Public Opinion on Sex Education in US Schools

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**Objective:** To examine US public opinion on sex education in schools to determine how the public's preferences align with those of policymakers and research scientists.

**Design:** Cross-sectional survey.

**Setting:** July 2005 through January 2006.

**Participants:** Randomly selected nationally representative sample of US adults aged 18 to 83 years (N=1096).

**Main Outcome Measures:** Support for 3 different types of sex education in schools: abstinence only, comprehensive sex education, and condom instruction.

**Results:** Approximately 82% of respondents indicated support for programs that teach students about both abstinence and other methods of preventing pregnancy and sexually transmitted diseases. Similarly, 68.5% supported teaching how to properly use condoms. Abstinence-only education programs, in contrast, received the lowest levels of support (36%) and the highest level of opposition (about 50%) across the 3 program options. Self-identified conservative, liberal, and moderate respondents all supported abstinence-plus programs, although the extent of support varied significantly.

**Conclusions:** Our results indicate that US adults, regardless of political ideology, favor a more balanced approach to sex education compared with the abstinence-only programs funded by the federal government. In summary, abstinence-only programs, while a priority of the federal government, are supported by neither a majority of the public nor the scientific community.

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The social merits and practical efficacy of sex education in schools generate considerable debate among public health professionals and government officials. The choice of appropriate and effective sex education policies is critical, as human immunodeficiency virus (HIV) infection and AIDS increased by 10% from 2000 to 2003 among 15- to 24-year-olds in the United States. In addition, this age group acquires half of all new sexually transmitted disease (STD) infections, but represents only about 25% of the sexually active population. Direct medical costs associated with the 9 million STD infections, including HIV, among this age group in 2000 were estimated at $6.5 billion, which is likely an underestimate. Although teen pregnancy, birth, and abortion rates declined in recent years, rates in the United States are persistently higher compared with other developed countries. Epidemiological data suggest that by 15 years of age, 25.1% of youth have had vaginal sex, and this figure increases to 37.9% at 16 years of age, and 46.9% by 17 years of age. These data underscore the relevance of timely and informative sex education in middle and high schools as an important component to the public health goal of promoting safe behaviors and preventing additional infections and unintended pregnancies.

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At the core of the federal government’s response to sexual activity and STD and HIV rates among youth is abstinence-only education. Federal requirements for abstinence-only education programs focus on the promotion of abstinence until marriage (ie, postponing sexual intercourse) as a lifestyle choice (ie, “a mutually monogamous relationship in the context of marriage is the expected standard”). Abstinence is endorsed as “the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems.” Implementation of federally funded programs precludes mentioning contraception and other forms of birth control or protection, such as condoms, unless it is to mention their limitations (eg, failure rates).

For abstinence-only education, the federal government identified 8 requirements or central program components.
a “prejudice” against messages that only emphasize abstinence.\cite{9,21} However, a randomized controlled trial of an abstinence intervention demonstrated promising effects for delaying sex in the short-term (ie, 3 months postintervention), but those effects disappeared by 6 months.\cite{11} Another recent study found that adolescents who took virginity pledges—public commitments to remain abstinent until marriage—experienced a delayed sexual debut but reported lower frequency of condom use at first intercourse. Pledgers were more likely to substitute oral and/or anal sex for vaginal sex, and had the same rates of STDs as nonpledgers.\cite{11}

Abstinence-plus programs (also referred to as comprehensive sex education) emphasize abstinence and a delay of sexual debut but also offer information on contraception and protection against STDs. These programs may or may not include instruction on how to properly use a condom. Systematic reviews of empirical studies on sex education efficacy provide evidence that support a more balanced approach (ie, comprehensive sex education). These reviews suggest that comprehensive programs may delay initiation of sexual intercourse, reduce frequency of sex, reduce frequency of unprotected sex, and reduce the number of sexual partners.\cite{9,10,19,21} Based on this evidence, an Institute of Medicine report in 2001 recommended “eliminating congressional, federal, state, and local requirements that public funds be used for abstinence-only education, and that states and local school districts implement and continue to support age-appropriate comprehensive sex education and condom availability programs in schools.”\cite{20}

Public opinion on sex education in schools is, however, largely absent from discourse on this issue, as few studies report on what types of sex education the public supports.\cite{16,17,18} This study examines public opinion on sex education in schools to determine how the public’s preferences align with those of policymakers and research scientists. Using a nationally representative sample of adults, this study describes levels of support among the public for the different sex education approaches.

The Annenberg National Health Communication Survey is a nationally representative, repeated cross-sectional survey with a sample universe of all people aged 18 years and older living in the United States.\cite{19} The online survey is administered by a survey research firm that uses a list-assisted random-digit-dialing telephone method to provide a probability-based starting sample of US telephone-accessible households. The recruited panel members are provided with free Web access and a WebTV set-top box that uses a telephone line to connect to the Internet and the television as a monitor to enable their participation in Internet surveys. The provision of identical hardware to all participating households allows for consistent delivery of the survey content and does not bias the sample in favor of current Internet users or computer owners. The Web-enabled panel closely tracks the US population on age, race, Hispanic ethnicity, geographical region, employment status, and other demographic elements. The differences that do exist are small and are corrected statistically in survey data (ie, by nonresponse adjustments).

Each month a sample for the Annenberg National Health Communication Survey is drawn from the firm’s participating households. The current study used data collected from July

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**METHODS**

The number of studies evaluating abstinence-only education is few compared with those assessing more comprehensive approaches. A recent review of abstinence-only programs concluded “there do not currently exist any abstinence-only programs with strong evidence that they either delay sex or reduce teen pregnancy.”\cite{18} Reasons often cited for the lack of more rigorous evaluations of abstinence-only education, as well as school-based education programs in general, include cost, a social environment in which research on sex is often seen as controversial, and
Beliefs About Sex Education Programs

<table>
<thead>
<tr>
<th>Beliefs About Sex Education Programs</th>
<th>Strongly Disagree, %</th>
<th>Somewhat Disagree, %</th>
<th>No Opinion, %</th>
<th>Somewhat Agree, %</th>
<th>Strongly Agree, %</th>
<th>Mean ± SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstinence-only education is an effective way to prevent unplanned pregnancy and sexually transmitted diseases.</td>
<td>29.8</td>
<td>24.7</td>
<td>6.4</td>
<td>22.9</td>
<td>16.2</td>
<td>−2.92 ± 1.49</td>
</tr>
<tr>
<td>Sex education that teaches about abstinence and other methods of preventing pregnancy is an effective way to prevent unplanned pregnancy and sexually transmitted diseases.</td>
<td>6.3</td>
<td>8.7</td>
<td>4.6</td>
<td>43.6</td>
<td>36.9</td>
<td>0.961 ± 1.15</td>
</tr>
<tr>
<td>Teaching teens how to properly use a condom encourages them to have sex.</td>
<td>23.8</td>
<td>33.1</td>
<td>6.0</td>
<td>23.5</td>
<td>13.5</td>
<td>−3.02 ± 1.40</td>
</tr>
</tbody>
</table>

*N = 1096.

2005 through January 2006. Rates of completion of the Annenberg National Health Communication Survey range from 73% to 76%. The survey features a core set of items answered by the entire sample as well as modules randomly assigned to half the sample. The variables used in this analysis were part of the noncore modules and resulted in a total sample of 1096 respondents. Data were collected on sex education policy preferences, beliefs regarding sex education programs, political ideology, and frequency of attendance at religious services. The primary variables of interest were the beliefs and policy preferences about sex education; ideology and attendance at religious services were treated as background characteristics.

To justify pooling the data across months, we conducted equivalency tests on the means, variances, and covariances of the belief and policy preference variables. Fit statistics, assuming no difference between months, were consistent with the assumption of no change over time: χ² = 26.143, P = .35; root-mean-squared error of approximation = 0.009; and Tucker-Lewis Index = 0.996. For information on these types of goodness-of-fit indices, see Kline.20

POLICY PREFERENCES

Three measures assessed policy preferences for sex education in schools by using a 5-point scale (from −2 to 2) from strongly oppose to strongly support. The measures each represented a different type of sex education: abstinence only, abstinence plus (ie, comprehensive sex education), and comprehensive sex education that includes condom instruction. The survey items were as follows: “Do you support or oppose sex education programs in schools in your community that teach abstinence only? Abstinence-only education promotes abstinence until marriage and does not teach students about other methods of preventing pregnancy and sexually transmitted diseases,” “Do you support or oppose sex education programs in schools in your community that teach students about other methods of preventing pregnancy and sexually transmitted diseases in addition to teaching about abstinence?”, and “Do you support or oppose sex education programs in schools in your community that include instruction on how to use condoms properly to prevent pregnancy and sexually transmitted diseases?”

BELIEFS

Respondents were also asked about their beliefs or expectations about the educational efficacy of different sex education approaches. They answered 3 items regarding their beliefs on sex education (disagree to agree, −2 to 2): “Abstinence-only education is an effective way of preventing teens from having unplanned pregnancies,” “Sex education that teaches about abstinence and other methods of preventing pregnancy is an effective way of preventing teens from having unplanned pregnancies,” and “Teaching teens how to properly use a condom encourages them to have sex.”

BACKGROUND CHARACTERISTICS

Self-reported political ideology was measured on a 7-point scale from “extremely liberal” to “extremely conservative,” with moderates at the midpoint. For the purposes of analysis, it was collapsed into 3 groups: liberals, moderates, and conservatives. Attendance at religious services, often used as an indicator of religiosity, was a 6-level ordinal estimate of attending religious services ranging from “never” to “more than once a week.”

SAMPLE DESCRIPTION

The mean age of the sample was 46.8 years (±15.94; range, 18-83 years) and 46% of the sample were male adults. The race/ethnicity distribution was consistent with other nationally representative surveys. According to the 2000 Census, 72.0% of adults aged 18 years or older were white, non-Hispanic; 11.2% were African American, non-Hispanic; 11.0% were Hispanic (all races); and 4.5% were classified as other, non-Hispanic (1.3% were classified as 2 or more races).21 Race and ethnicity estimates from our survey were as follows: 78.7% white, non-Hispanic; 9.6% black, non-Hispanic; 7.6% Hispanic; and 4.1% other, non-Hispanic. Politically, 39.5% of the sample identified themselves as moderate, 35.5% as conservative, and 25% as liberal. This distribution is also consistent with self-reported ideological identification in several national surveys.22,23 Respondents attended religious services with the following frequency: 20.4% never, 16.5% once a year or less, 20.6% a few times a year, 10.6% once or twice a month, 21.4% once a week, and 10.6% more than once a week.

RESULTS

BELIEFS REGARDING SEX EDUCATION PROGRAMS

Table 1 shows the distribution of beliefs regarding sex education programs. In general, the majority of respondents disagreed with the beliefs that abstinence-only programs were effective in preventing unplanned pregnancies and that teaching condom instruction encourages teens to have sex. Thirty-nine percent of respondents agreed that abstinence only was an effective way to prevent unplanned pregnancies, whereas 80.4% believed a
combination of abstinence and other methods was effective. Fifty-seven percent disagreed that teaching teens how to use a condom encourages them to have sex. There were no differences between men and women on 2 of the 3 belief measures. Women reported significantly stronger disagreement with the belief that abstinence-only education is an effective way of preventing unplanned pregnancies (female mean: \(-0.400 \pm 1.50\); male mean: \(-0.167 \pm 1.47\); \(t = -2.585\); \(P < .01\)).

POLICY PREFERENCES FOR SEX EDUCATION PROGRAMS

The distribution for policy preferences is similar to that of the corresponding beliefs (Table 2). Figure 1 depicts support and opposition for abstinence-only education, abstinence-plus education, and condom instruction. As shown, approximately 82% of respondents indicated support for programs that teach students about both abstinence and other methods of preventing pregnancy and STDs. Similarly, about 68% supported teaching how to properly use condoms. Abstinence-only education programs, in contrast, received the lowest levels of support (36%) and the highest level of opposition (about 50%) across the 3 program options. Only about 10% of the sample opposed comprehensive sex education, and 21% opposed condom instruction. Women also showed more opposition to abstinence-only policies (female mean: \(-0.233 \pm 1.38\); male mean: \(-0.118 \pm 1.34\); \(t = 2.018\); \(P < .05\)).

POLICY PREFERENCES FOR SEX EDUCATION PROGRAMS BY IDEOLOGY AND RELIGION

Figure 2 presents support for sex education programs by political ideology. Support for abstinence-plus programs and condom instruction is greater than 50% across all ideologies. Self-identified conservative, liberal, and moderate respondents all supported abstinence-plus programs, although the extent of support varied significantly. Seventy percent of conservatives supported abstinence plus, compared with 86.4% of moderates and 91.6% of liberals (\(F^2 = 78.86\); \(P < .01\)). More conservatives supported condom instruction in schools (51.2%) than supported abstinence-only education (47%), and conservatives opposed abstinence-only programs (39.9%) at approximately the same rate as they opposed condom instruction (37.5%). Opposition to condom instruction among liberals (9.1%) and moderates (13.4%) was much lower than opposition among conservatives. Nineteen percent of conservatives opposed abstinence-plus education, compared with 5.3% of moderates and 3.7% of liberals. Sixty-seven percent of liberals and 50.4% of moderates opposed abstinence only.

Differences in policy support by attendance at religious services were also assessed (Figure 3). Abstinence plus was supported by all religious attendance groups, with levels of support ranging from 87.4% among those who reported never attending religious services to 60.3% among those who attend more than once a week (\(F^2 = 16.46\); \(P < .01\)). Condom instruction was also supported by a majority across all groups, with the exception of those who attend services more than once a week (37.9%); opposition to condom instruction in this group was 52.6% (\(F^2 = 35.19\); \(P < .01\)). It is interesting to note that among the most religious respondents (ie, those who attend services more than once a week), abstinence only

<table>
<thead>
<tr>
<th>Sex Education Policy Preferences</th>
<th>Strongly Oppose, %</th>
<th>Somewhat Oppose, %</th>
<th>No Opinion, %</th>
<th>Somewhat Support, %</th>
<th>Strongly Support, %</th>
<th>Mean ± SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support or oppose abstinence only?</td>
<td>18.8</td>
<td>31.9</td>
<td>13.1</td>
<td>20.9</td>
<td>15.3</td>
<td>(-0.180 \pm 1.36)</td>
</tr>
<tr>
<td>Support or oppose teaching other methods of preventing pregnancy and sexually transmitted diseases in addition to teaching about abstinence?</td>
<td>3.3</td>
<td>6.5</td>
<td>8.1</td>
<td>43.6</td>
<td>38.5</td>
<td>(1.08 \pm 1.01)</td>
</tr>
<tr>
<td>Support or oppose instruction on how to use condoms properly?</td>
<td>7.7</td>
<td>13.2</td>
<td>10.8</td>
<td>41.3</td>
<td>27.0</td>
<td>(0.668 \pm 1.22)</td>
</tr>
</tbody>
</table>

*\(N = 1096\).
and abstinence plus received equivalent levels of support (60.3%). Opposition to abstinence-only programs was lowest for those who attended services more than once a week (31.3%) and at its highest (57.9%) among those who never attend religious services.

It appears that current investments in abstinence-only sex education programs do not correspond with either public opinion or scientific consensus on how sex education should be taught in schools. Our results demonstrated that American adults, regardless of political ideology, favor a more balanced approach to sex education compared with the abstinence-only programs funded by the federal government. Abstinence-only education received the lowest levels of public support and the highest levels of public opposition; more respondents supported teaching adolescents how to properly use a condom than teaching only about abstinence. This finding is consistent with respondents’ beliefs about the efficacy of different sex education approaches: 39% agreed that abstinence only was an effective way to reduce unplanned teenage pregnancies.

The federal government’s support of abstinence-only education is in contrast to the broad public and scientific support for comprehensive sex education demonstrated by our research review and study results. This discrepancy in the realm of sex education highlights a gap between science and policy. Sex education in schools is clearly a politically charged issue, but public opinion in this instance offers an opportunity to diffuse some of the inherent tension between science and policymaking. Our data indicated that among politically conservative respondents, support for comprehensive sex education was at 70%, compared with 47% support for abstinence-only education. With such high support for comprehensive sex education among the public from liberals, conservatives, and moderates alike, political leaders could capitalize on this rare occasion to enact public policy that is supported by both sound scientific evidence as well as public opinion.

Moving beyond the politics of sex education might also require reframing the issues. For example, Santelli and colleagues’ discussed abstinence-only programs in a human-rights context, citing the deprivation of scientifically accurate information as unethical. Their position, supported by the Society for Adolescent Medicine and the American College Health Association, is provocative insofar as it shifts the debate to focus on the more compelling theme of the strategic provision and withholding of information.

There are several limitations to this analysis. The sample universe is landline telephone subscribers and therefore does not include those who rely solely on cellular telephones. Telephone subscribership in the United States penetrated 92.4% of households as of March 2005; about 6% of households, mostly younger and single Americans, rely only on wireless service. It is also possible that, because of question wording, respondents did not fully appreciate the extent of differences between abstinence-only and abstinence-plus education. The results however are consistent with the assumption that citizens have a basic understanding of the sex education options: liberals and conservatives differ significantly in the extent of their support. In addition, study findings of overall support for comprehensive sex education are also consistent with results from similar studies.

In summary, public opinion favors comprehensive sex education. Abstinence-only programs, while a priority of the federal government, are supported by neither a majority of the public nor the scientific community. The public at large, across the ideological spectrum, supports programs that teach a combination of abstinence and other methods to prevent unplanned pregnancies and STDs.

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REFERENCES


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**Announcement**

**Trial Registration Required.** In concert with the International Committee of Medical Journal Editors (ICMJE), *Archives of Pediatrics and Adolescent Medicine* will require, as a condition of consideration for publication, registration of all trials in a public trials registry (such as http://ClinicalTrials.gov). Trials must be registered at or before the onset of patient enrollment. This policy applies to any clinical trial starting enrollment after July 1, 2005. For trials that began enrollment before this date, registration will be required by September 13, 2005, before considering the trial for publication. The trial registration number should be supplied at the time of submission.

For details about this new policy, and for information on how the ICMJE defines a clinical trial, see the editorials by DeAngelis et al in the September 8, 2004 (2004;292:1363-1364) and June 15, 2005 (2005;293: 2927-2929) issues of *JAMA*. Also see the Instructions to Authors on our Web site: www.archpediatrics.com.