



The Impact of Abstinence Education: What Does the Research Say?

Michael Young and Tina Penhollow

ABSTRACT

There has long been controversy in this country about the implementation of school-based sexuality education. In recent years, however, the controversy has centered on abstinence education. Critics of abstinence education programs seem to have three major concerns relative to abstinence education programming: (1) promotion of religion; (2) provision of inaccurate information; and (3) ineffective programming. The focus of this article is on the charge that abstinence education programs are ineffective in reducing risky sexual behavior among teens. Since the federal government is spending hundreds of millions of dollars on programs that must meet the a-h definition of abstinence education this is an important public policy issue. This article includes a review of published evaluations of abstinence education programs (limited to evaluations that addressed behavioral outcomes), commentary on aspects of Doug Kirby's analysis of the effectiveness of abstinence programs, as well as commentary on Robert Rector's defense of the effectiveness of abstinence programs. Additionally, other evaluation issues are addressed, such as apparent opposition to evaluation efforts, concerns with the evaluations of state abstinence education programs, concerns with federally funded evaluation efforts, and evaluation requirements of federal funding agencies.

INTRODUCTION

There has long been controversy in this country about the implementation of school-based sexuality education.¹ In recent years, however, the controversy has centered on abstinence education. Federal involvement in abstinence education began under President Reagan (1981) with the Adolescent Family Life (AFL) Act administered by the Office of Adolescent Pregnancy Programs (OAPP).² Grants to promote abstinence education were made to a number of community and faith-based groups. AFL was challenged in the courts and the case (Kendrick) went all the way to the Supreme Court. The plaintiffs had alleged that AFL was an unconstitutional violation of the

separation of church and state, both on its face and as applied, and the lower court agreed with the plaintiffs. The government appealed this verdict, and in a 5-4 decision the Supreme Court overturned the ruling as to the unconstitutionality of AFL on its face, ruling that the government did have a valid secular reason to promote abstinence. As to the application of the law, however, the Court noted problems with the lower court ruling relative to AFL funds going to "pervasively sectarian organizations." The lower court had not indicated which grantees it viewed as pervasively sectarian or why these organizations warranted such a classification, nor did it design an appropriate remedy for the wrongful approval of grants. Thus, this

aspect of the case was remanded to the lower court for further consideration.³

Early in the Clinton administration, the government and the plaintiffs reached an out-of-court settlement. According to the settlement terms, a stringent review process was established for educational materials proposed for use in AFL projects. Materials

Michael Young, PhD, is professor, Program in Health Science, University of Arkansas, Fayetteville, AR 72701; E-mail: meyoung@uark.edu. Tina M. Penhollow, PhD, CHES, assistant professor with the Department of Exercise, Science and Health Promotion, Florida Atlantic University, Davie, FL 33314.



were to be reviewed for medical accuracy, neutrality on religion, and could neither encourage nor discourage abortion. Materials that failed to meet these standards could not be used in AFL projects, unless appropriate revisions were made.⁴ The terms of the settlement expired in January, 1998, but the agency responsible for AFL programming indicated its commitment to continue the review process (P. Sheeran, OAPP, personal communication, October, 1998). Many of the abstinence education materials that had previously been approved for use in AFL projects did not gain approval once the new review process was in place.

In 1996, a provision was added to the Welfare Reform Act that block-granted abstinence education funds to states and introduced a federal “a-h” definition of abstinence education (Table 1). The definition emphasizes teaching abstinence from all sexual activity except within the context of marriage. The definition also applied to OAPP grantees.⁵ More recently abstinence education grants have been awarded directly to community groups under SPRANS (Special Projects of Regional and National Significance), a program that in 2005 became the Community Based Abstinence Education Program.⁶ Currently, substantial amounts of federal dollars are allocated to support abstinence education programs.

Critics of abstinence education programs seem to have three major concerns relative to abstinence education programming: (1) promotion of religion; (2) provision of inaccurate information; and (3) ineffective programming. Some abstinence education curricula place heavy emphasis on moral purity and maintaining virginity until marriage (e.g., *Passion and Principles*, *Worth the Wait*, and *Sex Respect*). Critics charge that such programs violate the constitutional separation of church and state. They maintain that while the promotion of abstinence may have a valid secular purpose, the promotion of moral purity and virginity until marriage does not.

In late 2004, the Waxman Report on Abstinence Education⁷ gave fuel to absti-

nence education critics concerned about provision of inaccurate information. The report charged that 11 of the 13 most frequently used abstinence curricula among SPRANS grantees contained “major errors and distortions of public health information (p. 7),” “false, misleading or distorted information about reproductive health (p. i),” and had “serious and pervasive problems (p. ii)” with the accuracy of the information provided.

The focus of this article, however, is on the charge that abstinence education programs are ineffective in reducing risky sexual behavior among teens. Since the federal government is spending hundreds of millions of dollars on programs that must meet the a-h definition of abstinence education this is an important public policy issue. The purpose of this article is to examine the effectiveness of abstinence education programs in helping young people postpone sexual involvement and decrease participation in risky sexual behavior. The paper includes a review of published evaluations of abstinence education programs (limited to evaluations that addressed behavioral outcomes), commentary on aspects of Doug Kirby’s analysis of the effectiveness of abstinence programs, as well as commentary on Robert Rector’s defense of the effectiveness of abstinence programs. Additionally, other evaluation issues are addressed, such as apparent opposition to evaluation efforts, concerns with the evaluations of state abstinence education programs, concerns with federally funded evaluation efforts, and evaluation requirements of federal funding agencies.

SUMMARY OF PUBLISHED EVALUATIONS

A review of published evaluations of abstinence education curricula indicates that, rather than research showing that abstinence programs are not effective, there are simply few studies that have examined the impact of abstinence education on student sexual behavior. In fact, of the 46 curricula listed in the Abstinence Clearinghouse Directory of Abstinence Resources,⁸

no published evaluations exist that examine the effects of programming on sexual behavior (note: an evaluation of *For Keeps* has recently been published but it is listed under “program/training” and “speakers,” rather than “curricula”).

Beginning in 1990, there have been 16 published evaluations of abstinence education programs in which the evaluation addressed the impact of the program on one or more measures of sexual behavior. None of the evaluations addressed here are of programs that include lessons dealing with condoms or means of birth control other than abstinence. These programs may or may not fully comply with the a-h definition of abstinence education. This section is organized in roughly chronological order. If there is more than one published evaluation of a program these evaluations are grouped together and organized by the date of the most recent evaluation.

In 1990, two different evaluations of the *Success Express* abstinence education program were published.^{9,10} Both studies used a quasi-experimental design with a pretest, posttest, and six week follow-up of both intervention and control groups. Researchers examined the impact of the program on the initiation of sexual intercourse and found that the program produced no differences between the intervention and control groups relative to this variable. It should come as no surprise, however, that these studies, with a short follow-up period produced no effect. In fact, the first published evaluation of *Reducing the Risk*,¹¹ one of the most frequently cited evaluations of a sexuality education program, found no effect due to the program at 6 months or 12 month follow-up, but did find an effect at the 18 month follow-up. The longer follow-up period gave students more opportunity to begin having sex, and significantly more students in the control group did so than did the intervention group. This long-term follow-up was lacking in the *Success Express* studies.

Evaluations of *Project Taking Charge*, a curriculum from the American Association of Family and Consumer Sciences, were

**Table 1. The Federal a-h Definition of Abstinence Education**

Abstinence education refers to a motivational or educational program which:

- a. Has as its exclusive purpose, teaching the social, psychological, and health gains to be realized by abstaining from sexual activity.
- b. Teaches abstinence from sexual activity outside marriage as the expected standard for all school age children.
- c. Teaches that abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems.
- d. Teaches that a mutually faithful monogamous relationship in the context of marriage is the expected standard of human sexual activity.
- e. Teaches that sexual activity outside of marriage is likely to have harmful psychological and physical effects.
- f. Teaches that bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents and society.
- g. Teaches young people how to reject sexual advances and how alcohol and drug use increases vulnerability to sexual advances.
- h. Teaches the importance of attaining self-sufficiency before engaging in sexual activity.

published in 1991¹² and in 1993.¹³ The first article examined pretest-posttest differences and the second article examined the six-month follow-up data. Intact classes at each of three program sites were randomly assigned to treatment or control conditions. The authors indicated that at the 6-month follow-up, among students who reported at pretest they were virgins, the comparison group subjects were more likely than the intervention subjects to report initiation of sexual intercourse. Among the control group subjects 50% became "sexually active" compared to 23% of the treatment group subjects. The authors did advise caution in generalizing results because of the relatively small sample size. Additionally, the probability level associated with this difference (noted in the statistical table, but not in the text) was .051. The authors should have acknowledged in the text of their article that even though they were reporting their findings as a positive program impact, the difference noted between the intervention and control groups carried with it an associated probability that was technically not less than .05, the standard most commonly used by researchers for defining statistical significance.

St. Pierre and his co-workers¹⁴ evaluated the impact of the *Stay Smart* curriculum. These researchers used a pretest-posttest, nonequivalent group design with multiple posttests at 3-, 15-, and 27-month follow-

up. Students were assigned to the basic program, the program plus two "booster" programs, or a comparison group. For students who were virgins at pretest, there was no effect on recency or frequency of sexual intercourse or a combined measure of these two variables. For students who were nonvirgins at pretest, there was no effect except at 27 months there was an effect on the frequency and recency of intercourse and the combined measure of these two variables for the basic program group, but not for the group that received the basic program, plus the booster programs. One would expect that the basic program plus the booster program would produce improvements of at least the same degree as the basic program alone. This did not happen. The authors also identified possible selection bias, small sample size, and overall rate of attrition as other factors to consider in interpreting the results of their study.

In 1997, Kirby and his co-workers published an evaluation of ENABL (Education Now and Babies Later), an abstinence program that included the *Postponing Sexual Involvement* curriculum.¹⁵ This study included a large sample size, random assignment, and long-term follow-up. This was a strong evaluation design. Results indicated that the program had no impact on initiation of intercourse (in the previous 3 or 12 months), number of sexual partners, use of

condoms or birth control pills, or pregnancy (except in the teen-led program in which program participants were statistically more likely to have been involved with a pregnancy).

Jemmott, Jemmott, and Fong¹⁶ used a randomized control trial (another strong evaluation design) to examine the impact of the *Making A Difference* curriculum (a CDC "Program that Works"). They found that young people who participated in the abstinence group were less likely to report having sexual intercourse in the three months after the intervention, than were those in the control group. This difference no longer existed at the six- and twelve-month follow-ups. At the twelve-month follow-up, however, adolescents in the abstinence program reported more frequent condom use than did those in the control group. This program is not typical of the abstinence education curricula used in federally funded a-h programs. For example, the curriculum provides the following information for teachers/facilitators: "Facilitators are encouraged to praise students' answers when HIV pregnancy prevention efforts are raised, even if they include suggestions other than abstinence. Facilitators should NOT denigrate condoms, speak of them only in terms of failure rates, or exaggerate condom failure (p. 3)."

The curriculum encourages abstinence from risky sexual behaviors but not neces-



sarily from other types of sexual activity. For example, one suggested response to pressure to have intercourse is “Let’s talk about some sexual activities that are OK for both of us (pg. 171).” Abstinence is defined as “avoiding oral sex, anal sex, and vaginal or sexual intercourse (p. 64).” Facilitators are told to “Be sure participants understand the definition of vaginal intercourse, oral sex, anal sex, and masturbation (pg. 63).” The curriculum defines masturbation as “rubbing, stroking, or ‘playing with’ one’s own genitals or the genitals of another person (pg. 63).” The curriculum does not direct young people to engage in masturbation, either by themselves or with partners. It does, however, make clear that the purpose of the curriculum is to encourage young people to avoid risky sexual behavior, and that masturbation, either by oneself or with a partner, is not risky.

In 2001, an evaluation of the Not Me—Not Now program was published in the *Journal of Health Communication*.¹⁷ The program consisted of TV advertisements, radio spots, and posters. The *Postponing Sexual Involvement* (PSI) curriculum was implemented in schools. Parent packets designed to promote abstinence were also distributed in some of the area schools. Three different waves of adolescents were surveyed. Researchers did not track the same subjects over time, nor was there a control group. Results showed a reduction in intercourse by age 15, no reduction in intercourse by age 17, and a decrease in adolescent pregnancy relative to comparison counties. Although some students did receive the PSI curriculum, the evaluation design does not make it possible to say anything about the effects of the curriculum.

Barnett and Hurst¹⁸ published an evaluation of the *Walk of Life* abstinence education program that involved two separate studies. Study one (n=217) employed a pre-test-posttest design, with no control group. Results actually showed an increase in sexual behavior, which was not that surprising since there was no control for maturation. In study two, 86 eighth graders were assigned to multiple sections of health edu-

cation classes. The program was implemented in the fall, with students scheduled to take health education in the spring serving as the control group. Study two found no impact (positive or negative) on behavior. Because the control group received the program during the spring semester, the opportunity for a long-term comparison of intervention students with control students was lost.

One interesting aspect of this evaluation was the behavior measure used in both studies. It involved a 10-item scale with each item rated on a scale of 1 (never done) to 5 (10 or more times). Behaviors listed ranged from “kissing and hugging” to “touching beneath the waist under clothing.” Students were not asked about participation in sexual intercourse because school officials would not give approval. Many studies of adolescent sexual behavior ask only about participation in sexual intercourse, leaving a gap in our knowledge regarding other sexual behaviors in which young people might participate. Thus, the authors are to be commended for attempting to measure behaviors other than intercourse. Yet it is unclear what this scale actually measures. Of the ten behaviors comprising the scale, we are only given the two extremes, and neither of these, nor presumably the remaining eight, pose a direct risk of pregnancy or sexually transmitted disease.

Lerner¹⁹ published an evaluation of the effectiveness of the Best Friends abstinence education program. The study compared several years of data on Best Friends participants in grades six through eight with data on girls the same age who participated in the Centers for Disease Control’s Youth Risk Behavior Survey (YRBS). While the program is not a classroom-based abstinence curriculum, Best Friends promotes abstinence among teen girls from inner-city school districts by fostering self-respect and sound decision making. The program includes a minimum of 110 hours of instruction throughout the year in the form of mentoring taking place at least 45 minutes a week, group discussions every three weeks, role model presentations, and

enrollment in fitness and dance classes. The program encourages young girls to abstain from sexual activity until marriage, as well as to reject illegal drugs, alcohol use, and violence.

Results indicated that middle school-aged girls who participated in the Best Friends program were much less likely to engage in premarital sex, use drugs, drink alcohol, or smoke cigarettes than girls from the YRBS data set. High school girls who have participated in the Best Friends program for at least two years have the opportunity to enter the Diamond Girls Leadership program, which is designed to assist girls in maintaining their commitment to abstinence. The Diamond Girls were also compared to high school girls in the YRBS. The results indicated that the Diamond Girls were much less likely to engage in sex, use drugs or alcohol, or smoke cigarettes than the YRBS girls. Concerns about the study include: (1) while there are several years of data, individual subjects were not tracked beyond a single school year; (2) YRBS data were from a single point and do not allow one to track people over time; (3) there was not random assignment of girls to the treatment (Best Friends) or control (YRBS) conditions; and (4) girls who participated in the Best Friends program may differ in systematic ways from those girls who did not participate in the program (but who did participate in the YRBS survey).

Borawski and her colleagues²⁰ examined the effects of the *For Keeps* abstinence-only program. This program stresses abstinence until marriage. The evaluation included an intervention group and a control group. The researchers did not assign classes to treatment or control conditions. This was apparently done by the agency providing instruction and the participating schools. Classes scheduled to receive the curriculum in the spring semester served as the control for those who received the curriculum in the fall semester. Because the intervention was a brief five-day program, by scheduling the intervention relatively early in the fall semester and relatively late in the spring semester, researchers were still able to con-



duct a follow-up comparison of intervention students with control students. Students were surveyed before the program began and then again at five months after the end of the program (some students were surveyed as early as 16 weeks after the end of the program and some were surveyed as late as 25 weeks after the end of the program). Among those who were sexually inexperienced, the curriculum did not significantly reduce the chances of initiation of sexual intercourse, nor did it decrease the chances of sexual intercourse among the sexually experienced. While the sexually experienced students receiving the intervention were no more likely to abstain from intercourse than control students, among students who did report they had sexual intercourse at least once during the five month study period, students receiving the program reported fewer episodes of sexual intercourse and fewer sexual partners than control students.

The curriculum for which there are the most published evaluations is the *Sex Can Wait* curriculum series. Author of this article is a co-author of *Sex Can Wait* and also co-authored the published evaluations. Four of the five published evaluation articles included an examination of the impact of the curricula on behavioral measures. None of these evaluations included any type of long-term follow-up. Young, Core-Gebhart, and Marx²¹ evaluated the impact of *Living Smart* (now the middle school component of *Sex Can Wait*) and found that students who were taught the curriculum as a part of their health education class were less likely to report participation in sexual intercourse in the last month than students in a health education class that did not receive the curriculum, or no-health education control students.

The intervention that Goldfarb and her co-workers²² evaluated consisted of the upper elementary component of *Sex Can Wait* taught to sixth graders, the middle school component taught to seventh graders, and activities from *Abstinence: Pick & Choose Activities* taught to eighth graders. At posttest researchers found that compared

to students at control schools, students at intervention schools were less likely to report sexual intercourse ever and sexual intercourse in the last month.

Denny, Young, and Spear²³ examined the impact of all three components of the curriculum series, comparing intervention schools to control schools. No behavioral questions were asked of upper-elementary students. The researchers indicated that at posttest the behavioral trends (for sexual intercourse ever and last month) were in the desired direction for both the middle school and high school students. These trends, however, were not statistically significant.

Denny, Young, Spear, and Rausch²⁴ again evaluated the impact of all three components of the curriculum. This time there were significant differences at the high school level between intervention and control students relative to sexual intercourse (both ever and last month). Students who participated in the curriculum were less likely to report participation in the behaviors than were comparison students.

An 18-month follow-up evaluation of the *Sex Can Wait* curriculum series was presented at the annual meeting of the American School Health Association.²⁵ At follow-up, students who had experienced the curriculum at either the upper elementary or middle school levels were less likely than control students to report having intercourse in the last month (both middle school and upper elementary) and sexual intercourse ever (middle school). (Note: all other studies reviewed are published articles; this paper is currently under review and may be published in the near future).

Only one of the *Sex Can Wait* evaluations included follow-up data. In none of the evaluations were individual students, classrooms, or schools, randomly assigned to treatment or comparison conditions; thus, these studies are quasi-experimental, rather than experimental in nature. Issues of concern include pretest differences between treatment and comparison groups, and participant attrition, especially in the 18-month follow-up. Effect sizes, when reported, were modest.

KIRBY'S ANALYSIS OF ABSTINENCE PROGRAMS

Kirby authored *No Easy Answers*²⁶ and *Emerging Answers*²⁷ for the National Campaign to Prevent Teen Pregnancy. In these works he reviewed the research relative to antecedents of adolescent sexual behavior and the effects of various interventions (including abstinence programs) on subsequent adolescent sexual behavior. These publications have become important resource materials and Kirby has become probably the nation's best-known expert on program effects. Nevertheless, there are problems with Kirby's analysis. In his review of the *Project Taking Charge* evaluation¹³ Kirby simply noted the program had no effect. This was not what the authors had to say in their original research article. They noted that among students who reported they were virgins at pretest, the comparison group subjects were more likely than the intervention subjects to report initiation of sexual intercourse. The authors probably should have noted in the text, rather than just in a table, that the associated probability was .051. Kirby should have noted the authors' claim of positive results and indicated that a probability of .051 was not, for him, statistically significant. This difference between what the authors actually reported, and Kirby's interpretation of the article should serve as a reminder to researchers that while reviews like Kirby's can be valuable, it is also important for researchers to obtain the original articles and do their own interpretation.

Kirby's *Emerging Answers*²⁷ provided an update to his earlier work. In the section on the effects of abstinence education curricula, however, four evaluations that were included in the earlier work were missing. In a footnote Kirby stated, "Some discerning readers may recognize that there are fewer abstinence-only studies included in this review than in its predecessor, *No Easy Answers*.... Four abstinence-only studies that were included in *No Easy Answers* are not included in this volume, primarily because their sample sizes were too small or because they failed to measure initiation



of sex for a sufficiently long period of time following completion of the program, and consequently they did not give the programs a fair chance at demonstrating success in delaying initiation of sex (p. 86).” Although not expressly stated, the idea conveyed was “these evaluations failed to demonstrate program effects, but they did not have a large sample size or follow the kids for a long enough time period where one might expect to actually see effects. So to be fair to the program, these evaluations have been excluded.” The problem is that two of the four evaluations Kirby excluded did show positive results^{13,21} and the former study also appeared to meet Kirby’s stated inclusion criteria. Again, while reviews done by others can be helpful, this points out the need for researchers to do their own review of the research and interpret the findings for themselves.

ROBERT RECTOR’S DEFENSE OF THE EFFECTIVENESS OF ABSTINENCE EDUCATION PROGRAMS

The published research relative to the effects of abstinence education programming on subsequent adolescent sexual behavior does not build a strong case for the effectiveness of such programming. However, Robert Rector of the Heritage Foundation²⁸ indicated, “Abstinence education programs have repeatedly been shown to be effective in reducing sexual activity among their participants (p. 10).” He stated, “Despite claims to the contrary, there are 10 scientific evaluations showing that real abstinence programs can be highly effective in reducing early sexual activity (p. 2).” According to Rector these are “real abstinence” programs; “that is, the program does not provide contraceptives or encourage their use (p. 5).” Of the ten evaluations he lists, two are from the National Longitudinal Study of Adolescent Health (The Add Health Study),^{29,30} a third is the *Project Taking Charge* evaluation,¹³ a fourth is the Not Me—Not Now evaluation,¹⁸ and a fifth is Howard and McCabe’s 1990 *Postponing Sexual Involvement* article.³¹ None of the other five evaluations have been published

in scholarly journals.

While the Add Health Study³² certainly has been a valuable data set, it does not in any way allow researchers to examine the effects of specific abstinence education programming on subsequent behavior. Some have argued that the positive findings in the articles noted for virginity pledges can be generalized to any abstinence program that includes a virginity pledge as part of the program. It should be noted that when young people decide to take virginity pledges they are, in effect, volunteering for this task. As volunteers they may differ systematically from those who did not volunteer. Thus, it may be that the volunteers who made the pledge would have been more likely than those who did not pledge to have abstained from sexual activity even without the pledge. Because the data set does not allow researchers to assign subjects to intervention (pledge) and control (no pledge) conditions, and to follow subjects over time, it is not really possible to use this data set to make a strong case relative to the effects of virginity pledging as an intervention. Additionally, the authors of the study indicated the pledge is part of an identity movement and is meaningful when pledging is to some degree non-normative rather than something in which everyone participates.

The *Project Taking Charge*¹³ and Not Me—Not Now¹⁸ evaluations have already been discussed. The effects of the *Project Taking Charge* program depends on whether or not a person accepts the .051 probability level as statistically significant. The Not Me—Not Now evaluation did not follow individual subjects over time, did not have a control group, and was not designed to evaluate the effects of a specific curriculum. The Howard and McCabe study³¹ did show positive results. Students received the program at the eighth grade level. By the end of the eighth grade, students who had not participated in the program were five times more likely to have reported participating in sexual intercourse than were program participants. When students were followed until the end of the ninth grade,

statistically significant and substantial differences remained between program participants and non-participants. Program participants continued to report a much lower percentage of students who had ever participated in sexual intercourse. The authors noted, however, that the intervention included the *Postponing Sexual Involvement* abstinence program plus a contraceptive education program. This does not seem to fit with Rector’s definition of real abstinence programs. Thus, while Rector indicates that these scientific studies show that abstinence education “can be highly effective in reducing early sexual activity” the evidence he presents does not substantiate his claim.

OPPOSITION TO EVALUATION/CRITICISM OF EVALUATION EFFORTS

For the vast majority of abstinence education curricula, including some of the more widely used programs, there are no published evaluations that examine the impact of the program on adolescent sexual behavior. Part of the reason for the lack of evaluations may be that at least some of the proponents of abstinence education are also opponents of evaluating such programs. For example Phyllis Schafley’s *Education Reporter*³³ has claimed “opponents are trying to undermine abstinence-until-marriage curricula through evaluations (p. 1).” Also from the same issue of the *Education Reporter*, Kathleen Sullivan noted, in reference to Mathematica’s evaluation of abstinence programs, that their “nosy personal questionnaire has nothing to do with the wholesome content of the abstinence message... we should be directing the dollars earmarked for evaluation toward more abstinence programs (pp. 1–2).”

Early in 2005, the evaluation of Title V abstinence education programs in Texas was made public at the request of a reporter from the Dallas Morning News. The technical report from this project provided detailed evidence that following participation in the programs, little behavioral change could be documented. The release of the report prompted much criticism from



abstinence education supporters. Some grantees that had participated in the program evaluation were upset and withdrew from further participation with the evaluation effort. A second wave of research yielded similar results—little or no measurable behavioral change. Following the second wave of data, the evaluation contract was not renewed. Both the evaluators and state officials agreed that there was nothing new to discover through continuing the same evaluation design; therefore, the five-year evaluation project was brought to a close (personal communication, B. Pruitt, November, 2005).

CONCERNS RELATIVE TO OTHER STATE EVALUATIONS

In addition to the evaluation of abstinence programs in Texas, a number of other evaluations of state (Title V) abstinence programs have been conducted. Some states also require individual projects to have an evaluation component. Evaluations for eleven states can be found on the Advocates for the Youth Web site.³⁴ The California evaluation is actually the ENABLE evaluation.¹⁵ This evaluation was included because it was an evaluation of a state-wide abstinence education program, even though it was not funded with Title V monies. Of the six evaluations that examined short-term behavior, three showed no impact on behavior, two showed an increase in sexual behavior, and one evaluation was described as showing “mixed” results. Of the seven evaluations that examined long term behavior, three showed no impact, two showed an increase in sexual behavior, and for two evaluations results were not yet available. Thus, the evaluations provided little evidence that the programs were effective in reducing behavioral risk. Five evaluations used no control group (for an additional state it was unclear as to whether a control group was utilized, and in another state the use of a control group varied by program site). For those states that had no control group, the evaluations offer relatively weak evidence that the programs do not work. None of these Title V evaluations have been published in scholarly journals.

CONCERNS RELATIVE TO FEDERAL EFFORTS AT EVALUATION

In the fall of 1998, Mathematica Policy Research Inc. received funding to conduct an evaluation of the Title V abstinence education programs. Eleven sites/programs were initially selected to participate in the evaluation. The group’s first report dealing with the impact of abstinence only curricula was not released until 2005.³⁵ The evaluation presented a summary of the first-year impact findings of four selected school-based abstinence education programs that have received Abstinence Education Program funds since 1998. The Mathematica Report included results relative to a number of outcome variables (views of abstinence and adolescent sexual activity, perceptions of adverse consequences of sexual activity, views relating to marriage, self-concept, refusal skills, communication with parents, perceptions of peer pressure, intent to engage in sexual behavior, the extent to which friends held supportive views of abstinence, and frequency of dating). The report indicated that the verdict is still out on whether abstinence programs have any impact on behavior. A follow-up report that does examine the effects of abstinence programs on behavior is expected to be released at some point in the future. This organization has received funding for more than seven years and has failed to produce a single report that examines the effects of the programs on adolescent sexual behavior.

OTHER FEDERAL AGENCIES AND EVALUATION

Office of Adolescent Pregnancy Programs (OAPP)

OAPP grantees are required by legislation to have an evaluation component, including an outside evaluator. The legislation has also placed a limit of 1–5 percent on evaluation. Projects have been allowed to request a waiver of this limit for an “evaluation intensive” project. Projects funded by OAPP in their last round of funding (2004) were funded under an evaluation intensive Request For Applications (RFA) that indicated that the 5 percent limit on evaluation

would be waived, up to a maximum of 25 percent.³⁶ Most of the published evaluations that have been examined in this article were supported by OAPP funding.

Special Programs of Regional and National Significance

The largest source of funding for abstinence education grants has been through the Health Resources and Services Administration, Bureau of Maternal and Child Health’s Special Programs of Regional and National Significance (SPRANS). For 2005 this program was moved to the Administration for Children and Families, Family and Youth Services Bureau and titled Community Based Abstinence Education (CBAE). This program has provided a large number of three-year grants, with funding limits of up to \$800,000/year. This program began in 2001; thus, grantees that received 3-year funding in 2001 needed to reapply in 2004 if they wanted to continue to receive funding. The process was competitive, but grantees were given special consideration for having previously received funding.³⁷ They did not have to show that they had done a good job with the initial grant, nor were they required to demonstrate that their program had made a substantial impact. The extra points were simply for having previously received a SPRANS grant. There has been no requirement that grantees evaluate program impact, and efforts to develop meaningful evaluations have been actively discouraged. At a grants application workshop in 2004, a workshop attendee asked about the use of control groups. The answer given was that if the applicant felt that a control group was really needed then it would probably be permissible. When the next person asked an evaluation question the answer given was “You need to understand, these are not research projects” (personal communication from MCHB staff with first author, January, 2004). Thus, it appears that rigorous evaluation of these projects has not been a priority for the funding agency.

The 2006 CBAE RFP³⁸ makes available \$24 million for new abstinence education grants. There is a ceiling amount of



\$600,000 per year for individual grants, but the grant period has been extended from three years to five. The RFP requires curricula to meet an expanded version of the a-h definition that encompasses 13 different abstinence themes. In addition, there is a requirement that applicants designate a minimum of 15 percent of their budget for evaluation.

The emphasis of the evaluation appears to be on process: documentation of the number of youth served, the hours of service provided to each youth, the number of youth that complete the program, the number of staff trained to provide services, the number of events hosted, number of marketing materials distributed, etc. It does appear, however, that a rigorous evaluation of project impact may now be possible. For example the RFP indicates that third party evaluators will “select and monitor outcomes that show that the project activities are accomplishing the goals of the project. Outcomes may include assessing changes in attitudes or behaviors of program participants that show the positive consequences of adopting abstinence until marriage as a personal standard. Ideally, the outputs and outcomes selected will also make it possible to calculate program efficiency and answer questions such as, “What is the overall cost of providing services per program graduate? (p.4).” One can certainly be critical of the agency’s approach to evaluation and it remains to be seen whether meaningful evaluations will actually be conducted. The inclusion of an evaluation requirement, however, is a positive step.

SUMMARY OF THE EVIDENCE

It is tempting to say abstinence programs are simply not effective in helping young people postpone sexual involvement or avoid risky sexual behavior. That is not, however, what this review of the research literature tells us. A more accurate statement would be that there is limited evidence of effectiveness. There are relatively few published program evaluations and even fewer that show promising results. Troubling aspects of the situation are: (1) evaluation

seems to be undervalued and avoided; (2) programs that have the most positive results are the least likely to be embraced by the abstinence community; and (3) the most popular programs, which have been around for a number of years, have no published evaluations dealing with the effects of the program on subsequent adolescent sexual behavior.

FUTURE DIRECTIONS FOR RESEARCHERS

The current administration’s approach to abstinence education offers much to criticize. Nevertheless, helping young people postpone early sexual involvement is a worthwhile goal. Researchers should examine the efficacy of existing programs in helping young people avoid risky sexual behaviors. Researchers should also develop new, theory-based interventions, and test them using rigorous evaluation designs. They must also use clear measures of behavior that go beyond participation in penile-vaginal intercourse and that elicit information regarding participation in other potentially risky sexual behaviors.

IMPLICATIONS FOR PUBLIC POLICY

Health educators interested in helping young people postpone participation in sexual intercourse and other risky sexual behavior should take an active interest in the government’s abstinence education initiative. Clearly, as this article has indicated, one of the concerns regarding abstinence education relates to evaluation and whether abstinence education programs are effective in helping young people avoid risky sexual behavior. Thus, federal and state grants should include requirements for rigorous program evaluation. In this regard, the new evaluation requirement for CBAE grants does hold some promise. In addition, when grants are awarded funding agencies should be encouraged to give preference to programs that have shown some positive benefit.

CONCLUSION

This article has presented information regarding abstinence education program-

ming, shared research findings, and examined directions for future research. Finally, it has included some recommendations for public policy. It is hoped that this article has been helpful to health educators and others in program selection and advocacy efforts.

REFERENCES

1. Irvine JM. *Talk About Sex: The battles over sex education in the United States*. Berkeley, CA: The University of California Press; 2002.
2. Adolescent Family Life (AFL) Act, 42 USC 300z-300z (10); 1981.
3. Bowen v. Kendrick et al. Rochester, NY: United States Supreme Court Reports, Lawyers Cooperative Publishing; 1990.
4. Kendrick et al v. Sullivan. Washington, D.C.: Settlement agreement, U.S. District Court for the District of Columbia, Civil Action No. 83-3175; 1993.
5. Edwards M. Abstinence-only education. *SIECUS Reports*. 1996; 25(4):1-2.
6. Department of Health & Human Services, Administration for Children and Families, Community-Based Abstinence Education. Available at <http://www.acf.hhs.gov/grants/open/HHS-2005-ACF-ACYF-AE-0099.html>. Accessed October 30, 2005.
7. United States House of Representatives, Committee on Government Reform, Minority Staff, Special Investigations Division, The Content of Federally Funded Abstinence Education Programs, Prepared for Representative Henry Waxman. Washington, D.C.; December, 2004.
8. Directory of Abstinence Resources. Sioux Falls, SD: Abstinence Clearinghouse; 2003.
9. Christopher FS, Roosa MW. An evaluation of an adolescent pregnancy prevention program: Is “just say no” enough? *Family Relations*. 1990;39:68-72.
10. Roosa M, Christopher S. Evaluation of an abstinence-only adolescent pregnancy prevention program: A replication. *Family Relations*. 1990;39:363-367.
11. Kirby D, Barth RP, Leland N et al. Reducing the risk: Impact of a new curriculum on sexual risk-taking. *Fam Plann Perspect*. 1991 Nov-Dec;23(6):253-263.
12. Jorgensen SR. Project Taking Charge: An evaluation of an adolescent pregnancy prevention program. *Family Relations*. 1991;40:



373–380.

13. Jorgensen SR, Potts V, Camp B. Project Taking Charge: Six-month follow-up of a pregnancy prevention program for early adolescents. *Family Relations*. 1993;42:401–406.

14. St Pierre TL, Mark MM, Kaltreider DL et al. A 27-month evaluation of a sexual activity prevention program in boys and girls clubs across the nation. *Family Relations*. 1995;44:69–77.

15. Kirby D, Korpi M, Barth RP et al. The impact of the Postponing Sexual Involvement curriculum among youths in California. *Fam Plann Perspect*. 1997;29(3):100–108.

16. Jemmott JB III, Jemmott LS, Fong FT. Abstinence and safer sex HIV risk reduction interventions for African American adolescents: a randomized controlled trial. *JAMA*. 1998;279:1529–1536.

17. Doniger AS, Adams E, Utter CA et al. Impact evaluation of the “Not Me, Not Now” abstinence-oriented, adolescent pregnancy prevention communications program, Monroe County, New York. *J Health Commun*. 2001;6(1):45–60.

18. Barnett JE, Hurst CS. Abstinence education for rural youth: an evaluation of the Life’s Walk Program. *J Sch Health*. 2003;73(7):264–8.

19. Lerner R. Can abstinence work: An analysis of the “Best Friends” program. *Adolescent and Family Health*. 2005;3(4):185–192.

20. Borawski EA, Trapl ES, Lovegreen LD et al. Effectiveness of abstinence-only intervention in middle school teens. *Am J Health Behav*. 2005;29(5):423–434.

21. Young M, Core-Gebhart P, Marx D. Abstinence-oriented sexuality education: initial field test results of the *Living Smart* curriculum. *Family Life Educator*. 1992;10(summer):4–8.

22. Goldfarb ES, Donnelly J, Duncan DF et al. Evaluation of an abstinence-based curriculum for early adolescents: First year changes in sex attitudes, knowledge and behavior. *North American Journal of Psychology*. 1999;1:243–254.

23. Denny G, Young M, Spear C. An evaluation of the “Sex Can Wait” abstinence education curriculum series. *Am J Health Behav*. 1999;23:134–143.

24. Denny G, Young M, Rausch S et al. An evaluation of an abstinence education curriculum series: Sex Can Wait. *Am J Health Behav*. 2002;26(5):366–377.

25. Denny G, Young M. An evaluation of an abstinence education curriculum series: An 18-month follow-up, paper presented at the annual meeting of the American School Health Association; October, 2003.

26. Kirby D. No easy answers: Research findings on programs to reduce teen pregnancy. Washington, D.C.: The National Campaign to Prevent Teen Pregnancy; 1997.

27. Kirby D. Emerging answers: Research findings on programs to reduce teen pregnancy. Washington, D.C.: National Campaign to Prevent Teen Pregnancy; 2001.

28. Rector R. The effectiveness of abstinence education programs in reducing sexual activity among youth, background paper 1533, April 8, 2002. Available at: <http://www.heritage.org/Research/Family/BG1533.cfm>. Accessed October 30, 2005.

29. Resnick MD, Bearman PS, Blum RW et al. Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *JAMA*. 1997;278:823–832.

30. Bearman PS, Bruckner H. Promising the future: Virginity pledges and the transition to first intercourse. *Am J Social*. 2002;106(4):

859–912.

31. Howard M, McCabe JB. Helping teenagers postpone sexual involvement. *Fam Plann Perspect*. 1990;22:21–26.

32. The National Longitudinal Study of Adolescent Health. Available at: <http://www.cpc.unc.edu/projects/addhealth>. Accessed October 30, 2005.

33. Eagle Forum. Nosy ‘evaluations’ could hurt abstinence programs. *Education Reporter*. Available at: <http://www.eagleforum.org/educate/2000/june00/nosy.html>. Accessed May 17, 2006.

34. Advocates for Youth. Available at: <http://www.advocatesforyouth.org/publications/stateevaluations/index.html>. Accessed October 30, 2005.

35. Maynard RA, Trenholm, C, Devaney B et al. *First-Year Impacts of Four Title V, Section 510 Abstinence Education Programs*. Washington, D.C.: U.S. Department of Health and Human Services, Mathematica Policy Research, Inc.; 2005.

36. Availability of funds for adolescent family life demonstration projects; Notice. *Fed Regist*. April 5, 2004;69(65):17887–17892.

37. Availability of funds for maternal and child health set-aside program: special programs of regional or national significance; community-based abstinence education grants. *Fed Regist*. December 9, 2003;68(236):68632–68636.

38. Availability of funds for Community-Based Abstinence Education. Administration for Children & Families, U.S. Department of Health and Human Services; 2006. Available at: <http://www.acf.hhs.gov/grants/open/HHS-2006-ACF-ACYF-AE-0099.html>. Accessed March 7, 2006.