(Constantine, N. A., Jerman, P., & Huang, A. X. (2007). California parents' preferences and beliefs on school-based sexuality education policy. *Perspectives on Sexual and Reproductive Health, 39,* 167-175.
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Perspectives on Sexual and Reproductive Health

California Parents' Preferences and Beliefs on School-Based Sexuality Education Policy

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Total number of words: abstract = 251, text = 5,069

Acknowledgements: This study was funded by a grant from The California Wellness Foundation (TCWF). Additional funding was provided by the W.T. Grant Foundation. Thanks to Paul Gibson, Chris Berry, Carmen R. Nevarez, Mike Miller, Wendy L. Constantine, Veronica Raymonda, Gerald Sumner, Michael Kupkowski, and the California Adolescent Sexual Health Work Group for consultation and review. Survey data were collected by Quantum Market Research in Oakland, CA.

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ABSTRACT

CONTEXT: Policy debates continue over the merits of abstinence-only versus comprehensive approaches to sexuality education, despite well-documented public support for comprehensive sexuality education.

METHODS: We conducted a random-digit-dial survey of 1,284 California parents, stratified into five socio-geographic regions. Parents were questioned about sexuality education policy preferences, importance, and reasons for preferences. Cross tabulations and odds ratios were used to assess regional and other subgroup differences. Open coding was employed to develop categories of reasons.

RESULTS: Overall, 89% of the sample reported a preference for comprehensive sexuality education versus 11% for abstinence-only education. Support for comprehensive was consistently high across all regions and subgroups. Four types of reasons for preferences emerged: consequentialist, realistic, and informational (combined to form the *pragmatic* category), and religious or purity-based morality concerns (designated as the *absolutist* category). Abstinence-only supporters were more likely to provide absolutist than pragmatic reasons for their policy preferences, while comprehensive sexuality education supporters provided pragmatic reasons almost exclusively.

CONCLUSIONS: The consistent findings of support for comprehensive sexuality education across diverse California regions, and across categories of race/ethnicity, age, income, religious attendance, evangelical Christian, and ideological leaning, demonstrate the breadth of support for comprehensive sexuality education in California, and the potential for generalizability of these

results to geographically and demographically diverse areas. The consistency of support across ideological and religious subgroups, together with the reasons given by supporters of different approaches, challenge the common belief that the sexuality education debates largely involve a clash between conservatives and liberals, suggesting instead the importance of the pragmatic versus absolutist distinction.

California Parents' Preferences and Beliefs on School-Based Sexuality Education Policy

Ongoing and sometimes rancorous policy arguments at the federal, state, and local school-district levels address the relative merits of sexuality education that teaches abstinence-only until marriage, versus approaches that include instruction regarding contraception and protection from sexually transmitted diseases (STDs) for students who do become sexually active. This policy debate continues despite widespread support for including contraception and protection in sexuality education curricula, which has been documented among American voters, parents, students, teachers, and health professionals, nationally and in diverse regions of the country [1-6]. The phrase *comprehensive sexuality education* is commonly used in policy debates and by the media to distinguish approaches that include contraception and protection from those that strategically omit these topics. A more expansive definition of comprehensive sexuality education includes three key components: it provides complete, accurate, positive, and developmentally appropriate information on human sexuality, including the risk reduction strategies of abstinence, contraception, and protection from STDs; it promotes the development of relevant personal and interpersonal skills; and it includes parents or caretakers as partners with teachers (see the National Guidelines Task Force's *Guidelines for Comprehensives Sexuality Education* for a more detailed discussion [7]).

Contrary to this widespread support for comprehensive sexuality education approaches, much of the sexuality education provided by American schools is minimal and fragmented, with essential topics often omitted or inaccurately presented, especially those related to methods of contraception and protection for sexually active youth [8-11]. Although most American students do receive some type of sexuality education by the time they leave high school [4], only about 5-10% receive complete and high quality comprehensive sexuality education [7,12]. Instead,

largely due to the federal funding policies of the last ten years, a growing proportion of students is receiving abstinence-only-until-marriage education, which withholds access to medically accurate and developmentally appropriate comprehensive reproductive health information [13-15].

A national survey of sexuality education in the classroom found that although 89% of the nation's secondary school students receive sexuality education at least once in school, only 68% receive information about how to use condoms correctly [4]. About half of the students surveyed reported that they wanted to know more about HIV (47%), STDs (50%), what to do in cases of rape or sexual assault (55%), how to deal with emotional consequences of being sexually active (55%), how to talk to a partner about birth control and STDs (46%), and how to use and where to get birth control (40%). In this same survey, only 53% of responding students were aware that STDs can increase the risk of getting HIV if sexually active, about what would be expected by chance if every student simply guessed the answer.

Given the paucity of comprehensive sexuality education in American classrooms, one might think that Americans are simply not ready to support school-based comprehensive sexuality education. Yet opinion surveys and other studies have consistently shown widespread public support. For example, a recent national survey found that 82% of U.S. adults supported teaching both abstinence and protection, and 69% supported teaching proper use of condoms [3]. Another national survey reported that 92% of Americans support teaching about condoms in high school [4], and a third national survey found that 90% of adults thought condom use was an appropriate subject for 11th and 12th graders, and 58% thought this was appropriate for 7-8th graders [16]. Parents have been polled less frequently than have general adults, yet a recent survey of North Carolina parents found that 89% supported comprehensive sexuality education [5]. Other national and state-level surveys have reported similar results [1,2,6].

This public support has a strong professional grounding—most mainstream American education, health, and medical professional associations have formally endorsed school-based comprehensive sexuality education, including the American Association of School Administrators, the American Medical Association, the American Nurses Association, the American Psychiatric Association, the American Psychological Association, the American Public Health Association, the American School Health Association, the National School Boards Association, and the Society for Adolescent Medicine [7,17-21].

California is the only state to have consistently opted out of the federally-funded state abstinence-only-until-marriage grant program, otherwise know as Section 510 of the Social Security Act, since its inception in 1996 (Maine, New Jersey, and Pennsylvania have recently opted out as well). This controversial program strictly requires teaching abstinence-only until marriage, and the program guidelines prohibit instruction in or promotion of the use of contraceptive methods [22,23].

The Section 510 funding program is in direct conflict with the California Comprehensive Sexual Health and HIV/AIDS Prevention Education Act of 2003 (SB 71). This act, codified as California Education Code Sections 51930-51939, mandates that if a district chooses to provide sexuality education, it must commence by 7th grade and be age-appropriate, factual, medically accurate, objective, and cover all contraception and STD prevention methods approved by the U.S. Food and Drug Administration. These requirements also apply to HIV/AIDS prevention education, which is minimally mandated in California for all students at least once in both middle school and high school.

According to a recent survey by the California Department of Health Services Office of AIDS, 85% of California adults support abstinence-plus education in public schools, as compared with the 10% who support abstinence-only education [6]. Another California survey

found that 78% of the state's adults think sexuality education programs should teach abstaining from sexual activity and information on how to obtain and use condoms and contraceptives [2]. This survey also found that 91% of adults felt that having sexuality education as part of the school curriculum is very or somewhat important. These findings are supported by local California school districts, which report that only a small proportion of parents opt out of classes for their 6-12th grade children [8]. Seventy percent of districts surveyed reported that no more than 1% of their students had parents who opted them out, and 93% of schools reported no more than 5%.

In spite of model legislation and high levels of public support on comprehensive sexuality education, California still does not have comprehensive sexuality education widely implemented in its schools. A recent school-district survey found that although 94% of the middle and high schools sampled reported providing sexuality education or HIV/STD prevention education, 88% violated one or more provisions of California's sexuality education code, with nearly half (48%) of schools not covering all required topics [8]. California Department of Education staff found similar violations during compliance-review visits with individual school districts [24]. One justification frequently heard for omission of key aspects of the mandated comprehensive sexuality education was fear of community opposition, together with the belief that state and national surveys showing high levels of support are not applicable to a district's unique community. This justification is consistent with concerns and beliefs reported by California community stakeholders, including parents and health and education professionals. In a recent series of focus-group interviews, these stakeholders were overwhelmingly in support of comprehensive sexuality education, yet most participants reported feeling intimidated by the anticipated challenges involved in bringing full comprehensive sexuality education to their school district [25].

The present analyses were conducted to provide more detailed information than currently exists about the breadth, depth, and motivational determinants of sexuality education policy preferences and beliefs among parents—a critical and understudied population of stakeholders. Because of the size and diversity of California, the study was designed to allow for regional and other subgroup estimates of parents' preferences, beliefs, and feelings. The findings of this survey will be relevant to California policy influentials involved in reviewing and developing sexuality education policy, including ongoing challenges and proposed expansions to the current comprehensive sexuality education code. At the same time, the analysis of regional and other subgroup differences and consistencies, together with the investigation of reasons given for preferences, will add to the sparse published literature on parental preferences and beliefs in this area more generally.

METHODS

The survey questions and sampling plan were developed during fall, 2005 through spring, 2006. The survey instrument and protocol were reviewed by the Public Health Institute's Institutional Review Board and declared exempt as per Category 2 of 45 CFR 46.101. The protocol for obtaining informed consent followed standard telephone survey informed consent practice. The parent was read a consent script and then asked if he or she would agree to participate, with the response entered directly into the data system.

Ten interviewers were trained in spring, 2006 and videotaped for use with any new interviewers to be hired subsequent to the training. Two rounds of pilot testing were conducted in spring, 2006 to assess and improve question wording and interviewer performance. This involved recording 18 pilot interviews, which was followed by two study researchers' listening to each interview and documenting potential issues in question presentation, follow-up, or comprehension. As a result of these pilot tests, some survey questions were reworded or

eliminated, and additional training was provided to interviewers. Data collection took place during spring and summer, 2006. Additional monitoring of interviewers by supervisors and by study staff continued throughout the duration of data collection, with additional feedback provided as necessary.

Sampling

We conducted a list-assisted random-digit-dial (RDD) survey of California parents. The sample was derived from the population of all households in California, and was classified into five social-geographic strata (regions) consisting of contiguous groups of counties organized by geographic and demographic proximity (North/Mountains, Central Valley, San Francisco Bay Area/Central Coast, Los Angeles County, and South; see Figure 1). Respondents were asked to enumerate the numbers of adults and children in the household. Respondents in households with any children aged 18 or younger were asked to identify a parent in the household, after which the parent was read the informed consent script and then asked if he or she would agree to participate. Appointments were made for a follow-up if the respondent was unable to complete the interview at that time. Initial calls were conducted in English; Spanish-speaking respondents were called back by a Spanish-speaking interviewer. At least ten callbacks were made to persistent no-answers, busy phone numbers, and answering machines.

A total of 1,284 parents completed the interview. An overall household response rate of .53 was calculated using the American Association for Public Opinion Research method RR3 [26]. This method represents the number of completed interviews divided by the estimated number of eligible households called, where the number of eligible households is estimated by a formula involving known-eligibles, known-ineligibles, and those of unknown eligibility. Phone numbers with follow-up calls not yet completed when a region's quota was reached were dropped and not counted in the calculations. Our response rate is near the maximum that can be

expected for rigorous large-scale RDD surveys, and several recent studies have demonstrated that non-response bias is typically minimal in such surveys [27,28].

To enhance statistical efficiency for estimates within each of the five specified regions, the sample was designed with higher sampling rates for the smaller regions. To compensate for the resulting difference in selection probabilities, we used stratum weights in full statewide analyses that pooled data across strata. The resulting design effect attributable to weighting was minimal (1.13). Confidence intervals (.95) ranged between +-.02 and +-.03 for full statewide-sample (N = 1,284) proportion estimates, and between +-.05 and +-.06 for full regional strata estimates (N = 253–262). Confidence intervals for subgroups estimates were larger.

Measurement and Analysis

The primary survey question asked a respondent's preference for one of three sexuality education policy options:

> *What do you think teenagers should be taught in sex education classes? (a) ONLY about abstinence, that is, not having sex until marriage, (b) ONLY about how to prevent pregnancies and the spread of sexually transmitted infections if they do decide to have sex, (c) BOTH about abstinence AND about how to prevent pregnancies and the spread of sexually transmitted infections if they do decide to have sex.*

We refer to the three options offered as abstinence-only, protection-only, and abstinence-plus. For many of the analyses reported, we combined the protection-only and abstinence-plus categories into a new category of protection-included, referred to subsequently by the commonly used label comprehensive sexuality education. This categorization is consistent with the key policy-debate distinction of excluding versus including instruction about how to prevent pregnancies and the spread of STDs for students who do become sexually active. The simplified definition provides a dichotomous variable (comprehensive sexuality education vs. abstinence-

only education) amenable to odds ratios and other types of categorical analyses. Other important aspects of comprehensive sexuality education are covered in more detail through subsequent survey questions about importance of, and earliest grade level for, specific sexuality education topics.

Other pre-coded questions asked about strength of feelings on the overall policy preference question and about the importance of this preference in deciding who to vote for in a school board election. One open-ended question included in this study asked about reasons for the respondent's stated policy preference.

Quantitative analyses were performed using SPSS 12.0 for Windows. Cross tabulations and odds ratios were used to assess region, race/ethnicity, and other potential subgroup disparities, with statistical significance assessed by Pearson chi-square test (For expected frequencies of fewer than five, we used Fisher's exact test or the Monte Carlo approximation if computational limits were reached for Fisher's exact test). An alpha level of .05 was used to evaluate statistical significance, and only statistically significant odds ratios were reported. Variable categories with fewer than 25 parents were collapsed into other categories as appropriate. Unadjusted odds ratios for the comprehensive sexuality education preference were calculated for dichotomous yes/no variables that resulted from each of the 11 categorical variables reported in Table 1. Each dichotomous variable reflected the difference between subgroup members versus non-members. Stratum weights were applied to all analyses that pooled data across strata (regions).

Qualitative analysis methods were used for the open-ended question on reasons for preference. This involved open coding of data to develop substantive categories, using Excel spreadsheets that were later merged into SPSS files. The first and third authors each independently coded a sample of 100 responses across the three policy preference categories.

Differences were discussed and resolved, and a coding dictionary was developed. The third author then coded the remainder of the responses, and the first author then reviewed these codes. All questions raised were discussed and resolved by the two coders.

Sample demographics

A majority of the 1,284 sampled parents was female (75%) and aged between 30 and 49 years (67%). The largest racial/ethnic subgroups were Hispanic (46%) and non-Hispanic White (38%). Twenty-eight percent of parents had earned a high school diploma or GED and 37% had earned a college degree or higher. Household income varied, with 35% reporting a household income below $40,000 and 38% reporting a household income above $60,000. A majority of the parents was born in the United States (54%). Of foreign-born parents, the greatest proportion was born in Mexico (30%). Catholics represented the largest religious denomination in the sample (45%), and 19% of parents identified as born-again or evangelical Christians. A quarter of the parents reported attending religious services more than once a week, and another quarter reported attending rarely or never. Thirty-seven percent of parents self-identified as very or somewhat conservative, 27% as middle of the road, and 24% as very or somewhat liberal. The demographic characteristics of the sample are presented in further detail in Table 1.

RESULTS

Overall, 82% of the sample reported a policy preference for abstinence-plus-protection sexuality education, 7% for protection-only, and 11% for abstinence-only. This yields a combined level of 89% support for the combined protection-included category, referred to here as comprehensive sexuality education, as compared with 11% support for abstinence-only (protection-excluded) category.

Breadth of support for comprehensive sexuality education

Uniformly high levels of support for comprehensive sexuality education were found across all five regions, differing only within the expected range of random sampling error (from 93% in Los Angeles County to 89% in the North/Mountains and Central Valley regions, 88% in the South region, and 87% in the San Francisco Bay Area/Central Coast region; see Figure 2). In addition, large proportions of respondents from all race/ethnic groups preferred comprehensive sexuality education, ranging from 92% among Whites, 90% among Hispanics, and 89% among African Americans, to 82% for Asian Americans (OR = .52) and 79% for "other" (OR = .42).

Parents across all age groups also showed high levels of preference for comprehensive sexuality education, with those under age 30 significantly most likely to prefer comprehensive sexuality education over abstinence-only education (94%, OR = 2.03). Similarly, respondents of all educational levels preferred comprehensive sexuality education, although the level of support differed slightly between educational levels. The lowest level of support for comprehensive sexuality education was found among those with less than a high school education (84%, OR = 0.53), as compared with respondents of other educational levels. Support for comprehensive sexuality education did not vary significantly across income levels.

No significant difference was found in preferences for comprehensive sexuality education between those who self-identified as evangelical Christians (86%) and those who did not (91%). In addition, support for comprehensive sexuality education was consistent with only small variations across all levels of religiosity, defined as frequency of attendance at religious services. As compared with other groups, respondents who never or rarely attended religious services (96%, OR = 3.84) and those who attended 1-3 times a month (95%, OR = 2.76) were significantly more likely to prefer comprehensive sexuality education. Conversely, respondents who attended religious services once a week (84%, OR = 0.53) and those who attended more

than once a week (69%, OR = 0.20) were significantly less likely to prefer comprehensive sexuality education, although both groups were still predominately supportive of comprehensive sexuality education.

A similar pattern was found for ideological leaning (see Figure 3). Respondents who identified as very conservative were significantly less likely to prefer comprehensive sexuality education, although they were still largely supportive (71%, OR = 0.19). Conversely, both moderate (95%, OR = 2.50) and somewhat liberal (96% OR = 3.37) respondents were significantly more likely to prefer comprehensive sexuality education.

Depth of support for comprehensive sexuality education

Large majorities of both abstinence-only (94%) and comprehensive sexuality education (80%) supporters reported having very or extremely strong feelings about the issue. Similarly, large majorities of abstinence-only (91%) and comprehensive sexuality education (69%) supporters considered this issue very or extremely important in voting for a school board member. On average, abstinence-only education supporters reported stronger feelings and voting importance than did comprehensive sexuality education supporters; however, due to the much greater proportion of comprehensive sexuality education supporters in the sample, the majority of strong feelings and strong voting importance was found in association with comprehensive sexuality education support. Almost three-quarters of all respondents preferred comprehensive sexuality education and rated their preference feelings as extremely strong or very strong, and nearly two-thirds of all respondents preferred comprehensive sexuality education and rated their preference for comprehensive sexuality education as an extremely important or a very important voting issue.

In addition, we asked respondents to rate the importance they attributed to the teaching of selected sexuality education topics. Parents were randomly given a reference point of either

middle school or high school. Table 2 shows that the importance of teaching a topic varied by school level, for some topics more than for others. Teaching about avoiding pregnancy and sexually transmitted infections was considered very important by a majority of the respondents, with little variation between those with a middle-school reference point and those with a high-school reference point. And while a majority of respondents thought it was very important to teach about avoiding sexual intercourse, this topic had the largest percentage difference between respondents who were given the high-school reference point and those given the middle-school reference point.

Respondents also indicated the earliest school level at which they thought selected topics should be taught. Although support for the teaching of various sexuality education topics depended on school level, the percentage of complete opposition (i.e., not supported at any school level) for all but one topic ranged from only 0.5% to 4% of the full sample of parents (see Table 3). Homosexuality as a topic, however, was completely opposed by 14% of the state sample, with considerable regional variation. Opposition ranged from a low of 8% in Los Angeles County to a high of 23% in northern California. We also found regional differences in support for teaching specific topics at the elementary school level. For example, on the topic of sexually transmitted infections, only 8% of respondents from the South region versus 20% from the Central Valley region thought the topic was appropriate for teaching at the elementary-school level.

Although 11% of surveyed parents had reported a preference for the abstinence-only approach, Table 3 shows that support for abstinence-only education decreased substantially when respondents were asked about the earliest school level at which "information about birth control pills, condoms, and other types of protection, and their role in preventing pregnancy and sexually

transmitted infections" should be taught. Only 4% of parents preferred that this topic not be taught at any school level.

Reasons for support of abstinence-only and comprehensive sexuality education

We also asked respondents "Why do you feel this way?" immediately following their response to the question about their preference for abstinence-only, protection-only, or abstinence-plus approaches. Four clusters of reasons were identified: (a) reasons that referred to the positive consequences of a respondent's preferred approach or to the negative consequences of a respondent's non-preferred approach (e.g., "because abstinence can help them avoid diseases, it's better that they wait" and "it is important that they know all the information so that they can so they can protect themselves from disease"); (b) reasons that focused on the importance of providing full and complete information to the adolescent (e.g., "because information is power, they'll be able to make better informed decisions" and "I think they should know both sides, both views, so they can be prepared for anything"); (c) reasons that referred to the inevitability of adolescents eventually having sex (e.g., "because you can teach abstinence but human nature says they will sooner or later have sex anyway" and "you can't stop kids from having sex"); and (d) reasons based on approval or disapproval of actions, often with reference to religious beliefs or moral principles, but without any mention of potential consequences (e.g., "because of my philosophy of life, I get it from the bible - there is a moral absolute and in my mind abstinence is right" and "it's up to the parents to talk about abstinence and schools shouldn't be involved, that is a moral deal and schools should teach only facts, not morals"). We further distinguished the first three clusters of reasons as *pragmatic*, as contrasted to the final cluster which we labeled *absolutist*. As illustrated in Figure 4, parents who preferred comprehensive sexuality education overwhelmingly provided pragmatic reasons (94%), while

the majority of parents who preferred abstinence-only education provide absolutist reasons (64%).

DISCUSSION

Consistent with previous national and state-level studies on this topic [1-6], a substantial majority of California parents prefer approaches to sexuality education that include instruction on how to prevent pregnancies and the spread of STDs for students who do decide to have sex. This support was consistently high across all regions of the state, and across all subgroups examined. Furthermore, when preferences were assessed in regard to specific sexuality education topics and grade levels, support for approaches that include information about birth control pills, condoms, and other types of protection for high school students increased to an astonishing 96% of the sample. Equally large majorities of support were found for teaching abstinence as part of the curriculum (97% of parents supported teaching abstinence at one or more school levels).

These findings show that California parents overwhelmingly support sexuality education approaches that are consistent with California's education code on the provision of sexuality education. A key provision of the code is that all sexuality education in California presented in grades seven and above must provide information about the value of abstinence, while also providing information about the effectiveness and safety of all methods of preventing pregnancy and reducing the risk of contracting sexually transmitted diseases that have been approved by the U.S. Food and Drug Administration approved. At the same time, California parents are nearly unanimous (96%) in opposition to key requirements of Section 510, the abstinence-only-until-marriage funding program that requires teaching abstinence-only-until-marriage and prohibits instruction in or promotion of the use of contraceptive methods, regardless of grade level [23,23].

One notable finding of this survey was the uniformity of preference levels across the five socio-geographic regions by which the survey was stratified. While these regions exhibit considerable political and demographic variability, the levels of support found were surprisingly consistent. This finding, combined with the strong feelings and voting-behavior considerations reported , contradicts fears that have been expressed by some education-code non-compliant school districts [24], which have argued that high levels of support for sexuality education were limited to the larger metropolitan areas of the state. The findings of uniformity of support across all five regions, along with the consistency of support found across categories of race/ethnicity, age, income, religious attendance, self-identification as evangelical Christian, and ideological leaning, demonstrate the breadth of support for comprehensive sexuality education in California, and the potential for generalizability of these results to geographically and demographically diverse areas.

A common belief that is reinforced by the popular sociological literature is that the sexuality education debates largely involve a clash between conservatives and liberals [29,30]. For example, sociologist Kristin Luker describes abstinence-only-education supporters and activists as conservatives with religious-based opposition to sex outside of marriage, while describing comprehensive sexuality education supporters as hedonistic liberals having mostly factual concerns about the question of sex [30]. In the terminology of ethics, Luker's distinction might be viewed as representing a conflict between absolutist values (protected, trade-off-resistant, deontological values based on rules concerning behaviors) and pragmatic values (negotiable values focused on outcomes and subject to value trade offs to achieve the best results) [31].

The finding that nearly two thirds of abstinence-only supporters (64%) gave absolutist reasons for their support is not inconsistent with Luker's view. Nevertheless, high levels of

support for comprehensive sexuality education among parents who self-identified as very conservative (71%), and evangelical Christian (84%), demonstrate limitations in equating religious conservativism with abstinence-only support. At the same time the finding that 88% of the full sample, including more than a third of abstinence-only supporters, claimed that their policy preference was based on pragmatic rather than absolutist considerations further challenges the proposition that the sexuality education debates are best characterized as a clash between religious conservatives and hedonistic liberals, suggesting instead the importance of the absolutist versus pragmatic distinction.

We note several caveats associated with this research. The concepts and components of comprehensive sexuality education and abstinence-only education are challenging to describe in survey questions intended for parents of varying backgrounds. It is possible that some parents misunderstood these questions. Nevertheless, the consistency of our results across regions and subgroups, as well as with other national and state-level surveys of this type, suggest an acceptable level of reliability and validity among responses.

Our decision to collapse the protection-only and abstinence-plus groups into the larger category of comprehensives sexuality education for most of the analyses allowed us to mirror the key issue in the policy debates on this topic--whether or not to teach methods of contraception and protection from STDs. We recognize that including protection-only in the comprehensive sexuality education category is inconsistent with some definitions of comprehensive sexuality education, which define abstinence instruction as part of comprehensive, yet we believe that our grouping is consistent with the common use of these terms by policy makers and the general public.

In taking advantage of the efficiency and power of a large telephone survey, we collected the open-ended responses with a minimum of probing and follow-up questioning. We recognize

that self-reported reasons for preferences might not provide a complete and unbiased explanation of the various causal factors that have influenced these preferences. In-depth questioning and probing about these topics with a smaller sample might provide additional useful information and insights. Furthermore, because moral judgments frequently arise from automatic cognitive and affective processes [32], it is possible that some of the pragmatic reasons provided for preference choices were actually post hoc reasoning justifications for intuitively derived moral judgments. This could imply that the incidence of absolutist motivation would be higher than reported. Further research employing responses to randomized comparisons of controlled sexuality education scenarios might help clarify this question [33].

Three-quarters of the interviewed parents were mothers, potentially biasing our results if mothers' views differ systematically from fathers' views. We tested differences between mothers and fathers preferences and other beliefs, and none were found to be statistically significant. For example, comprehensive sexuality education was preferred by 89% of mothers and 88% of fathers. A further caveat is that many languages are spoken by California parents, while resource constraints limited our data collection to English and Spanish languages only. Thus the results reported here will not be precisely representative of the full parent population in California, and specifically might under-represent Asian American parents. Yet many surveys of this type are conducted only in English [e.g., 1, 3-5], and our advantage is that we were able to include the one-third of our sample who preferred or required to be interviewed in Spanish.

In spite of these caveats, our results have potentially important policy implications. The breadth, depth, and motivational determinants of support for comprehensive sexuality education found among California parents will inform future discourse on several major policy initiatives in California. These include the state's legislated comprehensive sexuality education standards, its large investment of state funds to support teen pregnancy prevention programs that include

comprehensive sexuality education, and its decision to sacrifice millions of dollars of federal funding each year available through the Section 510 abstinence-only-until-marriage program. These findings also should be illuminating to school boards and administrators who are responsible for local school district compliance with California's comprehensive sexuality education code. In particular, these results address potential concerns about the generalizability of support for comprehensive sexuality education from national and statewide surveys to their own specific communities, and concerns about the depth of feeling and voting importance among comprehensive sexuality education supporters. Similarly, states and districts around the country can be informed by the consistency of the various aspects of support for comprehensive sexuality education found across diverse California regions and demographic subgroups.

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TABLE 1. Demographic characteristics of survey respondents

Characteristic	% (N=1,284)
Age	
Under 30	17.1
30-39	33.9
40-49	33.4
50 and over	15.1
Missing	0.5
Gender	
Female	74.8
Male	25.1
Missing	0.1
Race and ethnicity	
Hispanic	45.7
White, non-Hispanic	38.2
Asian, non-Hispanic	6.2
African-American, non-Hispanic	4.7
Other, non-Hispanic	4.1
Missing	1.2
Language of interview	
English	67.3
Spanish	32.6
Missing	0.1
Education	
Less than high school	17.5
High school graduate or GED	28.1
Some college	17.4
College graduate	21.5
Graduate school	15.2
Missing	0.3
Household income	
Less than $20,000	15.8
$20,000-$40,000	18.8

$40,000-$60,000	11.7
$60,000-$100,000	18.1
More than $100,000	19.9
Missing	15.7
Place of birth	
USA	53.8
Mexico	30.2
Other Central/South America	5.4
Asia	5.7
Europe	1.8
Other	2.4
Missing	0.6
Religious preference	
Catholic	44.8
Protestant	12.6
Other or Unspecified Christian	20.7
Other	5.9
None	14.1
Missing	1.8
Born-again or evangelical Christian	
Yes	19.0
No	79.2
Missing	1.8
Attend religious services	
Rarely or never	28.7
Few times a year	17.2
1-3 times a month	16.8
Once a week	24.8
More than once a week	10.9
Missing	1.6
Political leaning	
Very conservative	11.2
Somewhat conservative	25.9
Moderate	27.1
Somewhat liberal	16.7
Very liberal	7.3

Missing	11.8

TABLE 2. Importance of teaching selected sexuality education topics according to school-level reference point

Variable	High school	Middle school
To have healthy and positive relationships with someone they are dating***	(N=663)	(N=619)
% very important	85.4	74.6
% somewhat important	11.2	15.0
% not important	2.9	7.8
To avoid dating relationships***	(N=663)	(N=620)
% very important	34.2	48.2
% somewhat important	29.7	30.6
% not important	34.7	20.3
To develop healthy and positive attitudes about their sexuality	(N=663)	(N=620)
% very important	80.4	77.1
% somewhat important	13.9	16.0
% not important	5.0	5.5
To avoid sexual intercourse***	(N=662)	(N=620)
% very important	71.3	85.2
% somewhat important	22.8	11.8
% not important	5.4	3.1
To avoid pregnancy and sexually transmitted infections if they do have sex	(N=663)	(N=620)
% very important	94.0	93.5
% somewhat important	4.4	3.5
% not important	1.1	2.1

***Chi-square test for middle school vs. high school was significant at $p<.001$.

TABLE 3. Earliest cumulative school level at which to teach selected sexuality education topics (N = 1284)

Variable	Elementary school	Middle[a] school	High[b] school	Not at all
Reproductive facts	44.4	90.9	98.5	0.9
Puberty changes	44.5	93.8	98.5	0.6
Importance of responsible relationships	17.3	68.8	97.4	1.9
Sexual decision making	16.8	70.9	96.8	2.4
Pregnancy and childbirth	12.5	65.4	97.0	2.8
Parenting responsibilities	13.8	58.8	97.6	2.2
Abstinence	18.1	80.5	96.6	2.6
Contraception and protection	9.4	67.4	95.8	3.7
Sexually transmitted infections	12.9	73.9	98.9	1.0
Sexual abuse and assault	40.5	79.1	99.1	0.5
Information about homosexuality	18.0	60.8	84.3	13.7

[a]=includes elementary and middle school.
[b]=includes elementary, middle, and high school.

FIGURE 1. California survey regions and component counties (North/Mountain, San Francisco Bay Area/Central Coast, Central Valley, Los Angeles County, South)

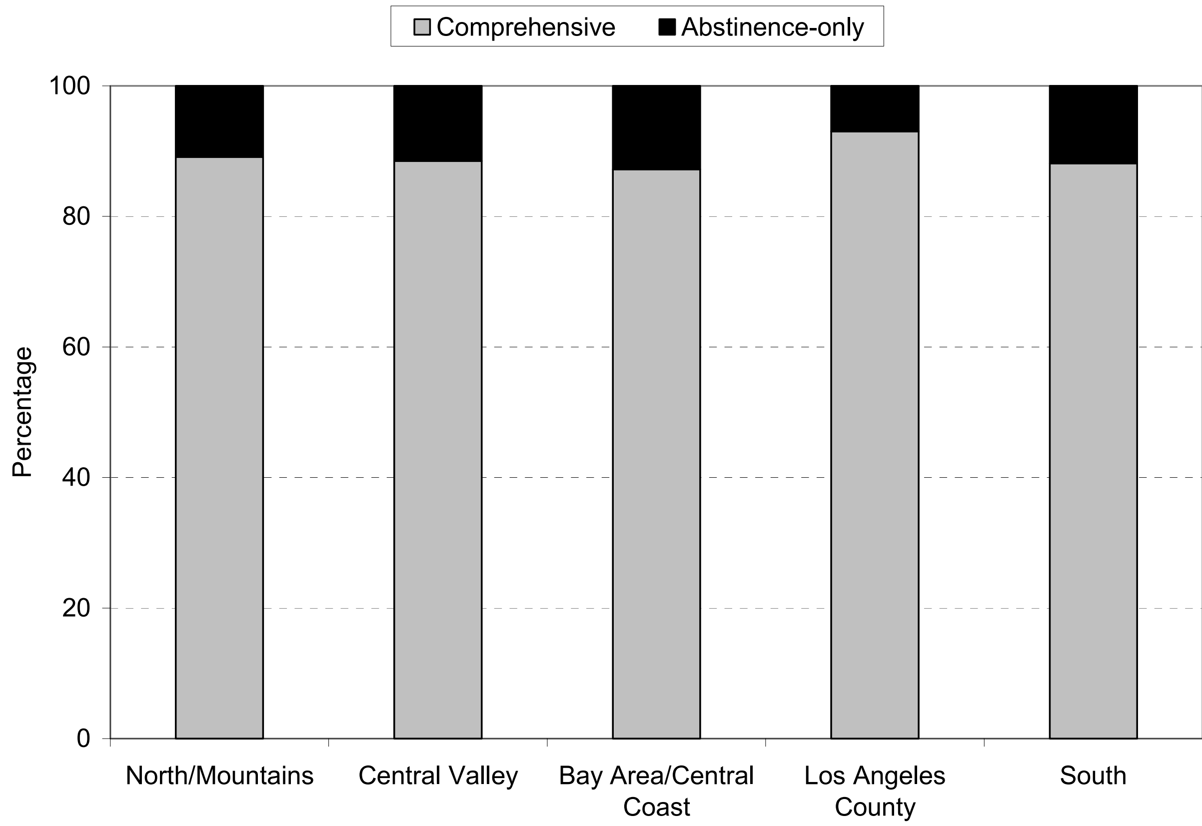

FIGURE 2. Percentage of support for sexuality education approaches by California region.

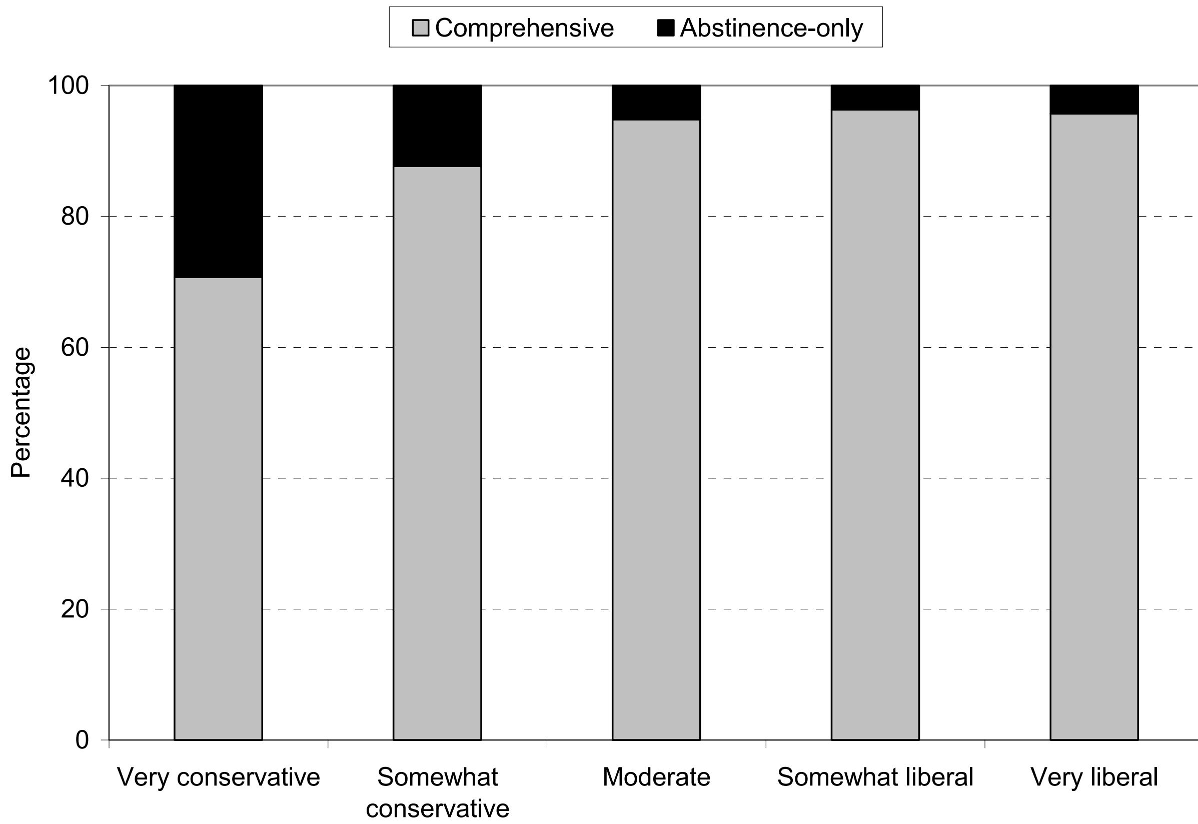

FIGURE 3. Percentage of support for sexuality education approaches by ideological leaning.

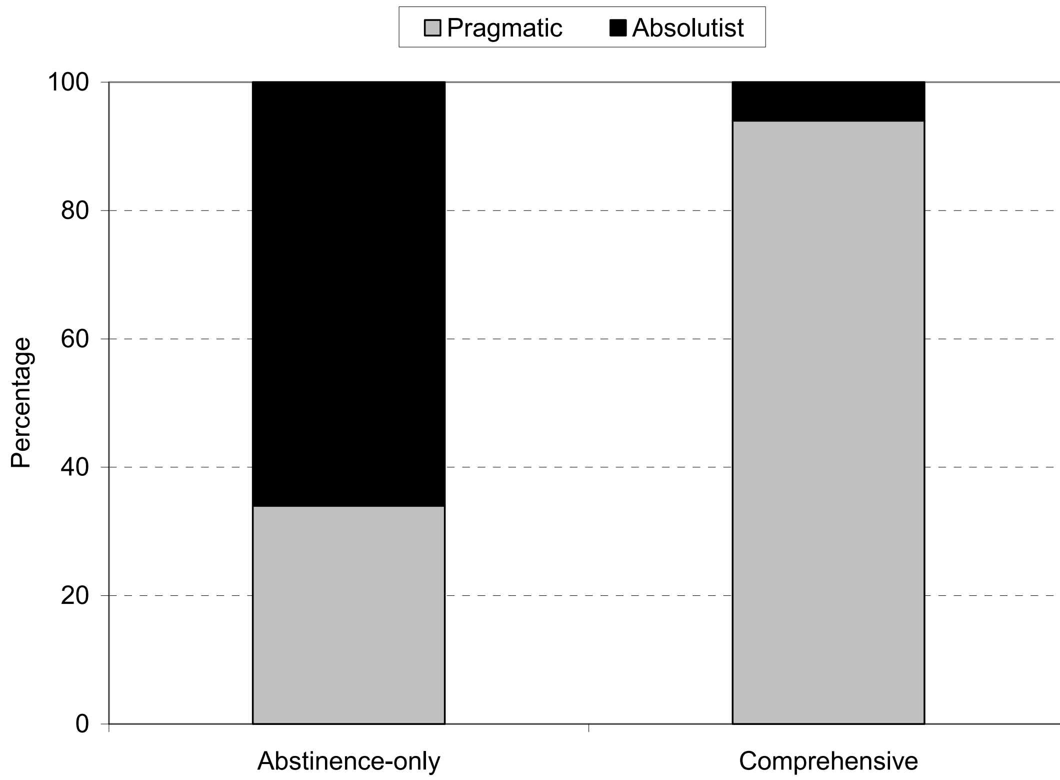

FIGURE 4. Pragmatic vs. absolutist reasons for policy preference, by type of preference.