied during sexual intercourse. Oral contraceptives, injectables, rings, implants, hormonal intrauterine devices, and patches are all considered hormonal contraception. Emergency contraception, which is administered following non-contracepting sexual intercourse, is also considered hormonal contraception. Hormonal contraception acts either by preventing ovulation, fertilization (conception), or implantation of a blastocyst (embryo).

Hormonal intrauterine devices (or hormonal IUDs) and birth control implants are longer-lasting methods of contraception. The birth control implant Implanon is inserted into the skin of the arm and is effective for up to three years.\textsuperscript{clxxxv} The hormonal IUD Mirena is effective for five years.\textsuperscript{clxxxvi}

Women who use oral contraceptives are more likely to have graduated from high school, be white rather than black, and have private insurance than are women who do not use contraception.\textsuperscript{clxxxvii} For every one-point increase on the “pregnancy avoidance scale,” respondents were 14 percent more likely to use birth control methods that they perceived as being more effective, such as oral contraceptives or injectables.\textsuperscript{clxxxviii}
Birth Control Pill Use* by Sexually Active** High School Students by Race/Ethnicity (Selected Years) 1993-2007

Source: Child Trends Data Bank, citing CDC Morbidity and Mortality Weekly Report

*Reported using birth control pills at last intercourse.
**Had had sexual intercourse in the three months preceding the interview.
C. Non-hormonal Intrauterine Devices (IUDs)
Non-hormonal intrauterine devices operate without the assistance of hormones. The IUD ParaGard contains copper, and may work by preventing fertilization (conception) or by preventing the implantation of a blastocyst (embryo).

D. Sterilization
Vasectomies (for men) and tubal ligations (for women) are both forms of sterilization. In a vasectomy, a man’s vasa deferentia are severed, thereby preventing the release of sperm. Tubal ligation involves the blocking or severing of a woman’s Fallopian tubes, which prevents the release of eggs to the uterus.

E. Natural Methods
Abstinence, Natural Family Planning (NFP), and the Lactational Amenorrhea Method (LAM) are all natural methods of avoiding pregnancy. Abstinence from sexual activity is 100 percent effective at preventing pregnancy and sexually transmitted diseases. NFP involves periodic abstinence during a woman’s fertile days, as gauged by variations in her basal body temperature and the consistency of her cervical mucus and by tracking her menstrual cycle on a calendar. NFP involves no drugs, procedures, or appliances. LAM may also be considered part of NFP; there are many ways of practicing LAM, but the basis of the practice is breastfeeding to prevent the re-starting of the menstrual cycle following pregnancy.

1. Biological Effects
Studies have examined links between contraception and significant health problems, questioning whether contraception affects mortality rates and incidence of cancer, STDs, heart disease, stroke, loss of bone density, and other side effects.

A. Mortality
Contraceptives do not significantly affect women's mortality rates. From 1950-1975, as birth-related deaths significantly declined, deaths attributed to contraception, particularly oral contraception, increased. A later study found that mortality among oral contraception users and non-users was nearly identical.

B. Cancer
One study found no association between parity (the condition of having borne children), oral contraceptive use, and various cancers. Another study found that oral contraception use decreased the risk of many cancers but found no difference in the risk of breast cancer between users and non-users. If a woman used oral contraceptives for more than eight years, however, her risk of any cancer increased. Another study found that women who used oral contraceptives were more likely to die from cervical cancer than oral
contraceptive non-users, but less likely to die from endometrial cancer or sarcomas.\textsuperscript{cxxxv} (The endometrium is the glandular mucous membrane that lines the uterus. A sarcoma is a malignant tumor in connective or nonepithelial tissue.)

Women who had obtained a tubal ligation had a lower risk of mortality due to breast cancer.\textsuperscript{cxxxvi} Risk of breast cancer was almost twice as high among contraceptors before first birth, and it may increase with duration of use.\textsuperscript{cxxxvii} Women who had ever used oral contraceptives had a 30 percent higher risk of breast cancer; risk of breast cancer was 60 percent higher among current or recent users and 20 percent higher among previous (but not current) users.\textsuperscript{cxxxviii} Contracepting women under age 35 who were diagnosed with breast cancer have a lower five-year-survival rate than non users.\textsuperscript{cxxxix}

Women who used oral contraceptives had a 40 percent lower risk of ovarian cancer and their risk continued to fall with duration of use.\textsuperscript{cc} Tubal ligation also lowered the risk of ovarian cancer, but the use of IUDs increased the risk of ovarian cancer.\textsuperscript{cci}

C. Sexually Transmitted Diseases (STDs)

Condoms are the only form of contraception lessons the transmission of STDs (also known as sexually transmitted infections, or STIs).\textsuperscript{ccii} Despite having similar numbers of partners and rate of intercourse, those who used a condom at sexual debut were half as likely to test positive for gonorrhea and chlamydia as those who did not.\textsuperscript{cciii} Condoms provided an estimated 85 percent reduction in HIV/AIDS transmission risk. Seroconversion, the development of antibodies in response to infection, occurred at a rate of 0.9 per 100 person years for those who always used condoms, compared with 6.7 for those who never used condoms.\textsuperscript{cciv}

As condoms are the only form of contraception that somewhat protects against STDs, their failure rates are important. Condom-using men aged 20 to 39
reported a 2.7 percent rate of failure by breakage and a 2.7 rate of failure by slippage. These rates increased among lower-income men, perhaps due to their increased likelihood to use condoms that were cheaper, and thus of inferior quality, and for those engaging in high-risk sexual behavior.\textsuperscript{ccv} Although many males prefer the polyurethane condom, the latex condom broke 1.1 percent of the time and slipped 0.6 percent of the time, compared to the 72 percent breakage rate and 3.6 percent slippage rate for the polyurethane condom.\textsuperscript{ccvi}

Though condoms reduce rates of STDs, they provide less protection against genital ulcer diseases, which may be transmitted by exposure to the female by male genital areas not covered by a condom.\textsuperscript{ccvii}
D. Heart Disease
Evidence regarding the role of oral contraceptives in heart attacks is conflicting. One study does suggest that heart attack risk is increased slightly by oral contraceptive use. Another suggests that while oral contraceptives by themselves do not increase heart attack risk, they may increase risk in women already prone to heart disease characterized by low blood supply. Still another study suggests that oral contraceptives increase the risk of heart attack only for women who smoke.

E. Stroke
Studies agree that thromboembolic disease and attacks increase in incidence among oral contraceptive users. Furthermore, the risk of cerebral thromboembolic attack increases exponentially with age. Among women using oral contraceptives, a 40-year-old faces a risk of attack 10 times greater than that of a 20-year-old.

F. Bone Density Loss
As women age, and particularly during menopause, bone density loss is natural. However, Depo-Provera (DMPA), an injectable contraceptive, may dangerously accelerate bone density loss. For this reason, it carries an FDA black box warning. The black box warning is the most serious warning the FDA can apply to a prescription drug label and is reserved for drugs that pose special risks and may lead to death or serious injury. DMPA has been known to cause bone loss that worsens with duration of administration and continues ceasing its use. Some studies have found that the bone density of exposed women may return to the bone density levels of unexposed women thirty months after ceasing injections.
G. Uterine Perforation
One study found that the insertion of a levonorgestrel-releasing intrauterine system, a specific type of hormonal IUD, was associated with a uterine perforation in an estimated 2.6 of 1000 cases, whereas the insertion of non-hormonal IUDs was associated with uterine perforations in 0-1.3 of 1000 cases.

H. Ectopic Pregnancy
Women who have had tubal ligations and become pregnant two or more years thereafter are most likely to have an ectopic pregnancy, a pregnancy in which the baby develops outside the uterus. Women who have had tubal ligations reversed or who become pregnant while using an IUD are also at increased risk of ectopic pregnancy.

I. Miscellaneous Side Effects
Most contraceptives have well-known side effects, including depression, decreased libido, bleeding, menstrual irregularities, and weight gain.

Women using DMPA, however, were less likely than non-contraceptors to experience bloating and cramping during menstruation, and more women reported that oral contraceptives helped their pre-menstrual syndrome than reported that oral contraceptives made it worse.

2. Psychological Effects of Contraception
Many studies have examined the relationship between contraception and significant issues in psychological health. The following section will discuss the effect (if any) of contraception on general quality of life, affect and mood, jealousy, anxiety, depression, and suicide rates.

A. Quality of Life
Many new oral contraceptive users report increased overall well-being. Four months after the introduction of oral contraception, quality of life was reported as having improved for 56 percent of users, remaining unchanged for 18 percent, and having decreased for 26 percent. After three cycles of oral contraceptive use, women have shown increased self-rated quality of life across a variety of categories, including mood, living situation and social and family relationships. Some studies, however, have found no association between quality of life scores and contraceptive use, whether oral contraceptives, injectables, or IUDs.

Women who continued to use oral contraception for more than three months experienced different results, depending on their reasons for use (medical v. contraceptive). Those using oral contraception as medical treatment for menstrual pain experienced increased physical, psychological, social, and
environmental well-being, and those using oral contraception as treatment for an irregular cycle experienced increased social well-being, but those using oral contraception to prevent pregnancy reported lower social, psychological, and environmental well-being, and increased physical well-being. All users reported improvement in overall well-being, regardless of their reason for oral contraceptive use.\textsuperscript{cxxxii}

New contraceptive users initially reporting poor quality of life reported a 50 percent decrease in quality of life after three cycles of oral contraceptive use. By contrast, women who initially reported high quality of life reported a score increased by more than 50 percent.\textsuperscript{cxxxiii} Thus it seems oral contraceptives may amplify existing states.

B. Mood and Affect

The term mood describes extended patterns of feelings, whereas affect describes quickly and regularly changing feelings. One study compared mood to climate and affect to weather.\textsuperscript{cxxxiv}

Oral contraceptive use has been associated with reports of increased positive affect\textsuperscript{cxxxv} and decreased negative affect, compared to oral contraceptive non-users, oral contraceptive initiators, and DMPA users.\textsuperscript{cxxxvi} Oral contraceptive users also reported less variation in both positive and negative affect.\textsuperscript{cxxxvii} However, one study found that 20 first-time oral contraceptive users, 52 long-time oral contraceptive users, and 57 women who had never used oral contraceptives displayed similar changes in both positive and negative affect over their whole menstrual cycle and during the different cycle phases.\textsuperscript{cxxxviii}

According to one study, there is simply no way of predicting which combinations of oral contraceptives will negatively affect which women's mood.\textsuperscript{cxxxix} One study found that oral contraceptive and DMPA use also contributed to decreased mood swings, compared to hormonal contraceptive non-users.\textsuperscript{cxl} A large study of mostly married women with children found that women with a history of depression tend to respond negatively to oral contraceptives, while women with the early onset of premenstrual mood disturbance or dysmenorrhea are more likely to report an improvement with oral contraceptives.\textsuperscript{cxli}

A large percentage of women, whether depressed or not, reported adverse mood changes in response to contraceptives.\textsuperscript{cxlii} Oral contraceptive users display greater mood deficiencies than non-users (anger, emotional behavior, social interaction, alertness, intellectual functioning, anxiety, tiredness, depression, and moodiness). Switching to a new contraceptive reduced those negative scores to insignificance.\textsuperscript{cxliii} However, oral contraceptive non-users frequently experience greater menstrual pain, which can obscure oral contraception's effect on mood. When users and non-users have the same initial level of depression or menstrual
pain, users report more negative mood effects. Oral contraceptive users also reported greater irritability and tension in the postmenstrual week.\cite{cxliv}

Finally, one study of postpartum women found that almost twice as many women who reported that oral contraceptives had, in the past, affected their mood developed either post-partum depression or “the blues” than women whose moods were not affected by oral contraception \cite{cxlv}

C. Jealousy and Anxiety
Higher estrogen levels in hormonal contraceptives have been found to increase jealousy in women, but higher progestin levels have not.\cite{cxlvi}

Contraception may reduce anxiety during sex due to decreased worry of pregnancy or disease, especially among the socially advantaged, who perhaps perceive pregnancy to have a larger opportunity cost and go to great contraceptive lengths to avoid it.\cite{cxlvii} Contraceptives may also reduce anxiety by alleviating heavy menstrual flows.\cite{cxlviii}

D. Depression
Evidence regarding the links between contraception and depression vary. Most find that contraception reduces depression, some that it has no effect, and some that contraception increases depression. There is some agreement that women with previous episodes of depression are more likely to react negatively to oral contraception.

Some oral contraceptive users reported less severe depression while menstruating, but not premenstrually.\cite{cxlxi} Other oral contraception users reported decreased premenstrual depression as well.\cite{cxl} Depression was less severe among combined oral contraceptive users than among non-hormonal contraceptive users.\cite{cxl} After three cycles, 70.6 percent of women complaining of problems before using that contraceptive reported improvement in depressive moods, 19.4 percent reported no change, and 10 percent reported worse depressive moods.\cite{cxl} One study found a significant decrease in depressive symptoms after administering oral contraceptives with a particular preparation of the progesterone hormone.\cite{cxl} Another study found that oral contraceptive non-users were 1.43 times more likely to be depressed than oral contraceptive users, but the relationship disappeared after controlling for urban or suburban residence, country of birth, marital and employment status, education, and age.\cite{cxl} Compared to contraceptive users, non-users generally experience more fluctuation in depression levels over their cycle, with lower scores at the beginning and higher scores at the end.\cite{cxl}

In one double blind study, there were no significant differences in depression between girls using oral contraception and those taking a placebo.\cite{cxl}
Some studies have found that oral contraceptive users\textsuperscript{celxvii} and Depo-Provera\textsuperscript{celxvii} users reported more depression than non-users. Beginning hormonal contraceptives before age 13 was related to a doubled likelihood of having highly depressive symptoms, compared to women who began hormonal contraception at age 18 or older.\textsuperscript{celxi} Furthermore, one study found that using oral contraception for non-contraceptive purposes (as opposed to contracepting oral contraceptive users) increases likelihood of experiencing depressive symptoms by a factor of 1.32.\textsuperscript{celx}

E. Suicide
Hormonal contraceptive users are at increased risk of committing suicide. Omitting those who ceased their use of hormonal contraceptives within 12 months of beginning their regimen, women using hormonal contraceptives were at 2.4 times greater risk of suicide and suspected suicide. Current users were at 1.42 times greater risk of attempted suicide than non-users, and former users at 2.12 times greater risk. The suicide attempts of those who had ever used oral contraception were fatal more than twice as often as the attempts of non-users.\textsuperscript{celxi}

Current hormonal contraceptive use was associated with increased rates of suicide and violent and accidental deaths. Compared to non-users, hormonal contraceptive users had higher rates of depression, anxiety, fatigue, neurotic symptoms, sexual disturbances, compulsion, anger, and negative menstrual effects. It is not certain, however, whether these maladies are caused by the hormones or the psychological impact of the contraceptive behavior itself.\textsuperscript{celxii}

Diaphragm users were at only one fourth the risk of oral contraceptive users of self-poisoning.\textsuperscript{celxiii} Diaphragm users were found to attempt suicide 40 percent less frequently than users of oral contraceptives or intrauterine devices, perhaps reflecting the more cautious and conscientious personalities of women who chose this method; diaphragm users also have low rates of accidental injury. This study, however, includes data concerning oral contraceptives that are no longer used; therefore, the comparisons may not hold for modern low-dose pills.\textsuperscript{celxiv}

It is not certain whether the amplified suicide risk of oral contraceptive users was caused by these drugs or whether women who chose this method were predisposed to suicide.\textsuperscript{celxv} Oral contraceptives are so routinely prescribed, however, that it is difficult to see what factors could draw psychiatrically troubled women so regularly toward oral contraception, rather than another method.\textsuperscript{celxvi}

VI. Conclusion
Contraception hurts individuals, families, and society. (Etc etc etc)
Unintended pregnancy is a significant health problem in the United States.\textsuperscript{celxvii}
I'm including this to quote it...Is unintended pregnancy really a health problem? Is that what it is? [Or are these drugs we're giving ourselves the real health problem as well as a social problem]

422 at risk women in New England

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