

WHAT KEEPS THE STORK AWAY? THE FACTORS THAT INFLUENCE PREGNANCY
PREVENTION KNOWLEDGE IN YOUNG ADULTS

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WHAT KEEPS THE STORK AWAY? THE FACTORS THAT INFLUENCE PREGNANCY
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Abstract

About half the pregnancies in the United States each year are accidental. Unintended pregnancies keep women out of the workforce and prevent many people from continuing their education and improving their economic state. This paper investigates the factors that influence young adults' knowledge of pregnancy prevention through data collected and organized by the Guttmacher Institute. This investigation takes into account types and sources of sex education, levels of general education, race and ethnicity, income, gender, age, religion and pregnancy history. The results show that contraceptive sex education is more effective than abstinence-only or abstinence-focused sex education. Women have much higher levels of pregnancy prevention knowledge than men and both black and white young adults have higher pregnancy prevention knowledge levels than other races. Higher education levels are also correlated with greater pregnancy prevention knowledge. Additionally, people who have been pregnant or whose partner has been pregnant in the past have a higher level of pregnancy prevention knowledge. Source of sex education, income, age, and religion did not have any significant effect on pregnancy prevention knowledge.

KEYWORDS: Sex education, pregnancy prevention, contraception, young adults

ON MY HONOR, I HAVE NEITHER GIVEN NOR RECEIVED UNAUTHORIZED
AID ON THIS THESIS

Margaret Bursch

Signature

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Introduction

By age 45, over half of the women in the United States will experience an unplanned pregnancy, one third of which end in abortions. Unintended pregnancies account for 51% of total pregnancies in the United States. Of all unintended pregnancies, 41% are due to a misuse of contraception rather than the absence of contraception (Guttmacher Institute 2012). This paper examines what types and sources of sex education are most effective in increasing knowledge about pregnancy prevention, and which demographics are most in need of this knowledge. Increased knowledge about preventing unintended pregnancies can help reduce unintended pregnancies in the future.

One in five sexually active teenagers in the United States will become pregnant before they turn 19, and by age 19, 80% of young adults are sexually active (Dawson 1986). Moreover, teen pregnancy rates are even higher among racial minorities and low-income households (Oettinger 1999). A woman's ability to avoid an unintended pregnancy and plan the births of her children is shown to reduce the gender gap in income by 10%. Women who can postpone pregnancy can continue their education and become more active members of the workforce (Bailey, Hershbien & Miller 2012). The benefits of preventing unplanned pregnancies span over age, income and race, positively influencing women as well as the economy of the United States.

The United States has one of the highest rates of unplanned and teen pregnancies among developed countries. Even so, unlike most developed countries, sex education is only mandated in 22 of the 50 states. While politicians fight over the issues of sex education and contraception, unintended pregnancies cost the U.S.

government 21 billion dollars in 2010 alone (Guttmacher Institute 2015). For each dollar spent on family planning, government spending on pregnancy related care is reduced by \$1.47 (Guttmacher Institute 2015). Not only does family planning reduce government spending, it also increases GDP 0.25% for every 1% decrease in fertility (The Aspen Institute 2013). Although sex education is controversial, it is evident that reducing unintended pregnancies reduces government spending and increases GDP.

In addition to reducing government spending, family planning improves family life. Children of planned pregnancies tend to have a higher quality of life and better health than children of unplanned pregnancies. Women whose pregnancies are planned are twice as likely to use prenatal care during their pregnancies than women whose pregnancies are unplanned. Prenatal care has shown to improve the health of a child throughout his or her entire life (Delgado-Rodríguez 1997). Children whose conceptions were intended also have a lower chance of suffering from child abuse or neglect from their parents than children whose conceptions were unplanned (Zuravin 1989). These studies emphasize that providing women with information about pregnancy prevention reduces unplanned pregnancies and helps women provide their children with a better quality of life.

Comprehensive sex education that emphasizes contraceptive methods is more effective than abstinence focused or abstinence only sex education. Young adults with lower levels of education have less information about pregnancy prevention than their better-educated peers. Men also have much less knowledge than women about pregnancy prevention and need more education on the topic. White and black

young adults are better off in the area of pregnancy prevention knowledge than other races included in the study. Although a number of the variables considered in this investigation are significant, many of the variables such as age and source of sex education have no influence on pregnancy prevention knowledge.

These insights will assist organizations, parents, and schools allocate resources to help young adults prevent unintended pregnancies. The proper allocation of resources will allow the country's young people to become educated and active members of the workforce before starting a family. Their children will benefit as well; estimates show that the offspring of women who used contraceptive methods have incomes on average 20% to 30% higher than those whose births were unintended (Bailey, Hershbien & Miller 2012).

This paper examines the extent to which sex education, source of sex information, level of general education, race and ethnicity, income, age, gender, religion, and past pregnancies influence the accuracy and amount of knowledge young adults have about preventing pregnancy. The following section is an overview of previous studies regarding different factors that influence unplanned pregnancies and contraception knowledge. The third section introduces the model. The fourth section explores the data, describes the sample population, and explains the limitations of the data used. The remainder of the paper details the model's results and offers conclusions.

A Review of Literature

This paper explores the extent to which various factors influence the level of pregnancy prevention knowledge among young adults. The factors explored in this paper are: type and presence of sex education, source of sex information, level of general education, race and ethnicity, income, age, gender, religion, and past pregnancies. Earlier research considered each of these factors, but no paper examines all of them in the context of American young adults. Additionally, many studies analyze the extent to which these factors reduce unplanned or teen pregnancy but very few include the knowledge of the participants on the topic of pregnancy prevention.

Variation in Types and Methods of Sex Education

Sex education varies in content and method between educators, programs, and schools. Many studies such as Wellings et al. (1995) and Denny and Young (2006) investigate the effects of various sex education methods on the knowledge young people have about preventing pregnancy. Comprehensive sex education increases knowledge about preventing pregnancy, but is controversial because many people fear that teaching young people about sex will increase sexual activity and lower the age of first coitus (Wellings et al. 1995). Studies show, however, that although some abstinence-only sex education courses do postpone the age of first sex, one abstinence-only program increased sexual activity (Denny & Young 2006; Christopher 1995). Wellings et al. (1995) find that comprehensive sex education programs postpone first sex and when students of these programs do have sex, they are more likely to use a method of contraception. These studies show that young

adults, who are exposed to comprehensive sex education, practice abstinence as much as their abstinence-only educated peers. After receiving comprehensive sex education young adults are more likely to use contraceptives when they are sexually active.

A study on college students shows that knowledge about preventing pregnancy does not always correlate with students' actions (Baldwin 1990). After taking a comprehensive sex education class for two months, students had increased knowledge of pregnancy prevention, but their risk-taking actions around sex did not change (Baldwin 1990). Another study finds that teaching students about contraception and risks is not always effective on its own—students need to build their self-esteem and learn communication and negotiation skills (Kirby 2002). Franklin and Corcoran (2000) find that courses that taught problem solving and methods to avoid peer pressure were most successful in reducing unplanned pregnancies compared to other curricula. Other topics that are effective as a part of a sex education course are risk management, contraceptive use, and promotion of norms against risky sexual behavior (Mellanby et al. 1995; Christopher 1995).

Access to contraception along with education increases the effectiveness of sex education. Clinics inside schools that provide contraceptives are more effective than sex education classes in increasing knowledge about preventing pregnancy as well as reducing pregnancy rates. However, simply providing contraception in high schools was less effective in preventing pregnancy than comprehensive sex education courses (Franklin & Corcoran 2000). Frost and Forrest (1995) find the most effective program, which reduced teen pregnancy by 22%, is a program that

provided access to contraceptives and offered information about contraceptives as well as targeting younger students and students who were not yet sexually active.

Source of Sex Education

Several studies investigate the sources of knowledge regarding sex and pregnancy prevention, however there is very little congruency across studies. Moreover, the studies do not assess the accuracy of knowledge from each source. Measor (2007) finds that young women get their information about sex and pregnancy mainly from their mothers whereas young men tend to get information from media and pornography. A study done in Scotland, however, finds that the most common source of knowledge for 14-16 year olds was school, followed by magazines, friends, and family (Graham, Green & Glasier 1996). Another study found that both men and women get their knowledge about sex from fairly similar sources; friends being the most common followed by books, media, parents and teachers. However, men's sixth source is pornography and women's is church (Duncan & Nicholson 1991). In Honduras, the leading source of information about emergency contraception (often referred to as Plan-B or the morning-after pill) is friends and family, followed by TV, videos, radio, and printed material (Garcia et al. 2006).

Although the sources of sex education vary greatly between populations there are a few common sources. Some of the sources that are frequently used are schools, clinics, media and families. However, there is limited research on the reliability of each of these sources of sex education information.

Level of General Education

Various researchers including Dreze and Murthi (1999) and Andalon et al. (2014) study the relationship between the years a woman is in school and her knowledge of contraceptives. Dreze and Murthi (1999) research the factors that influenced fertility rates in India. They conclude that urbanization, the poverty index, and male literacy rate have no impact on fertility, while female literacy has a significant impact on fertility. Female literacy and fertility are negatively correlated, supporting the claim that general education for women increases their ability to prevent unplanned pregnancies.

Andalon, Williams and Grossman (2014) find similar results among women in Mexico. The number of years women receive formal education is positively correlated with the number of contraceptive methods they are aware of. Women who complete at least one year of school past elementary school know on average 2.1 more methods of contraception than those whose education ends after the fifth grade. These women were also 65% more likely to use a contraceptive method than their peers who did not attend secondary school. In an investigation of birth timing in the United States, Cigno and Ermisch (1989) find that education influences fertility. They find that women with more years of formal education or work experience tend to delay having children longer and have fewer children. This indicates that women with higher levels of education have more knowledge about and access to contraception, allowing them to control when they become pregnant.

Race and Ethnicity

Race and ethnicity also play a significant role in the amount of knowledge a person has about pregnancy prevention. White young adults are more likely to have taken a sex education class before first coitus than Hispanic or black young adults. By age 16, 40% of white girls have taken a sex education class but only 33% of black girls and 28% of Hispanic girls (Marsiglio & Mott 1986). One study contradicts these findings; Dawson (1986) finds that black women are actually more likely to receive formal sex education than other races.

Dawson (1986) also studies less formal sex education and finds that more white women discuss menstrual cycles and how pregnancy occurs with their families than black women. However, more black women discuss contraception and venereal diseases with their families. The previous studies show the discrepancy between races when receiving sex education. This discrepancy is exemplified in that 33% of white teenagers and only 16% of black teenagers can identify the time in the menstrual cycle when a woman is most fertile (Dawson 1986). Pregnancy rates also vary significantly between races and are lower among young white women than racial minorities (Oettinger 1999). In 1988, the teenage pregnancy rate was 20 out of 1000 women for white women and 48 out of 1000 for black women (DeRidder 1993). All of the above studies conclude that there are large discrepancies between races both in access to sex education and unplanned pregnancy rates.

Socio-Economic Status

Income also affects the knowledge and ability people have to prevent unplanned pregnancies. Although women with socioeconomic disadvantages are just as likely

to initiate sex as their financially better-off peers, premarital childbirth is most common in poor and economically isolated areas (Singh, Darroch, & Frost 2001; Zabin & Hayward 1993). Jacobey et al. (1999) find that women who suffer from financial stress tend to have more pregnancies, and their pregnancies are closer together than the rest of the population.

Kearny and Levine (2009) find that income-based waivers, which allow access to birth control reduced pregnancy rates, especially among teens. Socio-economic disadvantage not only affects access to birth control but also knowledge about it. Palermo, Bleck and Westley (2014) find that knowledge about contraception increased with household wealth. Singh, Darroch and Frost (2001) find that unplanned pregnancies are higher in the United States than other developed countries due partially to the widespread socio-economic disadvantage in the United States. Singh, Darroch and Frost (2001) also suggest that in order to increase adolescent knowledge about pregnancy prevention, steps must be taken to improve economic discrepancy. These studies indicate that economic stress and disadvantage tend to lead to higher rates of unplanned pregnancies.

Age

Pregnancy prevention knowledge and age are related as young girls are less likely to be exposed to sex education and some older women are unaware of newer contraceptive methods (Dawson 1986). Garcia et al. (2006) find that the age group that was most likely to know about and most willing to use emergency contraception was the 20 to 24-year-old age group. However, in another study,

knowledge of emergency contraception simply increased with age (Palermo, Bleck & Westley 2014).

Zabin et al. (1986) find that younger adolescents have less knowledge about pregnancy prevention and are less likely to use contraception than their older peers. However, the age at which young adults are receiving sex education is declining and more 15-year-olds than 17-year-olds or 19-year-olds report having taken a sex education class before their 15th birthday. Despite the increase in pregnancy prevention knowledge, the same study also shows that younger teens are still less likely to use contraceptive methods than their older peers. Only 58% of sexually active 15-year-olds use contraception compared to 87% of 19-year-olds (Dawson 1986). These studies show that age is a determinant of sex education, knowledge, and safer sexual actions. Older people generally have more knowledge about contraception and practice safer sex.

Gender

Very few studies examine men as well as women in regards to unplanned pregnancy and pregnancy prevention. However, there are studies such as Oettinger (1999) that investigate the differences in sex education between men and women. One difference is that women take sex education classes at younger ages and more often than men (Marsiglio & Mott 1986). Women are also more likely to take a sex education class before their first intercourse (Oettinger 1999). By age 16, 38% of girls have taken a sex education class whereas only 28% of boys have (Marsiglio & Mott 1986). In rural areas of the U.S., girls scored higher than boys on knowledge tests regarding safer sex methods. In Scotland, 98% of girls aged 14-16 knew about

emergency contraception in contrast to only 87% of boys (Carter & Spear 2002; Graham, Green & Glasier 1996). On top of being more familiar with emergency contraception, girls who are sexually active know more about when to take it than boys who are sexually active (Graham, Green and Glasier 1996). Despite the findings that young girls receive more education and are more knowledgeable about preventing pregnancy, Leland and Barth (1992) find that more men than women reported using contraception the last time they engaged in sexual intercourse.

It is apparent that there are many differences between men and women concerning sex education and pregnancy prevention. While women are more likely to receive sex education than men and often receive it at a younger age, men are more likely to practice safer sex.

Religion

There are very few studies that investigate the relationship between religion and knowledge about preventing pregnancy, though many studies examine religion and abstinence. Uecker (2008) finds that religious college students are less likely to engage in premarital sex than non-religious students, and when they do engage in coitus they tend to have fewer sexual partners. Uecker (2008) also finds those who attend services only a few times a year have more partners than those who attend weekly or bi-weekly. Catholics and Black Protestants are more likely to have premarital sex than mainline Protestants. However, when Catholics have premarital sex it is typically with the person they eventually marry (Uecker 2008).

Family communication is one way information about preventing pregnancy is shared. Regnerus (2005) examines this in a study about sex education within

religious families. He finds that 78% of parents who go to church at least once a week talk to their child about sex, compared to 85% of parents who go to church less often. Although there is very little research on religion and sex education it is evident that religious young adults practice abstinence more than their non-religious peers and non-religious parents talk to their children more about sex than religious parents.

Past Pregnancies

Whether or not a woman was pregnant in the past also influences her knowledge about preventing pregnancy. In Honduras, past pregnancies influence the knowledge women have about emergency contraception. Four percent of women who were previously pregnant had heard of emergency contraception compared to 12% of those currently pregnant and 10% of those who were never pregnant (Garcia et al. 2006). In a study of young couples expecting babies, those who already had a child were less likely to have planned their current pregnancy than those who were expecting their first child (Sipsma et al. 2012).

A study by the Guttmacher Institute (2011) finds that 6 in 10 women who decide to have an abortion already have one or more children. Abortions are a clear indicator of unwanted pregnancies. The Guttmacher Institute study shows that even women who already have children need more access to adequate information and contraception.

Conclusion

This section outlined previous studies on pregnancy prevention knowledge. Each of these studies shows the extent to which the factors sex education, source of

sex education, level of general education, race and ethnicity, income, age, gender, religion, and past pregnancies influence evidence of knowledge about pregnancy prevention. However, there are some limits to previous studies. There is no agreement between researchers on the source of sex education that is most effective, and little information on differences in knowledge between genders. This investigation will study the knowledge levels of both men and women, filling a gap in the existing literature. This paper will also underline the levels of knowledge of young adults of differing religious beliefs, which is also an area that is lacking in sex education literature. Finally this paper will attempt to find more conclusive data on the reliability of sources of sex education. The next section describes the model used to analyze the data.

The Ordered Probit Model

This study examines the extent to which the type of sex education, presence of sex education, level of general education, source of sex education, race and ethnicity, income, age, gender, religion, and past pregnancies influence the knowledge a young person has about pregnancy prevention. The dependent variable in this study is the level of knowledge about pregnancy prevention, which is a ranked measure. Therefore, the most appropriate model to use is the ordered probit model. The ordered probit model utilized in this study is based on the work of Alauddin and Tisdell (2006) who used this model to analyze the teaching effectiveness of professors in undergraduate and postgraduate courses.

The ordered probit model derives from the binary probit model, which only measures the probability of the dependent variable being equal to 1 or 0, and is illustrated below (Wooldridge 2013):

$$P(y=1 \mid \mathbf{x}) = \Phi(\beta_0 + \beta_1 X_1 + \dots + \beta_k X_k) = \Phi(\beta_0 + \mathbf{x}\boldsymbol{\beta}) \quad (1)$$

The Φ represents the standard normal cumulative density function (cdf). The function $\Phi(\beta_0 + \mathbf{x}\boldsymbol{\beta}) = \Phi(z)$ and $\Phi(z)$ is the probit integral, therefore $\Phi(-\infty) = 0$ and $\Phi(+\infty) = 1$. This insures that the dependent variable will always have a binary outcome of 1 or 0 (Lambert 2013).

The ordered probit model measures the probability of the dependent variable being one of the j categories; in this case one of five levels of knowledge. The

following equation shows the expanded version of the ordered probit model built around the latent regression including all the variables in the study.

$$y_i^* = \beta_0 + \beta_1 \text{abstinence} + \beta_2 \text{contraceptive} + \beta_3 \text{recieved} + \beta_4 \text{lesshighschool} + \beta_5 \text{highschool} + \beta_6 \text{college} + \beta_7 \text{fouryears} + \beta_8 \text{white} + \beta_9 \text{black} + \beta_{10} \text{hispanic} + \beta_{11} \text{age} + \beta_{12} \text{female} + \beta_{13} \text{welfare} + \beta_{14} \text{nevpregnant} + \beta_{15} \text{previously} + \beta_{16} \text{catholic} + \beta_{17} \text{protestant} + e \quad (2)$$

Where

y^* – The unobservable dependent variable representing level of knowledge and is categorized into five groups with four thresholds;

β_{0-17} – The coefficients that correspond to each independent variable;

Abstinence – Abstinence only sex education;

Contraceptive – Contraceptive focused sex education;

Received – Received sex education;

Less High School – Less than high school education;

High School – Finished high school

College – Some college education;

Four years – Four years of college education;

White – Race and ethnicity: white;

Black – Race and ethnicity: black;

Hispanic – Race and ethnicity: Hispanic;

Age – Age, measured in years;

Female – Female;

Welfare – Qualifies for welfare;

Nev. Pregnant – Never pregnant;

Previously – Previously pregnant;

Catholic – Catholic;

Protestant – Protestant; and

e – the error term.

Each of the independent variables was chosen based on research that showed its influence on young adults' level of pregnancy prevention knowledge. The presence of sex education is expected to have a positive correlation with pregnancy prevention knowledge and comprehensive sex education is expected to have more of a positive correlation than abstinence based sex education according to the studies of Kirby (2002). The levels of education attained are expected to positively influence the level of pregnancy prevention knowledge (Andalon et al. 2014).

According to previous studies race and ethnicity, income, age, and gender also influence pregnancy prevention knowledge. It is expected that white young adults, women, older participants, and wealthier participants will have more knowledge regarding pregnancy prevention (Marsiglio & Mott 1986; Garcia et al. 2006; Jacobey et al. 1999). Pregnancy history is also expected to affect the level of knowledge but researchers find varied results on this topic. Religion also proves to be significant in the knowledge a young adult has regarding sex education (Regnerus 2005). Those who do not have a religious affiliation are exposed to more sex education and therefore are expected to have a higher level of knowledge than those who are religiously affiliated (Regnerus 2005).

The dependent variable, y , defines five levels of pregnancy prevention knowledge with four thresholds (u_i). This study determines the level of knowledge by assessing how many of the 28 questions the participant answered correctly. In this case the thresholds are 6, 12, 17, and 22. That is $[y=j \text{ if } u_{j-1} < y^* \leq u_j]$ (econometricsacademy 2013). If y^* falls between 0 and 6, y is equal to 0, and the knowledge level is 'very low' and if y^* falls between 6 and 12, y is equal to 1, and the knowledge level is 'low'. This division of y^* into the five categories of y continues until y is equal to 4, as demonstrated below. The levels of knowledge for the following categories are 'fair' if $y=2$, 'good' if $y=3$ and 'excellent' if $y=4$.

$$y=0 \text{ if } y^* \leq 6$$

$$y=1 \text{ if } 6 < y^* \leq 12$$

$$y=2 \text{ if } 12 < y^* \leq 17$$

$$y=3 \text{ if } 17 < y^* \leq 22$$

$$y=4 \text{ if } 22 < y^*$$

(Alauddin & Tisdell 2006).

This model explores the probability that an independent variable will influence the level of knowledge. This relationship can be expressed for each of the five alternative levels of knowledge. The levels of knowledge are ranked between zero: very low knowledge and four: excellent knowledge. There are five probabilities that i , each participant, will fall into j , the level of knowledge represented by 0 through 4. These probabilities make up the model.

$$\text{Prob}(y=0 \mid x_i) = \Phi(-x'\beta) \quad (u_0=0)$$

$$\text{Prob}(y=1 \mid x_i) = \Phi(6-x'\beta) - \Phi(-x'\beta)$$

$$\text{Prob}(y=2 | x_i) = \Phi(12 - x' \beta) - \Phi(6 - x' \beta)$$

$$\text{Prob}(y=3 | x_i) = \Phi(17 - x' \beta) - \Phi(12 - x' \beta)$$

$$\text{Prob}(y=4 | x_i) = \Phi(22 - x' \beta) - \Phi(17 - x' \beta)$$

(Alauddin and Tisdell 2006)

Where:

y – is the level of knowledge, now categorized,

x – is a matrix of all the dependent variables,

Φ – is the standard, normal cdf, and

β – is a coefficient matrix that relates the exogenous variables to the endogenous variable.

This relationship can be written to express the thresholds as well as the probabilities for any number of j alternatives. This equation also expresses the probability that observation i will fall into category j :

$$p_{ij} = p(y=j) = p(u_{j-1} < y_i^* \leq u_j) = \Phi(u_j - x_i' \beta) - \Phi(u_{j-1} - x_i' \beta) \quad (3)$$

From the probability of an observation fitting into a category the marginal effect is found. The marginal effect is expressed as a percentage point increase or decrease in the probability an observation will fall in a particular level of knowledge. It indicates to what extent a unit increases or decreases in one of the independent variables (x_r) influences this change in likelihood. The marginal effect for each independent variable is calculated using the following formula:

$$\delta p_{ij} / \delta x_{ri} = \{\Phi(u_j - x_i' \beta) - \Phi(u_{j-1} - x_i' \beta)\} \beta_r \quad (4)$$

p_{ij} - is the probability that participant, i ,will have a level of knowledge, j ,
 x_{ri} - is the specific independent variable that is investigated, and
 β_r - is the coefficient that corresponds to x_r .

As illustrated above, the ordered probit model is appropriate for this study because it measures the effects of multiple independent variables on an ordered dependent variable. This is fundamental because this paper examines several factors that influence the level of knowledge of young adults regarding pregnancy prevention.

This section explained the ordered probit model, and showed the equations necessary to execute this model with reference to the investigation on hand. The following section will describe the data and how the data was collected and cleaned. Further, it will examine the data source and general information about the sample population of this study.

Data

This section examines the data, its collection, and data trends. The Guttmacher Institute collected the data used in this study in 2009 as part of the National Campaign to Prevent Teen and Unwanted Pregnancy. The data studies unmarried young adults in between the ages of 18 and 29. Nationwide interviews were conducted over the phone between October 2008 and April 2009. The researchers interviewed a total of 1,800 participants and the sample was stratified by type of phone number, race, and ethnicity.

Dependent Variable

The dependent variable, level of knowledge, was constructed through several questions used to assess the level of knowledge about preventing pregnancy. The questions were separated into questions about methods of birth control such as “True or false: condoms have an expiration date,” and questions about pregnancy and conception such as “True or false: a woman who is still breastfeeding cannot get pregnant.” The researchers then combined the number of correct responses in these two areas of knowledge, and then categorized participants into five broad levels of knowledge.¹

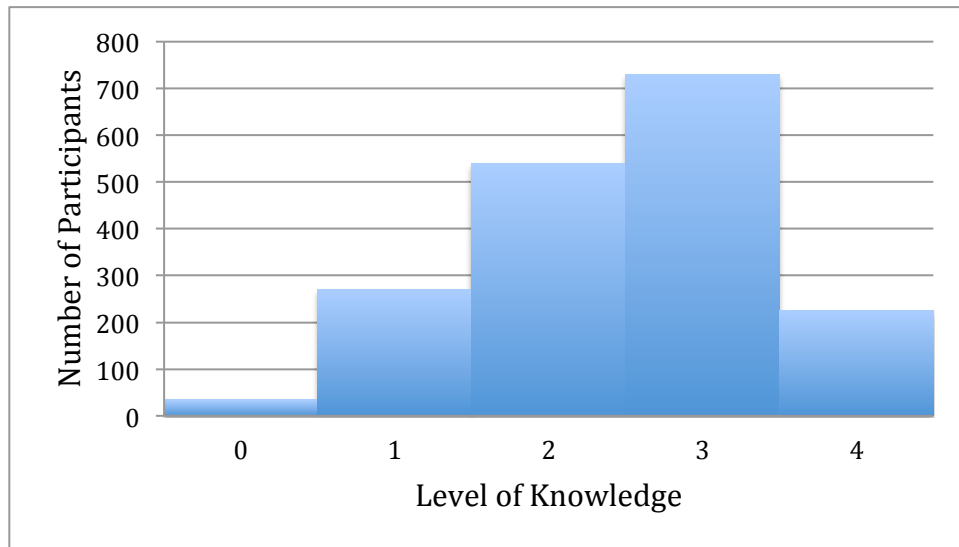
Of the 1,800 participants, 35 fall into the very low (level 0) knowledge group with 6 or fewer correct answers out of 28 questions. There are 270 participants in the low (level 1) knowledge group (6 -12 correct answers out of 28), 539 participants in the fair (level 2) knowledge group (12-17 correct answers out of 28), 730 participants in the good (level 3) knowledge group (17-22 correct answers out

¹ A copy of the survey questionnaire may be found in Appendix A.

² Contraceptive-focused sex education is statistically significant above the 90%

of 28), and 226 in the excellent (level 4) knowledge group (22-28 correct answers out of 28). The variations in knowledge levels are shown in Figure 1 below.

FIGURE 1 DEPENDENT VARIABLE KNOWLEDGE LEVELS



Source: Author's calculations using Guttmacher Institute's Fog Zone data (2015).

Independent Variables

Table 1, below, provides the summary statistics of all the variables included, in this study.

TABLE 1 SUMMARY STATISTICS

Variable	Obs.	Mean	Std. Dev.	Min	Max
Knowledge Level	1,800	2.46	0.96	0	4
Has Taken Sex ed.	1,789	0.78	0.41	0	1
Religion Christian	1,800	0.26	0.44	0	1
Religion Protestant	1,800	0.21	0.40	0	1
Religion Catholic	1,800	0.22	0.42	0	1
Religion Jewish	1,800	0.02	0.11	0	1
Never Pregnant	1,800	0.55	0.50	0	1
Pregnant Before	1,800	0.24	0.43	0	1
Sex ed. Abstinence Only	1,800	0.04	0.20	0	1
Source Personal	1,800	0.31	0.46	0	1
Source Professional	1,800	0.32	0.47	0	1
Sex ed. Contraception	1,800	0.29	0.45	0	1
Race and Ethnicity Black	1,800	0.20	0.40	0	1
Race and Ethnicity White	1,800	0.51	0.50	0	1
Race and Ethnicity Hispanic	1,800	0.22	0.42	0	1
Less than High School	1,800	0.14	0.34	0	1
High School Degree	1,800	0.28	0.45	0	1
Some College	1,800	0.42	0.49	0	1
College Degree	1,800	0.12	0.33	0	1
Beyond 4-year Degree	1,800	0.03	0.13	0	1
Gender Female	1,800	0.50	0.50	0	1
Received Welfare	1,787	0.09	0.29	0	1
Age	1,800	22.30	3.36	18	29

Note. Obs.= Observations; Std. Dev. = Standard Deviation

Source: Author's calculations using Guttmacher Institute's Fog Zone data (2015).

Sex Education, Presence and Type. The presence of sex education is a dummy

variable set 1 if the participant has received sex education, 0 if otherwise.

Abstinence-only sex education is a dummy variable set 1 if received abstinence-only

sex education, 0 if otherwise. Abstinence-focused education is a dummy variable set

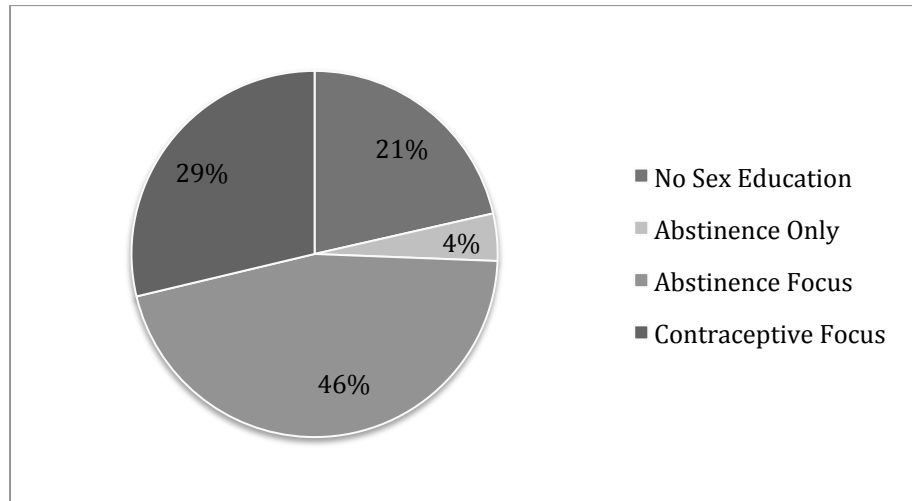
1 if the participant received abstinence-focused sex education, 0 if otherwise.

Contraceptive-focused sex education is a dummy set 1 if the participant received

contraceptive focused sex education, set 0 if otherwise. The type of sex education

was determined by a series of questions regarding the participant's sex education class. The allocation of sex education experiences is illustrated in Figure 2.

FIGURE 2 SEX EDUCATION OF SAMPLE POPULATION



Source: Author's calculations using Guttmacher Institute's Fog Zone data (2015).

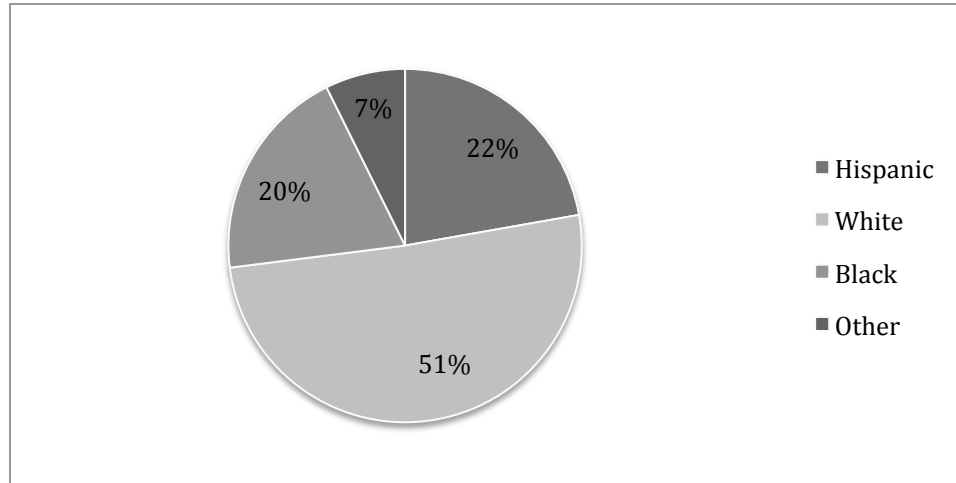
Level of General Education. Less than high school education is a dummy set to 1 if the participant has less than a high school education, set to 0 if otherwise. High school education is a dummy set to 1 if the participant received only a high school degree, set to 0 if otherwise. Some college is a dummy set to 1 if the participant attended some college but less than four years, set to 0 if otherwise. Four-year college degree is a dummy set 1 if the participant has a four year degree but no further education, set 0 if otherwise. Fourteen percent of the participants had not completed high school and 28% only had a high school degree. The rest of the participants attended some sort of college with 42% attending less than four years

of college, 13% attaining college degree, and 3% attaining education beyond a bachelors of arts or a bachelors of science.

Source of Sex Education. The source of sex education was determined by the source that the participant went to most often in the past 12 months to receive knowledge about pregnancy prevention. Personal source is a dummy set 1 if the participant received information from a personal source, set 0 if otherwise. Professional source is a dummy set 1 if the participant received information from a professional source, set 0 if otherwise. Thirty three percent of participants went to professional source for information about pregnancy prevention. Thirty-two and 35% respectively referred to personal and media sources.

Race and Ethnicity. In this study race and ethnicity are categorized into non-Hispanic black, non-Hispanic white, Hispanic, and other. The majority race is white, which represents 51% of the population, followed by 22% Hispanic, 20% black, and 7% other. Race and ethnicity were divided this way in order to keep the analysis concise and since other ethnic and racial groups were too small to analyze. Figure 3 illustrates these percentages.

FIGURE 3 RACE AND ETHNICITY OF SAMPLE POPULAITON



Source: Author's calculations using Guttmacher Institute's Fog Zone data (2015).

Age. The age of the participants is measured in years with the target population being between 18 and 29. The mean age is 22.3 years and the standard deviation is 3.4 years. Participants were asked their age at the beginning of the survey and if they were not between the ages of 18 and 29 the survey was not continued.

Gender. Women is a dummy set 1 if the participant is female, set 0 if otherwise. There were almost equal numbers of each gender with 49% of participants who identify as female and 51%, who identify as male.

Welfare. Income is a dummy set to 1 if participant qualified for welfare in the past 12 months, set 0 if otherwise. Nine percent of the participants qualified for welfare and the other 91% did not.

Religion. Religion is divided into the categories of Catholic, Christian, Protestant, Jewish, other, and none. Catholic is a dummy set 1 if the participant is catholic, set 0 if otherwise. Christian is a dummy set 1 if the participant is Christian, set 0 if

otherwise. Protestant is a dummy set 1 if the participant is Protestant, set 0 if otherwise. Jewish is a dummy set 1 if the participant is Jewish, set 0 if otherwise. Twenty six percent of the sample population identified with being a Protestant, followed by 23% who said they had no religion. The third most common religion was Catholicism with 22% of the sample population.

Pregnancy History. The participants were asked if they had ever become pregnant or gotten someone pregnant and if they or their partner is currently pregnant. Previously pregnant is a dummy set 1 if the participant is has ever been pregnant before, set 0 if otherwise. Never pregnant is a dummy set 1 if the participant has never been pregnant, set 0 if otherwise. Of the 1,800 participants, 27% had a history of pregnancy, 71% had no history of pregnancy, and 2% were currently pregnant or had a partner who was pregnant.

Conclusion. This section described the data used in this research and the demographics of the sample population both in the dependent and independent variables. This section also explored how the dependent variable was derived from the survey responses. The following section will outline the results and findings regarding the level of pregnancy prevention knowledge among young adults.

Results

This section outlines the results of the ordered probit analysis on the impact of various factors on pregnancy prevention knowledge among young adults. Although many of the factors have an insignificant effect on the level of knowledge regarding pregnancy prevention, a number of significant variables indicate that there may be a role for public policy in shaping young adult behavior.

Table 2 presents the coefficients of the ordered probit results and their confidence levels.

TABLE 2 RESULTS OF THE ORDERED PROBIT ANALYSIS

Independent Variable	Coefficient	z-value
Age	-.000	.975
Has received sex education	.181	.363
Religion Christian	.111	.499
Religion Protestant	.245	.141
Religion Catholic	.229	0.185
Religion none	.101	0.550
Religion Jew	.361	0.352
Never pregnant	.375	0.000***
Pregnant before	.602	0.000***
Sex ed. abstinence	.193	0.302
Sex ed. contraceptive	.430	0.104
Race black	.430	0.014**
Race Hispanic	.090	0.614
Race white	.516	0.001***
Gender female	.563	0.000***
Welfare	.111	0.411
Source professional	.114	0.237
Source personal	-.041	0.635
Less than HS education	-.581	0.017**
High school education	-.473	0.035**
Some college education	-.209	0.343
College degree	.105	0.656

Note. Appendix B contains a table of the marginal effects of the variables studied, the coefficient of probability they will be in

each knowledge group, and the confidence interval in each of the five knowledge groups.

Source: Author's calculations using Guttmacher Institute's Fog Zone Data (2015)

Type of sex education is marginally significant to the level of knowledge young adults have regarding pregnancy prevention. Contraceptive-focused sex education is statistically significant to the 89.6% confidence level but will be included in this study because it is very close to the 90% confidence level.² Young adults who took a sex education class that focused on contraceptive methods have higher levels of pregnancy prevention knowledge than young adults who took abstinence only or abstinence focused sex education classes.

The level of general education has a significant influence on young adults' knowledge of pregnancy prevention. Level of education is significant at the 90% confidence level in regards to those who have less than a high school education and those who only have a high school education. Young adults who only have a high school degree or less have lower pregnancy prevention knowledge than young adults who have education beyond high school. Education beyond high school was not found to have any significant effect on pregnancy prevention knowledge. The differences in probabilities that a young adult with an education of high school or less, will fall into each of the knowledge levels are illustrated in Table 3. The categories of 'less than high school' and 'high school only' are not statistically significant at the very low knowledge level and are not illustrated in Figure 4.

² Contraceptive-focused sex education is statistically significant above the 90% confidence level in the ordered logit analysis.

TABLE 3 COEFFICIENTS AND CONFIDENCE LEVELS OF GENERAL EDUCATION

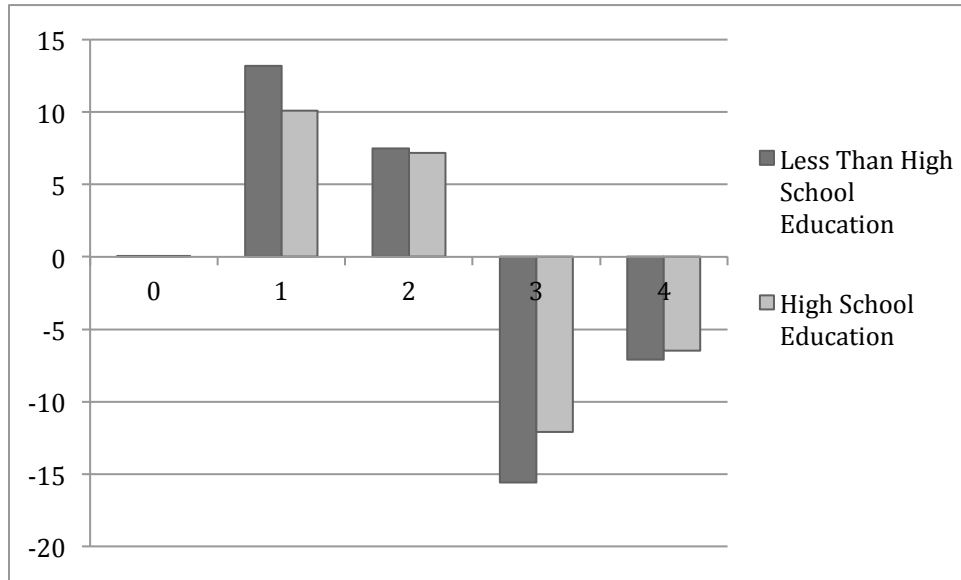
Knowledge Level	Less than High School		High School Education	
	Coefficient	z- value	Coefficient	z- value
Knowledge 0=Very Low	0.021	0.11	0.014	0.107
Knowledge 1= Low	0.132	0.035**	0.101	0.051*
Knowledge 2= Fair	0.075	0***	0.072	0.011**
Knowledge 3= Good	-0.156	0.024**	-0.121	0.043**
Knowledge 4= Excellent	-0.071	0.002***	-0.065	0.018**

Source: Author’s calculations using Guttmacher Institute’s Fog Zone data (2015).

The positive coefficients illustrate that the variable is more likely to fall into that category and the negative coefficients illustrate that the variable is less likely to fall into that category. The coefficients represent the percent increase or decrease in likelihood that the variable will fall into a given category given the participant’s educational level. Figure 4 illustrates these differences in likelihoods.³

³ Assuming there is an equal likelihood (20%) that each participant could fall into each of the pregnancy prevention knowledge levels, the coefficients represented in Figure 4 represent the percentage point increase or decrease in that likelihood if the participant has the given education level. For example, given a high school education, an individual has a 32% likelihood of possessing low(level 1) knowledge about pregnancy prevention, a 12% increase over the 20% likelihood.

FIGURE 4 PERCENTAGE POINT CHANGE IN LIKELIHOOD OF KNOWLEDGE LEVEL
VS. EDUCATION LEVEL



Source: Author's calculations using Guttmacher Institute's Fog Zone data (2015).

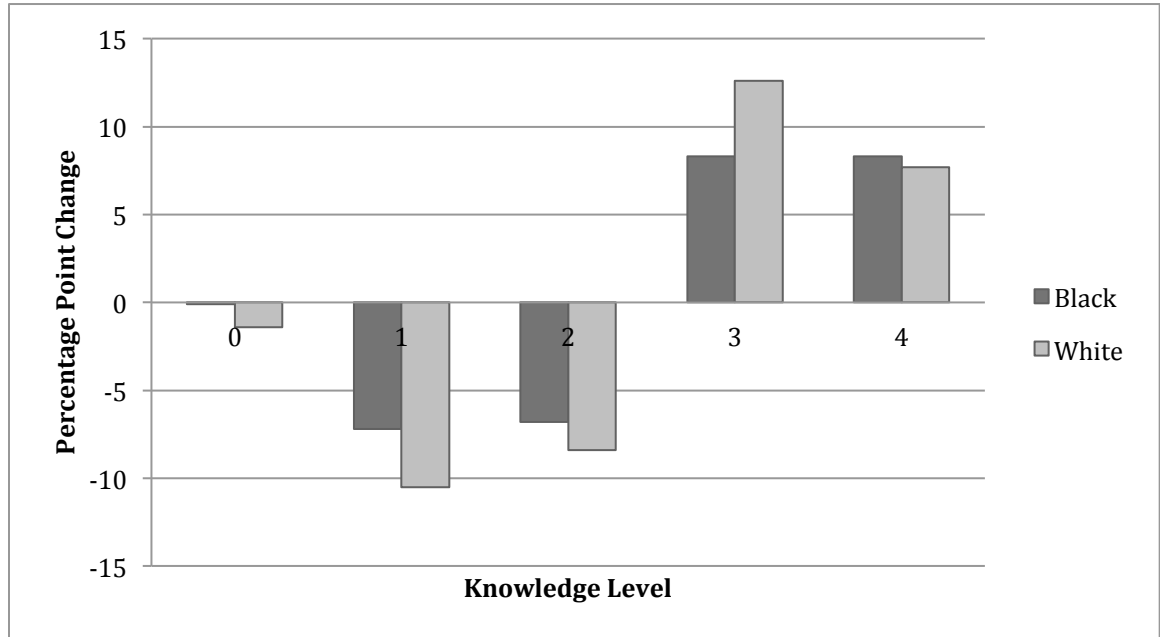
Race and ethnicity are also correlated with the level of pregnancy prevention knowledge and are statistically significant in all knowledge groups. The races white and black are positively correlated with pregnancy prevention knowledge levels. The differences between white and black young adults' levels of knowledge are illustrated in the change in the probability that they will fall in each knowledge group given their race. This is exhibited in Table 4 and Figure 5.

TABLE 4 COEFFICIENTS AND CONFIDENCE LEVELS OF RACE

Race	Black		White	
	Coefficient	z- value	Coefficient	z- value
Knowledge Level				
Knowledge 0=Very Low	-0.007	0.013**	-0.014	0.028**
Knowledge 1= Low	-0.072	0.004***	-0.105	0.002***
Knowledge 2= Fair	-0.086	0.003***	-0.084	0***
Knowledge 3= Good	0.082	0***	0.126	0.002***
Knowledge 4= Excellent	0.083	0.038**	0.077	0.001***

Source: Author's calculations using Guttmacher Institute's Fog Zone data (2015).

FIGURE 5 PERCENTAGE POINT CHANGE IN KNOWLEDGE LEVEL VS. RACE



Source: Author's calculations using Guttmacher Institute's Fog Zone data (2015).

Table 4 and Figure 5 exhibit that both black and white young adults have negative coefficients in the 'very low,' 'low,' and 'fair' knowledge groups, indicating they are less likely to fall into these categories than other categories. Both white and black young adults also have positive coefficients in the 'good' and 'excellent' knowledge groups, indicating that they're more likely to fall into those categories than other categories. Within white and black young adults, white young adults are less likely to have 'very low,' 'low,' or 'fair' levels of knowledge and more likely to have good levels of knowledge than black young adults, but black young adults are more likely to have excellent levels of knowledge than white young adults.

The general trend in this study confirms previous studies, finding that white young adults have lower pregnancy rates and more access to sex education than black young adults. This discrepancy indicates higher levels of knowledge regarding

sex education (Marsiglio & Mott 1986). The results found in this study match those of prior studies regarding race.

Gender also has a significant influence on pregnancy prevention knowledge. Young women are more likely to have higher levels of pregnancy prevention knowledge than young men. Gender is significant at the 99% confidence level in all levels of pregnancy prevention knowledge. The marginal effects of the probabilities young women will fall into each of the knowledge levels is shown in Table 5. These results match those of previous studies, confirming that women are more likely to have higher knowledge levels and less likely to have lower ones. Previous studies found that women receive more sex education and score higher on safer sex tests than men (Carter and Spear, 2002; Marsiligo and Mott 1986).

TABLE 5 COEFFICIENTS AND CONFIDENCE LEVELS OF GENDER

<u>Gender</u>	<u>Female</u>	
<u>Knowledge Level</u>	<u>Coefficient</u>	<u>z- value</u>
Knowledge 0=Very Low	-0.013	0***
Knowledge 1= Low	-0.108	0***
Knowledge 2= Fair	-0.099	0***
Knowledge 3= Good	0.128	0***
Knowledge 4= Excellent	0.092	0***

Source: Author's calculations using Guttmacher Institute's Fog Zone data (2015).

Pregnancy history has a significant influence on the level of pregnancy prevention knowledge to the 99% accuracy level. Both young adults who have been pregnant or gotten a partner pregnant and young adults who have never been or gotten anyone pregnant are more likely to have higher levels of pregnancy prevention knowledge than young adults who are currently involved in a pregnancy.

Table 6 presents the coefficients and confidence intervals of pregnancy history at all knowledge levels.

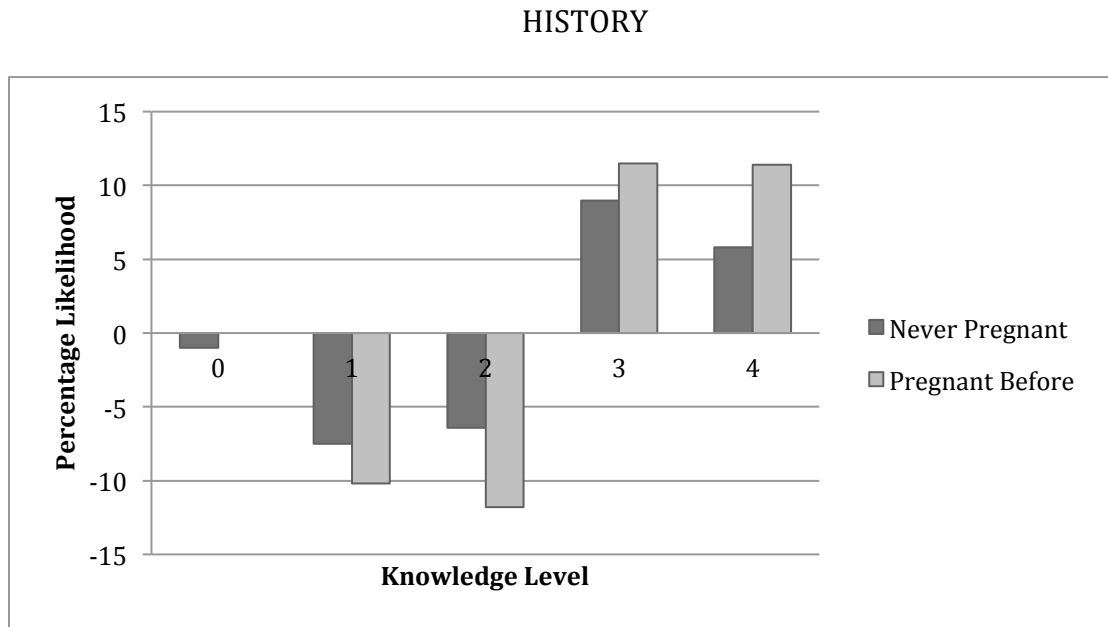
TABLE 6 COEFFICIENTS AND CONFIDENCE LEVELS OF PREGNANCY HISTORY

Pregnancy History Knowledge Level	Never Pregnant		Pregnant Before	
	Coefficient	z- value	Coefficient	z- value
Knowledge 0=Very Low	-0.009	0.008***	-0.01	0.001***
Knowledge 1= Low	-0.075	0***	-0.102	0***
Knowledge 2= Fair	-0.064	0***	-0.118	0***
Knowledge 3= Good	0.09	0***	0.114	0***
Knowledge 4= Excellent	0.058	0***	0.115	0***

Source: Author's calculations using Guttmacher Institute's Fog Zone data (2015).

Table 6 and Figure 6 show that young adults who have a history of pregnancy are less likely to fall into the 'low' or 'fair' knowledge levels and more likely to fall into the 'good' and 'excellent' knowledge levels than young adults who do not have a history of pregnancy. This shows that young adults who have been pregnant before or gotten someone pregnant have higher pregnancy prevention knowledge levels than young adults who have not. The one exception to this trend is in the 'very low' level of knowledge. Young adults who have never been pregnant or gotten someone pregnant are less likely to have a 'very low' level of knowledge than young adults who have been involved in a pregnancy.

FIGURE 6 PERCENTAGE POINT CHANGE IN KNOWLEDGE LEVEL VS. PREGNANCY



Source: Author's calculations using Guttmacher Institute's Fog Zone data (2015).

The findings of this research on pregnancy history and pregnancy prevention knowledge contrast with previous research. Garcia et al. (2006) found that women who have been pregnant in the past have lower levels of contraception knowledge than women who have never been pregnant. The results of this study indicate that women who have been pregnant actually have higher pregnancy prevention knowledge levels than those who have never been pregnant.

In summary, the variables that are statistically significant are type of sex education,⁴ level of general education, race and ethnicity, gender, and pregnancy history. Sex education that focuses on contraception is more effective than abstinence-focused or abstinence-only sex education. Young adults with lower levels of general education are more likely to have lower levels of pregnancy prevention knowledge than young adults with higher levels of education. Black and

⁴ Type of sex education is only significant to the 89.6% confidence level.

white young adults are both more likely to have higher levels of pregnancy prevention knowledge than other races. Women are more likely than men to have higher pregnancy prevention knowledge levels. Young adults who have been involved in a pregnancy are more likely to have higher levels of pregnancy prevention knowledge than those who have never been or are currently involved in a pregnancy.

Conclusion

Unplanned pregnancy accounts for economic and gender discrepancies as well as inequalities in the workplace. This study examines the factors that influence pregnancy prevention knowledge in order to better understand how to prevent unplanned pregnancies. Although many of the variables considered to determine pregnancy prevention knowledge were insignificant, several variables do provide insight into strategies for the reduction of unplanned pregnancies.

More sex education classes should focus on contraceptive methods as this was an indicator of pregnancy prevention knowledge and therefore could reduce unplanned pregnancies. As there is a major gender discrepancy in pregnancy prevention knowledge, policies to increase sex education for young men are necessary to equalize this difference. Racial minorities, excluding African Americans, would also benefit from increased sex education, as their pregnancy prevention knowledge is much lower than that of white and black young adults. Increasing sex education in high schools and middle schools is another major improvement that should be made. The young adults with the lowest levels of sex education have not completed high school and/or have not pursued higher education. This shows that sex education should be taught in middle school and the first years of high school in order to reach the largest populations.

While this study provides significant guidance on pregnancy prevention among young adults, it is important to recognize the limitations of this work. The sample size was 1,800, which is a fair sample size but small for a representation of the United States. An additional limitation to the study is that income was only

determined by one's qualification for welfare assistance. A more in-depth investigation could study several categories of income and possibly find more conclusive results. Location is another factor that is not included that could influence pregnancy prevention knowledge. Specifically, future research could include whether the participant lives in an urban or rural area, as well as the political climate of the state. Other factors that would be interesting to include in future studies are self-esteem and access to contraception. These factors influence unintended pregnancies in similar studies.

Unintended pregnancies are a major issue in the United States and further research and education can raise awareness on the importance of sex education. Increased quantity and quality of sex education directed at the right population will help young adults and the nation as a whole. An increase in sex education will give young adults the agency to time their pregnancies in a way that is compatible with their educations and careers, positively affecting both their own lives and the lives of their children.

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QUESTIONNAIRE USED TO COLLECT DATA FOR THE SURVEY OF YOUNG ADULTS

APPENDIX A

Guttmacher Institute – Survey of Young Adults 2009 (The Fog Zone)

Field Research Corporation 407-002 601 California Street, Ste. 900
02/02/09 San Francisco, CA

NATIONAL CAMPAIGN TO PREVENT TEEN AND UNPLANNED PREGNANCY – Screener For Use with Landline Sample –

As I mentioned, this is a nationwide research study. Before we begin, I need to verify a few things to make sure we have a good mix of people participating in the survey.

S5a. How old are you?

AGE IN YEARS: 334-336 REFUSED/NO ANSWER999 - ASK S5b

IF S5a = REFUSED/NO ANSWER, ASK:

S5b. We don't need to know your exact age, if you could please tell me which of the following age groups you are in... (READ CATEGORIES)?

Under 18.....1 - GO TO S3a
18-24.....2 -CONTINUE
25-29.....3 -CONTINUE
30 or over.....4 - GO TO S3a

DO NOT READ { DON'T KNOW 8 - TERMINATE

REFUSED.....9 - TERMINATE

. S6. Are you currently married? (IF NECESSARY, SAY:) I mean legally married. YES.....1 - READ TERMINATION STATEMENT & GO TO S3a
NO.....2 - CONTINUE
DON'T KNOW.....8 - TERMINATE
REFUSED.....9 - TERMINATE

. S7. (IF NECESSARY) May I please verify your gender? Sometimes it is

hard to tell over the
phone. FEMALE.....1 - CONTINUE
MALE.....2 - CONTINUE DON'T KNOW
.....8 - TERMINATE
REFUSED.....9 - TERMINATE

-337

-338

-339

CONFIRMATI
ON

1

Guttmacher Institute – Survey of Young Adults 2009 (The Fog Zone)

Field Research Corporation 407-002 601 California Street, Ste. 900
02/02/09 San Francisco, CA

NATIONAL CAMPAIGN TO PREVENT TEEN AND UNPLANNED
PREGNANCY – Screener For Use with Cell Phone Sample –

CONFIRMATION

Before we begin, may I just get ... CS17a. Your actual age?

AGE IN YEARS: 359-361REFUSED/NO ANSWER999
- ASK CS17b

IF CS17a = REFUSED, ASK:

CS17b. We don't need to know your exact age, if you could please tell me
which of the following age groups you are in... (READ CATEGORIES)?

Under 18.....1 18-24
 2 25-29
 3
 30 or over 4 DO NOT READ
 {
 DON'T KNOW 8 REFUSED
9

. CS18. And, are you currently married? (IF NECESSARY, SAY:) I mean
 legally married. YES.....1
 NO2 DON'T KNOW
8 REFUSED
9

. CS19. May I please verify your gender? Sometimes it is hard to tell over
 the phone. FEMALE 1
 MALE..... 2

DON'T KNOW 8 REFUSED
 9

- TERMINATE- CONTINUE TO CS18 - CONTINUE TO CS18 - TERMINATE-
 TERMINATE- TERMINATE

- TERMINATE - CONTINUE - TERMINATE - TERMINATE

- CONTINUE - CONTINUE - TERMINATE - TERMINATE

-362

-363

-364

CS20. And can you tell me your name? (IF NECESSARY, EXPLAIN:) All data
 will remain confidential, I just want to get your name in case we get
 disconnected and I have to call you back.

2

Field Research Corporation 601 California Street, Ste. 900 San Francisco,
 CA

NATIONAL CAMPAIGN TO PREVENT TEEN AND UNPLANNED PREGNANCY – National Survey of Young Adults –

407-002 02/02/09

Guttmacher Institute – Survey of Young Adults 2009 (The Fog Zone)

SECTION A: EDUCATION AND SEX EDUCATION

. Q1. First, are you currently working, going to school, or doing something else?

. Q2. What is the highest grade of school or year of college that you have completed? (DO NOT READ LIST) (ACCEPT ONLY ONE RESPONSE)

. Q3. Have you ever had a class on sex education? IF YES, ASK:

Q4. How old were you the last time you had a class on sex education?

WORKING.....1 GOING TO SCHOOL
.....2 WORKING AND GOING TO SCHOOL.....3
SOMETHING ELSE (NEITHER WORKING

NOR IN SCHOOL).....4 DON'T KNOW (VOLUNTEERED ONLY)8 REFUSED (VOLUNTEERED ONLY)9

LESS THAN HIGH SCHOOL1 HIGH SCHOOL DEGREE OR GED (HIGH

SCHOOL EQUIVALENCY CERTIFICATE)2 ASSOCIATE DEGREE/SOME COLLEGE

(BUT NO DEGREE).....3 4-YEAR COLLEGE DEGREE (BA OR BS)4 ANY GRADUATE OR PROFESSIONAL

EDUCATION (E.G. MASTERS, PHD, MD)5 VOCATIONAL-TECHNICAL TRAINING/OTHER ..6 DON'T KNOW8 REFUSED9

YES1 NO
.....2 DON'T KNOW
.....8 REFUSED9

AGE IN YEARS: 411-412DON'T KNOW 98 REFUSED
..... 99

-408

-409

-410

Q5. Which of the following topics were covered in the sex education classes you attended?

YES NO DK REF

a. The importance of using birth control if you have sex.....1....2....8....9

b. A demonstration on how to use a condom.....1... ..2....8....9

c. How to say 'no' to sex1289

d. The importance of waiting until marriage to have sex.....1....2....8....9

e. The availability of many different types of birth control methods1289 -417

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-413 -414 -415 -416

Guttmacher Institute – Survey of Young Adults 2009 (The Fog Zone)

SECTION B: KNOWLEDGE ABOUT CONTRACEPTIVE METHODS AND RISK FOR PREGNANCY

Now, I have some questions about birth control methods. Don't worry, this is not a test. It is okay if you don't know something. By birth control methods I mean anything a person might take, do or use to prevent becoming pregnant.

Q7. Even if you haven't used a method yourself, please tell me if you have ever heard of each of the following methods for preventing pregnancy...

(FILL METHOD)? (ASK IN ORDER) Have you heard of . .

YES, HAVE NO, NEVER HEARD OF HEARD OF DK REF

- a. Not having sex at all
..... 1
2..... 8 9
- b. birth control pills or oral contraceptives (the pill).....1
.....2.....8....9
- c. male condoms
(rubbers).....1.....
... 2.....8....9
- d. injectable birth control, like Depo Provera (the Shot, Lunelle).....1..
.....2.....8....9
- e. the birth control patch, or Ortho
Evra.....1..... 2.....8....9
- f. an IUD or intrauterine device, like Mirena.....
1.....2.....8....9
- g. a diaphragm, cervical cap, or female condom.....
1.....2.....8....9
- h. a vaginal ring or nuva-
ring.....1.....
2.....8....9
- i. contraceptive foam, jelly or
cream.....1.....
2.....8....9
- j. the Today
sponge.....1.
..... 2.....8....9
- k. Birth control implants, like Implanon (Norplant, tubes in your arm).....1..
.....2.....8....9
- l. The rhythm method or natural family planning, (IF NECESSARY: that is,

-418 -419 -420 -421 -422 -423 -424 -425 -426 -427 -428

when you use a calendar, temperature or mucous test to try to predict the safe period when you cannot get pregnant and you only have sex on those safe days (Billings method, periodic abstinence).....1.....2.....8.....9 -429

m. withdrawal or pulling out.....1.....2.....8.....9

n. Tubal or female sterilization12.....8 9

o. Vasectomy or male sterilization.....1.....2.....8.....9

p. Emergency contraception or the 'morning after pill'.....1.....2.....8.....9

-430 -431 -432 -433

-436

IF Q7c = 1, ASK:

Q8. The next questions are about male condoms. Overall, how much do you feel you know about condoms and their use? Would you say you know nothing, you know a little, you know a lot or you know everything about condoms?

KNOW NOTHING1 KNOW A LITTLE.....2 KNOW A LOT.....3 KNOW EVERYTHING4 DON'T KNOW8 REFUSED9

Q9. For the following set of statements, please tell me whether you think the statement is true or false... (ROTATE LIST)

TRUE FALSE DK REF

||
a. It is okay to use the same condom more than
once..... 1.....289 -437

|
b. Condoms have an expiration date
..... 1.....289

c. When putting on a condom, it is important to leave a space at the tip
..... 1.....289

-438 -439

||
d. It is okay to use petroleum jelly or Vaseline as a lubricant when using
latex condoms . 1.....289 -440

|
-441 f. Wearing two latex condoms will provide extra protection
..... 1.....289 -442

e.
When using a condom, it is important for the man to pull out right after ejaculation..1.
.....2....8....9

|.....
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IF Q7b = 1, ASK:

Q10. The next questions are about oral contraceptives or the birth control
pill. Overall, how much do you feel you know about birth control pills and
how they are used? Would you say you know nothing, you know a little,
you know a lot or you know everything about use of birth control pills?

-443

-444 -445

-446

-447

-448 a pelvic exam..... 1.....289 -449

Guttmacher Institute – Survey of Young Adults 2009 (The Fog Zone)

Q11.

Again, for each statement, tell me whether you think it is TRUE or FALSE. (ROTATE LIST)
T) TRUE FALSE DK REF

a. Birth control pills are effective even if a woman misses taking them for two or three days in a row.....

1.....289

b. Women should "take a break" from the pill every couple of years.....

1.....289

c. If a woman is having side effects with one kind of pill, switching to another type or brand might help

.....
1.....289

d. Birth control pills reduce the chances that women will get certain types of cancer.....

..... 1.....2...8...9

KNOW NOTHING1 KNOW A

LITTLE.....2 KNOW A

LOT.....3 KNOW EVERYTHING

.....4 DON'T KNOW8

REFUSED9

|| ____ | ____ | ||||

e. After a woman stops taking birth control pills, she is unable to get pregnant for at least two months

..... 1.....2
....89

f. In order to get the birth control pill, a woman must have

IF Q7f = 1, ASK:

Q12. The next questions are about intrauterine devices, or IUDs, such as Mirena. Overall, how much do you feel you know about IUDs and how they are used? Would you say you know nothing, you know a little, you know a

lot or you know everything about use of IUDs?

KNOW NOTHING1 KNOW A
LITTLE.....2 KNOW A
LOT.....3 KNOW EVERYTHING
.....4 DON'T KNOW8
REFUSED9

-450



Q13.

And, for each of the following, tell me whether you think it is TRUE or FALSE. (ROTATE LIST) TRUE FALSE DK REF

a. All IUDs are banned from use in the United States.....
.....1.....2.....8.....9

b. A young woman can use an IUD, even if she has never had a child.....1
.....2.....8.....9

c. Women who use IUDs cannot use tampons.....
.....1.....2.....8.....9

d. To obtain an IUD, a woman must undergo a surgical operation
.....1.....2.....8.....9

e. An IUD cannot be felt by a woman's partner during sex.....
.....1.....2.....8.....9

f. IUDs can move around in a woman's body.....
.....1.....2.....8.....9 -456

||
-451 -452 -453 -454 -455

||||
IF Q7d = 1, ASK:

Q14. The next questions are about birth control injectables, such as Depo Provera or the birth control 'shot'. Overall, how much do you feel you know about Depo Provera and how it is used? Would you say you know nothing,

you know a little, you know a lot or you know everything about use of Depo Provera?

KNOW NOTHING1 KNOW A
LITTLE.....2 KNOW A
LOT.....3 KNOW EVERYTHING
.....4 DON'T KNOW8
REFUSED9

-459

Q15.

Again, for each statement, tell me whether you think it is TRUE or FALSE. (ROTATE LIST) TRUE FALSE DK REF

a. Women using the birth control shot, Depo Provera, must get an injection every three months.....
..... 1.....289 -460

b. Even if a woman is late getting her birth control shot, she is still protected from pregnancy for at least 3 more months.....
.....1.....2....8....9 -461

d. Negative effects that a woman has from Depo Provera can last for the rest of her life.. 1.....289 -462

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IF Q7h = 1, ASK:

e. Women using the vaginal ring, or Nuva Ring must have it inserted by a doctor or health care provider every month.

IF Q7k OR Q7f = 1, ASK:

f. Long-acting methods like the implant or IUD cannot be removed early, even if a woman changes her mind about wanting to get pregnant.

DON'T KNOW (VOLUNTEERED ONLY) REFUSED (VOLUNTEERED ONLY)
.....

-836 -837

Q18.

Again, for each of the following statements, tell me whether you think it is TRUE or FALSE. (ROTATE LIST) TRUE FALSE DK REF

b. After giving birth, a woman can get pregnant even before she has her first period

.....
..... 1.....289 -467

c. Douching (washing the vagina) after sex can prevent pregnancy.....

.1.....2....8....9 -468

d. A woman who is still breast feeding cannot get pregnant

..... 1.....289 -469

e. Pregnancy is much less likely to occur if a couple has sex standing up.....

..... 1.....289 -470

f. The only way to completely prevent pregnancy is by not having sex.....

.....1
.....2....8....9 -471

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Guttmacher Institute – Survey of Young Adults 2009 (The Fog Zone) Next, I have some questions about the possible effects of birth control use.

Q19.

(IF FEMALE, SAY:) For each, please tell me how likely you think it is that you would experience the effect. Even if you don't currently have a partner or have never used the method yourself, please think about what might happen if you did.

(IF MALE, SAY:) For each, please tell me how likely you think it is that most women will experience the effect.

(READ ITEMS, ASKING:) Would you say it is not at all likely, slightly likely, quite likely or extremely likely? NOT AT ALL SLIGHTLY QUITE EXTREMELY

LIKELY LIKELY LIKELY

LIKELY DK REF

a. (IF FEMALE, SAY:) If you used the birth control pill or other hormonal methods, how likely is it that you would gain weight? (IF MALE, SAY:) If a woman uses the birth control pill or other hormonal methods, how likely is she to gain weight? 1 2 3 4..... 8 9

b. (IF FEMALE, SAY:) If you used the birth control pill or other hormonal methods, how likely is it to reduce your desire for sex? (IF MALE, SAY:) If a woman uses the birth control pill or other hormonal methods, how likely is it to reduce her desire for sex?1.....2.3..... 4.....8....9

c. (IF FEMALE, SAY:) If you used the birth control pill or other hormonal methods for many years, how likely is it to give you a serious health problem, like cancer? (IF MALE, SAY:) If a woman uses the birth control pill or other hormonal methods for many years, how likely is it to give her a serious health problem, like cancer?1.....2.....3..... 4.....8....9

IF FEMALE, ASK:

-472

-473

-474

..... |
-475 you to become pregnant in the future? 1
..... 2 3 4..... 8 9 -476

d. If you used an IUD, how likely is it to give you an infection? 1 2 3...
..... 4 8 9

e. If you used an IUD, how likely is it to make it more difficult for

|
f. (IF FEMALE, SAY:) If you used the birth control pill or other hormonal methods, how likely is it to give you severe mood swings? (IF MALE, SAY:) If a woman uses the birth control pill or other hormonal methods, how likely is it to give her severe mood

swings?.....1.....2...
.....3..... 4.....8...9 -477

IF ANY Q19a-f = 2, 3 OR 4, ASK: (FEMALE ONLY)

Q20.

And, please tell me how much the possibility of each effect reduces your likelihood of using the method.

.....
IF Q19a = SLIGHTLY, QUITE, OR EXTREMELY LIKELY, ASK:

a. How much does the possibility of weight gain reduce your likelihood of using birth control pills or other hormonal methods? Would you say not at all, a little, somewhat or a lot?

NOT AT ALL1 A LITTLE
.....2
SOMEWHAT.....3 A LOT
.....4 DON'T KNOW
.....8 REFUSED9

-478

.....
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IF Q19b = SLIGHTLY, QUITE, OR EXTREMELY LIKELY, ASK:

b. How much does the possibility of reduced sexual desire reduce your likelihood of using birth control pills or other hormonal methods? (IF NECESSARY, SAY: Would you say not at all, a little, somewhat or a lot?)

IF Q19c = SLIGHTLY, QUITE, OR EXTREMELY LIKELY, ASK:

c. How much does the possibility of serious health problems, like cancer reduce your likelihood of using birth control pills or other hormonal methods? (IF NECESSARY, SAY: Would you say not at all, a little, somewhat

or a lot?)

Q19d = SLIGHTLY, QUITE, OR EXTREMELY LIKELY, ASK:

d. How much does the possibility of getting an infection reduce your likelihood of using an IUD? (IF NECESSARY, SAY: Would you say not at all, a little, somewhat or a lot?)

Q19e = SLIGHTLY, QUITE, OR EXTREMELY LIKELY, ASK:

e. How much does the possibility of problems with future fertility reduce your likelihood of using an IUD? (IF NECESSARY, SAY: Would you say not at all, a little, somewhat or a lot?)

IF Q19f = SLIGHTLY, QUITE, OR EXTREMELY LIKELY, ASK:

f. How much does the possibility of severe mood swings (IF FEMALE, SAY: reduce your likelihood of using birth control pills or other hormonal method) (IF MALE, SAY: reduce the likelihood that you would want your partner to use birth control pills or other hormonal methods)? (IF NECESSARY, SAY: Would you say not at all, a little, somewhat or a lot?)

NOT AT ALL1 A LITTLE
2
 SOMEWHAT.....3 A LOT
4 DON'T KNOW
8 REFUSED9

NOT AT ALL1 A LITTLE
2
 SOMEWHAT.....3 A LOT
4 DON'T KNOW
8 REFUSED9

NOT AT ALL1 A LITTLE
2
 SOMEWHAT.....3 A LOT
4 DON'T KNOW
8 REFUSED9

NOT AT ALL1 A LITTLE
2
 SOMEWHAT.....3 A LOT
4 DON'T KNOW
8 REFUSED9

As I read each of the following statements, please tell me how much you, personally, agree or disagree with each statement... (READ ITEMS IN RANDOM ORDER, ASKING:) Do you strongly agree, somewhat agree, somewhat disagree, or strongly disagree?

SOME- (VOL. SOME- STRONGLY WHAT ONLY) WHAT STRONGLY

AGREE AGREE NEITHER DISAGREE DISAGREE DK REF

a. It is too much of a hassle to use a condom every time you have sex
1 2 3 4.....
 5.....89 -511

d. Using birth control is morally wrong1 2 3
 4..... 5.....89 -512

e. It doesn't matter whether you use birth control or not; when it is your
 time to get pregnant, it will
 happen.....1 2
 3 4..... 5.....8....9 -513

f. It is mainly a woman's responsibility to make decisions about birth
 control.....1 2 3 4.....
 5.....89 -514

The next questions are about the effectiveness of different methods at preventing pregnancy.

- . Q22. Overall, if a couple is having sex regularly and the woman is using birth control pills, what are the chances of her getting pregnant in a year? Please give me a number from 0-100, where 0 means no chance and 100 means a 100% chance. (IF NECESSARY, SAY: Regularly means about once a week.)
- . Q23. And, if a couple is having sex regularly and they are not using any method to prevent pregnancy, what are the chances of getting pregnant in a year? (IF NECESSARY, SAY: Using the same scale from 0 to 100.) (IF NECESSARY, SAY: Regularly means about once a week.)
- . Q24. What are the chances of getting pregnant after one single act of unprotected sex? (IF NECESSARY, SAY: Again, using a scale from 0 to 100.)

IF FEMALE, ASK:

% CHANCE: 515-517 (FROM 0%-100%) DON'T KNOW	998
REFUSED	999
% CHANCE: 518-520 (FROM 0%-100%) DON'T KNOW	998
REFUSED	999
% CHANCE: 521-523 (FROM 0%-100%) DON'T KNOW	998
REFUSED	999

For each of the following pairs of birth control methods, please tell me which one you think is more effective at preventing pregnancy and which one is less effective. If you think they are equally effective say it is a tie.

- . Q25. First, birth control pills or condoms--which is more effective?
- . Q26. Birth control pills or the IUD? (Which one is more effective?)
- . Q27. Condoms or withdrawal?

BIRTH CONTROL PILLS MORE EFFECTIVE 1 CONDOMS MORE EFFECTIVE 2 BOTH EQUALLY EFFECTIVE 3 DON'T KNOW (VOLUNTEERED ONLY) 8 REFUSED (VOLUNTEERED ONLY) 9

BIRTH CONTROL PILLS MORE EFFECTIVE 1 IUD MORE EFFECTIVE 2 BOTH EQUALLY EFFECTIVE 3 DON'T KNOW (VOLUNTEERED ONLY) 8 REFUSED (VOLUNTEERED ONLY) 9

CONDOMS MORE EFFECTIVE 1 WITHDRAWAL MORE EFFECTIVE 2 BOTH EQUALLY EFFECTIVE 3 DON'T KNOW (VOLUNTEERED ONLY) 8 REFUSED (VOLUNTEERED ONLY) 9

-524

-525

-526



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- . Q28. Condoms or the birth control injection, Depo Provera? CONDOMS MORE EFFECTIVE.....1 INJECTION MORE EFFECTIVE.....2 BOTH EQUALLY EFFECTIVE3 DON'T KNOW (VOLUNTEERED ONLY)8 REFUSED (VOLUNTEERED ONLY)9

- . Q29. Birth control pills or the birth control injection, Depo Provera? BIRTH CONTROL PILLS MORE EFFECTIVE1 INJECTION MORE EFFECTIVE.....2 BOTH EQUALLY EFFECTIVE3 DON'T KNOW (VOLUNTEERED ONLY)8 REFUSED (VOLUNTEERED ONLY)9

- . Q30. And finally, withdrawal or no method? WITHDRAWAL MORE EFFECTIVE1 NO METHOD MORE EFFECTIVE2 BOTH EQUALLY EFFECTIVE3 DON'T KNOW (VOLUNTEERED ONLY)8 REFUSED (VOLUNTEERED ONLY)9

- . Q31. Which is more risky to a woman's health... taking birth TAKING BIRTH CONTROL PILLS FOR A YEAR ..1 control pills for a year or having a baby, including the HAVING A BABY2 pregnancy, labor and delivery? DON'T KNOW8 REFUSED9

SECTION C: RELATIONSHIPS AND PREGNANCY EXPERIENCES

Next, I have some questions about relationships and pregnancy. Please remember that everything you say is confidential and anonymous. For these questions we are interested in relationships with members of the opposite sex. We recognize some people are in same-sex relationships, but that is outside the scope of this survey.

-527

-528

-529

-530



Q32. Are you currently in a sexual relationship with a (IF FEMALE: man) (IF MALE: woman); that is, do you have a (IF FEMALE: boyfriend) (IF MALE: girlfriend), with whom you are having sex?

IF NO CURRENT PARTNER, ASK:

Q35. Have you ever had sex, that is sexual intercourse, with a (IF FEMALE: man) (IF MALE: woman)? (IF NECESSARY, SAY: By sex, I mean having penile/vaginal intercourse.)

IF REFUSED, SAY:

I understand your hesitation. Please remember, all of your responses are confidential and private. They will never be linked back to you or your phone number. Would you like me to repeat the question?

YES, HAS CURRENT PARTNER1 NO CURRENT PARTNER2
DON'T KNOW8 REFUSED9

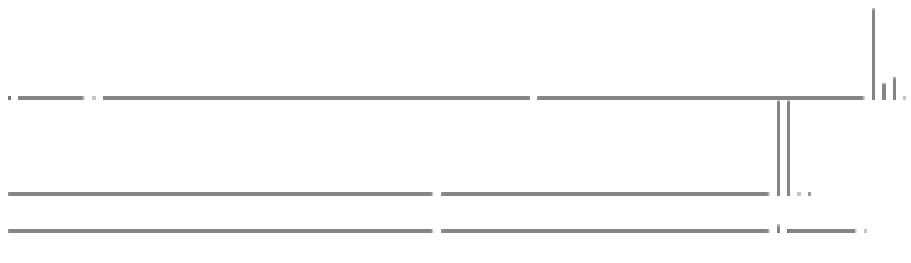
YES1 NO2
DON'T KNOW8 REFUSED9

YES1 – RE-ASK Q35 NO.....2

-531

-532

-533



IF Q32 = 1 (HAS CURRENT PARTNER) OR Q35 = 1 (HAS HAD SEX) OR DK, ASK:

Q36. How old were you the first time you ever had sex? (OK TO ACCEPT ESTIMATE)

Q37. In the past 12 months, with how many (IF FEMALE: men) (IF MALE: women) have you had sex? (IF NECESSARY, SAY: Including your current partner.)

AGE IN YEARS: 534-535DON'T KNOW 98 REFUSED
..... 99

TOTAL NUMBER: 536-537DON'T KNOW 98 REFUSED
..... 99

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IF Q32 = 2 (NO CURRENT PARTNER) AND (Q35 = 2 (NEVER HAD SEX)) OR Q37 = 0 (NO PARTNER IN LAST 12 MONTHS), ASK:

Q38.

There are many reasons why someone might not currently be having sex with a (IF FEMALE: man) (IF MALE: woman). Can you tell me if any of these reasons apply to you? (ROTATE ORDER)

YES NO DK REF

a. You want to wait and have sex only with your spouse.....1289

b. You are not currently in a relationship.....1289

c. You only have sex with other (IF FEMALE: women) (IF MALE: men) 1 2 8 9

d. You don't want to get pregnant or STDs (EITHER OR BOTH).....1289 -541

IF Q39 = YES, DK OR REF (HAVE HAD PREGNANCY), ASK:

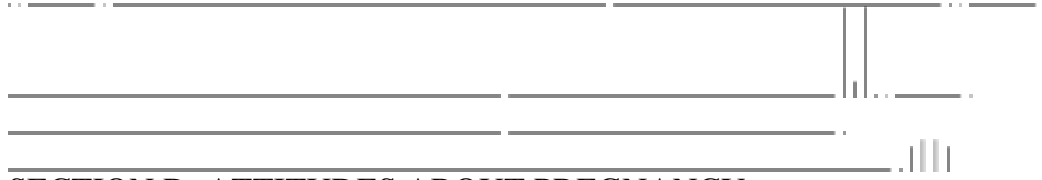
. Q42. Do you have any children that you have (IF FEMALE: given birth to) (IF MALE: fathered)?

. Q43. (IF FEMALE:) Have you ever become pregnant at a time when you were not trying or expecting to become pregnant? (IF MALE:) Have you ever gotten a woman pregnant at a time when you were not trying or expecting the pregnancy?

YES, CURRENTLY TRYING1 NO, NOT TRYING.....2 DON'T KNOW8 REFUSED9

YES1 NO2 DON'T KNOW8 REFUSED9

YES1 NO2 DON'T KNOW8 REFUSED9



SECTION D: ATTITUDES ABOUT PREGNANCY

IF Q40 = 2, DK OR REF (NOT CURRENTLY PREGNANT) OR Q41 = 2, DK OR REF (NOT TRYING TO GET PREGNANT) OR Q39=2 (NEVER BEEN PREGNANT), ASK:



Q44. Thinking about your life right now, how important is it to you to avoid (IF FEMALE: becoming pregnant) (IF MALE: getting someone pregnant)? Would you say very important, somewhat important, a little important, or not at all important?

VERY IMPORTANT1 SOMEWHAT IMPORTANT2 A LITTLE IMPORTANT3 NOT AT ALL IMPORTANT4 DON'T KNOW8

REFUSED9

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Q45. (IF NOT CURRENTLY PREGNANT: If you found out today that (IF FEMALE: you were) (IF MALE: your partner was) pregnant, how would you feel? Would you be very upset, a little upset, a little pleased or very pleased?

(IF CURRENTLY PREGNANT:) When you found out that (IF FEMALE: you were) (IF MALE: your partner was) pregnant, how did you feel? Were you very upset, a little upset, a little pleased or very pleased?

IF FEMALE, ASK:

VERY UPSET1 A LITTLE UPSET2 A LITTLE PLEASSED3 VERY PLEASSED.....4 WOULDN'T CARE (DON'T READ).....5 DON'T KNOW (VOLUNTEERED ONLY)8 REFUSED (VOLUNTEERED ONLY)9

-548

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Q46.

The following statements relate to feelings you (might have if) (IF PREGNANT: had when) you became pregnant, please tell me if you agree or disagree with each. (READ ITEM, IN RANDOM ORDER) -- Do you strongly agree, somewhat agree, somewhat disagree or strongly disagree?

SOME- (VOL. SOME- STRONGLY WHAT ONLY) WHAT STRONGLY

AGREE AGREE NEITHER DISAGREE DISAGREE DK REF

a. You worry that a new baby would keep you from doing things, like working, going to school and going out.....1 2 3 4..... 5.....8....9

b. You (would look) (IF PREGNANT: look) forward to the new experiences that a baby would bring1 2 3 4..... 5.....89

c. You (would look) (IF PREGNANT: looked) forward to telling your friends that you were pregnant1 2 3 4..... 5.....89

d. You worry that you don't have enough money to take care of a baby.....1 2 3 4..... 5.....89

e. You (would dread) (IF PREGNANT: dreaded) telling your friends that you were pregnant.....1 2 3 4..... 5.....89

f. You (would look) (IF PREGNANT: look) forward to buying things for a new baby.....1 2 3 4..... 5.....89

IF Q32 = 1 (HAS PARTNER), ASK:

g. You (worry)(IF PREGNANT: worried) that a baby would ruin your relationship with your partner1 2 3 4..... 5.....89

h. You (would look)(IF PREGNANT: look) forward to raising a child with your partner.....1 2 3 4..... 5.....89

-549 -550 -551 -552 -553 -554

-555 -556

-573



DO NOT ASK IF CURRENTLY PREGNANT (Q40=1)

Q47. Some people are unable to become pregnant, even if they want to. How likely do you think it is that you are infertile or will have difficulty (IF FEMALE: getting pregnant) (IF MALE: getting a woman pregnant) when you want to? Do you think it is not at all likely, slightly likely, quite likely or extremely likely?

NOT AT ALL LIKELY.....1 SLIGHTLY LIKELY
2 QUITE LIKELY3
 EXTREMELY LIKELY4 DON'T KNOW
8 REFUSED9

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IF SLIGHTLY, QUITE OR EXTREMELY LIKELY, ASK: (FEMALES ONLY)

Q48.

Which of the following are reasons why you think you might be infertile or have difficulty getting pregnant when you want to?

YES NO DK REF

a. A doctor has told you that you are infertile or that you might have difficulty getting pregnant.....1....2....8....9

b. Other women in your family are infertile.....1289

c. You have had sex without using birth control and you have never become pregnant.....1....2....8....9

. Q50. For the next few statements, please think about your own life and tell me how much you, personally, agree or disagree with each statement ... (READ ITEMS IN RANDOM ORDER, ASKING:) Do you strongly agree, somewhat agree, somewhat disagree or strongly disagree? SOME- (VOL. SOME- STRONGLY WHAT ONLY) WHAT STRONGLY AGREE AGREE NEITHER DISAGREE DISAGREE DK REF

a. In life, things just seem to happen to me.....1 2
 3..... 4..... 5.....89

b. In life, I think I take many more risks than other people my age.....1 2
 3..... 4..... 5.....89

c. In my family it is not acceptable to have a child out-of-

wedlock.....1 2
..... 3..... 4..... 5.....89

d. Many of my friends have had unplanned pregnancies.1 2
..... 3..... 4..... 5.....89

e. Most of my friends think using birth control is
important.....1
2 3..... 4..... 5.....89

f. If things were different in my life, I would love to have a baby now
.....1 2 3.....
4..... 5.....89

g. I have all the information I need to avoid an unplanned pregnancy
.....1 2 3.....
4..... 5.....89

h. It is OK for an unmarried female to have a child.....1.....2.....3.....
....4.....5.....8....9

i. Pregnancy is something that should be planned.....1.....2.....3...
.....4.....5.....8....9

j. Every pregnancy is a blessing1 2
..... 3..... 4..... 5.....89

. Q51. And, for each of the following, please tell me how likely you think it
is to happen to you. Would you say it is not at all likely, slightly likely,
quite likely or extremely likely? NOT AT ALL SLIGHTLY QUITE EXTREMELY

LIKELY LIKELY LIKELY LIKELY DK REF

-574 -575

-576

-577 -578

-579 -580

-608 -609

-610 -611 -612 -613



a.
That you will get married before age 35?.....1.....2.....3
.....4.....8.....9 -614 IF Q32 = 1 (HAS CURRENT PARTNER), ASK:

b.
That you will marry your current partner?.....1.....2.....
3.....4.....8.....9

IF 40=2, DK OR REF (NOT CURRENTLY PREGNANT)

c. That you will (IF FEMALE: get pregnant) (IF MALE: get a partner pregnant)
in the next 12
months?.....1.....2.....3.....4.....8.....9

d.
That you will have a baby while you are unmarried?.....1.....2.....3..
.....4.....8.....9

IF 40=2, DK OR REF (NOT CURRENTLY PREGNANT) AND IF Q32 = 1 (HAS
CURRENT PARTNER),

-615

-616 -617

e.
That you will have a baby with your current partner?.....1.....2.....3..
.....4.....8.....9 -618

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SECTION E: EXPOSURE TO INFORMATION SOURCES

Q52. (IF FEMALE, SAY:) Have you ever made a visit to a doctor or clinic for
women's health care? (IF NECESSARY, SAY: This could be a visit where you
got an annual gynecological exam, a birth control method, or a test for

STDs or pregnancy.)

(IF MALE, SAY:) Have you ever made a visit to a doctor or clinic where you received sexual health care services?

(IF NECESSARY, SAY: This could be a visit where you got condoms or a test or treatment for STDs.)

YES.....1 NO
..... 2 DON'T KNOW
..... 8 REFUSED 9

-619

Q55. Have you ever gotten information about birth control or pregnancy prevention from each of the following sources? (READ LIST)

Q56. Among these sources, from which one source have you received the most information in the past 12 months? (IF NECESSARY, REPEAT SOURCES EVER USED) (ACCEPT ONLY ONE ANSWER)

Q57. Among all possible sources of information, which one source would you trust to give you the most accurate information about contraception and birth control. (IF NECESSARY, REPEAT LIST) (ACCEPT ONLY ONE ANSWER)

Q58. And, finally, if you heard about a new method of birth control, like from a TV ad or from someone you knew, and you wanted to learn more about it, what is the first source you would use to get information about this method? (IF NECESSARY, REPEAT LIST) (ACCEPT ONLY ONE ANSWER)

632-633 634-635

Q55. | Q56. Q57.

636-637

Q58.

|| |||
EVER USED YES NO DK REF |OFTEN |TRUSTED |SOURCE

a. Your friends -622... 1... 2... 8... 9
..... 1..... 1..... 1

b. Your partner (current or past)..... -623...1...2...8...9
.....2.....2.....2

c. Your mother or father..... -624...1...2...8...9
.....3.....3.....3

d. Siblings or other relatives..... -625...1...2...8...9
.....4.....4.....4

e. A doctor or nurse -626...1...2...8...9
.....5.....5.....5

f. A teacher or counselor..... -627...1...2...8...9
.....6.....6.....6

g. A minister, priest, or rabbi..... -628...1...2...8...9
.....7.....7.....7

h. The internet..... -629...1...2...8...9
.....8.....8.....8

j. Books, magazines or pamphlets..... -630...1...2...8...9
.....9.....9.....9

k. TV or radio..... -631...1...2...8...9
.....10.....10.....10 DON'T KNOW
.....
98..... 9898 REFUSED
.....
99..... 9999

USED MOST MOST
FIRST

.....
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SECTION F. CURRENT BEHAVIOR: CONTRACEPTION

Okay, we are nearly finished. This section is about your own personal use of birth control methods.

Q60. a. Have you ever used any method to prevent pregnancy? By use, I mean that either you, yourself, have used the method or that a partner of yours used the method when having sex with you.

YES1 NO
.....2 DON'T KNOW
.....8 REFUSED9

-638

-639

IF YES, DK OR REFUSED, HAS EVER USED ANY METHOD TO PREVENT PREGNANCY, ASK:

b. In the past 1 month, have you used any method to YES
.....1 prevent pregnancy? NO
.....2 DON'T KNOW
.....8 REFUSED9

IF Q60A = 1, YES, DK OR REFUSED, HAS EVER USED ANY METHOD TO PREVENT PREGNANCY, ASK:Q61.

Haveyoueverused...(FILLMETHOD)?(ONLYASKMETHODSRESPONDENTHASEVER HEARDOF

(Q7a-o = 1) (KEEP IN ORDER – DO NOT ROTATE) (LOOP UNTIL ALL Q7a-o METHODS = 1 ARE ASKED)

- €(IF NECESSARY, SAY:) By use, I mean that either you, yourself, have used the method or that a partner of yours used the method when having sex with you.
- €(IF MALE AND NECESSARY, SAY:) If you don't know whether your partner ever used the method with you, just tell me you don't know.

.....

.....

.....

IF Q61= YES, DK OR REF AND Q60B = 1, IMMEDIATELY ASK: Q62. Haveyouused(FILLMETHOD)inthepast1month?

.....

_____ |||
Q61. Q62. USED IN LAST

_____ ||
EVER USED

MONTH

_____ ||
YES NO DK REF YES NO DK REF

||
B C D

E F K

H Gi

L

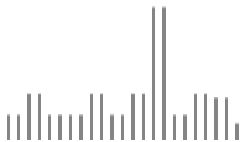
M No

P

- a. birth control pills or oral contraceptives (“the pill”).....
- b. male condoms (rubbers)
- c. injectable birth control, like Depo Provera (the Shot, Lunelle).....
- d. the birth control patch, or Ortho Evra.....
- e. an IUD or intrauterine device, like Mirena
- f. birth control implants, like Implanon (Norplant, tubes in your arm).....
- g. a vaginal ring or nuva-ring.....
- h. Other methods, like a diaphragm, sponge, female condom, foam, jelly or cream.....
- i. the rhythm method or natural family planning, (IF NECESSARY: that is, when you use a calendar, temperature or mucous test to try to predict the safe period when you cannot get pregnant and you only have sex on those safe days); (Billings method, periodic abstinence).....

- j. withdrawal or pulling out.....
- k. Sterilization, including female (tubal) or male (vasectomy)
.....
- l. emergency contraception or the 'morning after pill'
.....

-640...1....2....8....9 -641...1....2....8....9
 -642...1....2....8....9 -643...1....2....8....9 -644...1....2....8....9
 -645...1....2....8....9 -646...1....2....8....9
 -647...1....2....8....9
 -648...1....2....8....9 -649...1....2....8....9
 -650...1....2....8....9 -651...1....2....8....9
 ... 1 2....8 9 -654 ... 1 2....8 9 -655
 ... 1 2....8 9 -656 ... 1 2....8 9 -657 ... 1 2....8 9 -658
 ... 1 2....8 9 -659 ... 1 2....8 9 -660
 ... 1 2....8 9 -661
 ... 1 2....8 9 -662 ... 1 2....8 9 -663
 ... 1 2....8 9 -664 ... 1 2....8 9 -665



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|
IF FEMALE, ASK:

Q63.

How important are each of the following characteristics to you in deciding which birth control method to use? (READ ITEM, ASKING:) Would you say, not at all

important, slightly important, quite important or extremely important to you in choosing a method?

NOT AT ALL SLIGHTLY QUITE EXTREMELY IMP. IMP. IMP. IMP. DK REF

a. It is very effective at preventing pregnancy 1 2 3 4
.8....9 -668

b. It has a low cost 1 2 3 4
.....8....9 -669

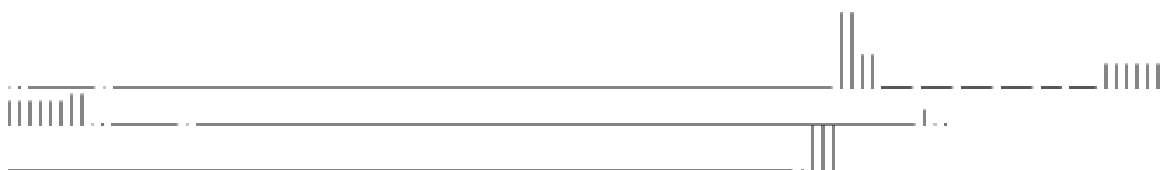
c. It is easy to use 1 2 3 4
.....8....9 -670

d. It doesn't contain hormones 1 2 3 4
.....8....9 -671

e. It is acceptable to my partner 1 2 3 4
...8....9 -672

f. It doesn't interrupt sex 1 2 3 4
.....8....9 -673

g. It is effective at preventing HIV or STDs 1
2 3 4 8 9 -674



PROGRAMMER NOTE::CURMTHD1=CURRENT METHOD BASED ON HIERARCHY-
Q61X =1-PILL, DEPO, IUD, IMPLANT, PATCH, RING, CONDOMS, RHYTHM,
WITHDRAWAL.

IF FEMALE AND ANY CURRENT METHOD OR MALE AND CURRENTLY USES
CONDOMS, ASK:

Q64. Overall, are you now satisfied or dissatisfied with your use of (IF FEMALE:
CURMTHD1) (IF MALE: condoms)? Are you completely satisfied, somewhat

satisfied, somewhat dissatisfied or completely dissatisfied?

COMPLETELY SATISFIED.....1 SOMEWHAT SATISFIED.....2 NEUTRAL/NEITHER/IN THE MIDDLE

(VOLUNTEERED ONLY)3 SOMEWHAT DISSATISFIED.....4 COMPLETELY DISSATISFIED5 DON'T KNOW8 REFUSED9

-675

..... ||
IF FEMALE, ASK: Q65.

Do you think it is likely or unlikely that you will use (FILL METHOD) (IF NEVER USED: in the

future) (IF EVER USED: again)? IF Q61a = 2 OR Q62a = 2, ASK:

..... ||||
LIKELY UNLIKELY DK REF a. Birth control pills.....1.....2.....8.....9 -676

||..... ||||.....
..... ||
IF Q61c = 2 OR Q62c = 2, ASK:

b. Birth control injectables, like Depo Provera.....1.....2.....8.....9 -677 IF Q61e = 2 OR Q62e = 2, ASK:

c. An IUD.....1.....2.....8.....9 -678

..... ||||.....
..... ||.....
..... ||||.....
..... ||||
IF (Q61a = 2 OR Q62a = 2) AND Q65a = 2, ASK:

Q66.
Which of the following are reasons why it is unlikely that you will use birth control pills (IF NEVER USED: in the future) (IF EVER USED: again)? (READ ITEMS)

YES NO DK REF a.

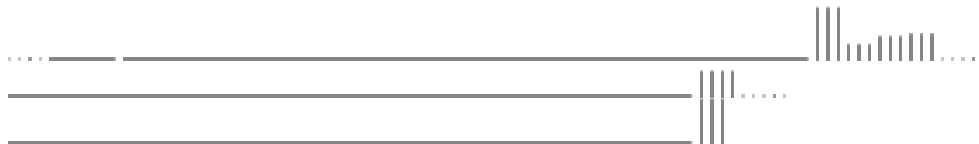
Adoctor told you not to use this method.....1...2...8...9

IF Q61a ≠2, ASK:

b. You had a bad experience with this method.....1...2...8...9

-679

-680



c. Your friends or relatives have had bad experiences with this method.....1289 -708

d. You are worried about side effects or health problems1...2...8...9 -709 e.

You have some other reason (SPECIFY) _____1...2...8...9 -710

(SEE VERBATIMS FILE FOR Q66oth)

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||
IF (Q61c = 2 OR Q62c = 2) AND Q65b = 2, ASK:

Q67.

Which of the following are reasons why it is unlikely that you will use birth control injectables or Depo Provera (IF NEVER USED: in the future) (IF EVER USED: again)? (READ ITEMS)

YES NO DK REF a.

Adoctor told you not to use this method.....1...2...8...9
-726

IF Q61c ≠2, ASK:

.....128
....9 -748

d. You are worried about side effects or health problems
.....1....2....8....9 -749

e. You have some other reason (SPECIFY) -750

|||
.....12
....89 (SEE VERBATIMS FILE FOR Q68oth)

.....||
IF Q62b = 1 (CURRENTLY USING CONDOMS), ASK:

Q70. Thinking about all of the times you had sex in the past 3 months, would you say you used a condom (IF FEMALE: with your partner) every time, most of the time, about half of the time, less than half of the time, or none of the time you had sexual intercourse? (ESTIMATES ARE OKAY)

IF FEMALE AND Q62a = 1 (CURRENTLY USING PILLS), ASK:

Q71. Inthepastthreemonths,altogetherhowmany pills that you were supposed to take did you skip? (That is, how many of the hormone pills did you skip, even if you remembered later and took two pills the next day?) (ESTIMATES ARE OKAY)

EVERY TIME1 MOST OF THE TIME
.....2 ABOUT HALF OF THE TIME3 LESS
THAN HALF OF THE TIME4 NONE OF THE TIME
.....5 DON'T KNOW8
REFUSED9

OF PILLS MISSED: 767-768DON'T KNOW 98
REFUSED 99

-766

.....||
.....||

IF FEMALE AND Q62c = 1 (CURRENTLY USING DEPO), ASK:

Q72. Thinking about when you received your last Depo injection, was it earlier, later or exactly when you were originally scheduled to return?

EARLIER.....1 LATER
.....2 EXACTLY ON
TIME.....3 LAST SHOT WAS HER FIRST SHOT.....4
DON'T KNOW8 REFUSED
.....9

-769

-770

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IF Q37 ≠ 0 AND Q40 ≠ 1 AND Q41 ≠ 1 (SEX IN PAST 12 MONTHS AND NOT PREGNANT AND NOT TRYING), ASK:

Q73. In the next 3 months, how likely is it that you will have sex without using any method of birth control? Would you say it is: Not at all likely, slightly likely, quite likely, or extremely likely?

(IF NECESSARY, SAY: "Using birth control" means that you or your partner will use a method, including being protected by a method like the pill or injectable.)

NOT AT ALL LIKELY.....1 SLIGHTLY LIKELY

.....2 QUITE LIKELY3
 EXTREMELY LIKELY4 DON'T EXPECT TO HAVE SEX
 (VOL.)5 DON'T KNOW8 REFUSED
9

Q54 The following statements relate to the roles of doctors and health care institutions in the United States. Please tell me if you agree or disagree with each statement... (READ ITEMS, ASKING:) Do you strongly agree, somewhat agree, somewhat disagree or strongly disagree? (ROTATE LIST)

SOME- (VOL. SOME- STRONGLY WHAT ONLY) WHAT STRONGLY

AGREE AGREE NEITHER DISAGREE DISAGREE DK REF

a. The government makes certain that birth control methods are safe before they come onto the market ..1 2 3..... 4.....
 5.....89 -771

b. The government and public health institutions use poor and minority people as guinea pigs to try out new birth control methods.....1 2 3.....
 4..... 5.....89 -772

e. The government is trying to limit Blacks and other minority populations by encouraging the use of birth control
1 2 3.....
 4..... 5.....89 -773

f. Drug companies don't care if birth control is safe, they just want people to use it so they can make money.....1
 2 3..... 4..... 5.....89 -774

SECTION G: FINAL BACKGROUND CHARACTERISTICS

Now, we are really almost done. I just have a few last questions about your background characteristics.

Q74. AreyouHispanicorLatinoorofSpanishorigin?

Q75. Whichofthefollowingbestdescribesyourracial background: White, Black or African American, Asian or some other race? (ACCEPT MULTIPLE

RESPONSES)

YES1 NO
.....2 DON'T KNOW
.....8 REFUSED9

-775

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WHITE -840 BLACK OR AFRICAN
AMERICAN -841 ASIAN (PACIFIC ISLANDER)..... -842
HISPANIC (VOLUNTEER ONLY) -843

SOME OTHER RACE DON'T KNOW
..... REFUSED

-844 -845 -846

Q76. Were you born in the United States or somewhere else?

Q78. What language did you mostly speak at home when you were growing up?

Q78a. Do you currently live with your parents, (IF Q32 = 1 HAS PARTNER: your partner), roommates, someone else or no one? (ACCEPT MULTIPLE RESPONSES)

Q79. What is your religion, if any? Are you Protestant, Catholic, Jewish, some other religion, or no religion?

(IF NECESSARY: Protestant includes many Christian faiths, including Baptist, Methodist, Presbyterian, Lutheran, Episcopal, etc.)

IFQ79=1,4OR5,ASK:

Q80. Doyouconsideryourselftobeaborn-again Christian, an evangelical (EE-VAN-JEL-I-CAL), or a fundamentalist?

Q81. About how often do you attend religious services? Would you say once a week or more, 1-3 times per month, less than once a month, or never?

IN UNITED STATES1 SOMEWHERE ELSE
.....2 DON'T KNOW8

REFUSED9
 ENGLISH1 SPANISH
2 OTHER
3 DON'T KNOW
8 REFUSED9

-777

-779

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PARENTS -848 PARTNER
 -849
 ROOMMATES..... -850 SOMEONE ELSE
 _____ -851 NO ONE..... -
 852

DON'T KNOW REFUSED

PROTESTANT1 CATHOLIC
2 JEWISH3
 SOME OTHER RELIGION (SPECIFY) _____ ...4 CHRISTIAN (VOLUNTEER
 ONLY).....5 MUSLIM.....6 NO
 RELIGION.....7 DON'T KNOW
8 REFUSED9

YES1 NO
2 DON'T KNOW
8 REFUSEDREF

ONCE A WEEK OR MORE1 1-3 TIMES PER MONTH
2 LESS THAN ONCE A MONTH3 OR
 NEVER.....4 DON'T KNOW
8 REFUSED9

-854 -854

-808

-810

Q82.

At any time in the past 12 months did you have any of the following types of medical coverage or health insurance... (READ ITEMS)? (IF NECESSARY, SAY: Did you have this type of medical coverage in the past 12 months?)

YES NO DK REF

a. private health insurance, including insurance that you have through your employer, your school or college, your parents, your partner or military insurance of any kind.....1289 -812

b. Medicaid (IF CA, SAY: Medi-Cal) or any other government-sponsored health plan for low-income families?12
.....89 -813

IF Q82a=NO,DK,ORREF AND Q82b=NO,DK,ORREF,ASK:

c. any other type of medical coverage or health insurance?1289 -814

Q83. At any time in the past 12 months, even for one month, did you, yourself, receive public assistance, welfare or TANF (Temporary Assistance to Needy Families)?

YES.....1 NO
.....2 DON'T KNOW
.....8

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19

IF Q32 = 1 (HAS CURRENT PARTNER), ASK: And, finally I have just a few questions about your (PARTNER)...

. Q84. First, how old is (IF FEMALE: he) (IF MALE: she)?

- . Q85. Is (IF FEMALE: he) (IF MALE: she)currently working, going to school or doing something else?
- . Q86. What is the highest grade of school or year of college that (IF FEMALE: he) (IF MALE: she) has completed? (DO NOT READ LIST) (ACCEPT ONLY ONE RESPONSE)
- . Q87. What is the ZIP code of your residence?

IF LANDLINE RESPONDENT, ASK:

- . A1. Do you have a working cellular phone? (DUAL FRAME ADJUSTMENT)
- . A2. How many landlines do you have coming into your house? I mean landlines used to make and receive calls and not for connecting to the Internet, connecting to a fax machine, or for business purposes. (UNEQUAL PROBABILITY OF SELECTION ADJUSTMENT)

IF CELL PHONE RESPONDENT, ASK:

B1. How many landlines, if any, do you have coming into your house? I mean landlines used to make and receive calls and not for connecting to the Internet, connecting to a fax machine or for business purposes. (UNEQUAL PROBABILITY OF SELECTION ADJUSTMENT)

IF HAS LANDLINE AND CELL PHONE, ASK:

C1. And thinking of all the telephone calls that all the adults in your household receive, are all or almost all calls received on cell phones, some received on cell phones and some on regular phones, or are very few or none received on cell phones? (DUAL FRAME ADJUSTMENT)

816-817 YEARS OLD DON'T KNOW 98 REFUSED
 99

WORKING.....1 GOING TO SCHOOL
2 WORKING AND GOING TO SCHOOL.....3
 SOMETHING ELSE.....4 DON'T KNOW
8 REFUSED9

LESS THAN HIGH SCHOOL1 HIGH SCHOOL DEGREE OR GED
 (HIGH

SCHOOL EQUIVALENCY CERTIFICATE)2 ASSOCIATE DEGREE/SOME
 COLLEGE

(BUT NO DEGREE).....3 FOUR-YEAR COLLEGE DEGREE
(BA OR BS)4 ANY POST-GRADUATE LEVEL EDUCATION

OR PROFESSIONAL SCHOOLING5 VOCATIONAL-TECHNICAL
TRAINING6 DON'T KNOW8 REFUSED
.....9

ZIP CODE: 856-860DON'T KNOW 99998 REFUSED
..... 99999

YES1 NO
.....2 DON'T KNOW
.....8 REFUSED9

OF LANDLINES: 821-822DON'T KNOW 98
REFUSED 99

OF LANDLINES: 823-824DON'T KNOW 98
REFUSED 99

ALL OR ALMOST ALL.....1
SOME.....2 VERY FEW OR NONE
.....3 DON'T KNOW8
REFUSED9

-818

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