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## **ADOLESCENTS WHO TAKE VIRGINITY PLEDGES HAVE LOWER RATES OF OUT-OF-WEDLOCK BIRTHS**

**KIRK A. JOHNSON, PH.D., AND ROBERT RECTOR**

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214 Massachusetts Avenue, NE • Washington, D.C. 20002 • (202) 546-4400 • [www.heritage.org](http://www.heritage.org)

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# ADOLESCENTS WHO TAKE VIRGINITY PLEDGES HAVE LOWER RATES OF OUT-OF-WEDLOCK BIRTHS

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Young women who take a virginity pledge are about 40 percent less likely to have a child out of wedlock when compared to similar young women who do not make such a pledge, according to recently released data from the National Longitudinal Study of Adolescent Health. These dramatic findings are sustained when background factors, such as socioeconomic status, race, religiosity, and other relevant variables, are held constant. This finding strongly suggests the potential for abstinence education programs to reduce teen pregnancy and out-of-wedlock childbearing.

## BACKGROUND

For more than a decade, organizations such as True Love Waits have encouraged young people to abstain from sexual activity. As part of these programs, young people are encouraged to take a verbal or written pledge to abstain from sex until marriage. In recent years, increased public policy attention has been focused on adolescents who take these “virginity pledges” as policymakers seek to assess the social and behavioral outcomes of such abstinence programs.

To that end, the National Longitudinal Study of Adolescent Health (hereafter simply Add Health),<sup>1</sup> originally a survey of junior high and high school-aged students funded by the Department of Health and Human Services and other federal agencies, began asking adolescents whether they have taken such a virginity pledge in 1994. These students were tracked through high school and into early adulthood. By 2001, most of the youth in the survey were between the ages of 19 and 25, old enough to evaluate the relationship between pledging and a number of social outcomes.

One key outcome of public policy interest is out-of-wedlock births. Some 1.35 million children are born out of wedlock annually, and have been in recent years, representing roughly one-third of all births in the United States. Children raised by single parents are seven times more likely to live in poverty than are children raised in intact homes, and they are much more likely to be dependent on welfare programs and to suffer from a wide range of other social maladies.<sup>2</sup>

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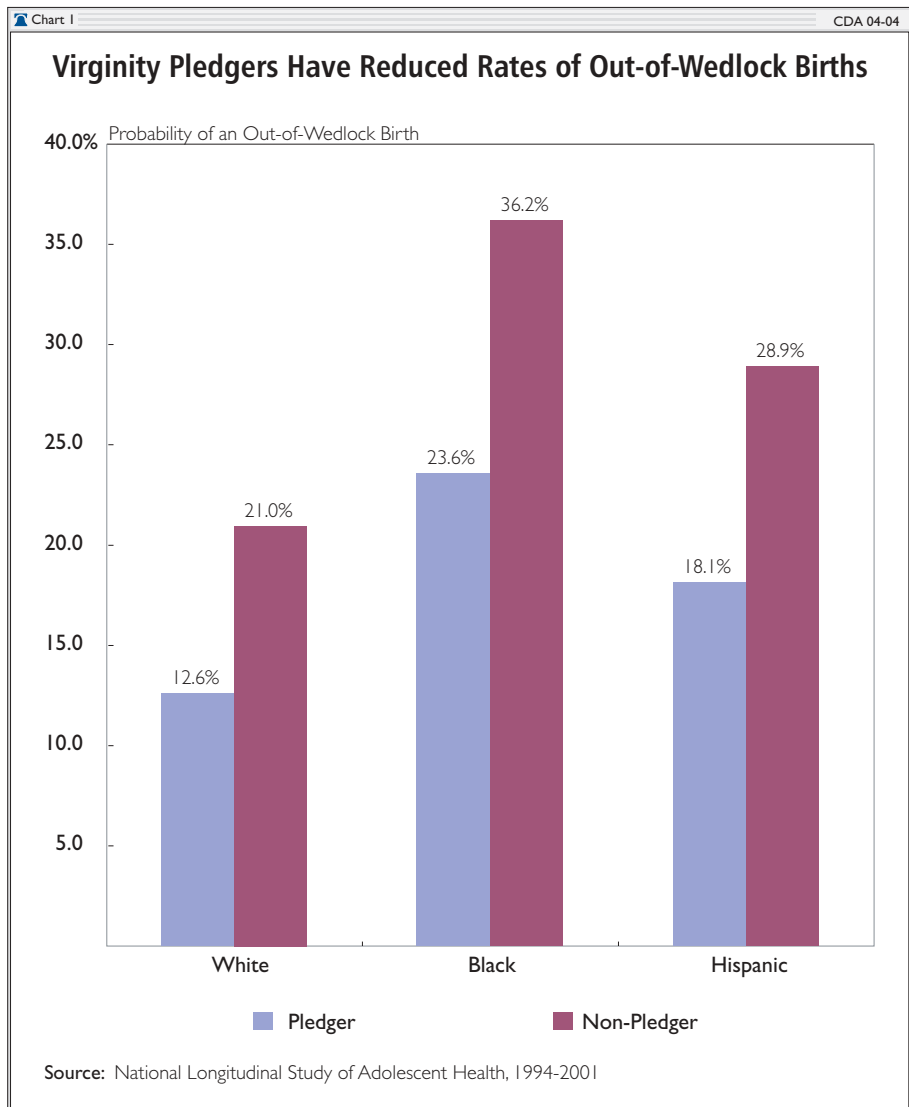
1. This research uses data from Add Health, a program project designed by J. Richard Udry, Peter S. Bearman, and Kathleen Mullan Harris, and funded by a grant P01-HD31921 from the National Institute of Child Health and Human Development, with cooperative funding from 17 other agencies. Special acknowledgment is due Ronald R. Rindfuss and Barbara Entwisle for assistance in the original design. Persons interested in obtaining data files from Add Health should contact Add Health, Carolina Population Center, 123 W. Franklin Street, Chapel Hill, NC 27516-2524 ([addhealth@unc.edu](mailto:addhealth@unc.edu)).

Analysis of the Add Health data shows that youths who make virginity pledges are less likely to have out-of-wedlock births. Specifically:

- Some 14 percent of young women who had taken a virginity pledge had had a child out of wedlock. This compares with 29 percent among those women who had not taken a pledge.
- In other words, the out-of-wedlock childbearing rate among women who had taken a virginity pledge in their youth was 50 percent lower than that of women who had not taken such a pledge.

One plausible explanation for this difference in out-of-wedlock childbearing is that pledgers differ from non-pledgers in important social background factors such as socioeconomic status, race, religiosity, and school performance. It is possible that these background factors, rather than the pledge per se, account for the differences in rates of out-of-wedlock childbearing. To investigate this possibility, we performed a multivariate logistic regression analysis, which held relevant background factors constant.

In this statistical procedure, girls who took a virginity pledge were compared to non-pledging girls who were otherwise identical with regard to race, income, family structure, religiosity, and other background conditions. This analysis showed that girls who had taken the pledge were still about 40 percent less likely to have children out of wedlock when compared to otherwise iden-



tical girls who had not taken a pledge. Thus, the virginity pledge itself was found to have a strong independent effect in predicting lower levels of out-of-wedlock childbearing. The effect of taking a virginity pledge on reducing out-of-wedlock births was statistically significant, at the 99.6 percent confidence level.

## DATA AND METHODOLOGY

The analysis of the Add Health data utilized a logistic regression to assess the likelihood of an out-of-wedlock birth (or births) among young

2. See, for example, Robert Rector, Kirk A. Johnson, Ph.D., and Patrick F. Fagan, “The Effect of Marriage on Child Poverty,” Heritage Foundation Center for Data Analysis Report No. CDA02-04, April 15, 2002, at [www.heritage.org/Research/Family/CDA02-04.cfm](http://www.heritage.org/Research/Family/CDA02-04.cfm); Robert Rector, Kirk A. Johnson, Ph.D., and Patrick F. Fagan, “Understanding Differences in Black and White Child Poverty Rates,” Heritage Foundation Center for Data Analysis Report No. CDA01-04, May 24, 2001, at [www.heritage.org/Research/Welfare/CDA01-04.cfm](http://www.heritage.org/Research/Welfare/CDA01-04.cfm); and Linda J. Waite and Maggie Gallagher, *The Case for Marriage: Why Married People Are Happier, Healthier, and Better Off Financially* (New York: Doubleday, 2000).

women while holding constant a number of factors that may be related to having a child out of wedlock. The independent variables included in the regression included:

- Family status (whether or not a youth came from a single-parent family, cohabiting family, intact married family, or married stepfamily);
- Family income at the time of the initial Add Health survey;
- Religiosity (how important religion is to the individual, how often the individual attends religious services, and related measures);
- Self-worth and self-esteem, measured by an index of 11 items;
- School performance, measured by a student's grade point average;
- Race; and
- Virginity pledge status (a youth's response to the Add Health survey questions asking adolescents, "Have you taken a public or written pledge to remain a virgin until marriage?").

When all of these factors are held constant, important differences in out-of-wedlock childbearing are apparent by pledge status. Chart 1 shows the differences in out-of-wedlock childbearing rates between pledgers and non-pledgers for three different racial groups.

## DISCUSSION

These findings are consistent with prior research on the potential impact of virginity pledge programs. Young people who make deliberate public pledges to remain virgins are likely to substantially delay the initiation of sexual activity, have fewer sexual partners, and are more likely to marry. These behaviors, in turn, are likely to lead to lower rates of out-of-wedlock childbearing. The current findings strongly suggest that abstinence education programs that clearly encourage young people to delay sexual activity can, potentially,

have a large positive effect on youth behaviors and life outcomes.

In the last decade, abstinence education programs have become increasingly popular. The best abstinence programs teach adolescents:

- The primary importance of delaying sexual activity;
- That human sexual relationships are predominantly emotional and moral rather than merely physical in character; and
- That teen abstinence is an important step leading toward a loving marital relationship as an adult.

Abstinence education programs stand in sharp contrast to the "safe sex" or "comprehensive sex education" curricula that often permeate America's public school classrooms. In general, these sex-ed curricula fail to provide a message to delay sexual activity, fail to deal adequately with the long-term emotional and moral aspects of sexuality, and fail to explain that sexual activity should be linked to love, commitment, and intimacy. True abstinence education programs, on the other hand, are uniquely suited to meeting both the emotional and the physical needs of America's youth.<sup>3</sup>

## CONCLUSION

At present, there are 10 studies or evaluations that show the effectiveness of abstinence education programs in reducing teen sexual activity.<sup>4</sup> Several additional studies demonstrating the effectiveness of abstinence education are being completed or are under review at academic journals. The findings in this paper add to the growing evidence showing the potential effectiveness of abstinence education as a means to positively change youths' behavior.

—Kirk A. Johnson, Ph.D., is Senior Policy Analyst in the Center for Data Analysis, and Robert Rector is Senior Research Fellow in Domestic Policy, at The Heritage Foundation.

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3. Robert E. Rector, Melissa G. Pardue, and Shannan Martin, "What Do Parents Want Taught in Sex Education Programs?" Heritage Foundation *Background* No. 1722, January 28, 2004, at [www.heritage.org/Research/Welfare/bg1722.cfm](http://www.heritage.org/Research/Welfare/bg1722.cfm).

4. Robert Rector, "The Effectiveness of Abstinence Education Programs in Reducing Sexual Activity Among Youth," Heritage Foundation *Background* No. 1533, April 8, 2002, at [www.heritage.org/Research/Family/BG1533.cfm](http://www.heritage.org/Research/Family/BG1533.cfm).

STATISTICAL APPENDIX

A logistic regression model was employed to compute the probability of a woman having a child out of wedlock, after holding constant a set of independent variables. The main independent variable of analysis was virginity pledge status. There are three possible pledge categories:

- **Non-pledger**—a youth who has never taken a virginity pledge;
- **Consistent pledger**—a youth who reported having taken a virginity pledge in one of the three waves (or years) of the survey and consistently reported that she has taken a pledge in any and all subsequent waves of the survey; and
- **Inconsistent pledger**—a youth who reported having taken a virginity pledge on one wave of the survey, but whose reports in a subsequent wave were inconsistent (e.g., she reported not having taken a pledge in a subsequent wave or waves of the survey).

The Add Health survey asks whether the youth had ever taken a virginity pledge in each of the three survey waves or years: first wave in 1994–1995, second wave in 1996, and third wave in 2001. Respondents who said that they took a pledge in any wave and then affirmed that response in each subsequent wave were coded as consistent pledgers. (Individuals who reported taking a virginity pledge for the first time in the final wave in 2001 were judged to be consistent pledgers since they did not provide contradictory data at a later date.) By contrast, an individual who reported having taken a pledge in one wave but then denied having taken a pledge in any subsequent wave was deemed an inconsistent pledger. An individual who reported not having taken a pledge in each of the three waves of the survey was coded as a non-pledger.

Logistic Regression Model						
Dependent Variable: Any Child Born Out of Wedlock						
Effects of Independent Variables***	Coefficients	Standard Error	Wald (t-test)	Sig.	Note	Odds Ratios
(constant)	0.888	0.349	2.540	0.012	*	2.431
Consistent Virginity Pledge	-0.609	0.205	-2.980	0.004	**	0.544
Inconsistent Virginity Pledge	-0.278	0.139	-2.000	0.048	*	0.757
Race = Black	0.760	0.184	4.130	0	**	2.139
Race = American Indian	-0.271	0.441	-0.610	0.541		0.763
Race = Asian	0.030	0.347	0.090	0.931		1.031
Race = Hispanic	0.429	0.180	2.380	0.019	*	1.536
Self-Esteem Index	-0.108	0.087	-1.230	0.22		0.898
Income in 1994 (in thousands)	-0.007	0.002	-4.020	0	**	0.993
Religiosity Index	-0.131	0.045	-2.900	0.004	**	0.878
Step/Cohabiting Family Background	0.488	0.167	2.930	0.004	**	1.630
Single-Parent Family Background	0.366	0.127	2.880	0.005	**	1.443
Other Non-Intact Family Background	0.830	0.234	3.550	0.001	**	2.294
Grade Point Average	-0.392	0.066	-5.900	0	**	0.676
<b>Omnibus Tests of Model Coefficients</b>						
	<b>Chi-square</b>	<b>df</b>	<b>Sig.</b>			
Step	655819.227	13.000	0.000			
Block	655819.227	13.000	0.000			
Model	655819.227	13.000	0.000			
* Significant at a 95 percent confidence level.						
** Significant at a 99 percent confidence level.						
Note: ***A white woman who lived in an intact family is the default condition against which the other categories are compared.						
Source: National Longitudinal Study of Adolescent Health, 1994–2001.						

Consistent and inconsistent pledgers alike exhibit lower odds of bearing a child out of wedlock when compared to non-pledgers. According to the regression analysis, consistent pledgers exhibit about a 40 percent drop in out-of-wedlock childbearing when compared to non-pledgers; this finding is statistically significant at the 99.6 percent confidence level. Inconsistent pledgers exhibit just above a 20 percent drop in their rate; this finding is statistically significant at the 95 percent confidence level.<sup>1</sup> These results are shown in Table 1.

We also performed a separate regression analysis in which consistent and non-consistent pledgers were combined together into a single group labeled “all pledgers.” All other independent variables remained unchanged. “All pledgers” were found to be roughly 30 percent less likely to have a child out of wedlock than were non-pledgers, after controlling for background variables. These results were statistically significant at the 99.9 percent

1. The logistic regression used here takes into consideration the complex survey design in calculating the Wald/t-statistics by utilizing the methodology suggested in Kim Chantala and Joyce Tabor, “Strategies to Perform a Design-Based Analysis of the Add Health Data,” Carolina Population Center, June 1999, at [www.cpc.unc.edu/projects/addhealth/files/weight1.pdf](http://www.cpc.unc.edu/projects/addhealth/files/weight1.pdf).

confidence level. The results of this separate regression are available upon request.

Overall, taking a virginity pledge, even when reported inconsistently, is related to lower rates of out-of-wedlock childbearing.