

**A SURVEY OF VIEWS ON TEEN PREGNANCY PREVENTION
BY THE DELAWARE POPULATION**

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I. RESEARCH PURPOSE

A. Overview of Teen Pregnancy Problem¹

In the United States, substantial justification exists for considering teen pregnancy prevention programs. First, the prevalence of teen pregnancy and birth rates among female teenagers has been at high levels. Second, teen pregnancies have produced considerable social costs to the America population.

Teen pregnancy prevention continues to be an important public policy issue despite the substantial drop in teen birth rates and pregnancy rates in the US since 1992 (Hoffman, 2007). Between 1991 and 2002 in the US, the birth rate among teenagers has decreased every year, and the teen pregnancy rate has decreased 36% between 1990 and 2002.² In 1991, the birth rate was 61.8 births for every 1,000 girls ages 15 to 19 years old, and in 2004 the rate was 41.1 per 1000 for this same age group, representing a 33% decline. In Delaware, the birthrate was 60.4 in 1991 and 43.5 in 2004, indicating 28.0% decrease. Although birth rates have been decreasing steadily for white and black teenagers since 1991, the first year that birth rates decreased for Hispanic teenagers was 1996. Hispanic adolescents had the highest overall birth rates and smallest decreases in 2000.³

Approximately 75% of adolescent births are first births.⁴ In 2001, approximately 51% of adolescent pregnancies ended in live births, 35% ended in induced abortion, and 14% resulted in miscarriage or stillbirth.⁵ Also, it was estimated that in 2001, more than 40% of adolescent girls had been pregnant at least once before 20 years of age (Kirby, Emerging Answers, 2001).

Very recently, the Center for Disease Control and Prevention (CDC) reported that in 2006 the US teen birth rate rose for the first time since 1991.⁶ This increase has occurred after a 14 year decline in the teen birth rate in which the birth rate fell 34% from its all-time high of 61.8 births per 1000 female teenagers in 1991. Between 2005 and 2006, the birth rate for teenagers 15-19 years of age rose by 3% from 40.5 births per 1000 to 41.9 per 1000. The largest increase of 5% was for non-Hispanic black teenagers, with a 2% increase for Hispanic teenagers, a 3% rise for non-Hispanic Caucasian teenagers, and a 4% increase for Native Americans. For Delaware, the teen birth rate remained stable at 10.7% in 2005 and 2006.

Despite the substantial drop in teen pregnancy in the US since 1991, as of 2004, the US has manifested the highest teen pregnancy rate and teen birth rate among developed countries. The US rate has been two to six times higher than Western Europe (Hoffman, 2007). This disparity has existed even though sexual activity rates are similar or higher among Western European teenagers than among teenagers in the United States.⁷

Due to the high prevalence of teen pregnancy, an array of social costs is imposed on American society. These negative societal impacts require public expenditures for social programs or cause social

harms such as crime. Recently Hoffman (2007) has estimated an array of social costs that teen pregnancy and birthrates have imposed on American society. Hoffman estimates that teen child bearing costs to taxpayers was at least \$9.1 billion annually in 2004 due to federal, state and local programs directed at the social needs caused by detrimental impacts of teen pregnancy and births. This figure excludes financial and social costs of prevention programs. The same classes of social costs were estimated to be \$7 billion annually in 1990 (Kids Having Kids: Economic Cost and Social Consequences of Teen Pregnancy). Because of the 33.3% decline in the teen birthrate from 1991 through 2004 in the US, the annual savings in 2004 due to this trend has been estimated to be \$6,820,000,000 nationwide. In Delaware, the 28.0% decline between 1991 and 2004 has resulted in \$16,000,000 savings in 2004 (Hoffman, 2007).

B. Objectives of The Study

Given the extent of the teen pregnancy problem and the public policy concerns that it raises, the Division of Public Health (DPH) of the State of Delaware Department of Health and Human Services (DHSS) has contracted with the Christiana Care Health Services to undertake a survey of Delaware adult residents to ascertain their opinions and attitudes of (a) teen pregnancy and its prevention, and (b) various programmatic alternatives that could be undertaken to address teen sexual activities. The topics encompassed by the survey are concerns about the prevalence of teen pregnancy, teen sexual behavior, approaches to sex education, and the role of the state and educational institutions in sex education. The content of the survey is based on an earlier survey conducted in 1999 by Doble Research Associates under the auspices of the Office of the Governor (then Thomas Carper) of the State of Delaware (**hereinafter the Doble survey**). Upon the request of Christiana Care Health Services, most of the questions contained in the Doble survey have been included in the present survey. Also some additional questions regarding opinions have been added along with a number of respondents' demographic characteristics. A copy of the present survey instrument can be found in Appendix A.

This report provides several perspectives of the survey results. First, the responses to each question as well as responses to combinations of several questions are presented on tabular displays with a brief commentary. Second, most of the results of the survey are also compared with the findings of the earlier 1999 Doble survey. Third, statistical analyses of some survey responses are given. The statistical analyses are in the form of various regression models that explore the social, economic and demographic determinants of different views about teen pregnancy and its prevention. These analyses are intended to offer a starting point to explore such differences and provide an example of one technique for interpreting the data. Additional analysis is needed to more fully understand meaningful differences in the characteristics of respondents that may explain differences in their views regarding teen pregnancy and prevention. To simplify the presentation of the statistical analysis, the statistical estimates of the various models are given in Appendix B, and only general statements are made in the text of the report.

C. Format of Report

The remainder of this report is comprised of two major sections. First, the characteristics of the survey are described. This discussion entails consideration of the design of the survey, the sampling dimensions and processes, and the procedures employed for obtaining the responses to the survey. Second, the results of the survey are presented as outlined in the subsection of “Objectives of the Study”.

II. SURVEY DIMENSIONS AND PROCEDURES

The personnel of the Health Services Policy Research Group conducted the survey on teen pregnancy prevention that is the subject of this report. The simple random survey, which was undertaken through random digit dialing, took place for six weeks from November 6, 2007 to December 20, 2007. Individual respondents were contacted by telephone in which only adults individuals (18 years of age and older) of Delaware households, as the targeted population, were interviewed.

A. Survey Procedures

The respondents were included in the survey in accordance with the following process.

First, the simple random survey was based upon a sampling frame comprised of 229,881 Delaware households which had listed telephone numbers on land line telephones located throughout the entire state. A particular respondent was selected into the survey sample by applying a random number generator to the listed telephone numbers of the sampling frame. Second, each chosen telephone number was scheduled to be called 10 times before the potential respondent was dropped from the drawn sample. The ten attempts were varied by time of day, and carried out on weekdays and weekends. The scheduling of calls to respondents is outlined in Table 1.

TABLE 1			
CALL SCHEDULE OF POTENTIAL RESPONDENTS			
	Weekdays (Monday - Friday)	Weekends (Saturday)	Weekends (Sunday)
Morning 10 -12 pm (noon)	2 Attempts		
Afternoon 12 pm (noon) – 4 pm	2 Attempts		1 Attempt
Daytime 10 am – 4 pm		1 Attempt	
Evening 4 pm – 8 pm	2 Attempts	1 Attempt	1 Attempt

Health Services Policy Research Group, University of Delaware, 2007

The timing of calls to the individuals did not follow a pattern; the timing of the calls themselves was random. The person answering the phone was informed of the purpose of the survey, and then asked if he or she were an adult. If a child (17 years of age or less) answered the telephone, the interviewer asked to speak to an adult in the household; and if an adult was unavailable, the interviewer concluded the call. (See the directions on the survey instrument in the Appendix). If a call was unanswered or an adult was not present, the household would be called again until the ten attempts were exhausted. If an adult in the

household refused to be interviewed, the call was completed immediately and the household was not called again.

The Sampling and Response Characteristics of the survey are provided on Table 2. A total of 2,104 eligible individual households were designated for interviews. The refusal rate was high at 41%, -- i.e., individuals in 843 households refused to be interviewed out of the 2,104 number of households to which calls were made. The final number of completed interviews was 352, which yielded a response rate of 17 percent.

TABLE 2	
SAMPLING AND RESPONSE CHARACTERISTICS	
1. Sampling Frame (All telephone numbers)	229,881
2. Chosen for Interviews	2,104
3. Disconnected or Number Changed	273
4. Completed Attempts (10 calls)	85
5. Partial Attempts (Less than 10 calls)	466
6. Not a Residence	47
7. Modem	39
8. Refused to be interviewed	843
9. Refusal Rate [8/2]	41%
10. Incomplete interviews	2
11. Completed interviews	350
11. Response rate [(10 + 11)/2]	17%

Health Services Policy Research Group, University of Delaware, 2007

Third, all potential respondents of the sampling frame were anonymous. The names of the individuals in the sampling frame, -- i.e., those individuals for whom the telephone was listed -- were unknown. Also, the individuals answering phone calls were not asked their name, and they were informed that their responses would be confidential.¹

Fourth, the individual responses were recorded as respondents answered each question in turn. Upon completion of the survey by a respondent, the particular interviewer checked the responses to each question to ensure that the given answers were recorded. The completed telephone interviews were recorded in a data framework provided by an ACCESS program (of Microsoft Office) specifically designed for the survey. The ACCESS program was utilized to compile the separate interviews in a data base. The compiled data base was in turn transferred into a SAS data file so the responses could be aggregated and then prepared for tabular display of the frequency distributions of responses as well as for conducting statistical analyses.

¹ The survey process and the content of the survey were approved separately as an expedited review by three Institutional Review Boards: Christiana Care Health Services, the University of Delaware, and the Division of Public Health of the State of Delaware.

B. Survey Properties

The properties of the survey are shown on Table 3. The total number of households that were interviewed from the sampling frame was 352. The number of surveys was sufficient to produce a total sample size and mix of respondents that (a) yields reliable estimates about the population of households (b) permits making (valid) statements and conclusions that are very representative of the households of Delaware, and (c) allows assessment of the relationship between (i.e., test hypotheses about) respondents' characteristics (variables) and their responses to survey questions.

TABLE 3		
SAMPLE SIZE AND SAMPLING ERROR FOR DHCP SURVEY		
Sampling Characteristics	Sample Size Required For 0.05 Sampling Error	Sampling Error With The Collected Sample
Households (Sampling Frame)	229,881	229,881
Sample Size	384	352
Sample Size (Weighted) ¹	-	350
Confidence Level	95%	95%
Estimated Sample Proportion	.5 or 50%	.5 or 50%
Sampling Error (Margin of Error)	.05 or 5%	.0522 or 5.22%

¹Two surveys were dropped from the weighted sample due to missing data in one or more of the weighting variables of gender, age group and marital status.

Health Services Policy Research Group, University of Delaware, 2007

This conclusion rests on the required inputs of the formula to calculate sample size. The survey was designed to yield (a) a 5% confidence interval (or margin of error), (b) a 95% confidence level, based on the (c) sampling frame (or population) of 229,881, and (d) the response distribution of survey questions of 50%. The sample size n and margin of error E are produced by the following calculations:

$$X = Z(c/100)^2 r(100-r)$$

$$n = N x / ((N-1)E^2 + x)$$

$$E = \text{Sqrt}[(N - n)x / n(N-1)]$$

Where:

n is the sample size,

E margin of error (or confidence interval)

N is the population size,

r is the proportion of the responses, and

$Z(c/100)$ is the critical value for the confidence level c .

1. The sampling frame is comprised of the population, (N), for which inferences are to be made, i.e., the 229,881 households.
2. The sample size, (n), should be large enough to provide a set of respondents that is representative of the selected population. The resulting number and mix of respondents, -- 352, -- does yield considerable accuracy of the opinions and attitudes of the adult population of Delaware.
3. The margin of error, (E), or confidence interval provides the acceptable level of the precision of estimates derived from survey responses. E indicates the range of error of a survey response that is acceptable to the researchers and the consumers of the survey. A common standard is the application of a 5% confidence interval (or margin of error), that is, the setting of a 5% sampling error, which was applied to set a target sample size for this survey on teen pregnancy prevention. Another commonly employed margin of error that is used to determine a sample size is a 10% confidence interval. The target sample size of 384 respondents was chosen on the basis of a 5% margin of error.
 - By way of example, with a 5% sampling error chosen, if 60% of the survey respondents selected a particular answer, -- say, A versus B or C, --, then there is strong assurance that if the entire population were asked the question, the proportion of the population that would have chosen A would be between 55% (60% - 5%) and 65% (60% + 5%).
4. The confidence level, (c), involves the amount of uncertainty that can be acceptable to researchers and consumers of surveys. Signified as a percentage, the confidence level represents how often the true percentage of the population who would select an answer, -- say A, -- lies within the confidence interval (e.g., 5% or 10%).
 - With the setting of a 90% confidence level to generate a sample, the resulting responses would indicate that, in 90 out of a 100 samples, the true value of a selected variable in the population (e.g. A rather than B or C) would lie within the range of the sample values established by the confidence interval, e.g., a 5% margin of error. Conversely, only 10 out of 100 times the population values would not be within the estimate range of the chosen sample confidence interval values—e.g., a 5% or a 10% error.

The present survey invokes a stronger position by the choice of a 95% confidence level as a basis of obtaining the sample size. Thus if the present teen pregnancy survey were

undertaken repeatedly, in 95 out of 100 samples drawn, the values of the responses for any question included in the present teen pregnancy survey would lie within the range encompassed by the margin of error for the response.

- The role of the confidence level can be understood by extending the example above. As stated, with a sample that provides a 5% margin of error, the point estimate of 60% of the respondents choosing A rather than B or C, would generate a confidence interval of 55% to 65%, respectively the lower limit and upper limit of the confidence interval. With respect to these limits, the interpretation of a 90% (or 95%) percent confidence level is that in 90 (or 95) out of 100 samples comprised of the same number of respondents, the percentage of the sample respondents (and thus the population) choosing A would fall between 55% and 65%.
5. The proportion of the responses, (r), refers to the percentage of the sample respondents that chooses a particular answer to a question. The accuracy of an inference to the population depends on the percentage of the sample that picks any one response to a survey question. More assurance is obtained where a large proportion of respondents provide the same answer to a question than where the responses are less consistent. For instance, if 80% of the sample responded "Yes" and 20% said "No", the likelihood of making an error, --i.e., inferring the majority view of the population, -- are small irrespective of sample size. However, if the percentages of the response to a question are 51% and 49% for the answers, the likelihood of making an error (or incorrect inference) is much greater. Most survey questions in the survey entailed multiple response categories to which various proportions that respondents could answer were unknown before the survey was undertaken, and the proportions could differ according to each question. To determine the sample size needed for the targeted level of accuracy, the conservative percentage (50%) was selected, and this proportion (r) was also utilized to determine a general level of accuracy for the actual collected sample. This choice, -- because of the (above) sampling formula, -- means that a larger sample is required to obtain a certain margin of error. Put differently, assuming a higher proportion of responses, r , after the sample is collected means that there is a larger sample size needed to realize a small margin of error, or confidence interval, as was done with the present survey.

As shown in Table 3, a random sample of 352 respondents was obtained. Given the stipulations of the sampling undertaken here, -- 95% confidence level, 50% proportion of responses with a sample frame of 229,881, -- the resulting sampling error (confidence interval) is 5.22% (just slightly higher than the targeted 5% with a sample of 384 respondents). When compared with the 5% confidence interval, the 5.22% margin of error produces a very minimal difference in the inferences about the sample respondents.

Specifically, with a 5.22% error margin, the proportion of the population (which the sample represents) that would answer a particular question would have respectively a lower limit of 5.22% below and an upper limit of 5.22% above the value that respondents collectively in the sample give to a question.

- Continuing the above example, with a 5.22% error margin, if 60% of the sample (which is representative of the population) would have chosen A for a particular question, then with a 95 % confidence level, the true value of the population would lie between 54.78% and 67.22%, and values in this range would be manifested in 95 out of 100 samples that were collected.

While the sample generated is adequate in size, based on the 5.22% error margin, a profile of the respondents indicated that the sample was not completely representative of three dimensions of the Delaware adult population. That is, the structure of age, gender, and marital status in the sample manifested different percentages or proportions than that of the Delaware population. Consequently, the sample was weighted to take into account these discrepancies. This adjustment entailed the extrapolation of observations and their values according to the non-representative demographic characteristics and restored the sample back to observations that reflect the profiles of the Delaware population. What follows in the next section is the demographic profile of the sample according to weighted values.

C. Demographic Profile of Survey Respondents

A profile of the respondents follows immediately. The social, economic, and demographic characteristics of respondents are presented without commentary.

TABLE 4		
GENDER		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
Male	48%	50%
Female	52%	50%
Total	100%	100%

TABLE 5		
MARITAL STATUS		
Response	HSPRG 2007 Survey %	<i>Doble Survey %</i>
Single	26%	26%
Married	57%	56%
Widowed	6%	5%
Divorced	10%	11%
Separated	1%	2%
Total	100%	100%

TABLE 6			
AGE GROUP			
HSPRG 2007 Survey		<i>Doble Survey</i>	
Response	%	Response	%
18-21	7%	18-25	13%
21-30	14%	26-35	22%
31-40	17%	36-45	24%
41-50	20%	46-66	16%
51-60	18%	56-65	14%
61-70	12%	66 or older	0%
Over 70	12%		
Total	100%	Total	89%

TABLE 7		
ANNUAL HOUSEHOLD INCOME		
Response	HSPRG 2007 Survey %	<i>Doble Survey %</i>
\$10,000 or less	3%	
\$10,001 - \$20,000	7%	
\$20,001 - \$30,000	12%	
\$30,001 - \$50,000	31%	
\$50,001 - \$75,000	21%	
\$75,001 - \$100,000	16%	
Greater than \$100,000	10%	
Total	100%	

TABLE 8		
RACIAL CATEGORY		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
African American	21%	15%
Caucasian	69%	78%
Asian	3%	1%
American Indian	<1%	0%
Other*	7%	3%
Total	100%	97%
*Hispanic was included as a racial category for the Doble Survey - this has been added to "Other" in this summary.		

TABLE 9		
RESPONDENT HAS CHILDREN		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
Yes	74%	72%
No	26%	27%
Total	100%	99%

TABLE 10		
CHILDREN UNDER 18 RESIDING IN THE HOUSEHOLD		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
Range	1-5	
Mean	1.96	
Median	2	
<i>N=97, based on respondents with children under 18</i>		

TABLE 11		
SCHOOL PRESENTLY ATTENDED BY NUMBER OF CHILDREN RESIDING IN THE HOUSEHOLD		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
Public School	66%	
Private/religious school	16%	
Private/non-religious school	3%	
Home school	0%	
Not in school	14%	
Total	99%	
<i>N=97, based on respondents with children under 18. Does not add up to 100% due to rounding.</i>		

TABLE 12		
ZIP CODE AREAS OF RESPONDENT		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
Newark zip codes	15%	18%
Wilmington zip codes	22%	22%
Other NCC zip codes	24%	19%
Dover zip codes	11%	7%
Other Kent zip codes	10%	13%
Seaford zip codes	2%	1%
Other Sussex zip codes	16%	20%
Total	100%	100%

TABLE 13		
HISPANIC ETHNICITY OF RESPONDENT		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
Yes	6%	2%
No	94%	98%
Total	100%	100%
<i>An exact comparison can not be made between the HSPRG survey and the Doble Survey – Hispanic was included as a racial category within the Doble survey.</i>		

TABLE 14		
RELIGIOUS AFFILIATION OF RESPONDENT		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
7 th Day Adventist	1%	
Agnostic	2%	
Atheists	1%	
Baptist	8%	
Buddhist	1%	
Catholic	28%	
Christian	10%	
Church of Latter Day Saints	<1%	
Episcopalian	4%	
Jewish	2%	
Lutheran	2%	
Methodist	11%	
Mormon	<1%	
Muslim	<1%	
None	9%	
Other	2%	
Pentecostal	3%	
Presbyterian	2%	
Protestant	13%	
Unitarian	1%	
Total	100%	

III. SURVEY RESULTS

This section of the report consists of several dimensions, which are presented together.

First, detailed results and analyses of the survey responses are provided. This first dimension includes a tabular display of the survey questions as well as some analyses based on a combination of questions. Each table identifies the specific question and its number as it appeared on the survey. The tabular results are compared with the results of the 1999 Doble survey.

Second, statistical analyses conducted with regression models are considered for selected survey questions. The statistical analyses are designed to determine the social, economic, and demographic characteristics of Delaware adults (the survey respondents) that explain or account for differences (if any) in their answers with respect to an issue measured by a particular survey question. The social, economic, and demographic characteristics are listed in Table 15.

Several different types of statistical modeling are employed to assess the social, economic, and demographic determinants of respondents' views/opinions. However, all of the models permit addressing the basic issue of which social, economic, and demographic factors are associated with different responses to a particular question.

The results of the statistical analyses are presented in a simplified manner for any survey question that is assessed statistically. To simplify the discussion, the statistical estimates of the models have been placed in the appendix, and only commentary is given in the text regarding the statistical findings. If none of the determinants is associated with any responses of a survey question, then a simple statement will be made that there is no differences in the responses according to any of the respondents, social, economic and demographic factors. Specifically, this would mean that for any particular set of responses for a survey question, there is no difference between men and women, Caucasians and minorities, income levels, etc. When one or more social, economic and demographic factors are associated with any particular set of responses for a survey question, then statements will be made about the impact of these factors.

TABLE 15			
COMMON SET OF INDEPENDENT VARIABLES USED IN THE VARIOUS EQUATIONS			
Variable Name	Variable Measurement	Variable Name	Variable Measurement
Gender of Respondents	Female; Male;	Marital Status of Respondent	Married; Widowed; Divorced/Separated; Single;
Age of Respondent	18 years of age and above;	Household Income	\$20,000 or less; \$20,001 - \$30,000; \$30,001 - \$50,000; \$50,001 - \$75,000; \$75,001 - \$100,000; Greater than \$100,000;
Race of Respondent	African American; Caucasian; Other;	Geographical Location of Household	Newark; Wilmington; Other New Castle County Areas; Dover; Other Kent County Areas; Sussex County
Ethnicity of Respondent	Hispanic; Not Hispanic;	Religious Affiliation	Protestants (includes Protestants, Lutherans, Presbyterians) Catholics Christians (Christians, 7 th Day Adventists and Pentecostals) Methodists Baptists Episcopalians
Children Residing in Household	Children but not at home; Children at home; No children;	Active Church Member	Yes; No;
Type of School for Children Residing in Household	Public School; Private Religious/Nonreligious School; Not in School;		

THE PUBLIC'S VIEW OF THE SEXUAL BEHAVIOR OF TEENAGERS

PRIORITY OF TEEN PREGNANCY PREVENTION AND ITS COMPARISON TO OTHER SOCIAL ISSUES

The prevention of teen pregnancy has high priority among Delawareans.

Adults in Delaware were asked to rate the importance of six issues that prevail in Delaware. Specifically, respondents were asked to rank the priority of six issues on a scale of 1 to 10: (1) reducing crime, (2) building new roads, (3) improving education, (4) reducing the teenage pregnancy rate, (5) reducing unemployment, and (6) reducing cancer. Table 16 reports the proportion of respondents designating the issues 8 to 10 on the 1 to 10 scale.

Slightly over 80% of the Delaware population ranked the reduction of the teenage pregnancy rate as a very important concern, i.e., 8, 9, or 10 on the rating scale. This 82% is greater than the 69% reported in the Doble survey, indicating perhaps an increase in the priority of the issue among Delaware adults.

When compared to other issues, the reduction of teenage pregnancy rate ranked slightly lower than the importance of reducing crime, improving education and reducing cancer, and slightly higher than unemployment, but far higher in priority than building new roads.

TABLE 16		
<i>1. On a scale of 1 to 10 where 10 means the highest possible priority and 1 means the lowest possible priority, please tell me how important you think each of these issues is:</i>		
Issues	<i>Respondents' Rating of 8 - 10</i>	
	<i>HSPRG 2007 Survey</i> %	<i>Doble Survey</i> %
Reducing crime	91%	87%
Building new roads	64%	24%
Improving education	88%	88%
Reducing the teenage pregnancy rate	82%	69%
Reducing unemployment	77%	55%
Reducing cancer	87%	

Statistical Analysis

A statistical analysis assessed the social, economic, and demographic bases of the difference between respondents who ranked the reduction in teen pregnancy rate a high priority (8 to 10) with those individuals who rated the reduction in teen pregnancy rate less than 8. The estimated results indicate:

- The importance of reducing the teenage pregnancy rate decreases with the over 70 age group.
- Males rate the reduction of teenage pregnancy as less important than females.
- African Americans and Caucasians weight the importance of teenage pregnancy less than “other” races.
- Catholics are more likely to have a lower priority for the issue of teenage pregnancy.

CURRENT SOCIAL DISAPPROVAL OF TEEN PREGNANCY

At the present time only a third of the adult population (31%) believes that unmarried teenage mothers realize strong social disapproval. A majority of Delawareans (60%) believe that unwed teenage mothers encounter only mild social disapproval in the society, while 9% of adults assert that unwed teenage mothers receive no disapproval within society.

TABLE 17		
2. How much disapproval, if any does an unmarried teenage mother face today?		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
No disapproval	9%	
Some disapproval	60%	
Much disapproval	31%	
Total	100%	

CURRENT SOCIAL DISAPPROVAL OF TEEN PREGNANCY COMPARED WITH SOCIAL DISAPPROVAL TWENTY YEARS AGO

It is the opinion of most Delawareans that social disapproval of teen pregnancy has eroded over the past twenty years.

A large majority of adult Delawareans (75%) believe that unwed teen mothers have less social disapproval (i.e., much less” and “somewhat less” disapproval) than they the unmarried teens did twenty years ago. Conversely, only 17% assert that unwed teen mothers now have more social disapproval (i.e., much more” and “somewhat more” disapproval) than that unwed teen mothers had 20 years ago. The lack of disapproval of unwed teens is slightly higher than the 70% elicited by the Doble report.

TABLE 18		
3. Do unwed teen mothers face much less disapproval, somewhat less, about the same amount, somewhat more, or much more community disapproval than they did 20 years ago?		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
Much less disapproval	45%	43%
Somewhat less disapproval	30%	27%
About the same amount	8%	6%
Somewhat more disapproval	9%	5%
Much more disapproval	7%	12%
Not sure/don't know/no response	1%	7%
Total	100%	100%

CURRENT RISK OF TEEN PREGNANCY COMPARED WITH THE RISK TEN YEARS AGO

A slight majority of Delawareans (61%) are of the opinion that female teenagers are at greater risk of becoming pregnant than teenagers were ten years ago. Only 16% of the adult population thinks that the risk of teenage pregnancy has declined; while 23% believe the risk is the same as it was ten years ago.

TABLE 19		
4. Do you believe that kids today are at more risk, the same risk or less risk of getting pregnant than youth were 10 years ago?		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
More risk	61%	
Same risk	23%	
Less risk	16%	
Total	100%	

**OPINIONS OF PARENTAL COMMUNICATION
ABOUT ISSUES RELATED TO SEX WITH THEIR
CHILDREN**

PUBLIC ASSESSMENT OF PARENTS' DISCUSSION ABOUT SEX WITH THEIR SCHOOL AGE CHILDREN

A considerable proportion of all adult Delawareans (who have and do not have children), 54%, believe that parents of school age children do not provide sufficient discussion with their children over issues involving sex. This proportion is 25% lower than that reported in the Doble survey. These two results indicate, over the past eight years, the general public believes that parents are talking more with their school age children about sexual issues. See question 8 below for views by parents only. The question does not directly consider what the adult population viewed as being the appropriate content of sexual discussion with children. Put differently, as they were interviewed, some respondents expressed statements which indicated that they did not interpret the meaning of “sex” discussions in the same way.

TABLE 20		
9. Do you think the parents of school age children discuss issues related to sex...		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
Too much	14%	3%
Too little	54%	79%
About the right amount	17%	9%
Don't know/no response	15%	9%
Total	100%	100%

Statistical Analysis

A statistical analysis was conducted to determine the sources of the difference between adults who viewed parent's allocate (a) “too little” discussion versus (b) “too much” discussion or “about the right amount” of discussion. The estimated results indicate:

- Females are more likely to think that there is too little discussion.
- Younger respondents are more likely to view that there is too little discussion about sex.

PUBLIC OPINION OF THE TIMING OF PARENTS' DISCUSSION ABOUT SEX WITH THEIR CHILDREN

A large proportion of respondents (70%) consider that parents initiate their discussion with their children when they are too old. This strength of opinion is far greater than that reported in the Doble report which showed a 55% corresponding opinion, an increase of 15% over the 8 years eight years. As with the above question, this question does not directly consider what the adult population viewed as being the appropriate content of sexual discussion with children. Put differently, as they were interviewed, some respondents expressed different interpretations of the meaning of “sex” discussions.

TABLE 21		
11. Do most parents talk about issues related to sex when their child is:		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
Too young	7%	8%
Too old	70%	55%
About the right age	9%	19%
Don't know/no response	14%	14%
Total	100%	96%

Statistical Analysis

A statistical analysis evaluated what social, economic, and demographic factors account for adults' views that parents address the children (a) when they are “too old”, compared to (b) when children are either “too young” or “about the right age”. The statistical analysis reveals:

- Respondents with children older than 18 years of age are more likely to have the opinion that parents discuss sexual issues when the child is too old compared to respondents with younger or no children.
- Respondents not active in a church are more likely to believe that parents address the issue of sex when their children are too old.
- Respondents labeling themselves as “Christian” or “Protestant” are more likely than respondents who identify themselves with other religions or no religion to think that sexual discussions occur when the child is too old.

PUBLIC OPINION OF THE CHILDREN’S AGE THAT PARENTS SHOULD DISCUSS SEX

Adult Delawareans revealed a considerable range regarding the age that parents should initiate discussion of sex with their children. The responses ranged between two and sixteen years of age. Fifty percent of adults believe that parents’ discussions about sex with their children should begin at 10 years of age or less, and 50% of adults think that such discussions should begin eleven years or older. (Many respondents stated that they were confused about what is included in the “issues of sex”, with different interpretations about the appropriate content to be discussed. Many respondents also expressed that when they gave the answer of the “right age”, they also added that it depended on the maturity level of child and the nature of information being discussed).

TABLE 22		
10. What age do you think is the right age to talk to children about sex?		
HSPRG 2007 Survey		
Age	Frequency %	Cumulative Frequency %
2	0.16%	0.16%
3	2.05%	2.21%
4	1.47%	3.68%
5	5.40%	9.08%
6	1.81%	10.89%
7	3.21%	14.10%
8	7.53%	21.63%
9	9.03%	30.66%
10	17.63%	48.29%
11	10.79%	59.08%
12	24.26%	83.34%
13	7.35%	90.69%
14	6.10%	96.80%
15	2.68%	99.48%
16	0.52%	100.00%
Mean	10.3	

Statistical Analysis

A statistical analysis assessed the social, economic, and demographic bases of the differences in responses about the “right” age that parental discussions about sex with their children should begin. The estimated results show that:

- Christians, Baptists and Catholics tend to think children should be younger for parents to discuss sexual issues when compared to Methodists, Protestants and respondents not labeling themselves with a religion.

PUBLIC OPINION OF THE REASONS WHY PARENTS DO NOT TALK ABOUT SEX TO THEIR CHILDREN

Ten questions asked respondents about why they thought parents did not talk to children about sex. All the answers had a common set of choices: almost always true, sometimes true, or not true at all. (Many respondents stated that they had difficulty interpreting and making the distinction between “almost always” and “sometime” true). For all questions, the highest proportion of respondents replied with “Sometimes True”. These responses are similar to the Doble survey. However, the proportion of respondents’ answers to “sometimes true” in the Doble survey are slightly lower than those of the present survey in which a larger percentage of respondents aligned themselves with “almost always true.” In a question not asked on the Doble survey, the respondents strongly indicated, -- 68% inclusive of “almost always true” and “sometimes true”, -- that parents’ religious and moral values inhibit them from discussing sex with their children.

TABLE 23				
12. Here are some possible reasons why parents don't talk to their children about sex. How true do you think each one is --- almost always true, sometimes true, or not at all true?				
Response	Almost Always	Sometimes True	Not True at all	Don't know/NA
<i>Parents are uncomfortable or embarrassed</i>				
HSPRG 2007 Survey	47%	46%	6%	1%
Doble Survey	42%	47%	8%	2%
<i>Parents lack a clear idea of exactly what to say and what not to say</i>				
HSPRG 2007 Survey	45%	49%	4%	2%
Doble Survey	41%	51%	6%	2%
<i>Parents think their child is too young</i>				
HSPRG 2007 Survey	41%	49%	6%	4%
Doble Survey	36%	54%	8%	3%
<i>Parents think it should be left up to the school</i>				
HSPRG 2007 Survey	12%	46%	38%	5%
Doble Survey	13%	50%	33%	4%
<i>Parents are afraid of sending the wrong message -- that talking about sex will lead a child to think that being sexually active is okay or expected</i>				
HSPRG 2007 Survey	24%	55%	17%	4%
Doble Survey	22%	58%	17%	3%
<i>Parents think the child doesn't want to talk to them</i>				
HSPRG 2007 Survey	37%	50%	9%	5%
Doble Survey	31%	57%	10%	2%
<i>Parents aren't sure about certain facts themselves</i>				
HSPRG 2007 Survey	19%	56%	20%	5%
Doble Survey	14%	69%	15%	3%
<i>Parents are afraid they may learn things their children are doing that they don't want to know</i>				
HSPRG 2007 Survey	34%	52%	10%	5%
Doble Survey	35%	57%	6%	2%
<i>Parents think their children may already know about sex</i>				
HSPRG 2007 Survey	30%	57%	11%	2%

TABLE 23				
12. Here are some possible reasons why parents don't talk to their children about sex. How true do you think each one is --- almost always true, sometimes true, or not at all true?				
Response	Almost Always	Sometimes True	Not True at all	Don't know/NA
Doble Survey	28%	60%	11%	1%
<i>Religious or moral values stop them</i>				
HSPRG 2007 Survey	11%	57%	27%	5%
Doble Survey	N/A	N/A	N/A	N/A

NA: not asked

PARENTS' DISCUSSION ABOUT ISSUES RELATED TO SEX WITH THEIR CHILDREN

Of the adult respondents who had children, a substantial majority of them, 79%, stated that they talked to their children about matters involving sex. This proportion of parents talking to their children is 6% higher (increase) than that obtained by the Doble report. Among those that responded "no," many indicated that their children were too young. In this question and the following ones about parents' own views, the type, substance, and depth of parental discussions is unknown.

TABLE 24		
8. Have you ever talked to any of your children about issues related to sex?		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
Yes	79%	73%
No	21%	26%
Total	100%	99%

DID YOUR PARENTS DISCUSS WITH YOU ISSUES ABOUT SEX

Only 46% of all respondents reported that their parents discussed sex with them. This percentage is almost identical (46%) to that found in the Doble Survey. Thus for 51% of adult Delawareans, their parents did not engage them in discussions about sex.

TABLE 25		
13. Did your parents ever talk to you about issues related to sex?		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
Yes	46%	46%
No	51%	51%
No response	3%	2%
Total	100%	99%

STATISTICAL RESULT

A statistical analysis evaluated the bases of why respondents' parents did (i.e., they answered the question "yes") or did not (i.e., they answered the question "no") discuss sex with them.

- Younger respondents (21-30 years old) were more likely to have had their parents talk to them about sex.
- Parents with children less than 18 years old were less likely to have had discussions regarding sex with their parents.
- Catholics are more likely not to have had discussions regarding sex with their parents.

REASONS THAT YOUR PARENTS DID NOT DISCUSS ISSUES OF SEX WITH YOU

Three follow-up questions were asked of those respondents whose parents did not talk to them about sex (i.e., they answered question number 13 as “no”). The responses to the three questions are reported for the proportion of respondents who answered yes to each of the inquiries. All the percentages are approximately twice as large as the response reported in the Doble survey.

TABLE 26		
14. Why do you think your parents didn't talk about issues of sex? Percentage responding YES		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
Parents were embarrassed	49%	26%
Religious/moral values stopped them from talking about it	25%	10%
Parents thought child already knew	23%	11%
Your grandparents never talked to your parents about sex when your parents were growing up	45%	21%

**PUBLIC OPINIONS OF POLICIES TO REDUCE
THE SEXUAL BEHAVIOR OF TEENAGERS**

TEEN ACCESS TO CONDOMS

Respondents were asked whether they support teenagers' access to condoms. Support is indicated by answering either "definitely yes" or "probably yes". However, these responses may have some ambiguity attached to them, since, when asked the question, many respondents made comments involving two dimensions; (a) their answers entail some types of constraints, e.g., parents should be permission, and/or (b) their positive view depends on the age of the child. Given these caveats, the survey responses strongly indicate that a considerable majority of adults support the access to condoms by teenagers. This 82% (of "definitely yes" and "probably yes") is slightly below the results of the Doble report survey. Only 12% (of "definitely no" and "probably no") of respondents opposed the access.

TABLE 27		
15. Should teenagers have access to condoms?		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
Definitely yes	55%	65%
Probably yes	27%	20%
Probably not	6%	6%
Definitely not	9%	5%
Not sure/Don't know/No response	3%	3%
Total	100%	99%

Statistical Analysis

A statistical analysis was conducted to determine the bases of the difference between adults who (a) supported access to condoms by responding "definitely yes" and "probably yes", versus (b) opposed access to condoms by responding "definitely no" and "probably no". The estimated results indicate that:

- Younger adults are more likely to support access to condoms for teenagers.
- Active members of religious groups are less likely to support teenagers having access to condoms.

TEEN ACCESS TO OTHER CONTRACEPTIVES

Similar to their views on access to condoms, a large majority of Delawareans believe that teenagers should have access to contraceptives other than condoms. Given the caveats stated with regard to the responses for condoms, the survey responses strongly indicate that a considerable majority of adults support the access to contraceptives other than condoms by teenagers. While 73% of respondents gave either a “definitely yes” or “probably yes”, only 22% stated either a “definitely no” or “probably no”.

TABLE 28		
16. Should teenagers have access to other contraceptives (for example, birth control pills)?		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
Definitely yes	43%	.
Probably yes	30%	.
Probably not	13%	.
Definitely not	9%	.
Not sure/Don't know/No response	5%	.
Total	100%	.

Statistical Analysis

A statistical analysis was conducted to determine the bases of the difference between adults who (a) supported access to contraceptives other than condoms by responding “definitely yes” and “probably yes”, versus (b) opposed access to contraceptives other than condoms by responding “definitely no” and “probably no”. The estimated results indicate:

- Males are less likely to support access to “other” contraceptives by teenagers.
- In comparison to other adults, respondents over 70 years old are more opposed to teenagers having access to “other” contraceptives.
- Adults who are married or widowed are more supportive of giving teenagers access to “other” contraceptives than single and divorced adults.
- Active church members are less supportive of allowing teenagers access to “other” contraceptives compared to all other respondents.

MAIN PLACE THAT TEENS SHOULD BE ABLE TO OBTAIN CONTRACEPTIVES

Adults who support the access to contraceptives generally have diverse opinions about the main location where teens should be able to obtain contraceptives. However, the predominant choice is that teenagers should obtain contraceptives at physician's offices (perhaps reflecting the comments made by respondents to questions 15 and 16). That is, 30% of the Delawareans that believe teenagers should have access to contraceptives also state that they should be acquired mainly at first choice at doctors' offices.

TABLE 29		
17. Where is the <u>main</u> place teenagers should be able to get contraceptives?*		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
School/Nurse's office	12%	
Drug store	11%	
Clinics	15%	
Home	13%	
Doctor's office	30%	
School wellness center	19%	
Total	100%	
*Answered only by those responding YES or PROBABLY YES for either question 15 or 16.		

OTHER PLACES THAT TEENS SHOULD BE ABLE TO OBTAIN CONTRACEPTIVES

TABLE 30		
18. What other places should teenagers be able to get contraceptives?		
Response	HSPRG 2007 Survey %	Doble Survey %
School/Nurse's office	41%	51%
Drug store	37%	28%
Clinics	55%	23%
Home	39%	18%
Doctor's office	49%	13%
School wellness center	48%	
*Answered only by those responding YES or PROBABLY YES for either question 15 or 16. The question does not exactly match up with the Doble Survey as respondents were first asked about the main place teenagers should be able to get contraceptives.		

TABLE 31						
Main Choice By Secondary Choice(s)						
<u>Other (Secondary) Choices</u>	<u>Main Choices</u>					
	School/ Nurse's office	Drug store	Clinics	Home	Doctor's office	School wellness center
School/Nurse's office		86%	60%	70%	33%	59%
Drug store	34%		48%	33%	23%	35%
Clinics	81%	55%		67%	43%	57%
Home	59%	59%	50%		32%	39%
Doctor's office	56%	48%	100%	73%		55%
School wellness center	84%	76%	83%	61%	35%	
*Answered only by those responding YES or PROBABLY YES for either question 15 or 16.						

TEACHING ABSTINENCE TO REDUCE TEENAGE PREGNANCY

When asked whether teaching abstinence would reduce teenage pregnancies, Delawarean adults are evenly divided. Fifty percent of adult Delawareans do not believe that teaching abstinence is an effective prevention measure.

TABLE 32		
19. Do you believe that teaching youth about abstinence - not have sex at all until marriage – will reduce the number of teen pregnancies?		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
Yes	50%	
No	50%	
Total	100%	

Statistical Analysis

(1) A statistical analysis was undertaken to evaluate what factors account for why some adults believe that teaching abstinence would reduce teen pregnancy (i.e., answered “yes” to the question), but others do not (i.e., answered “no” to the question). The results revealed the following finding:

- Active church members are more likely to believe that teaching youth about abstinence will reduce the number of teen pregnancies.

(2) An additional simple analysis was conducted to determine whether the support of/opposition to the access to condoms and other contraceptives (ascertained with questions 17 and 18) is associated with the views that teaching abstinence does or does not produce a reduction in teen pregnancy. The (chi-square test of the cross tabulation) analysis reveals that those adults who support access to condoms and other contraceptives are more likely to have the opinion that teaching abstinence would not reduce teen pregnancy.

TABLE 33		
Teaching Youth About Abstinence Will Reduce Pregnancy	Teenagers Should Have Access to Condoms	
	Yes or Probably Yes	No or Probably No
Yes	20%	56%
No	80%	44%
Total	100%	100%
Chi-square=22.7497 p=<.0001		

TABLE 34		
Teaching Youth About Abstinence Will Reduce Pregnancy	Teenagers Should Have Access to Other Contraceptives	
	Yes or Probably Yes	No or Probably No
Yes	21%	61%
No	79%	39%
Total	100%	100%
Chi-square=35.9622 p=<.0001		

PUBLIC SCHOOL INVOLVEMENT IN SEX EDUCATION

An overwhelming majority of Delawareans respondents hold the opinion that public schools in the state are moderately involved in sex education for teenagers. Compared with the 9% of adults who believe that public schools are not involved in sex education for teenagers, a slightly higher proportion, 15%, think public schools are very involved in such efforts. However, 76% of adults view public schools as “somewhat involved” in the sex education for teenagers.

TABLE 35		
20. How involved do you think the public schools are in educating teens about sex?		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
Not involved	9%	
Very involved	15%	
Somewhat involved	76%	
Total	100%	

PREFERENCES REGARDING PUBLIC SCHOOL INVOLVEMENT IN SEX EDUCATION

However, while a substantial proportion of respondents consider that there is moderate involvement by public schools in sex education for teens, a majority of Delawareans view the current level of involvement to be inadequate. Fifty two percent of the respondents would be receptive to more involvement by public schools in the teaching of sex education for teenagers. This figure corresponds to the findings off the Doble survey.

TABLE 36		
21. When it comes to educating teens about sex, how involved should the public schools be?		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
More involved then they are now	52%	56%
About as involved as they are now	22%	22%
Less involved then they are now	11%	11%
Don't know/No response	14%	11%
Total	100%	100%

Statistical Analysis

A statistical analysis evaluated whether any of the chosen social, economic, and demographic factors account for the difference between respondents who believe that public schools should be more involved in the sex education of teenagers (52%) with those individuals who think that public schools should either (a) have the same level of involvement as the present, -- 22% --, or (b) be less involved than they are now currently, 11%. The estimated results indicate that:

- African Americans and Caucasians state they would like “more involvement” of the schools in teaching sex education than other races.

STATE SPENDING ON IN SEX EDUCATION

A large majority of adult Delawareans believe that the State of Delaware does not spend enough money on sex education for teenagers. Sixty five percent of the adult population considers that the amount of state expenditures for sex education is inadequate.

TABLE 37		
22. Do you think the state spends enough on sex education for teens?		
Response	HSPRG 2007 Survey %	<i>Doble Survey</i> %
Yes	35%	
No	65%	
Total	100%	

Statistical Analysis

A statistical analysis was conducted to determine the bases of the difference between adults who (a) considered that the amount of state expenditures for sex education as adequate (by responding “yes”, versus (b) viewed state spending for sex education as insufficient (by responding “no”). The estimated results indicate:

- In contrast to females, males believe more strongly that there is adequate spending by the state of Delaware for sex education for teenagers.
- Married respondents also expressed similar views about the adequacy of sex education funding.

MESSAGES THAT THE STATE SHOULD SUPPORT ABOUT TEEN PREGNANCY

Eleven questions asked respondents about the messages that they thought the State of Delaware should support regarding teen pregnancy. All the answers required either a “yes” to indicate that the State should support the message, or a “no” to indicate that the State should not support the message. (Many respondents indicated that they interpret the questions as being true or not, instead of whether (or not) the State should support the message. Also, as questions, the messages are unconstrained choices in which the respondents were not asked anything about the spending levels that would be required and whether they would support such spending. Moreover, the respondents were not asked about the degree of importance of such messages, and were not asked to rank them as priorities).

For all questions, a majority of adults indicated that the State should support each message. For all but two messages, the proportion of respondents that replied “yes” was greater than 70%, showing their affirmation of specific State action. While some results are similar to the Doble survey results, many of the responses of the present survey are lower than the findings of the Doble survey. (See the footnote to the table). Statistical analyses were applied to two responses in order to determine some of the sources of disagreement among Delawareans.

TABLE 38		
23. Which of the following messages should the state support to educate about teen pregnancy? <i>Count of those supporting</i>		
Response	HSPRG 2007 Survey %	<i>Doble Survey*</i> %
Danger of Sexually Transmitted Diseases (STDs)	99%	99%
Encourage parents to talk to their children about sex	97%	99%
Fathers are required to pay child support	92%	97%
Teenage mothers are less likely to finish school, get a good job and are more likely to go on welfare	85%	98%
The importance about love and sex together	84%	96%
Possibility of prison for sex with underage girls	77%	96%
Babies of teen mothers are often less healthy	72%	96%
Not having sex (abstinence) is the only way to guarantee that a girl won't get pregnant	73%	92%
Teens should not have sex until they are out of high school	59%	92%
Teens should not have sex until they are married**	53%	
Educate teens where to get contraceptives and how to use them	86%	92%
<i>* The Doble Survey asked respondents to say whether messages were "Very important" or Somewhat important" and "Not at all important". Those that answered "Very Important" or Somewhat important" or shown here.</i> <i>**Answer to Doble Survey cannot be compared: The response for the Doble Survey was "Tell teens that sex before marriage is morally wrong".</i>		

Statistical Analysis

(1) A statistical analysis was undertaken to evaluate what factors account for why some adults declared “yes”(73%) to the question “Not having sex (abstinence) is the only way to guarantee that a girl won’t get pregnant”, but others did not (i.e., answered “no” to the question, 27%). The results revealed the following findings:

- The only significant variables were geographic – respondents in Newark, New Castle suburban, Dover, and Kent suburban are more likely to support the abstinence message than Wilmington and Sussex County.

(2) A statistical analysis was undertaken to evaluate what factors account for why some adults declared “yes”(59%) to the question “Teens should not have sex until they are out of high school”, but others did not (i.e., answered “no” to the question, 41%). The results revealed the following findings:

- Respondents age 18-21 were not in favor of the state supporting this message.
- African-Americans tended to not support this message in comparison with Caucasians and other races.

IV. APPENDICES

A. Survey Template

Instructions to surveyor: The survey is only to be given to adults 18 years or older. If it is obvious that the person who answered the phone is a child, ask if you may speak to an adult in the household.

Introduction: Hello, my name is _____ and I work for the University of Delaware. We are conducting a public opinion survey for Christiana Care Health Services. The survey is about teenage pregnancy in Delaware and I'd like to ask you some questions. The survey will take about 15 minutes. You have been selected at random from the published telephone numbers of Delaware households. Your answers are totally confidential, and you will not be asked any questions that could identify you. You must be 18 years of age to answer the survey. *(If the respondent is not 18 years of age or older, ask him/her if there is an adult present who would answer the survey.)* May we ask you the survey questions?

1. On a scale of 1 to 10 where 10 means the highest possible priority and 1 means the lowest possible priority, please tell me how important you think each of these issues is:

a. Reducing crime?

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

b. Building new roads?

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

c. Improving education?

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

d. Reducing the teenage pregnancy rate?

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

e. Reducing unemployment?

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

f. Reducing cancer?

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

2. How much disapproval, if any, does an unmarried teenage mother face today?

No disapproval	
Some disapproval	
Much disapproval	

3. Do unwed teen mothers face much less disapproval, somewhat less, about the same amount, somewhat more, or much more community disapproval than they did 20 years ago?

Less disapproval	
Somewhat less disapproval	
About the same amount	
Somewhat more disapproval	
Much more disapproval	

4. Do you believe that kids today are at more risk, the same risk or less risk of getting pregnant than youth were 10 years ago?

More risk	
Same risk	
Less Risk	

5. Do you have any children?

Yes	
No	

NO, skip to question #9.

6. How many children do you have living in the household under 18? _____

7. How many of these children are presently attending ...

_____ public school
 _____ private/religious school
 _____ private/non-religious school

8. Have you ever talked to any of your children about issues related to sex?

Yes	
No	

9. Do you think the parents of school age children discuss issues related to sex...

Too much	
Too little	
About the right amount	

10. What age do you think is the right age to talk to children about sex? _____

11. Do most parents talk about issues related to sex when their child is...

Too young	
Too old	
About the right age	

12. Here are some possible reasons why parents don't talk to their children about sex. How true do you think each one is --- almost always true, sometimes true, or not at all true?

Reasons:	Almost Always	Sometimes True	Not True at all	No opinion
Parents are uncomfortable or embarrassed				
Parents lack a clear idea of exactly what to say and what not to say				
Parents think their child is too young				
Parents think it should be left up to the school				
Parents are afraid of sending the wrong message – that talking about sex will lead a child to think that being sexually active is okay or expected				
Parents think the child doesn't want to talk to them				
Parents aren't sure about certain facts themselves				
Parents are afraid they may learn things their children are doing that they don't want to know				

Reasons:	Almost Always	Sometimes True	Not True at all	No opinion
Parents think their children may already know about sex.				
Religious or moral values stop them.				

13. Did your parents ever talk to you about issues related to sex?

Yes		IF YES, skip to question #15
No		

14. Why do you think your parents didn't talk about issues of sex?

	Yes	No
Parents were embarrassed		
Religious/moral values stopped them from talking about it		
Parents thought child already knew		
Your grandparents never talked to your parents about sex when your parents were growing up		

15. Should teenagers have access to condoms?

Definitely yes	
Probably yes	
Probably not	
Definitely not	
Not sure/Don't know	

16. Should teenagers have access to other contraceptives (for example, birth control pills):

Definitely yes	
Probably yes	
Probably not	
Definitely not	
Not sure/Don't know	

17. (IF DEFINITELY YES OR PROBABLY YES for either question 15 or 16) Where is the main place teenagers should be able to get contraceptives?

School/Nurse's office	
Drug store	
Clinics	
Home	
Doctor's office	
School wellness center	

18. (IF DEFINITELY YES OR PROBABLY YES for either question 15 or 16) What other places should teenagers be able to get contraceptives? *(check all that apply)*

School/Nurse's office	
Drug store	
Clinics	
Home	
Doctor's office	
School wellness center	

19. Do you believe that teaching youth about abstinence – not having sex at all until marriage – will reduce the number of teen pregnancies?

Yes	
No	

20. How involved do you think the public schools are in educating teens about sex?

Not involved	
Very involved	
Somewhat involved	

21. When it comes to educating teens about sex, how involved should the public schools be?

More involved then they are now	
About as involved as they are now	
Less involved then they are now	
Don't know	

22. Do you think the state spends enough on sex education for teens?

Yes	
No	

23. Which of the following messages should the state support to educate about teen pregnancy?

	Support	Don't support
Dangers of Sexually Transmitted Diseases (STDs)		
Encourage parents to talk to their children about sex		
Fathers are required to pay child support.		
Teenage mothers are less likely to finish school, get a good job and are more likely to go on welfare.		
The importance about love and sex together		
Possibility of prison for sex with underage girls		
Babies of teen mothers are often less healthy		
Not having sex (abstinence) is the only way to guarantee that a girl won't get pregnant		
Teens should not have sex until they are out of high school		
Teens should not have sex until they are married		
Educate teens where to get contraceptives and how to use them		

We are almost finished. I just have a few more questions about your household characteristics.

24. Gender

Male	
Female	

25. Which best describes your marital status?

Single	
Married	
Widowed	
Divorced	
Separated	

26. Which age group best describes you?

18-21	
21-30	
31-40	
41-50	
50-60	
61-70	
Over 70	

27. Which income group best describes your annual household income?

\$10,000 or less	
\$10,001 - \$20,000	
\$20,001 - \$30,000	
\$30,001 - \$50,000	
\$50,001 - \$75,000	
\$75,001 - \$100,000	
Greater than \$100,000	

28. Which racial category best describes you?

African American	
Caucasian	
Asian	
American Indian	
Other	

29. What is the zip code of the household? _____

30. Are you of Hispanic background?

Yes	
No	

31. Which religious category best describes you? _____

(A “pull-down” menu of numerous religious affiliations and orientation will be used)

32. (SKIP THIS QUESTION if Atheist or Agnostic answer to question 31) Are you an active member of your church?

Yes	
No	

That’s all the questions I have. Thank you so much for your time.

B. Compiled Responses To Individual Questions

1. On a scale of 1 to 10 where 10 means the highest possible priority and 1 means the lowest possible priority, please tell me how important you think each of these issues is:

Issues	<i>Respondents' Rating of 8 - 10</i>
Reducing crime	91%
Building new roads	64%
Improving education	88%
Reducing the teenage pregnancy rate	82%
Reducing unemployment	77%
Reducing cancer	87%

2. How much disapproval, if any does an unmarried teenage mother face today?

Response	%
No disapproval	9%
Some disapproval	60%
Much disapproval	31%
Total	100%

3. Do unwed teen mothers face much less disapproval, somewhat less, about the same amount, somewhat more, or much more community disapproval than they did 20 years ago?

Response	%
Much less disapproval	45%
Somewhat less disapproval	30%
About the same amount	8%
Somewhat more disapproval	9%
Much more disapproval	7%
Not sure/don't know/no response	1%
Total	100%

4. Do you believe that kids today are at more risk, the same risk or less risk of getting pregnant than youth were 10 years ago?

Response	%
More risk	61%
Same risk	23%
Less risk	16%
Total	100%

5. Do you have any children?

Response	%
Yes	74%
No	26%
Total	100%

6. How many children do you have living in the household under 18?

Response	%
Range	1-5
Mean	1.96
Median	2

7. How many of these children are presently attending ...

Response	%
Public School	66%
Private/religious school	16%
Private/non-religious school	3%
Home school	0%
Not in school	14%
Total	99%

8. Have you ever talked to any of your children about issues related to sex?

Response	%
Yes	79%
No	21%
Total	100%

9. Do you think the parents of school age children discuss issues related to sex...

Response	%
Too much	14%
Too little	54%
About the right amount	17%
Don't know/no response	15%
Total	100%

10. What age do you think is the right age to talk to children about sex?

Age	Frequency %
2	0.16%
3	2.05%
4	1.47%
5	5.40%
6	1.81%
7	3.21%
8	7.53%
9	9.03%
10	17.63%
11	10.79%
12	24.26%
13	7.35%
14	6.10%
15	2.68%
16	0.52%
Mean	10.3

11. Do most parents talk about issues related to sex when their child is...

Response	%
Too young	7%
Too old	70%
About the right age	9%
Don't know/no response	14%
Total	100%

12. Here are some possible reasons why parents don't talk to their children about sex. How true do you think each one is --- almost always true, sometimes true, or not at all true?

Response	Almost Always	Sometimes True	Not True at all	Don't know/NA
Parents are uncomfortable or embarrassed	47%	46%	6%	1%
Parents lack a clear idea of exactly what to say and what not to say	45%	49%	4%	2%
Parents think their child is too young	41%	49%	6%	4%
Parents think it should be left up to the school	12%	46%	38%	5%
Parents are afraid of sending the wrong message -- that talking about sex will lead a child to think that being sexually active is okay or expected	24%	55%	17%	4%
Parents think the child doesn't want to talk to them	37%	50%	9%	5%
Parents aren't sure about certain facts themselves	19%	56%	20%	5%
Parents are afraid they may learn things their children are doing that they don't want to know	34%	52%	10%	5%
Parents think their children may already know about sex	30%	57%	11%	2%
Religious or moral values stop them	11%	57%	27%	5%

13. Did your parents ever talk to you about issues related to sex?

Response	%
Yes	46%
No	51%
No response	3%
Total	100%

14. Why do you think your parents didn't talk about issues of sex?

Response	YES %
Parents were embarrassed	49%
Religious/moral values stopped them from talking about it	25%
Parents thought child already knew	23%
Your grandparents never talked to your parents about sex when your parents were growing up	45%

15. Should teenagers have access to condoms?

Response	%
Definitely yes	55%
Probably yes	27%
Probably not	6%
Definitely not	9%
Not sure/Don't know/No response	3%
Total	100%

16. Should teenagers have access to other contraceptives (for example, birth control pills):

Response	%
Definitely yes	43%
Probably yes	30%
Probably not	13%
Definitely not	9%
Not sure/Don't know/No response	5%
Total	100%

17. (IF DEFINITELY YES OR PROBABLY YES for either question 15 or 16) Where is the main place teenagers should be able to get contraceptives?

Response	%
School/Nurse's office	12%
Drug store	11%
Clinics	15%
Home	13%
Doctor's office	30%
School wellness center	19%
Total	100%

18. (IF DEFINITELY YES OR PROBABLY YES for either question 15 or 16) What other places should teenagers be able to get contraceptives? *(check all that apply)*

Response	%
School/Nurse's office	41%
Drug store	37%
Clinics	55%
Home	39%
Doctor's office	49%
School wellness center	48%

19. Do you believe that teaching youth about abstinence – not having sex at all until marriage – will reduce the number of teen pregnancies?

Response	%
Yes	50%
No	50%
Total	100%

20. How involved do you think the public schools are in educating teens about sex?

Response	%
Not involved	9%
Very involved	15%
Somewhat involved	76%
Total	100%

21. When it comes to educating teens about sex, how involved should the public schools be?

Response	%
More involved then they are now	52%
About as involved as they are now	22%
Less involved then they are now	11%
Don't know/No response	14%
Total	100%

22. Do you think the state spends enough on sex education for teens?

Response	%
Yes	35%
No	65%
Total	100%

23. Which of the following messages should the state support to educate about teen pregnancy?

Response	% Supporting
Danger of Sexually Transmitted Diseases (STDs)	99%
Encourage parents to talk to their children about sex	97%
Fathers are required to pay child support	92%
Teenage mothers are less likely to finish school, get a good job and are more likely to go on welfare	85%
The importance about love and sex together	84%
Possibility of prison for sex with underage girls	77%
Babies of teen mothers are often less healthy	72%
Not having sex (abstinence) is the only way to guarantee that a girl won't get pregnant	73%
Teens should not have sex until they are out of high school	59%
Teens should not have sex until they are married**	53%
Educate teens where to get contraceptives and how to use them	86%

24. Gender

Response	%
Male	48%
Female	52%
Total	100%

25. Which best describes your marital status?

Response	%
Single	26%
Married	57%
Widowed	6%
Divorced	10%
Separated	1%
Total	100%

26. Which age group best describes you?

Response	%
18-21	7%
21-30	14%
31-40	17%
41-50	20%
51-60	18%
61-70	12%
Over 70	12%
Total	100%

27. Which income group best describes your annual household income?

Response	%
\$10,000 or less	3%
\$10,001 - \$20,000	7%
\$20,001 - \$30,000	12%
\$30,001 - \$50,000	31%
\$50,001 - \$75,000	21%
\$75,001 - \$100,000	16%
Greater than \$100,000	10%
Total	100%

28. Which racial category best describes you?

Response	%
African American	21%
Caucasian	69%
Asian	3%
American Indian	<1%
Other*	7%
Total	100%

29. What is the zip code of the household?

Response	%
Newark zip codes	15%
Wilmington zip codes	22%
Other NCC zip codes	24%
Dover zip codes	11%
Other Kent zip codes	10%
Seaford zip codes	2%
Other Sussex zip codes	16%
Total	100%

30. Are you of Hispanic background?

Response	%
Yes	6%
No	94%
Total	100%

31. Which religious category best describes you:

Response	%
Atheists	1%
Jewish	2%
Lutheran	2%
Methodist	11%
Mormon	<1%
Muslim	<1%
Pentecostal	3%
Presbyterian	2%
Protestant	13%
Agnostic	2%
Unitarian	1%
7 th Day Adventist	1%
Christian	10%
None	9%
Baptist	8%
Other	2%
Buddhist	1%
Catholic	28%
Church of Latter Day Saints	<1%
Episcopalian	4%
Total	100%

32. Are you an active member of your church? (*Respondents answering “Agnostic” “Atheist” or “None” are not included.*)

Response	%
Yes	54%
No	46%
Total	100%

C. Independent Variables

APPENDIX TABLE 1	
COMMON SET OF INDEPENDENT VARIABLES USED IN THE VARIOUS EQUATIONS	
Variable Name	Variable Measurement
Gender of Respondent	Male = 1, Female = 0, (reference);
Age of Respondent	18-21 = 1, 22-30 = 1, 31-40 = 1, 41-50 = 1 51-60 = 1 61-70 = 1 > 70 = 0, (reference);
Race of Respondent	African American = 1, Caucasian = 1, Asian = 1, Native American = 1, Other = 0, (reference);
Ethnicity of Respondent	Hispanic = 1, Not Hispanic = 0, (reference);
Marital Status of Respondent	Married = 1, Widowed = 1, Divorced = 1, Separated 1, Single = 0, (reference)
Children Residing in Household	Children but not at home = 1; Children at home = 1; No children = 0, (reference);
Type of School for Children Residing in Household	Public School = 1, Private School (religious and non-religious)= 1, Not in School = 0, (reference)
Household Income	\$10,000 or less = 1, \$10,001 - \$20,000 = 1, \$20,001 - \$30,000 = 1, \$30,001 - \$50,000 = 1, \$50,001 - \$75,000 = 1, \$75,001 - \$100,000 = 1, > 100,000 = 0, (reference);
Geographical Location of Household	Newark = 1, Wilmington = 1, Other New Castle County Areas = 1, Dover = 1, Other Kent County Areas = 1, Seaford = 1, Other Sussex County Areas = 0 (reference);
Religious Affiliation	Protestants (includes Protestants, Lutherans, Presbyterians)=1 Catholics=1 Christians (Christians, 7 th Day Adventists and Pentecostals) =1 Methodists=1 Baptists=1 Episcopalians=1 None=0 (reference);
Active Church Member	Yes = 1, No = 0, (reference);

D. SAS Output for Statistical Analysis

1. On a scale of 1 to 10 where 10 means the highest possible priority and 1 means the lowest possible priority, please tell me how important you think each of these issues is:

The LOGISTIC Procedure

Model Information		
Data Set	WORK.SURVEY4	
Response Variable	teenagepreg	Question 1. Reducing teenage pregnancy rate
Number of Response Levels	2	
Weight Variable	adjweight	
Model	binary logit	
Optimization Technique	Fisher's scoring	

Number of Observations Read	325
Number of Observations Used	274
Sum of Weights Read	323.7684
Sum of Weights Used	277.3051

Response Profile			
Ordered Value	teenagepreg	Total Frequency	Total Weight
1	1	231	225.80829
2	0	43	51.49683

Probability modeled is teenagepreg=1.

Note: 51 observations were deleted due to missing values for the response or explanatory variables.

Model Convergence Status		
Convergence criterion (GCONV=1E-8) satisfied.		
Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates

Model Convergence Status		
AIC	268.176	263.943
SC	271.790	375.950
-2 Log L	266.176	201.943

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	64.2331	30	0.0003
Score	56.9649	30	0.0021
Wald	39.0649	30	0.1243

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	10.6137	2.3651	20.1390	<.0001
<i>gender</i>	<i>1</i>	<i>-0.8481</i>	<i>0.4152</i>	<i>4.1730</i>	<i>0.0411</i>
<i>age1821</i>	<i>1</i>	<i>-6.8915</i>	<i>1.9249</i>	<i>12.8181</i>	<i>0.0003</i>
<i>age2130</i>	1	-2.5949	1.8242	2.0235	0.1549
<i>age3140</i>	<i>1</i>	<i>-3.5827</i>	<i>1.7201</i>	<i>4.3383</i>	<i>0.0373</i>
<i>age4150</i>	<i>1</i>	<i>-3.8429</i>	<i>1.6923</i>	<i>5.1566</i>	<i>0.0232</i>
<i>age5160</i>	<i>1</i>	<i>-3.7058</i>	<i>1.6619</i>	<i>4.9727</i>	<i>0.0258</i>
<i>age6170</i>	<i>1</i>	<i>-3.8199</i>	<i>1.6490</i>	<i>5.3660</i>	<i>0.0205</i>
<i>African American</i>	<i>1</i>	<i>-3.4481</i>	<i>1.0912</i>	<i>9.9844</i>	<i>0.0016</i>
<i>Caucasian</i>	<i>1</i>	<i>-2.1475</i>	<i>0.9009</i>	<i>5.6824</i>	<i>0.0171</i>
<i>married</i>	1	-0.6763	0.5342	1.6029	0.2055
<i>widowed</i>	1	-1.0071	1.3901	0.5249	0.4687
<i>income10000</i>	<i>1</i>	<i>-1.6861</i>	<i>0.8585</i>	<i>3.8577</i>	<i>0.0495</i>
<i>income20000</i>	1	-0.7381	0.9196	0.6443	0.4222

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
income30000	1	-1.1587	0.9957	1.3541	0.2446
income40000	1	-0.8092	0.7823	1.0699	0.3010
income50000	1	-0.5028	0.7445	0.4560	0.4995
income75000	1	-1.0229	0.7580	1.8215	0.1771
Children18anDover	1	0.0300	0.6069	0.0024	0.9605
ChildrenUnder18	1	0.5233	0.5809	0.8115	0.3677
Newark	1	-0.5534	0.7074	0.6121	0.4340
Wilmington	1	-1.1049	0.6202	3.1739	0.0748
New Castle Suburban	1	-1.1471	0.6155	3.4735	0.0624
Dover	1	-0.7394	0.8855	0.6972	0.4037
Kent Suburban	1	-0.3081	0.9683	0.1012	0.7503
Active in church	1	0.3807	0.3987	0.9115	0.3397
Christian	1	0.7239	1.1041	0.4298	0.5121
Methodist	1	0.9390	0.8309	1.2772	0.2584
Baptist	1	-0.8171	1.0004	0.6672	0.4140
Protestant	1	-1.2902	0.8397	2.3607	0.1244
Catholic	1	-1.5677	0.7911	3.9273	0.0475

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
gender	0.428	0.190	0.966
age1821	0.001	<0.001	0.044
age2130	0.075	0.002	2.666
age3140	0.028	<0.001	0.809

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
age4150	0.021	<0.001	0.591
age5160	0.025	<0.001	0.638
age6170	0.022	<0.001	0.556
African American	0.032	0.004	0.270
Caucasian	0.117	0.020	0.683
married	0.509	0.178	1.449
widowed	0.365	0.024	5.570
income10000	0.185	0.034	0.996
income20000	0.478	0.079	2.899
income30000	0.314	0.045	2.210
income40000	0.445	0.096	2.063
income50000	0.605	0.141	2.603
income75000	0.360	0.081	1.588
Children18anDover	1.030	0.314	3.386
ChildrenUnder18	1.688	0.541	5.269
Newark	0.575	0.144	2.300
Wilmington	0.331	0.098	1.117
New Castle Suburban	0.318	0.095	1.061
Dover	0.477	0.084	2.708
Kent Suburban	0.735	0.110	4.902
Active in church	1.463	0.670	3.197
Christian	2.062	0.237	17.956
Methodist	2.557	0.502	13.032
Baptist	0.442	0.062	3.138

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
Protestant	0.275	0.053	1.427
Catholic	0.209	0.044	0.983

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	76.8	Somers' D	0.539
Percent Discordant	22.9	Gamma	0.541
Percent Tied	0.4	Tau-a	0.143
Pairs	9933	c	0.769

9. *Do you think the parents of school age children discuss issues related to sex...*

The LOGISTIC Procedure

Model Information	
Data Set	WORK.SURVEY4
Response Variable	parentsdiscuss
Number of Response Levels	2
Weight Variable	Adjweight
Model	binary logit
Optimization Technique	Fisher's scoring

Number of Observations Read	325		
Number of Observations Used	229		
Sum of Weights Read	323.7684		
Sum of Weights Used	233.9981		
Response Profile			
Ordered Value	parentsdiscuss	Total Frequency	Total Weight
1	1	153	144.71065
2	0	76	89.28749

Probability modeled is parentsdiscuss=1.

Note: 96 observations were deleted due to missing values for the response or explanatory variables.

Model Convergence Status		
Convergence criterion (GCONV=1E-8) satisfied.		
Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	313.138	307.791
SC	316.571	421.103

Model Convergence Status		
-2 Log L	311.138	241.791

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	69.3470	32	0.0001
Score	62.2191	32	0.0011
Wald	42.2448	32	0.1063

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-1.1036	1.4784	0.5572	0.4554
<i>gender</i>	<i>1</i>	<i>-1.1376</i>	<i>0.3654</i>	<i>9.6897</i>	<i>0.0019</i>
age1821	1	-0.5593	1.1047	0.2563	0.6127
<i>age2130</i>	<i>1</i>	<i>2.9971</i>	<i>0.9514</i>	<i>9.9236</i>	<i>0.0016</i>
<i>age3140</i>	<i>1</i>	<i>2.5251</i>	<i>0.8926</i>	<i>8.0017</i>	<i>0.0047</i>
<i>age4150</i>	<i>1</i>	<i>2.0731</i>	<i>0.8288</i>	<i>6.2570</i>	<i>0.0124</i>
<i>age5160</i>	<i>1</i>	<i>2.3866</i>	<i>0.8013</i>	<i>8.8696</i>	<i>0.0029</i>
<i>age6170</i>	<i>1</i>	<i>1.8843</i>	<i>0.7121</i>	<i>7.0014</i>	<i>0.0081</i>
African American	1	1.1156	0.8795	1.6089	0.2047
Caucasian	1	1.1381	0.8547	1.7731	0.1830
Hispanic	1	1.4657	0.9296	2.4856	0.1149
married	1	0.2323	0.4687	0.2456	0.6202
widowed	1	1.0858	0.9232	1.3834	0.2395
divorced	1	1.2753	2.0790	0.3763	0.5396
income10000	1	-0.3740	0.7995	0.2189	0.6399
income20000	1	-0.6536	0.7554	0.7487	0.3869

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
<i>income30000</i>	<i>1</i>	<i>-1.8820</i>	<i>0.8323</i>	<i>5.1128</i>	<i>0.0237</i>
income40000	1	-0.8556	0.6775	1.5946	0.2067
income50000	1	-0.7004	0.6702	1.0924	0.2959
income75000	1	-0.5390	0.7078	0.5800	0.4463
Children18anDover	1	0.00319	0.5842	0.0000	0.9956
ChildrenUnder18	1	0.0156	0.5170	0.0009	0.9760
Newark	1	-0.6073	0.6528	0.8656	0.3522
Wilmington	1	0.2549	0.5560	0.2101	0.6467
New Castle Suburban	1	-0.2709	0.5434	0.2485	0.6181
Dover	1	0.2835	0.7597	0.1392	0.7090
Kent Suburban	1	0.0153	0.7160	0.0005	0.9830
Active in church	1	0.0821	0.3767	0.0475	0.8275
Christian	1	-0.9436	0.7933	1.4149	0.2342
Methodist	1	-0.4627	0.6320	0.5359	0.4641
Baptist	1	-1.1727	0.8404	1.9473	0.1629
Protestant	1	0.1599	0.7729	0.0428	0.8360
Catholic	1	-0.2239	0.7486	0.0894	0.7649

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
gender	0.321	0.157	0.656
age1821	0.572	0.066	4.982
age2130	20.027	3.103	129.254
age3140	12.492	2.172	71.851

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
age4150	7.950	1.566	40.347
age5160	10.876	2.261	52.310
age6170	6.582	1.630	26.578
African American	3.051	0.544	17.107
Caucasian	3.121	0.584	16.665
Hispanic	4.330	0.700	26.782
married	1.262	0.503	3.161
widowed	2.962	0.485	18.087
divorced	3.580	0.061	210.630
income10000	0.688	0.144	3.297
income20000	0.520	0.118	2.286
income30000	0.152	0.030	0.778
income40000	0.425	0.113	1.604
income50000	0.496	0.133	1.846
income75000	0.583	0.146	2.335
Children18anDover	1.003	0.319	3.152
ChildrenUnder18	1.016	0.369	2.798
Newark	0.545	0.152	1.958
Wilmington	1.290	0.434	3.837
New Castle Suburban	0.763	0.263	2.213
Dover	1.328	0.300	5.885
Kent Suburban	1.015	0.250	4.132
Active in church	1.086	0.519	2.272
Christian	0.389	0.082	1.843

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
Methodist	0.630	0.182	2.173
Baptist	0.310	0.060	1.607
Protestant	1.173	0.258	5.337
Catholic	0.799	0.184	3.467

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	71.5	Somers' D	0.432
Percent Discordant	28.2	Gamma	0.434
Percent Tied	0.3	Tau-a	0.193
Pairs	11628	c	0.716

11. Do most parents talk about issues related to sex when their child is:

The LOGISTIC Procedure

Model Information	
Data Set	WORK.SURVEY4
Response Variable	Question11
Number of Response Levels	2
Weight Variable	adjweight
Model	binary logit
Optimization Technique	Fisher's scoring

Number of Observations Read	325		
Number of Observations Used	232		
Sum of Weights Read	323.7684		
Sum of Weights Used	235.6001		
Response Profile			
Ordered Value	toolittle	Total Frequency	Total Weight
1	1	192	196.82196
2	0	40	38.77812

Probability modeled is question11=1.

Note: 93 observations were deleted due to missing values for the response or explanatory variables.

Model Convergence Status		
Convergence criterion (GCONV=1E-8) satisfied.		
Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	212.725	211.943

Model Convergence Status		
SC	216.171	325.686
-2 Log L	210.725	145.943

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	64.7813	32	0.0005
Score	54.8171	32	0.0073
Wald	35.4492	32	0.3088

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-1.1433	1.9131	0.3572	0.5501
gender	1	1.0585	0.5612	3.5573	0.0593
age1821	1	0.6533	1.5405	0.1798	0.6715
<i>age2130</i>	<i>1</i>	<i>3.3343</i>	<i>1.5277</i>	<i>4.7636</i>	<i>0.0291</i>
age3140	1	0.4727	1.2451	0.1441	0.7042
age4150	1	1.5026	1.2910	1.3546	0.2445
age5160	1	0.6661	1.0873	0.3753	0.5401
age6170	1	0.2418	0.9734	0.0617	0.8038
African American	1	-0.1827	1.2051	0.0230	0.8795
Caucasian	1	0.1080	1.0983	0.0097	0.9217
Hispanic	1	-0.1637	1.0266	0.0254	0.8733
married	1	0.7626	0.6535	1.3619	0.2432
widowed	1	-1.2824	1.1700	1.2014	0.2731
divorced	1	-2.2876	2.5516	0.8037	0.3700
income10000	1	2.9838	1.7098	3.0455	0.0810

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
income20000	1	0.2119	1.1420	0.0344	0.8528
income30000	1	-0.1484	1.1920	0.0155	0.9009
income40000	1	-0.8021	1.0296	0.6070	0.4359
income50000	1	0.0673	1.0377	0.0042	0.9483
income75000	1	0.3829	1.0350	0.1369	0.7114
<i>Children18andDover</i>	<i>1</i>	<i>2.0760</i>	<i>0.8582</i>	<i>5.8514</i>	<i>0.0156</i>
ChildrenUnder18	1	0.4264	0.7411	0.3310	0.5651
Newark	1	-1.0868	0.8178	1.7661	0.1839
Wilmington	1	-1.1200	0.6888	2.6441	0.1039
New Castle Suburban	1	0.3426	0.8443	0.1646	0.6850
Dover	1	-0.8452	0.8724	0.9387	0.3326
Kent Suburban	1	0.1079	0.9688	0.0124	0.9113
<i>Active in church</i>	<i>1</i>	<i>-1.6816</i>	<i>0.6057</i>	<i>7.7081</i>	<i>0.0055</i>
<i>Christian</i>	<i>1</i>	<i>2.1521</i>	<i>1.0900</i>	<i>3.8983</i>	<i>0.0483</i>
Methodist	1	0.7024	0.9998	0.4935	0.4824
Baptist	1	0.9975	1.1607	0.7386	0.3901
<i>Protestant</i>	<i>1</i>	<i>2.1545</i>	<i>1.0054</i>	<i>4.5921</i>	<i>0.0321</i>
Catholic	1	1.8954	0.9763	3.7691	0.0522

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
gender	2.882	0.959	8.658
age1821	1.922	0.094	39.357
age2130	28.059	1.405	560.362

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
age3140	1.604	0.140	18.412
age4150	4.493	0.358	56.422
age5160	1.947	0.231	16.400
age6170	1.274	0.189	8.582
African American	0.833	0.078	8.840
Caucasian	1.114	0.129	9.588
Hispanic	0.849	0.114	6.349
married	2.144	0.596	7.717
widowed	0.277	0.028	2.748
divorced	0.102	<0.001	15.083
income10000	19.763	0.693	563.936
income20000	1.236	0.132	11.590
income30000	0.862	0.083	8.916
income40000	0.448	0.060	3.373
income50000	1.070	0.140	8.176
income75000	1.467	0.193	11.150
Children18andDover	7.972	1.483	42.865
ChildrenUnder18	1.532	0.358	6.546
Newark	0.337	0.068	1.675
Wilmington	0.326	0.085	1.259
New Castle Suburban	1.409	0.269	7.370
Dover	0.429	0.078	2.374
Kent Suburban	1.114	0.167	7.439
Active in church	0.186	0.057	0.610

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
Christian	8.603	1.016	72.855
Methodist	2.018	0.284	14.324
Baptist	2.712	0.279	26.375
Protestant	8.623	1.202	61.868
Catholic	6.655	0.982	45.102

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	78.9	Somers' D	0.582
Percent Discordant	20.8	Gamma	0.583
Percent Tied	0.3	Tau-a	0.167
Pairs	7680	c	0.791

10. What age do you think is the right age to talk to children about sex?

The REG Procedure

Model: MODEL1

Dependent Variable: Right age to talk to children about gender

Number of Observations Read			325		
Number of Observations Used			225		
Number of Observations with Missing Values			100		
Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	32	387.97447	12.12420	1.64	0.0222
Error	192	1415.51036	7.37245		
Corrected Total	224	1803.48483			
Root MSE		2.71523	R-Square	0.2151	
Dependent Mean		10.23223	Adj R-Sq	0.0843	
Coeff Var		26.53600			

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	12.42092	1.65393	7.51	<.0001
Gender	1=Male, 0=Female	1	0.52328	0.39995	1.31	0.1923
age1821	Ages 18-21	1	-1.11388	1.33639	-0.83	0.4056
age2130	Ages 21-30	1	0.90212	1.09333	0.83	0.4103
age3140	Ages 31-40	1	-0.48228	1.00414	-0.48	0.6316
age4150	Ages 41-50	1	0.64236	0.92878	0.69	0.4900
age5160	Ages 51-60	1	-0.90940	0.88130	-1.03	0.3034
age6170	Ages 61-70	1	-1.06809	0.82770	-1.29	0.1985
African American	Race of Respondent	1	-1.20926	0.98909	-1.22	0.2230

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Caucasian	Race of Respondent	1	-0.72636	0.89237	-0.81	0.4167
Hispanic	Hispanic=1	1	-1.09556	0.91555	-1.20	0.2329
Married	Married=1	1	-0.46238	0.51228	-0.90	0.3679
widowed	Widowed=1	1	-2.28151	1.06751	-2.14	0.0338
divorced	Divorced=1	1	1.87256	1.86103	1.01	0.3156
income10000	income \$20,000 and less	1	-1.22177	0.86319	-1.42	0.1586
income20000	income \$20001 - \$30000	1	-0.44902	0.83859	-0.54	0.5930
income30000	income \$30001 - \$40000	1	-0.84337	1.03616	-0.81	0.4167
income40000	income \$40001 - \$50000	1	-0.29956	0.73982	-0.40	0.6860
income50000	income \$50001 - \$75000	1	-0.85186	0.71346	-1.19	0.2340
income75000	income \$750001 - \$100000	1	0.32084	0.77551	0.41	0.6795
Children18anDover	Children 18 and over	1	0.60499	0.65940	0.92	0.3600
ChildrenUnder18	Children under 18	1	-0.32325	0.60626	-0.53	0.5945
Newark	Newark zip codes	1	-0.14907	0.69753	-0.21	0.8310
Wilmington	Wilmington zip codes	1	0.73771	0.62655	1.18	0.2405
New Castle Suburban	NCC Suburban zip codes	1	0.97735	0.60377	1.62	0.1071
Dover	Dover zip codes	1	1.01042	0.80066	1.26	0.2085
Kent Suburban	Kent Suburban zip codes	1	0.26945	0.75917	0.35	0.7230
Active in church	Active in church?	1	0.40375	0.44363	0.91	0.3639
Christian	Religion	1	-2.54826	0.89102	-2.86	0.0047
Methodist	Religion	1	0.20045	0.73059	0.27	0.7841
Baptist	Religion	1	-2.12950	0.95469	-2.23	0.0269
Protestant	Religion	1	-1.29260	0.78073	-1.66	0.0994
Catholic	Religion	1	-1.66777	0.73512	-2.27	0.0244

13. Did your parents ever talk to you about issues related to sex?

The LOGISTIC Procedure

Model Information	
Data Set	WORK.SURVEY4
Response Variable	Parentstalk
Number of Response Levels	2
Weight Variable	Adjweight
Model	binary logit
Optimization Technique	Fisher's scoring

Number of Observations Read	325		
Number of Observations Used	274		
Sum of Weights Read	323.7684		
Sum of Weights Used	277.3051		
Response Profile			
Ordered Value	parentstalk	Total Frequency	Total Weight
1	1	117	132.05009
2	0	157	145.25503

Probability modeled is parentstalk=1.

Note: 51 observations were deleted due to missing values for the response or explanatory variables.

Model Convergence Status		
Convergence criterion (GCONV=1E-8) satisfied.		
Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	385.797	357.984
SC	389.411	477.217

Model Convergence Status		
-2 Log L	383.797	291.984

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	91.8139	32	<.0001
Score	78.7596	32	<.0001
Wald	54.8831	32	0.0071

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	0.5793	1.3857	0.1748	0.6759
gender	1	0.5384	0.3217	2.8005	0.0942
age1821	1	1.7546	1.0429	2.8306	0.0925
<i>age2130</i>	<i>1</i>	<i>2.7120</i>	<i>0.8435</i>	<i>10.3376</i>	<i>0.0013</i>
age3140	1	0.9188	0.7415	1.5353	0.2153
age4150	1	1.3026	0.6812	3.6567	0.0558
age5160	1	-0.4634	0.6440	0.5179	0.4717
age6170	1	-0.00288	0.6000	0.0000	0.9962
African American	1	-1.1920	0.7797	2.3372	0.1263
Caucasian	1	-0.6233	0.7452	0.6997	0.4029
Hispanic	1	0.1716	0.7746	0.0491	0.8247
married	1	-0.4768	0.4100	1.3525	0.2448
widowed	1	-0.5647	0.8023	0.4955	0.4815
divorced	1	1.4590	1.6765	0.7573	0.3842
income10000	1	-0.3690	0.7207	0.2622	0.6086
income20000	1	0.8632	0.6869	1.5789	0.2089

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
income30000	1	-0.2151	0.7589	0.0804	0.7768
income40000	1	0.6752	0.5705	1.4009	0.2366
income50000	1	0.8154	0.5684	2.0575	0.1515
income75000	1	0.1673	0.6183	0.0732	0.7867
Children18anDover	1	-0.0699	0.5036	0.0192	0.8897
<i>ChildrenUnder18</i>	<i>1</i>	<i>-1.1452</i>	<i>0.4730</i>	<i>5.8630</i>	<i>0.0155</i>
Newark	1	0.9818	0.5936	2.7356	0.0981
Wilmington	1	-0.0516	0.4629	0.0124	0.9113
New Castle Suburban	1	-0.3883	0.4808	0.6523	0.4193
Dover	1	-0.5493	0.6298	0.7607	0.3831
Kent Suburban	1	-0.1695	0.5976	0.0804	0.7767
Active in church	1	0.3784	0.3357	1.2705	0.2597
Christian	1	-1.3765	0.7138	3.7181	0.0538
Methodist	1	-0.4542	0.5429	0.7000	0.4028
Baptist	1	-1.2901	0.7845	2.7044	0.1001
Protestant	1	-0.2149	0.6464	0.1105	0.7395
<i>Catholic</i>	<i>1</i>	<i>-1.4339</i>	<i>0.6417</i>	<i>4.9936</i>	<i>0.0254</i>

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
gender	1.713	0.912	3.219
age1821	5.781	0.749	44.641
age2130	15.059	2.883	78.666
age3140	2.506	0.586	10.721

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
age4150	3.679	0.968	13.980
age5160	0.629	0.178	2.223
age6170	0.997	0.308	3.232
African American	0.304	0.066	1.400
Caucasian	0.536	0.124	2.310
Hispanic	1.187	0.260	5.418
married	0.621	0.278	1.386
widowed	0.569	0.118	2.739
divorced	4.301	0.161	114.989
income10000	0.691	0.168	2.839
income20000	2.371	0.617	9.111
income30000	0.806	0.182	3.569
income40000	1.964	0.642	6.009
income50000	2.260	0.742	6.886
income75000	1.182	0.352	3.971
Children18anDover	0.933	0.348	2.502
ChildrenUnder18	0.318	0.126	0.804
Newark	2.669	0.834	8.544
Wilmington	0.950	0.383	2.353
New Castle Suburban	0.678	0.264	1.740
Dover	0.577	0.168	1.984
Kent Suburban	0.844	0.262	2.723
Active in church	1.460	0.756	2.819
Christian	0.252	0.062	1.023

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
Methodist	0.635	0.219	1.840
Baptist	0.275	0.059	1.281
Protestant	0.807	0.227	2.864
Catholic	0.238	0.068	0.838

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	72.0	Somers' D	0.441
Percent Discordant	27.8	Gamma	0.442
Percent Tied	0.2	Tau-a	0.217
Pairs	18369	c	0.721

15. Should teenagers have access to condoms?

The LOGISTIC Procedure

Model Information	
Data Set	WORK.SURVEY4
Response Variable	condomaccess
Number of Response Levels	2
Weight Variable	adjweight
Model	binary logit
Optimization Technique	Fisher's scoring

Number of Observations Read	325		
Number of Observations Used	265		
Sum of Weights Read	323.7684		
Sum of Weights Used	267.8185		
Response Profile			
Ordered Value	condomaccess	Total Frequency	Total Weight
1	1	211	221.06635
2	0	54	46.75215

Probability modeled is condomaccess=1.

Note: 60 observations were deleted due to missing values for the response or explanatory variables.

Model Convergence Status		
Convergence criterion (GCONV=1E-8) satisfied.		
Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	250.029	262.399
SC	253.608	380.530
-2 Log L	248.029	196.399

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	51.6297	32	0.0154
Score	48.8963	32	0.0284
Wald	36.7887	32	0.2567

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	0.0229	1.8183	0.0002	0.9899
gender	1	0.2623	0.4248	0.3815	0.5368
<i>age1821</i>	<i>1</i>	<i>3.1618</i>	<i>1.3903</i>	<i>5.1718</i>	<i>0.0230</i>
age2130	1	1.9008	1.0615	3.2062	0.0734
<i>age3140</i>	<i>1</i>	<i>2.0079</i>	<i>0.9604</i>	<i>4.3713</i>	<i>0.0365</i>
<i>age4150</i>	<i>1</i>	<i>1.6860</i>	<i>0.7848</i>	<i>4.6152</i>	<i>0.0317</i>
<i>age5160</i>	<i>1</i>	<i>1.7856</i>	<i>0.7437</i>	<i>5.7648</i>	<i>0.0164</i>
<i>age6170</i>	<i>1</i>	<i>1.7612</i>	<i>0.7248</i>	<i>5.9041</i>	<i>0.0151</i>
African American	1	1.1796	0.9458	1.5557	0.2123
Caucasian	1	0.5837	0.9333	0.3912	0.5317
Hispanic	1	-1.3836	0.9273	2.2260	0.1357
married	1	0.3310	0.5179	0.4085	0.5227
widowed	1	-0.2319	0.9176	0.0639	0.8005
divorced	1	-1.9454	1.5921	1.4930	0.2218
income10000	1	0.8474	0.9410	0.8109	0.3679
income20000	1	0.3736	0.8174	0.2089	0.6476
income30000	1	1.4381	1.1561	1.5472	0.2135
income40000	1	0.5058	0.7532	0.4509	0.5019

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
income50000	1	-0.4309	0.7319	0.3465	0.5561
income75000	1	0.2935	0.8100	0.1313	0.7171
Children18anDover	1	-0.6583	0.7185	0.8394	0.3596
ChildrenUnder18	1	0.0680	0.6925	0.0096	0.9218
Newark	1	0.0511	0.7088	0.0052	0.9425
Wilmington	1	0.5286	0.6177	0.7324	0.3921
New Castle Suburban	1	0.3402	0.6332	0.2886	0.5911
Dover	1	0.9412	0.8018	1.3779	0.2405
<i>Kent Suburban</i>	<i>1</i>	<i>1.8179</i>	<i>0.8716</i>	<i>4.3502</i>	<i>0.0370</i>
<i>Active in church</i>	<i>1</i>	<i>-0.8716</i>	<i>0.4334</i>	<i>4.0436</i>	<i>0.0443</i>
Christian	1	-1.5699	1.1801	1.7697	0.1834
Methodist	1	-0.8175	0.7792	1.1008	0.2941
Baptist	1	-1.0699	1.2633	0.7173	0.3970
Protestant	1	0.2772	1.1559	0.0575	0.8105
Catholic	1	-1.1534	1.0950	1.1096	0.2922

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
gender	1.300	0.565	2.989
age1821	23.613	1.548	360.251
age2130	6.691	0.835	53.591
age3140	7.448	1.134	48.921
age4150	5.398	1.159	25.133
age5160	5.963	1.388	25.617

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
age6170	5.820	1.406	24.092
African American	3.253	0.510	20.764
Caucasian	1.793	0.288	11.166
Hispanic	0.251	0.041	1.543
married	1.392	0.505	3.842
widowed	0.793	0.131	4.790
divorced	0.143	0.006	3.238
income10000	2.334	0.369	14.758
income20000	1.453	0.293	7.212
income30000	4.213	0.437	40.614
income40000	1.658	0.379	7.257
income50000	0.650	0.155	2.728
income75000	1.341	0.274	6.560
Children18anDover	0.518	0.127	2.117
ChildrenUnder18	1.070	0.275	4.159
Newark	1.052	0.262	4.222
Wilmington	1.697	0.506	5.692
New Castle Suburban	1.405	0.406	4.861
Dover	2.563	0.532	12.337
Kent Suburban	6.159	1.116	33.996
Active in church	0.418	0.179	0.978
Christian	0.208	0.021	2.102
Methodist	0.442	0.096	2.033
Baptist	0.343	0.029	4.080

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
Protestant	1.319	0.137	12.715
Catholic	0.316	0.037	2.698

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	75.1	Somers' D	0.504
Percent Discordant	24.7	Gamma	0.505
Percent Tied	0.2	Tau-a	0.164
Pairs	11394	c	0.752

16. Should teenagers have access to other contraceptives (for example, birth control pills)?

The LOGISTIC Procedure

Model Information	
Data Set	WORK.SURVEY4
Response Variable	contraaccess
Number of Response Levels	2
Weight Variable	adjweight
Model	binary logit
Optimization Technique	Fisher's scoring

Number of Observations Read	325		
Number of Observations Used	257		
Sum of Weights Read	323.7684		
Sum of Weights Used	261.6754		
Response Profile			
Ordered Value	contraaccess	Total Frequency	Total Weight
1	1	194	191.73154
2	0	63	69.94390

Probability modeled is contraaccess=1.

Note: 68 observations were deleted due to missing values for the response or explanatory variables.

Model Convergence Status		
Convergence criterion (GCONV=1E-8) satisfied.		
Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates

Model Convergence Status		
AIC	305.830	299.396
SC	309.379	409.418
-2 Log L	303.830	237.396

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	66.4337	30	0.0001
Score	56.6179	30	0.0023
Wald	43.4151	30	0.0538

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-1.8207	1.2966	1.9718	0.1603
gender	1	-1.0541	0.3745	7.9209	0.0049
<i>Age 40 and less</i>	<i>1</i>	<i>2.0608</i>	<i>0.8516</i>	<i>5.8556</i>	<i>0.0155</i>
<i>age4150</i>	<i>1</i>	<i>2.1845</i>	<i>0.8159</i>	<i>7.1691</i>	<i>0.0074</i>
<i>age5160</i>	<i>1</i>	<i>2.1536</i>	<i>0.7597</i>	<i>8.0368</i>	<i>0.0046</i>
<i>age6170</i>	<i>1</i>	<i>1.9502</i>	<i>0.7443</i>	<i>6.8662</i>	<i>0.0088</i>
<i>African American</i>	<i>1</i>	<i>1.7463</i>	<i>0.7827</i>	<i>4.9781</i>	<i>0.0257</i>
<i>Caucasian</i>	<i>1</i>	<i>1.4609</i>	<i>0.6976</i>	<i>4.3852</i>	<i>0.0363</i>
Hispanic	1	-0.4811	0.7587	0.4022	0.5260
<i>married</i>	<i>1</i>	<i>1.3029</i>	<i>0.4610</i>	<i>7.9883</i>	<i>0.0047</i>
<i>widowed</i>	<i>1</i>	<i>2.3692</i>	<i>1.0247</i>	<i>5.3458</i>	<i>0.0208</i>
divorced	1	-2.8435	1.8967	2.2476	0.1338
<i>income10000</i>	<i>1</i>	<i>2.7062</i>	<i>0.9574</i>	<i>7.9892</i>	<i>0.0047</i>
income20000	1	0.7037	0.7452	0.8919	0.3450

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
<i>income30000</i>	<i>1</i>	<i>2.1871</i>	<i>1.0472</i>	<i>4.3617</i>	<i>0.0368</i>
income40000	1	0.1930	0.6329	0.0931	0.7603
income50000	1	-0.3740	0.6568	0.3242	0.5691
income75000	1	0.4520	0.7103	0.4049	0.5246
Children18anDover	1	-1.0958	0.6606	2.7518	0.0971
ChildrenUnder18	1	-0.5170	0.5860	0.7784	0.3776
Newark	1	-0.0624	0.6060	0.0106	0.9179
Wilmington	1	0.3089	0.5252	0.3460	0.5564
<i>New Castle Suburban</i>	<i>1</i>	<i>1.1765</i>	<i>0.5776</i>	<i>4.1488</i>	<i>0.0417</i>
Dover	1	1.3768	0.7464	3.4022	0.0651
<i>Kent Suburban</i>	<i>1</i>	<i>1.5873</i>	<i>0.7891</i>	<i>4.0464</i>	<i>0.0443</i>
<i>Active in church</i>	<i>1</i>	<i>-1.0343</i>	<i>0.4124</i>	<i>6.2905</i>	<i>0.0121</i>
Christian	1	-1.3456	0.8870	2.3014	0.1293
Methodist	1	-0.2166	0.6906	0.0984	0.7538
Baptist	1	-0.8190	0.9917	0.6820	0.4089
Protestant	1	-0.0658	0.7932	0.0069	0.9339
Catholic	1	-0.4029	0.7614	0.2800	0.5967

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
gender	0.349	0.167	0.726
youngones	7.852	1.479	41.676
age4150	8.886	1.796	43.971
age5160	8.616	1.944	38.190

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
age6170	7.030	1.635	30.232
African American	5.733	1.236	26.584
Caucasian	4.310	1.098	16.916
Hispanic	0.618	0.140	2.734
married	3.680	1.491	9.082
widowed	10.689	1.435	79.641
divorced	0.058	0.001	2.396
income10000	14.973	2.293	97.788
income20000	2.021	0.469	8.709
income30000	8.909	1.144	69.382
income40000	1.213	0.351	4.193
income50000	0.688	0.190	2.493
income75000	1.571	0.391	6.323
Children18anDover	0.334	0.092	1.220
ChildrenUnder18	0.596	0.189	1.880
Newark	0.939	0.286	3.081
Wilmington	1.362	0.487	3.812
New Castle Suburban	3.243	1.045	10.060
Dover	3.962	0.917	17.113
Kent Suburban	4.891	1.042	22.963
Active in church	0.355	0.158	0.798
Christian	0.260	0.046	1.481
Methodist	0.805	0.208	3.117
Baptist	0.441	0.063	3.079

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
Protestant	0.936	0.198	4.432
Catholic	0.668	0.150	2.973

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	75.3	Somers' D	0.508
Percent Discordant	24.5	Gamma	0.510
Percent Tied	0.3	Tau-a	0.189
Pairs	12222	c	0.754

19. Do you believe that teaching youth about abstinence - not have sex at all until marriage – will reduce the number of teen pregnancies?

The LOGISTIC Procedure

Model Information		
Data Set	WORK.SURVEY4	
Response Variable	teaching_youth_about_abstinence	teaching youth about abstinence
Number of Response Levels	2	
Weight Variable	adjweight	
Model	binary logit	
Optimization Technique	Fisher's scoring	

Number of Observations Read	325
Number of Observations Used	274
Sum of Weights Read	323.7684
Sum of Weights Used	277.3051

Response Profile			
Ordered Value	teaching_youth_about_abstinence	Total Frequency	Total Weight
1	Yes	139	147.12648
2	No	135	130.17864

Probability modeled is teaching_youth_about_abstinence='yes'.

Note: 51 observations were deleted due to missing values for the response or explanatory variables.

Model Convergence Status		
Convergence criterion (GCONV=1E-8) satisfied.		
Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	385.390	389.127

Model Convergence Status		
SC	389.003	508.360
-2 Log L	383.390	323.127

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	60.2635	32	0.0018
Score	53.5523	32	0.0098
Wald	42.7210	32	0.0976

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	0.4809	1.2116	0.1575	0.6914
gender	1	0.4712	0.3093	2.3208	0.1277
age1821	1	0.6454	0.9771	0.4364	0.5089
age2130	1	-1.0103	0.7545	1.7928	0.1806
age3140	1	-0.3386	0.7068	0.2295	0.6319
age4150	1	-0.5096	0.6508	0.6131	0.4336
age5160	1	-0.9559	0.6144	2.4204	0.1198
age6170	1	-0.8966	0.5802	2.3879	0.1223
<i>African American</i>	<i>1</i>	<i>-2.1365</i>	<i>0.7443</i>	<i>8.2405</i>	<i>0.0041</i>
<i>Caucasian</i>	<i>1</i>	<i>-1.6951</i>	<i>0.7002</i>	<i>5.8614</i>	<i>0.0155</i>
Hispanic	1	1.1769	0.9216	1.6306	0.2016
married	1	-0.3941	0.3814	1.0678	0.3014
widowed	1	-0.2666	0.7521	0.1256	0.7230
divorced	1	0.1518	1.6703	0.0083	0.9276
income10000	1	-0.6524	0.6520	1.0012	0.3170

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
income20000	1	-0.3119	0.6311	0.2443	0.6212
income30000	1	-0.4348	0.6944	0.3920	0.5312
income40000	1	-0.0269	0.5392	0.0025	0.9602
income50000	1	0.6033	0.5445	1.2276	0.2679
income75000	1	-0.1748	0.5738	0.0928	0.7606
Children18andDover	1	0.9182	0.4898	3.5145	0.0608
ChildrenUnder18	1	0.5500	0.4505	1.4903	0.2222
Newark	1	0.7482	0.5338	1.9647	0.1610
Wilmington	1	0.2830	0.4479	0.3992	0.5275
New Castle Suburban	1	0.0176	0.4436	0.0016	0.9683
Dover	1	0.6059	0.5813	1.0863	0.2973
Kent Suburban	1	0.0996	0.5675	0.0308	0.8607
<i>Active in church</i>	<i>1</i>	<i>0.6837</i>	<i>0.3124</i>	<i>4.7885</i>	<i>0.0286</i>
Christian	1	1.2047	0.6493	3.4424	0.0635
<i>Methodist</i>	<i>1</i>	<i>-1.0964</i>	<i>0.5445</i>	<i>4.0544</i>	<i>0.0441</i>
Baptist	1	1.2836	0.7132	3.2393	0.0719
Protestant	1	1.0122	0.6015	2.8317	0.0924
Catholic	1	0.5729	0.5813	0.9715	0.3243

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
gender	1.602	0.874	2.937
age1821	1.907	0.281	12.942
age2130	0.364	0.083	1.598

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
age3140	0.713	0.178	2.848
age4150	0.601	0.168	2.151
age5160	0.384	0.115	1.282
age6170	0.408	0.131	1.272
African American	0.118	0.027	0.508
Caucasian	0.184	0.047	0.724
Hispanic	3.244	0.533	19.752
married	0.674	0.319	1.424
widowed	0.766	0.175	3.345
divorced	1.164	0.044	30.735
income10000	0.521	0.145	1.869
income20000	0.732	0.212	2.522
income30000	0.647	0.166	2.525
income40000	0.973	0.338	2.801
income50000	1.828	0.629	5.315
income75000	0.840	0.273	2.585
Children18andOver	2.505	0.959	6.542
ChildrenUnder18	1.733	0.717	4.191
Newark	2.113	0.742	6.015
Wilmington	1.327	0.552	3.193
New Castle Suburban	1.018	0.427	2.428
Dover	1.833	0.587	5.727
Kent Suburban	1.105	0.363	3.360
Active in church	1.981	1.074	3.655

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
Christian	3.336	0.934	11.909
Methodist	0.334	0.115	0.971
Baptist	3.609	0.892	14.605
Protestant	2.752	0.846	8.946
Catholic	1.773	0.568	5.541

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	69.4	Somers' D	0.390
Percent Discordant	30.4	Gamma	0.391
Percent Tied	0.2	Tau-a	0.196
Pairs	18765	c	0.695

21. When it comes to educating teens about sex, how involved should the public schools be?

The LOGISTIC Procedure	
Model Information	
Data Set	WORK.SURVEY4
Response Variable	moreinvolved
Number of Response Levels	2
Weight Variable	adjweight
Model	binary logit
Optimization Technique	Fisher's scoring

Number of Observations Read	325		
Number of Observations Used	227		
Sum of Weights Read	323.7684		
Sum of Weights Used	236.7358		
Response Profile			
Ordered Value	moreinvolved	Total Frequency	Total Weight
1	1	134	147.87340
2	0	93	88.86241

Probability modeled is moreinvolved=1.

Note: 98 observations were deleted due to missing values for the response or explanatory variables.

Model Convergence Status		
Convergence criterion (GCONV=1E-8) satisfied.		
Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	315.320	320.711

Model Convergence Status		
SC	318.745	433.734
-2 Log L	313.320	254.711

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	58.6088	32	0.0028
Score	53.3460	32	0.0103
Wald	41.7720	32	0.1157

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-0.5922	1.4994	0.1560	0.6929
gender	1	0.5756	0.3522	2.6709	0.1022
age1821	1	1.4117	1.2142	1.3517	0.2450
age2130	1	-0.3026	0.9223	0.1077	0.7428
age3140	1	-1.0395	0.8527	1.4863	0.2228
age4150	1	-1.1652	0.7697	2.2914	0.1301
age5160	1	-0.4307	0.7380	0.3406	0.5595
age6170	1	-0.2567	0.7026	0.1335	0.7149
<i>African American</i>	<i>1</i>	<i>1.9575</i>	<i>0.9492</i>	<i>4.2528</i>	<i>0.0392</i>
<i>Caucasian</i>	<i>1</i>	<i>1.8669</i>	<i>0.8875</i>	<i>4.4249</i>	<i>0.0354</i>
Hispanic	1	0.7507	0.9024	0.6921	0.4054
married	1	-0.5973	0.4414	1.8311	0.1760
widowed	1	-0.1532	0.9121	0.0282	0.8666
divorced	1	0.0114	1.7147	0.0000	0.9947
income10000	1	0.7670	0.7671	0.9998	0.3174

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
income20000	1	-0.3347	0.6867	0.2376	0.6260
income30000	1	1.3367	0.8574	2.4304	0.1190
income40000	1	-0.1336	0.6215	0.0462	0.8298
income50000	1	0.3358	0.6006	0.3127	0.5761
<i>income75000</i>	<i>1</i>	<i>1.3545</i>	<i>0.6807</i>	<i>3.9594</i>	<i>0.0466</i>
Children18andDover	1	-0.1765	0.5589	0.0998	0.7521
ChildrenUnder18	1	0.8958	0.5396	2.7563	0.0969
Newark	1	-0.2183	0.6344	0.1184	0.7307
Wilmington	1	0.2988	0.5170	0.3341	0.5632
New Castle Suburban	1	0.2716	0.5108	0.2827	0.5950
Dover	1	0.1393	0.6708	0.0431	0.8355
Kent Suburban	1	0.6037	0.6594	0.8382	0.3599
Active in church	1	-0.6507	0.3588	3.2888	0.0698
Christian	1	-0.2357	0.8256	0.0815	0.7753
<i>Methodist</i>	<i>1</i>	<i>1.4162</i>	<i>0.6246</i>	<i>5.1406</i>	<i>0.0234</i>
Baptist	1	-1.3042	0.8966	2.1159	0.1458
Protestant	1	-1.3343	0.7637	3.0521	0.0806
Catholic	1	0.000852	0.7370	0.0000	0.9991

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
gender	1.778	0.892	3.547
age1821	4.103	0.380	44.325
age2130	0.739	0.121	4.504

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
age3140	0.354	0.066	1.881
age4150	0.312	0.069	1.410
age5160	0.650	0.153	2.761
age6170	0.774	0.195	3.066
African American	7.081	1.102	45.508
Caucasian	6.468	1.136	36.830
Hispanic	2.119	0.361	12.421
married	0.550	0.232	1.307
widowed	0.858	0.144	5.126
divorced	1.011	0.035	29.141
income10000	2.153	0.479	9.684
income20000	0.716	0.186	2.749
income30000	3.806	0.709	20.433
income40000	0.875	0.259	2.958
income50000	1.399	0.431	4.540
income75000	3.875	1.021	14.711
Children18andDover	0.838	0.280	2.506
ChildrenUnder18	2.449	0.851	7.053
Newark	0.804	0.232	2.787
Wilmington	1.348	0.489	3.714
New Castle Suburban	1.312	0.482	3.570
Dover	1.149	0.309	4.280
Kent Suburban	1.829	0.502	6.660
Active in church	0.522	0.258	1.054

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
Christian	0.790	0.157	3.985
Methodist	4.121	1.212	14.020
Baptist	0.271	0.047	1.573
Protestant	0.263	0.059	1.177
Catholic	1.001	0.236	4.244

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	74.5	Somers' D	0.492
Percent Discordant	25.3	Gamma	0.493
Percent Tied	0.2	Tau-a	0.239
Pairs	12462	c	0.746

22. Do you think the state spends enough on sex education for teens?

The LOGISTIC Procedure

Model Information		
Data Set	WORK.SURVEY4	
Response Variable	the_state_spends_enough_on_sex	the state spends enough on gender education
Number of Response Levels	2	
Weight Variable	Adjweight	
Model	binary logit	
Optimization Technique	Fisher's scoring	

Number of Observations Read	325
Number of Observations Used	186
Sum of Weights Read	323.7684
Sum of Weights Used	190.7871

Response Profile			
Ordered Value	the_state_spends_enough_on_sex	Total Frequency	Total Weight
1	Yes	66	67.45297
2	No	120	123.33413

Probability modeled is the_state_spends_enough_on_sex_e='yes'.

Note: 139 observations were deleted due to missing values for the response or explanatory variables.

Model Convergence Status		
Convergence criterion (GCONV=1E-8) satisfied.		
Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates

Model Convergence Status		
AIC	249.877	250.706
SC	253.103	353.930
-2 Log L	247.877	186.706

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	61.1714	31	0.0010
Score	52.4985	31	0.0093
Wald	38.0926	31	0.1779

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-2.1039	1.6635	1.5994	0.2060
<i>gender</i>	<i>1</i>	<i>1.0011</i>	<i>0.4454</i>	<i>5.0524</i>	<i>0.0246</i>
age1821	1	0.3790	1.2190	0.0967	0.7559
age2130	1	0.3270	1.0556	0.0959	0.7568
<i>age3140</i>	<i>1</i>	<i>-2.2575</i>	<i>1.0013</i>	<i>5.0829</i>	<i>0.0242</i>
age4150	1	-1.0695	0.8711	1.5072	0.2196
age5160	1	-1.5355	0.8571	3.2093	0.0732
age6170	1	-0.3254	0.8405	0.1499	0.6986
African American	1	-0.2742	0.8793	0.0972	0.7552
Caucasian	1	0.8519	0.7574	1.2651	0.2607
<i>married</i>	<i>1</i>	<i>1.8289</i>	<i>0.6293</i>	<i>8.4450</i>	<i>0.0037</i>
widowed	1	0.3570	1.0673	0.1119	0.7380
divorced	1	-0.2729	2.3439	0.0136	0.9073
income10000	1	0.4246	0.8294	0.2621	0.6087

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
income20000	1	-1.1168	1.0622	1.1054	0.2931
income30000	1	1.0603	0.9671	1.2019	0.2730
income40000	1	-0.4210	0.8069	0.2722	0.6019
income50000	1	-0.2807	0.7643	0.1349	0.7134
income75000	1	-0.6610	0.8517	0.6024	0.4377
Children18andDover	1	0.3155	0.6747	0.2187	0.6400
ChildrenUnder18	1	0.0355	0.6312	0.0032	0.9552
Newark	1	0.6607	0.7584	0.7588	0.3837
Wilmington	1	-0.0837	0.6248	0.0179	0.8934
New Castle Suburban	1	-0.0344	0.6111	0.0032	0.9551
Dover	1	-0.8045	0.9693	0.6889	0.4065
Kent Suburban	1	0.2444	0.7223	0.1145	0.7351
Active in church	1	0.2657	0.4646	0.3269	0.5675
Christian	1	0.2149	0.9045	0.0564	0.8122
Methodist	1	-0.1026	0.8125	0.0160	0.8995
Baptist	1	0.4561	0.9625	0.2246	0.6356
Protestant	1	0.5886	0.8069	0.5322	0.4657
Catholic	1	-0.3186	0.7598	0.1759	0.6750

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
gender	2.721	1.137	6.514
age1821	1.461	0.134	15.929
age2130	1.387	0.175	10.979

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
age3140	0.105	0.015	0.745
age4150	0.343	0.062	1.893
age5160	0.215	0.040	1.155
age6170	0.722	0.139	3.750
African American	0.760	0.136	4.259
Caucasian	2.344	0.531	10.343
married	6.227	1.814	21.378
widowed	1.429	0.176	11.577
divorced	0.761	0.008	75.273
income10000	1.529	0.301	7.769
income20000	0.327	0.041	2.625
income30000	2.887	0.434	19.217
income40000	0.656	0.135	3.191
income50000	0.755	0.169	3.378
income75000	0.516	0.097	2.741
Children18andOver	1.371	0.365	5.144
ChildrenUnder18	1.036	0.301	3.570
Newark	1.936	0.438	8.561
Wilmington	0.920	0.270	3.130
New Castle Suburban	0.966	0.292	3.200
Dover	0.447	0.067	2.990
Kent Suburban	1.277	0.310	5.260
Active in church	1.304	0.525	3.242
Christian	1.240	0.211	7.299

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
Methodist	0.902	0.184	4.436
Baptist	1.578	0.239	10.409
Protestant	1.802	0.371	8.759
Catholic	0.727	0.164	3.224

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	73.5	Somers' D	0.471
Percent Discordant	26.4	Gamma	0.472
Percent Tied	0.1	Tau-a	0.217
Pairs	7920	c	0.736

23. Which of the following messages should the state support to educate about teen pregnancy

- Not having sex (abstinence) is the only way to guarantee that a girl won't get pregnant

The LOGISTIC Procedure

Model Information		
Data Set	WORK.SURVEY4	
Response Variable	Not_having_sex__abstinence_	Not having sex (abstinence)
Number of Response Levels	2	
Weight Variable	adjweight	
Model	binary logit	
Optimization Technique	Fisher's scoring	

Number of Observations Read	325
Number of Observations Used	274
Sum of Weights Read	323.7684
Sum of Weights Used	277.3051

Response Profile			
Ordered Value	Not_having_gender__abstinence_	Total Frequency	Total Weight
1	Yes	201	207.67137
2	No	73	69.63375

Probability modeled is Not_having_sex__abstinence_='yes'.

Note: 51 observations were deleted due to missing values for the response or explanatory variables.

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.
Model Fit Statistics

Model Convergence Status		
Criterion	Intercept Only	Intercept and Covariates
AIC	314.551	321.979
SC	318.164	441.212
-2 Log L	312.551	255.979

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	56.5720	32	0.0047
Score	52.2199	32	0.0135
Wald	40.6424	32	0.1406

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	1.8698	1.4479	1.6678	0.1966
gender	1	-0.1247	0.3473	0.1290	0.7195
age1821	1	-0.1252	1.1195	0.0125	0.9110
age2130	1	-0.1289	0.8919	0.0209	0.8851
age3140	1	0.1658	0.8576	0.0374	0.8467
age4150	1	-0.4130	0.7371	0.3140	0.5752
age5160	1	0.1767	0.7041	0.0630	0.8019
age6170	1	-0.6995	0.6296	1.2345	0.2665
African American	1	-1.2190	0.8813	1.9133	0.1666
Caucasian	1	-0.1625	0.8476	0.0367	0.8480
Hispanic	1	0.3420	0.9224	0.1374	0.7108
married	1	0.2998	0.4222	0.5043	0.4776

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
widowed	1	0.7605	0.8533	0.7943	0.3728
divorced	1	-0.7824	1.7423	0.2017	0.6534
income10000	1	-1.1520	0.7222	2.5443	0.1107
income20000	1	-0.4351	0.7264	0.3588	0.5492
income30000	1	0.4593	0.8390	0.2996	0.5841
income40000	1	-0.1643	0.6229	0.0696	0.7919
income50000	1	-0.5537	0.6161	0.8076	0.3688
income75000	1	-0.2496	0.6912	0.1304	0.7180
Children18anDover	1	-0.8245	0.5739	2.0640	0.1508
ChildrenUnder18	1	-0.3524	0.5360	0.4321	0.5110
<i>Newark</i>	<i>1</i>	<i>2.9942</i>	<i>0.8690</i>	<i>11.8730</i>	<i>0.0006</i>
Wilmington	1	0.8030	0.4669	2.9581	0.0854
<i>New Castle Suburban</i>	<i>1</i>	<i>1.5170</i>	<i>0.4884</i>	<i>9.6466</i>	<i>0.0019</i>
<i>Dover</i>	<i>1</i>	<i>1.9740</i>	<i>0.7390</i>	<i>7.1343</i>	<i>0.0076</i>
<i>Kent Suburban</i>	<i>1</i>	<i>1.6620</i>	<i>0.6724</i>	<i>6.1097</i>	<i>0.0134</i>
Active in church	1	0.6644	0.3654	3.3065	0.0690
Christian	1	-0.2382	0.8292	0.0825	0.7740
Methodist	1	-0.7088	0.5819	1.4837	0.2232
Baptist	1	-0.6114	0.8616	0.5036	0.4779
Protestant	1	-1.3013	0.7565	2.9589	0.0854
Catholic	1	-1.0620	0.7332	2.0984	0.1475

Odds Ratio Estimates		
Effect	Point Estimate	95% Wald Confidence Limits

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
gender	0.883	0.447	1.744
age1821	0.882	0.098	7.917
age2130	0.879	0.153	5.049
age3140	1.180	0.220	6.338
age4150	0.662	0.156	2.806
age5160	1.193	0.300	4.743
age6170	0.497	0.145	1.706
African American	0.296	0.053	1.662
Caucasian	0.850	0.161	4.476
Hispanic	1.408	0.231	8.584
married	1.350	0.590	3.087
widowed	2.139	0.402	11.393
divorced	0.457	0.015	13.907
income10000	0.316	0.077	1.302
income20000	0.647	0.156	2.687
income30000	1.583	0.306	8.197
income40000	0.848	0.250	2.876
income50000	0.575	0.172	1.923
income75000	0.779	0.201	3.020
Children18anDover	0.438	0.142	1.350
ChildrenUnder18	0.703	0.246	2.010
Newark	19.969	3.637	109.650
Wilmington	2.232	0.894	5.574
New Castle Suburban	4.559	1.750	11.874

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
Dover	7.199	1.691	30.646
Kent Suburban	5.270	1.411	19.685
Active in church	1.943	0.950	3.977
Christian	0.788	0.155	4.003
Methodist	0.492	0.157	1.540
Baptist	0.543	0.100	2.937
Protestant	0.272	0.062	1.199
Catholic	0.346	0.082	1.455

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	74.2	Somers' D	0.487
Percent Discordant	25.6	Gamma	0.487
Percent Tied	0.2	Tau-a	0.191
Pairs	14673	c	0.743

Teens should not have sex until they are out of high school

The LOGISTIC Procedure

Model Information		
Data Set	WORK.SURVEY4	
Response Variable	Teens_should_not_have_sex_until_	Teens should not have sex until they are out of high school
Number of Response Levels	2	
Weight Variable	adjweight	
Model	binary logit	
Optimization Technique	Fisher's scoring	

Number of Observations Read	325
Number of Observations Used	274
Sum of Weights Read	323.7684
Sum of Weights Used	277.3051

Response Profile			
Ordered Value	Teens_should_not_have_sex_until_	Total Frequency	Total Weight
1	Yes	178	172.72118
2	No	96	104.58395

Probability modeled is Teens_should_not_have_sex_until_='yes'.

Note: 51 observations were deleted due to missing values for the response or explanatory variables.

Model Convergence Status		
Convergence criterion (GCONV=1E-8) satisfied.		
Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates

Model Convergence Status			
AIC	369.512	389.982	
SC	373.125	509.216	
-2 Log L	367.512	323.982	
Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	43.5293	32	0.0840
Score	39.9139	32	0.1587
Wald	32.8287	32	0.4262

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	2.6702	1.2544	4.5310	0.0333
gender	1	0.1300	0.3017	0.1858	0.6664
<i>age1821</i>	<i>1</i>	<i>-2.7151</i>	<i>1.0080</i>	<i>7.2548</i>	<i>0.0071</i>
age2130	1	-0.9844	0.7956	1.5308	0.2160
age3140	1	-1.0493	0.7595	1.9085	0.1671
age4150	1	-0.8293	0.7060	1.3798	0.2401
age5160	1	-0.9394	0.6678	1.9788	0.1595
age6170	1	-0.6288	0.6435	0.9550	0.3284
<i>African American</i>	<i>1</i>	<i>-1.3920</i>	<i>0.7006</i>	<i>3.9479</i>	<i>0.0469</i>
Caucasian	1	-1.1928	0.6530	3.3371	0.0677
Hispanic	1	-1.1990	0.6860	3.0545	0.0805
married	1	-0.2282	0.3751	0.3703	0.5428
widowed	1	-0.3018	0.8123	0.1380	0.7102
divorced	1	0.5513	1.8052	0.0933	0.7601

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
income10000	1	-0.6383	0.6475	0.9717	0.3242
income20000	1	0.0562	0.6313	0.0079	0.9291
income30000	1	0.0457	0.6813	0.0045	0.9465
income40000	1	1.0109	0.5826	3.0109	0.0827
income50000	1	0.5877	0.5506	1.1393	0.2858
income75000	1	0.2497	0.5773	0.1871	0.6653
Children18anDover	1	0.0880	0.4841	0.0331	0.8557
ChildrenUnder18	1	0.0695	0.4405	0.0249	0.8747
Newark	1	-0.1937	0.5214	0.1380	0.7103
Wilmington	1	-0.0783	0.4416	0.0314	0.8593
New Castle Suburban	1	-0.5826	0.4396	1.7570	0.1850
Dover	1	-0.2502	0.5695	0.1931	0.6604
Kent Suburban	1	0.6517	0.6396	1.0383	0.3082
Active in church	1	-0.1510	0.3109	0.2361	0.6271
Christian	1	-0.3936	0.6386	0.3799	0.5377
Methodist	1	1.1170	0.5792	3.7192	0.0538
Baptist	1	0.5698	0.7366	0.5983	0.4392
Protestant	1	-0.5799	0.5861	0.9790	0.3225
Catholic	1	0.0839	0.5682	0.0218	0.8826

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
gender	1.139	0.631	2.057
age1821	0.066	0.009	0.477

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
age2130	0.374	0.079	1.777
age3140	0.350	0.079	1.552
age4150	0.436	0.109	1.741
age5160	0.391	0.106	1.447
age6170	0.533	0.151	1.882
African American	0.249	0.063	0.981
Caucasian	0.303	0.084	1.091
Hispanic	0.301	0.079	1.157
married	0.796	0.382	1.660
widowed	0.739	0.150	3.634
divorced	1.735	0.050	59.709
income10000	0.528	0.148	1.879
income20000	1.058	0.307	3.645
income30000	1.047	0.275	3.979
income40000	2.748	0.877	8.609
income50000	1.800	0.612	5.295
income75000	1.284	0.414	3.980
Children18anDover	1.092	0.423	2.821
ChildrenUnder18	1.072	0.452	2.542
Newark	0.824	0.297	2.289
Wilmington	0.925	0.389	2.197
New Castle Suburban	0.558	0.236	1.322
Dover	0.779	0.255	2.377
Kent Suburban	1.919	0.548	6.721

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
Active in church	0.860	0.468	1.581
Christian	0.675	0.193	2.358
Methodist	3.056	0.982	9.508
Baptist	1.768	0.417	7.490
Protestant	0.560	0.178	1.766
Catholic	1.088	0.357	3.312

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	64.3	Somers' D	0.289
Percent Discordant	35.4	Gamma	0.289
Percent Tied	0.3	Tau-a	0.132
Pairs	17088	c	0.644

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VI. END NOTES

¹ The discussion here is merely a summary of issues presented in “A Literature Review of Teen Pregnancy Prevention” By Paul L. Solano, Mary Joan McDuffie, Pat Powell, Kymieria Ingram, Health Services Policy Research Group (HSPRG), Center for Community Research and Service (CCRS), University of Delaware, June 2007. Prepared under contract for the Christiana Care Health Services of Delaware.

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