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SCHOOL ACHIEVEMENT AND SEXUAL ABSTINENCE:  
POSITIVE CORRELATES FOR ADOLESCENTS?

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## Abstract

According to the National Campaign to Prevent Teen Pregnancy, one out of five youths has experienced sexual intercourse before the age of 15. That this early sexual involvement may have negative consequences on the adolescent's personality system, behavior system, and environment system has been posited. This study clearly supports this assertion with regard, specifically, to school achievement. While causality cannot be confirmed, a strong relationship was found between school achievement and beliefs favoring abstinence. That the high achieving youths in this study see the gains to be realized from abstinence is indicated by their self-reported agreement with abstaining from sex, even until marriage. Conversely, the low achieving youths seem not to be realizing the negative consequences associated with early sexual involvement. Educational outcomes certainly seem to be associated with choices made by youths regarding their sexual behavior and intentions. Abstinence education interventions may be an important addition to education of quality.

## SCHOOL ACHIEVEMENT AND SEXUAL ABSTINENCE: POSITIVE CORRELATES FOR ADOLESCENTS?

According to the National Campaign to Prevent Teen Pregnancy (2003), one out of five youths has experienced sexual intercourse before the age of 15. Although this finding is alarming, the results of the Youth Risk Behavior Survey (Centers for Disease Control and Prevention, 2006) indicated that the percentage of high school students who had ever had sexual intercourse has declined from 54.1% in 1991 to 46.8% in 2005. Likewise, the percentage of students who had had sexual relations before the age of 13 fell from 10.2% in 1991 to 6.2% in 2005. This decrease in early sexual activity may be seen as positive for a number of researchers (Finer, Darroch, & Singh, 1999; Shrier, Emans, Woods, & DuRant, 1996; Smith, 1997) have found that youths who delay their first sexual experience are likely to have fewer sexual partners.

Despite these decreases in initial sexual activity, though, the percentage of ninth-grade students who had had sexual intercourse with one or more partners within the last 3 months has remained relatively constant: 22.4% in 1991 and 21.9% in 2005 (Centers for Disease Control and Prevention, 2006). Given the need to delay initial sexual activity so as to prevent teen pregnancy and sexual transmitted diseases, these statistics clearly show that there is a problem.

The National Campaign to Prevent Teen Pregnancy (2007) speculated that the majority of unplanned pregnancies result in children born to unmarried women. Women with unplanned pregnancies are less likely to receive prenatal care. Thus, their babies are more likely to have low birth weight and to be born prematurely. Subsequently, such children are more likely to have a lower socioeconomic status, lower grade-point averages, and poorer school attendance. Further, they are more likely to drop out of high school.

Although female youths are less likely to have sexual involvement compared to male youths, those who do are more likely to earn low grades according to research done by Langille and Curtis (2002). Orr, Beiter, and Ingersoll (1991) investigated the link between sexual activity and other risk behaviors, such as school difficulties, with 1,504 junior high school students. These researchers found that sexually active students had a significantly higher risk of delinquency and school problems. These findings were supported by the research of Gruber and Machamer (2000) with high school students. Those participants who were classified as high risk of educational failure (e.g., low school achievement or dropout) tended to have a higher likelihood for experiencing risk taking behaviors, such as sexual activity, compared to those with low or no educational risk. Of those participants who were considered no educational risk, only 33.9% of them reported involvement in sexual behavior. However, 88.9% of the participants who were considered high educational risk reported involvement in sexual behavior.

The literature does not provide a conclusive position on the relationship between school achievement and sexual beliefs and involvement however. The purpose of this research study was to investigate further this relationship. Specific research questions were these:

1. What is the relationship between self-reported grades and the participants' agreement with selected beliefs about abstinence as a priority?
2. What is the relationship between grade level and the participants' agreement with selected beliefs about abstinence as a priority?
3. Does grade level moderate the relationship between self-reported grades and the participants' agreement with selected beliefs about abstinence as a priority?

## Methods

### *Data Source*

The data source for this study was a sample of 336 students from a rural county located in a southeastern state within the United States participating in an abstinence-only education program funded by Section 510 of Title V of the Social Security Act. The participants included 170 (50.6%) seventh- and 166 (49.4%) eighth-grade students. Of these students, 154 (45.8%) were male, and 182 (54.2%) were female. The racial makeup of the group was 181 (53.9%) White, 138 (41.1%) Black, and 17 (5.0%) students who reported they belonged to other racial groups. For self-reported grades, 110 (32.7%) reported they earned mostly A's, 102 (30.4%) reported they earned mostly B's, and 124 (36.9%) reported they earned mostly C's or below in school. More than 51% of the participants reported they received free or reduced lunch at school. More than 94% of the participants reported that they planned to attend post-secondary school. In terms of family structure, 128 (38.1%) participants reported that they lived with both parents, and 78 (23.2%) participants reported they lived in a single-parent household. The remaining 38.7% of the participants reported living with stepparents, grandparents, or extended family members.

### *Data Collection Procedure*

The Youth Survey (Halpin & Halpin, 1998) was administered to the sample of 336 students in their respective classrooms. Prior to administering the surveys, the Abstinence Educator filled out a unique code for each participant which included grade level on the Youth Survey answer sheets. These answer sheets were distributed to the participants along with the Youth Survey booklets at the beginning of the class period. Before beginning the survey, participants were informed that the information collected with this survey would be kept

confidential, and they were asked to be as truthful as possible. The Youth Survey was read aloud to the participants as they followed along and answered the questions. After the questions were read, the meanings of some questions were clarified for the participants by asking the question with simplified wording.

### *Measures*

The Youth Survey, which consisted of 76 items, was the measurement tool used in this study. The beginning questions elicited demographic information and established an initial baseline of sexual activity among the respondents. On the majority of the other items, respondents were asked to indicate the extent of their agreement using a 4-point scale. The response scale progressed from a rating of 1, which represented the most positive response of *Strongly Agree*, to a rating of 4, which represented the least positive response of *Strongly Disagree*. These items were rationally combined to form scales which measured the eight legislative priorities as defined by Section 510 of Title V of the Social Security Act.

Understandings related to each of the eight legislative priorities assessed were as follows:

- (a) There are social, psychological, and health gains to be realized by abstaining from sexual activity;
- (b) Abstinence from sexual activity outside of marriage is the expected standard for all school-age children;
- (c) Abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy;
- (d) A mutually faithful and monogamous relationship in the context of marriage is the expected standard of human sexual activity;

- (e) Sexual activity outside of the context of marriage is likely to have harmful psychological and physical effects;
- (f) Bearing children out of wedlock is likely to have harmful consequences for the child, the child’s parents, and society;
- (g) Sexual advances can be rejected and that alcohol and drug use increase vulnerability to sexual advances;
- (h) Attaining self-sufficiency is vital before engaging in sexual activity.

In order to be confident that these scales provide accurate measurements, reliability analyses were conducted. Results for the reliability analyses are presented in Table 1. With Cronbach’s alpha of .50 or greater as a criterion, these results suggest that the scales within the survey are internally consistent measures (ranged from .65 to .89). Given these analyses indicating that the Youth Survey measures are reliable, subsequent analyses were justified.

Table 1

*Alpha Reliability Coefficients for the Legislative Priority Scales*

Scale	Coefficient
Legislative Priority A	.81
Legislative Priority B	.87
Legislative Priority C	.65
Legislative Priority D	.77
Legislative Priority E	.79
Legislative Priority F	.65
Legislative Priority G	.75
Legislative Priority H	.89

*Research Question 1: What is the relationship between self-reported grades and the participants' agreement with selected beliefs about abstinence as a priority?*

Data were analyzed using multivariate analysis of variance with follow-up univariate analyses to answer the first research question. The results indicated that the means of the optimally weighted combination of scores for the legislative priority scales differed significantly by self-reported grades,  $F(16, 648) = 4.59; p < .001; \eta^2 = .10$ . The follow-up univariates were significant for all eight legislative priorities. These results support the notion that agreement with the legislative priorities differs for participants who reported earning mostly A's and for participants who reported earning mostly B's and C's. The means, standard deviations, and GLM univariates are presented in Table 2. A Bonferroni pairwise comparison revealed that all combinations were significant except between mostly A's and mostly B's for Legislative Priorities A, B, D, F, G, and H.

Table 2

*Means, Standard Deviations, and GLM Univariates by Grade*

Scale	Mostly A's		Mostly B's		Mostly C's and below		F	p	$\eta^2$
	M	SD	M	SD	M	SD			
Legislative Priority A	1.52	0.45	1.68	0.48	1.92	0.49	20.22	.00	.11
Legislative Priority B	1.64	0.51	1.83	0.55	2.16	0.50	29.25	.00	.15
Legislative Priority C	1.45	0.43	1.60	0.40	1.75	0.48	12.79	.00	.07
Legislative Priority D	1.44	0.49	1.53	0.45	1.75	0.52	11.00	.00	.06
Legislative Priority E	1.55	0.50	1.75	0.54	1.93	0.55	13.94	.00	.08
Legislative Priority F	1.70	0.41	1.83	0.43	2.04	0.45	18.18	.00	.10
Legislative Priority G	1.52	0.48	1.57	0.48	1.83	0.48	13.99	.00	.08
Legislative Priority H	1.51	0.54	1.67	0.61	1.96	0.61	17.24	.00	.10



*Research Question 2: What is the relationship between grade level and the participants' agreement with selected beliefs about abstinence as a priority?*

Data 1 were analyzed using multivariate analysis of variance with follow-up univariate analyses to answer the second research question. The 1 results of the multivariate analysis indicated that the means of the optimally weighted combination of scores for the eight legislative priority scales differed significantly by grade level,  $F(8, 323) = 4.64$ ;  $p < .001$ ;  $\eta^2 = .10$ . These results lend credence to the notion that seventh- and eighth-grade students differed in their agreement with the legislative priorities. The follow-up univariate analyses revealed that seventh-grade participants differed significantly from the eighth-grade participants on Legislative Priorities A, B, D, E, G, and H. The means, standard deviations, and GLM univariates are presented in Table 3.

1 Table 3

*Means, Standard Deviations, and GLM Univariates by Grade*

Scale	<u>Grade 7</u>		<u>Grade 8</u>		<i>F</i>	<i>p</i>	$\eta^2$
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Legislative Priority A	1.63	0.49	1.80	0.50	9.55	.00	.03
Legislative Priority B	1.77	0.54	2.01	0.56	16.82	.00	.05
Legislative Priority C	1.60	0.47	1.62	0.45	0.02	.88	.00
Legislative Priority D	1.51	0.47	1.66	0.54	7.21	.01	.02
Legislative Priority E	1.63	0.50	1.88	0.57	16.29	.00	.05
Legislative Priority F	1.82	0.44	1.91	0.46	2.48	.12	.01
Legislative Priority G	1.57	0.46	1.73	0.52	7.62	.01	.02
Legislative Priority H	1.55	0.54	1.90	0.64	27.59	.00	.08

*Research Question 3: Does grade level moderate the relationship between self-reported grades and the participants' agreement with selected beliefs about abstinence as a priority?*

Data 1 were analyzed using multivariate analysis of variance with follow-up univariate analyses to answer the third research question. The results indicated that the means of the optimally weighted combination of scores for the legislative priority scales did not differ significantly by self-reported grades within grade level,  $F(16, 648) = 1.12; p = .33; \eta^2 = .03$ . Since there was not a significant interaction effect, the follow-up univariate analyses were not applicable. The means, standard deviations, and GLM univariates by self-reported grades within grade level are presented in Table 4.

Table 4

*Means, Standard Deviations, and GLM Univariate Tests by Grade Within Self-Reported Grades*

Scale	Grade 7						Grade 8						F	p	$\eta^2$
	Mostly A's		Mostly B's		Mostly C's and below		Mostly A's		Mostly B's		Mostly C's and below				
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD			
Legislative Priority A	1.40	0.34	1.62	0.50	1.86	0.51	1.67	0.52	1.72	0.47	1.97	0.46	1.21	.30	.01
Legislative Priority B	1.51	0.37	1.74	0.59	2.05	0.53	1.81	0.62	1.90	0.52	2.27	0.43	0.47	.62	.00
Legislative Priority C	1.42	0.42	1.65	0.44	1.73	0.48	1.49	0.44	1.56	0.37	1.77	0.48	0.88	.42	.01
Legislative Priority D	1.34	0.35	1.49	0.46	1.68	0.52	1.58	0.61	1.56	0.45	1.81	0.52	0.80	.45	.01
Legislative Priority E	1.41	0.37	1.73	0.52	1.77	0.52	1.74	0.58	1.77	0.55	2.09	0.53	2.79	.06	.02
Legislative Priority F	1.68	0.39	1.80	0.39	1.98	0.49	1.72	0.44	1.86	0.47	2.10	0.40	0.26	.77	.00
Legislative Priority G	1.45	0.41	1.53	0.46	1.72	0.48	1.60	0.56	1.60	0.49	1.94	0.46	0.71	.50	.00
Legislative Priority H	1.37	0.38	1.52	0.55	1.77	0.60	1.69	0.66	1.80	0.63	2.14	0.57	0.17	.85	.00

## Discussion

Years ago, Billy, Landale, Grady, and Zimmerle (1988) posited that early sexual involvement may have negative consequences on the adolescent's personality system, behavior system, and environment system. This study clearly supports this assertion. While causality cannot be confirmed, the strong relationship found in this study between beliefs favoring abstinence and school achievement strongly supports a directional hypothesis supporting abstinence. That the high achieving youths see the gains to be realized from abstinence is indicated by their self-reported agreement with the Title V legislative priorities advancing abstinence. Conversely, the low achieving youths do not espouse the same beliefs regarding abstinence. Educational outcomes certainly seem to be related to choices made by youth regarding their sexual behavior and intentions. Abstinence education interventions may be an important addition to education of quality.

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