

Original article

Parent Opinion of Sexuality Education in a State with Mandated Abstinence Education: Does Policy Match Parental Preference?

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Abstract:

Purpose: Despite public debate about the content of sexuality education in schools, state and federal policy has increasingly financed and legislated abstinence-only education over the past decade. Although public schools strive to meet the needs of parents who, as taxpayers, fund the educational system, little is known about parental desires regarding sexuality education in states with mandated abstinence education. The objective of this study was to assess parental opinion about sexuality education in public schools in North Carolina, a state with mandated abstinence education.

Methods: Computer-assisted, anonymous, cross-sectional telephone surveys were conducted among 1306 parents of North Carolina public school students in grades K–12. Parental support for sexuality education in public schools and 20 sexuality education topics was measured. We defined comprehensive sexuality education as education that includes a discussion of how to use and talk about contraception with partners.

Results: Parents in North Carolina overwhelmingly support sexuality education in public schools (91%). Of these respondents, the majority (89%) support comprehensive sexuality education. Less than a quarter of parents oppose teaching any specific topic, including those typically viewed as more controversial, such as discussions about sexual orientation, oral sex, and anal sex. Parents' level of education was inversely related to support for specific sexuality education topics and comprehensive education, although these differences were small in magnitude. More than 90% of respondents felt that parents and public health professionals should determine sexuality education content and opposed the involvement of politicians.

Conclusions: Current state-mandated abstinence sexuality education does not match parental preference for comprehensive sexuality education in North Carolina public schools. © 2006 Society for Adolescent Medicine. All rights reserved.

Keywords:

Sex education; Schools; Parents

The content of sexuality education in public schools in the United States is debated intensely. Although nearly 90% of public school students receive sexuality education at least

once in middle or high school, content varies widely [1]. Nationwide, the debate has focused on the merits of abstinence-only vs. comprehensive sexual education. Abstinence-only education emphasizes monogamous sexual activity in the context of marriage as the only means of avoiding sexually transmitted infections (STIs) and unintended pregnancy [2]. Contraceptive use is not discussed except to highlight method failure rates. Comprehensive

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education, in contrast, includes teaching about both abstinence and contraceptive use.

Many comprehensive education programs have been shown to be successful in delaying sexual intercourse and increasing condom and contraceptive use among sexually active adolescents [3–7]. To date, the few rigorously evaluated abstinence-only programs have failed to demonstrate effectiveness in delaying sexual intercourse [4,6,8]. A well-designed, federally funded evaluation of abstinence-only programs has shown a change in attitudes toward abstinence and perceived consequences of sexual activity, but no change in self-efficacy or expectation to abstain from sexual intercourse [9]. Data on whether these abstinence-only programs result in a change in sexual behavior is expected within the next year [9].

Despite the public controversy, abstinence-only education has been adopted increasingly by schools. A national survey found that 23% of secondary school sexuality education teachers taught abstinence as the only means of preventing STIs and pregnancy in 1999 as compared with 2% in 1988 [10]. Among school superintendents who have a policy regarding sexuality education, 35% have an abstinence-only policy [10]. The number of female adolescents reporting receiving no formal instruction on contraception has more than doubled from 12% in 1995 to 30% in 2002 [11,12].

State and federal policy has significantly influenced the shift to abstinence-only education. The 1996 welfare reform package designated \$250 million over five years to promote abstinence-only programs [2]. Thirty states have passed mandates requiring teaching about abstinence in public schools [13]. The actual impact of such mandates in each state varies depending on the degree of discretion left to local school districts and teachers to regulate curricula.

North Carolina was one of the first states to legislate a statewide abstinence-until-marriage curriculum in 1995 [14]. School districts are required to teach abstinence-until-marriage as the only certain means of avoiding STIs and pregnancy and that “any instruction concerning the use of contraceptives or prophylactics shall provide accurate statistical information on their effectiveness and failure rates” [14]. The Department of Public Instruction, responsible for overseeing school curricula and interpretation of the mandate, instructs teachers to discuss the effectiveness and failure rates but not how to use contraception unless specifically asked by students (personal communication with Sherry Lehman, July 2005). Local school districts can opt-in to comprehensive education by holding a public hearing and school board vote; approximately 10% of state school districts have exercised this option thus far. The abstinence-until-marriage policy has been associated with low rates of contraceptive education statewide, with only 14% and 21% of teachers reporting teaching students how to use a condom or how to use birth control, respectively [15].

Sexuality education remains a crucial public health issue in North Carolina and the nation as a whole. Nearly two-

thirds of high school seniors have engaged in sexual intercourse and an estimated one in four of those sexually active will acquire a sexually transmitted infection each year [16,17]. The majority of children in North Carolina receive sexuality education in public school where curriculum ideally meets the needs of parents who, as taxpayers, fund the educational system. Although polls with nationally representative samples suggest that nationwide the majority of parents support comprehensive education, less is known about parental preference for sexuality education in abstinence education states [18,19]. The purpose of this study is to describe parental opinion about content of sexuality education in public schools in North Carolina nearly 10 years after enactment of the statewide abstinence sexuality education policy and to determine if this policy reflects parental expectations.

Methods

Sample

A listed household frame with a targeted sample known to have parents of school-age children was purchased from GENESYS Sampling Systems (Fort Washington, PA). We conducted an anonymous telephone survey in October 2003 using the Behavioral Risk Factor Surveillance System (BRFSS) survey data collection protocol [20]. Although we used BRFSS protocol, the study was conducted separately from the North Carolina BRFSS. Four thousand telephone numbers were called. Contacted individuals were eligible to participate if they were English-speaking parents or legal guardians of North Carolina public school students in grades K–12 reached at a private residence. If more than one parent or legal guardian resided in the household, the computer randomly selected one respondent. Fifteen call attempts during various times of the week (daytime, evening and weekend hours) were made before a final disposition was assigned to a phone number. Telephone surveys were administered using computer-assisted telephone interviewing and lasted approximately 10 minutes. The study was reviewed by the Office of Human Research Ethics at the University of North Carolina at Chapel Hill School of Medicine.

Measures

The sexuality education measures were adapted from the Kaiser Family Foundation Sex Education Survey [18]. Respondents were asked whether sexuality education was taught in their child’s school and whether they felt sexuality education should be taught in North Carolina public schools. If respondents answered yes to the second question, they were asked to rate “how important it is that your child learns about the [following] topic at any point during K–12.” Twenty sexuality education topics, ranging from the basics of reproduction to discussions of sexual orientation,

were included. Response options were given on a five-point Likert scale (very important, somewhat important, not too important, not at all important, or opposed to teaching). Demographic information of respondents was also collected.

Both abstinence-only and comprehensive sexuality education encourage abstinence. A critical difference between abstinence-only and comprehensive sexuality education is that comprehensive education includes a discussion of how to use contraception in case students do not abstain. Although comprehensive education is often defined more broadly by organizations supportive of comprehensive education, for the purposes of this study we defined comprehensive sexuality education as including the following three contraceptive education topics: teaching how to talk with partners about birth control and sexually transmitted infections (STIs), how to use birth control methods, and how to use condoms. Respondents were categorized as supporters of abstinence-only or comprehensive sexuality education if they opposed or did not oppose any of these three topics, respectively.

Statistical analysis

We conducted univariate analysis on all of the study variables using summary statistics. Likert scale responses were reduced to three categories, important (very and somewhat important), not important (not too and not at all important) and opposed, for ease of interpretability. We examined bivariate relationships among sexuality education measures and demographics using Pearson's chi-square and Fisher's exact tests for expected cell frequencies of less than five. Analyses were conducted with both unweighted data and with sample weights assigned to each subject based on parent age, gender, race, education, grade level of oldest child, and geographic region. Unweighted and weighted analysis results differed by only a few percentage points, so unweighted data are presented for ease of interpretability. Stata Version 8.1 was used for statistical analysis (Stata Corp, College Station, TX).

Results

Respondent characteristics

We completed 1306 interviews (60% response rate using the BRFSS CASRO response rate calculation) [21]. Of the 4000 telephone numbers, 1437 were ineligible (no eligible respondent, nonprivate residence, nonworking number, or fax/modem line), 873 had unknown eligibility (no answer, busy, hung up before determining eligibility, telephone answering device, changed phone number, or inability to communicate), 384 were eligible but did not complete the interview (refused, hung up after determin-

Table 1
Demographics of survey respondents (n = 1306)

Characteristics	n	%
Age, years		
20–34	184	14
35–49	952	74
50–69	149	12
Sex		
Male	482	37
Female	824	63
Race		
White	1123	87
Black	119	9
Hispanic	17	1
Other	29	2
Education		
Not high school graduate	25	2
High school graduate	288	22
Some college	361	28
College graduate	627	48
Household income		
< \$25,000	97	9
\$25,000–49,999	282	26
\$50,000–74,999	280	25
≥ \$75,000	445	40
Number of school-age children		
1	592	45
2	548	42
≥ 3	166	13
Grade level of oldest child		
Elementary school	486	37
Middle school	276	21
High school	544	42
County		
Urban	635	49
Rural	671	51
Region		
Western NC	120	9
Piedmont NC	889	69
Eastern NC	284	22

ing eligibility, unavailable for length of survey, or selected respondent unable to communicate).

Of the 1306 respondents, 63% were female (Table 1). The majority were white (87%), with blacks constituting the second largest group (9%), compared with 72% white and 22% black in the general population [22]. The mean age of respondents was 41.5 years (SD 6.8) with a range of 22 to 69 years. Nearly half of the sample were college graduates (48%), compared with 23% in the general population. The oldest children of respondents were in high school (42%), middle school (21%), or elementary school (37%). Respondents were from the Piedmont (69%), Eastern (22%), and Western (9%) regions of the state, as compared with 57%, 30%, and 13% in the general population, respectively.

Parental opinion about sexuality education acceptability, availability, timing and duration

The vast majority (91%) of all respondents agreed that sexuality education should be taught in North Carolina

Table 2
Parental opinion of acceptability, availability, timing, and duration of sexuality education (n = 1306)^a

	n	%
Should sex ed be taught in NC public schools?		
Yes	1171	91
No	109	9
Is sex ed taught in your public school?		
Yes	874	67
No	122	9
Not sure	310	24
What grade level should sex ed start?		
Elementary school	438	38
Middle school	635	55
High school	81	7
How much classroom time for sex ed in elementary school?		
One hour/week over year (36 hours)	62	15
One hour/week over half year (18 hours)	86	21
One hour/week-every other week over quarter (4–9 hours)	203	49
3 hours or less over year	63	15
How much classroom time for sex ed in middle school?		
One hour/week over year (36 hours)	293	28
One hour/week over half year (18 hours)	288	28
One hour/week-every other week over quarter (4–9 hours)	375	36
3 hours or less over year	75	7
How much classroom time for sex ed in high school?		
One hour/week over year (36 hours)	470	43
One hour/week over half year (18 hours)	270	25
One hour/week-every other week over quarter (4–9 hours)	287	26
3 hours or less over year	65	6

^a Timing and duration of sexuality education questions limited to respondents supportive of sexuality education in public schools.

public schools (Table 2). Mothers were slightly more likely than fathers to believe that sexuality education should be taught in school (93% vs. 88%, $p = .001$), but there were no other significant differences by demographic variables, including gender, age, race, education, geographic region, and grade level of children. Of the respondents supportive of sexuality education, 38% felt sexuality education should start in elementary school, 55% in middle school, and 7% in high school. Respondents felt classroom time devoted to sexuality education should increase with age. The majority felt that high school students (68%) and middle school students (56%) should receive one hour per week of sexuality education throughout half to an entire school year.

Of the 109 (9%) respondents opposed to teaching sexuality education in schools, 71% felt that sexuality education should be taught at home by parents, 6% had religious beliefs precluding teaching about sexuality, 6% felt it inappropriate to teach about sexuality, 4% felt sexuality education was not necessary for their children, 4% felt it would encourage teens to have sex, and 9% did not specify the reason for their opposition.

Parental knowledge of their children's receipt of sexuality education

Only 67% of parents report knowing that sexuality education is taught in their public school. Older parents, parents with an oldest child in middle or high school, mothers, and parents with more than one child were significantly more likely to report that sexuality education was taught in their public school ($p < .05$).

Parental opinion about sexuality education content among supporters of sexuality education in schools

Among parents agreeing that sexuality education should be taught in public schools, the majority supported all 20 sexuality education topics, including those included in our definition of comprehensive sexuality education (Table 3). Nearly all ranked teaching about transmission and prevention of human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS) and sexually transmitted infections as important. Discussions of abstinence and dealing with pressure to have sex were viewed as important by more than 90% of parents. Comprehensive topics, such as how to talk with a partner about birth control and STIs, how to use birth control methods and how to use condoms were felt to be important by 93%, 81%, and 80% of parents, respectively. Additional topics not included in our basic definition of comprehensive sexuality education, but often included in comprehensive sexuality curricula, such as where to get birth control, how to get tested for HIV/AIDS and STIs, and risks of oral and anal sex were felt to be important by more than 70% of parents. Classroom demonstration of condom use was the least supported of 20 sexuality education topics; however, it was still felt to be important by more than half of parents. Only three topics were opposed by more than 10% of parents supportive of sexuality education in public schools: teaching about the risks of anal sex (11%), teaching where to obtain birth control (11%), and having classroom demonstrations of condom use (24%).

No matter parents' gender, age, race, education, geographic region or grade level of children, the majority remained in support of all 20 sexuality education topics in bivariate analysis. Group-to-group differences were relatively slight, with not more than an approximate 10% overall difference in beliefs, with the exception of parents of different educational levels, whose differences in beliefs ranged up to 20%. Mothers, for example, more than fathers, felt that education about the following topics was important: how to talk to a partner about not having sex (99% vs. 94%, respectively; $p < .001$), abstinence until marriage (93% vs. 88%, respectively; $p = .006$), effectiveness of birth control (91% vs. 86%, respectively; $p = .007$), where to get birth control (77% vs. 68%, respectively; $p = .001$), and the risks of oral sex (85% vs. 79%, respectively; $p = .01$). Respondents younger than age 35 were less likely than those age 35

Table 3
Parental opinion of sexuality education topics among supporters of sexuality education in schools (n = 1157)^a

	Important %	Not important %	Opposed %
Transmission and prevention of STIs	98	1	< 1
Transmission and prevention of HIV/AIDS	98	1	< 1
What to do if one has been sexually assaulted	98	1	< 1
The basics of reproduction	98	1	< 1
How to deal with pressure to have sex	98	2	< 1
How to talk with partner about not having sex	97	2	< 1
How to talk with parents about sex	97	3	< 1
How to deal with emotions and consequences of sex	94	4	2
How to talk with partner about birth control and STIs	93	4	3
Abstinence until marriage	91	7	1
Waiting until high school graduation to have sex	90	5	5
Effectiveness and failure rates of birth control	89	7	4
How to get tested for HIV/AIDS and STIs	88	8	4
Risks of oral sex	83	9	9
How to use birth control methods	81	11	8
Risks of anal sex	80	9	11
How to use condoms	80	11	9
Talking about what sexual orientation means	78	13	9
Where to get birth control	74	15	11
Classroom demonstrations of how to use condoms	57	19	24

^a n Varies slightly for each item based on item response (n = 1130–1157). Fourteen respondents classified as sexuality education supporters were not asked the individual items because they initially answered that they were unsure whether sexuality education should be taught, but indicated their support in the immediate follow-up question after items had been skipped per protocol.

and above to oppose classroom demonstrations of condom use (15% vs. 26%, respectively; $p = .003$). Respondents age 50 and above were more likely than those younger than age 50 to support talking about sexual orientation (86% vs. 77%, respectively; $p = .02$). Blacks were more likely than Whites to support teaching about abstinence until marriage (97% vs. 91%, respectively, $p = .03$), but there were no other significant differences by race.

There was a consistent finding of an inverse relationship between parental education and support for sexuality education topics, including both abstinence and comprehensive topics (Table 4). Parents with higher levels of education were more opposed to and less supportive of teaching specific topics than parents with lower levels of education. However, the majority of highly educated parents remained in support of each sexuality education topic.

When parents were categorized into supporters of comprehensive or abstinence-only education based on our definition of comprehensive education as inclusive of contraceptive topics, the majority (89%) supported comprehensive programs. If we conservatively estimate that all parents opposing the teaching of sexuality education in public schools would oppose the comprehensive sexuality education topics, then 81% of all respondents surveyed would support comprehensive programs. Among those supporting comprehensive programs, 82% supported a more expansive definition of comprehensive education, including where to get birth control, how to get tested for HIV/AIDS and STIs, discussing sexual orientation, discussing risks of oral and anal sex, and classroom demonstrations of condom use.

There was also an inverse relationship between parental education and support for comprehensive sexuality education. However, most highly educated parents remained in support of comprehensive education; 86% of college-graduate parents supported comprehensive education compared with 88% of parents with some college education and 96% of parents with a high school education or less ($p < .001$). There were no other significant differences between support for abstinence-only and comprehensive education by gender, age, race, geographic region, or grade level of children on bivariate analysis.

Parental opinion about who determines the content of sexuality education

The vast majority of parents agreed that the content of sexuality education should be determined by parents (96%) and public health professionals (95%) (Table 5). Others felt that school administrators (81%), religious leaders (54%), and students (50%) should determine content. Only 7% felt politicians should determine the content of sexuality education, with 93% opposing their involvement.

Discussion

Parents of public school children in North Carolina overwhelmingly support sexuality education in public schools and feel it should start in elementary or middle school with a significant amount of classroom time devoted to its teaching. The majority of parents support comprehensive education, defined as including a discussion of how to use and discuss contraception with partners. The majority also support topics traditionally viewed as more controversial, including discussions of sexual orientation, oral sex, and anal sex. Fewer than a quarter of parents supportive of sexuality education opposed teaching any specific topic.

We observed small differences in the magnitude of support among parents of different gender, age, education and children's grade level. Parents younger than age 35 were less likely than those over age 35 to oppose classroom demonstrations of condoms, possibly reflecting a gradual cultural shift in younger generations toward a greater com-

Table 4
Selected sexuality education topics among supporters of sexuality education according to parental education level (n = 1154)^a

	Important %	Not important %	Opposed %	p Value
How to deal with emotions and consequences of sex				
High school	97	2	< 1	.001 ^b
Some college	96	2	3	
College graduate	91	6	3	
How to talk to partner birth control/STIs				
High school	97	2	< 1	.001 ^b
Some college	94	3	3	
College graduate	90	6	4	
Abstinence until marriage				
High school	95	4	< 1	.017 ^b
Some college	93	6	< 1	
College graduate	89	9	2	
Waiting to until high school graduation to have sex				
High school	95	3	2	.005
Some college	92	3	5	
College graduate	87	7	6	
Risks of oral sex				
High school	87	7	6	.020
Some college	85	6	9	
College graduate	79	11	10	
How to use birth control methods				
High school	89	8	3	< .001
Some college	84	9	8	
College graduate	75	14	11	
Risks of anal sex				
High school	87	7	6	.001
Some college	83	6	11	
College graduate	76	12	12	
How to use condoms				
High school	89	7	3	< .001
Some college	82	8	10	
College graduate	75	14	11	
Talking about what sexual orientation means				
High school	89	7	4	< .001
Some college	79	11	10	
College graduate	71	18	11	
Where to get birth control				
High school	82	12	6	.001
Some college	75	14	11	
College graduate	69	18	13	
Classroom demonstrations of how to use condoms				
High school	64	18	18	.002
Some college	61	15	24	
College graduate	51	22	27	

^a n Varies slightly for each item based on item response (n = 1129–1154).

^b Fisher's exact test.

fort with discussion and use of condoms [23]. Mothers were more likely than fathers to support specific topics, many of which involved contraception. This may be explained by the fact that females often bear the responsibility for contraceptive use and experience the consequences of contraceptive failure.

Interestingly, we found the largest and most consistent differences among parents of varying educational levels. Parents with higher levels of education were more opposed to and less supportive of specific sexuality education topics. Also, they were more likely to support abstinence-only

Table 5
Parental opinion about responsibility for determining sexuality education content (n = 1186)

	Support (%)	Oppose (%)
Parents	96	4
Public Health Professionals	95	5
School Administrators	81	19
Students	54	46
Religious Leaders	50	50
Politicians	7	93

education. One possible hypothesis is that more educated parents may feel better equipped to teach their children about sexuality or equip them with the skills necessary to avoid sexual activity than those who are less educated. More exploratory research in this area is needed.

Public discourse about sexuality education rarely defines the content of abstinence-only and comprehensive curricula. The term “abstinence” has been shown to have a wide variety of definitions among adolescents [24,25]. No doubt, similar confusion surrounds the term “abstinence-only education” among parents. Arguably, a discussion of support for specific content in sexuality education would be beneficial to constructive public debate. We have defined the major measurable difference between abstinence-only and comprehensive education to be inclusion of a discussion of how to use and talk about contraception with partners. Our results are consistent with a prior national study of parental attitudes toward sexuality education conducted by the Kaiser Family Foundation, in which abstinence-only supporters were defined as those agreeing that “abstinence is best for teens” and “sex ed classes should not provide information on how to obtain and use condoms and other contraception.” Their study demonstrated similar overwhelming support for teaching sexuality education in schools with a relatively small percentage of parents (15%) supporting abstinence-only education [18].

We found that the majority of respondents agreed that parents and health professionals should determine the content of sexuality education. Parents were strongly opposed to politicians determining content. This is in direct contrast to the current policy of North Carolina’s abstinence-until-marriage curriculum mandated by state regulations. Many health professional organizations have voiced their support of comprehensive sexuality education, including the American Academy of Pediatrics and the Society for Adolescent Medicine [26–28]. Although parents rate themselves as most important in determining sexuality education content, nearly a quarter of parents were not even aware that their children received sexuality education in school. Increased parental knowledge of existing curricula is essential for parents to be able take a more active role in determining sexuality education content.

Our study is a descriptive, telephone survey limited to English-speaking parents of public school children in North Carolina. Biases inherent to a telephone survey include an inability to sample those without listed telephone numbers, particularly low income families. By limiting the survey to English-speaking respondents, we were unable to include information about parental opinions of the state’s rapidly growing Spanish-speaking population. Minority, low income, and respondents with lower levels of education were underrepresented in our sample. We observed only one significant difference in support for or opposition to the 20 sexuality education topics and no significant difference in support for abstinence or comprehensive sexuality educa-

tion by race; thus, we would not expect this underrepresentation to significantly bias our results. Our results represent conservative estimates of parental support for sexuality education because respondents with lower levels of education were in general more supportive of sexuality education and underrepresented in our sample.

In conclusion, our results provide compelling evidence that the majority of parents in North Carolina want sexuality education that is comprehensive in content and strongly disapprove of legislators determining content. Current state-mandated abstinence sexuality education policies do not match parental preferences for sexuality education in North Carolina public schools. Although this survey is representative of opinions in one state, North Carolina is typically viewed as among the more conservative regions of the United States. The disconnect between parental expectations and current policy may have implications for the nationwide debate over the content of sexuality education in schools in the United States.

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