

# UC Berkeley

## UC Berkeley Previously Published Works

### Title

Factors Associated With Parent Support for Condom Education and Availability

### Permalink

<https://escholarship.org/uc/item/4rx6p1r7>

### Journal

Health Education and Behavior, 41(2)

### ISSN

1090-1981

### Authors

Augsjoost, B  
Jerman, P  
Deardorff, J  
[et al.](#)

### Publication Date

2014

### DOI

10.1177/1090198113505852

### License

[CC BY-NC-ND 4.0](#)

Peer reviewed

# Factors Associated With Parent Support for Condom Education and Availability

Health Education & Behavior  
2014, Vol. 41(2) 207–215  
© 2013 Society for Public  
Health Education  
Reprints and permissions:  
sagepub.com/journalsPermissions.nav  
DOI: 10.1177/1090198113505852  
heb.sagepub.com



**Brett Augsjoost, MPH<sup>1</sup>, Petra Jerman, PhD, MPH<sup>1</sup>,  
Julianna Deardorff, PhD<sup>2</sup>, Kim Harley, PhD<sup>2</sup>,  
and Norman A. Constantine, PhD<sup>1,2</sup>**

## Abstract

Expanding condom-related knowledge and skills and reducing barriers to condom use have the potential to help reduce pregnancies and sexually transmitted infections among youth. These goals are sometimes addressed through condom education and availability (CEA) programs as part of sexuality education in school. Parents are a key constituency in efforts to implement such programs. A representative statewide sample of households with children ( $N = 1,093$ ) in California was employed to examine parent support for CEA and the potential influences of demographics (gender, age, and Hispanic ethnicity), sociodemographics (education, religious affiliation, religious service attendance, and political ideology), and condom-related beliefs (belief in condom effectiveness and belief that teens who use condoms during sex are being responsible) on parent support for CEA. The parents in our sample reported a high level of support for CEA ( $M = 3.23$  on a 4-point scale) and believing in a high level of condom effectiveness ( $M = 3.36$  on a 4-point scale). In addition, 84% of the parents agreed that teens who use condoms during sex are being responsible. Hierarchical regression analyses showed that parents who were younger, Hispanic, with a lower educational attainment, without a religious affiliation, less religiously observant, and politically liberal were more supportive of CEA. After controlling for these demographic and sociodemographic factors, condom effectiveness and responsibility beliefs each added independently to the predictability of parent support for CEA. These findings suggest that parent education related to condom effectiveness could help increase support for school-based CEA programs.

## Keywords

comprehensive sexuality education, condom availability, condom education, parent attitudes, parent beliefs

Broad parent support for school-based comprehensive sexuality education has been widely demonstrated (Bleakley, Hennessy, & Fishbein, 2006; Constantine, Jerman, & Huang, 2007; Eisenberg, Bernat, Bearinger, & Resnick, 2008; Ito et al., 2006; Lindley et al., 1998). Comprehensive sexuality education represents a variety of approaches and configurations of content, but virtually all include some type of instruction on condom use and effectiveness. Schools implementing comprehensive sexuality education may offer condom availability programs as well. For the purposes of this study, condom education and availability (CEA) is an operationalized concept that includes teaching and demonstration of condom use as part of a school-based comprehensive sexuality education curriculum, together with a condom availability program implemented within the school.

Several early studies provided evidence that CEA programs increased condom use among teens, but did not encourage sexual intercourse at an earlier age (Blake et al., 2003; Guttmacher et al., 1997; Schuster, Bell, Berry, & Kanouse, 1998). With the dissemination of this promising research came calls for expanded CEA programs, but

research on condom availability programs has since waned (Epstein, 2006; Fields & Tolman, 2006). Recently, however, several studies have been conducted on parent support for CEA in schools (Eisenberg, Bernat, Bearinger, & Resnick, 2009; Yarber, Milhausen, Crosby, & Torabi, 2005). A variety of demographic, sociodemographic, and psychological factors appear to have potential relevance to the understanding of parent support for CEA.

## Gender and Age

Two studies examined parent gender in relation to support for CEA, and neither showed significant associations

<sup>1</sup>Public Health Institute, Oakland, CA, USA

<sup>2</sup>University of California, Berkeley, CA, USA

## Corresponding Author:

Brett Augsjoost, Center for Research on Adolescent Health and Development, Public Health Institute, 555 12th St., 10th Floor, Oakland, CA 94607, USA.

Email: baugsjoost.ph@gmail.com

between the two (Eisenberg et al., 2009; Ito et al., 2006). Gender differences have been found in support for comprehensive sexuality education, however, with mothers being more supportive than fathers (Bleakley et al., 2006). With regard to parent age, Ito et al. (2006) found that younger parent age was associated with support for instruction on condom use and support for promotion of condoms on television or by the government. In addition, younger parent age was also associated with greater belief in condom effectiveness. Generational differences in beliefs and attitudes toward condoms might be at the root of these associations.

### *Hispanic Ethnicity*

Hispanics are the fastest growing subpopulation in the United States and in California, and they also have the highest teen birth rate (Jerman, Constantine, & Nevarez, 2012; Martin et al., 2008). In addition, Hispanics have poor teen birth outcomes, use condoms less consistently, and are believed to be socially conservative and focused on family culture (Centers for Disease Control and Prevention, 2012; Gilbert, Jandial, Field, Bigelow, & Danielsen, 2004; Ryan, Franzetta, & Manlove, 2005). Two studies examining the relationship between Hispanic ethnicity and parent support for CEA did not detect an association (Bleakley et al., 2006; Eisenberg et al., 2009). Eisenberg et al. (2009) noted that their null results might be biased because they did not provide a Spanish-speaking option for their survey. Understanding Hispanic parents' support for CEA is crucial for developing policy recommendations for schools and communities with large Hispanic populations and ultimately for reducing adolescent sexual health disparities. As public health professionals work to advance CEA programs in public schools, research investigating Hispanic parents' attitudes and beliefs about such programs will be important for their strategic implementation.

### *Education*

Two studies have addressed the association between parent educational level and parent support for CEA (Eisenberg et al., 2009; Ito et al., 2006). Eisenberg et al. (2009) found no association, whereas Ito et al. (2006) found higher levels of education to be associated with lower levels of CEA support. In addition, educational achievement might also be associated with belief in condom effectiveness, but the only known study on parent belief in condom effectiveness did not include education in the analysis (Eisenberg, Bearinger, Sieving, Swain, & Resnick, 2004).

### *Religion*

Some evidence exists on the association between religious affiliation and parent support for CEA. One study indicated

that Catholics and Protestants, compared with those of other or no religion, were significantly less supportive of making condoms available in schools (Ito et al., 2006). Another study showed that Evangelical Christians were less supportive of CEA, as compared with non-Evangelicals (Eisenberg et al., 2009). Evidence also suggests that parents who attend church more frequently are less supportive of CEA (Bleakley et al., 2006; Lindley et al., 1998).

### *Political Ideology*

Previous studies have shown political ideology to be associated with support for CEA, and for comprehensive sexuality education more broadly (Bleakley et al., 2006; Constantine et al., 2007; Eisenberg et al., 2004; Eisenberg et al., 2008; Eisenberg et al., 2009). Political conservatives were found to be less supportive of reproductive health services in schools, including condom availability, condom instruction, and CEA. In addition, political liberals showed greater support for CEA as compared with political moderates (Bleakley et al., 2006; Eisenberg et al., 2008; Lindley, Reininger, & Saunders, 2001).

### *Beliefs in Condom Effectiveness and Responsibility*

Condoms are a highly effective way to reduce the risk of pregnancy, HIV, and other sexually transmitted infections (STIs; Gallo et al., 2007; Holmes, Levine, & Weaver, 2004). Nevertheless, several studies have shown significant differences in belief in condom effectiveness associated with political ideology and age, with politically conservative and older parents having a decreased belief in condom effectiveness (Eisenberg et al., 2009; Yarber et al., 2005). To the best of our knowledge, no studies have examined parent beliefs in teen condom-use responsibility (i.e., beliefs about whether teens who use condoms during sex are being responsible). Neither have the potential associations between condom beliefs and CEA support been studied.

### *Hypotheses*

On the basis of research outlined above, we hypothesized that mothers, younger parents, non-Hispanic parents, non-Catholic parents, non-Evangelical parents, parents who attend religious services less frequently, and parents with a liberal political ideology would be more supportive of CEA. We also hypothesized that parent's educational level would be predictive of CEA support, but because of the limited mixed results research on this factor, this hypothesis is non-directional. In addition, we hypothesized that parents with beliefs in higher levels of condom effectiveness and with stronger beliefs in teen condom-use responsibility would be more supportive of CEA, and that these two beliefs would independently predict levels of support.

## Method

This study used data from a list-assisted, random-digit-dial statewide survey of parents' beliefs, preferences, and practices regarding sexuality education and adolescent sexual health services in California (Constantine et al., 2007; Jerman & Constantine, 2010). The Public Health Institute's institutional review board reviewed the survey instrument and protocol and declared them exempt. Data were collected in the spring and summer of 2006.

## Sampling

The sampling frame was based on the population of all households with a landline telephone in California. Data were collected by trained interviewers and monitored by study staff. The person answering the telephone was asked the number of adults and the number of children aged 18 years and younger in the household and to identify a parent in the household. An available parent was read a consent script, invited to participate, and given the option of a follow-up appointment to complete the interview at that time. Initial calls were conducted in English, and follow-up calls by Spanish-speaking interviewers were made to Spanish-speaking respondents. At least 10 calls were placed to consistently unanswered or busy phone numbers and answering machines (Jerman & Constantine, 2010).

A total of 1,284 parents completed the survey. A response rate of 53% was calculated using the RR3 method of the American Association for Public Opinion Research (Jerman & Constantine, 2010). This conservative method uses the number of completed interviews divided by the estimated number of eligible households called, which is estimated by a formula involving known-eligibles, known-ineligibles, and those of unknown eligibility. The total sample was based on subsampling within California's five all-inclusive regions consisting of groups of counties that share geographic and demographic similarities. Weighting of the sample was based on the higher probability of a respondent being sampled if he or she was from a less populated region. The resulting design effect attributable to weighting (1.14) was minimal.

## Participants

This study's sample included 1,093 of the 1,284 interviewed parents who provided complete demographic, sociodemographic, and condom-related belief data. Demographic and sociodemographic information collected about the parents included gender, age, Hispanic ethnicity, education, religious affiliation, religious service attendance, and political ideology. As shown in Table 1, a majority of the parents in the sample were female (74%). Approximately two thirds of the parents were between 30 and 50 years old. Hispanics represented 43% of the parents, and 66% of Hispanics were interviewed in Spanish. Just over 40% of the parents identified as

Catholic. There was a large intersection between Hispanics and Catholics in this sample, with 75% of Hispanics identifying as Catholic and 75% of Catholics identifying as Hispanic (not shown in Table 1). Parent education ranged from less than high school to graduate school. The greatest majority of the parents identified as ideologically conservative (42%).

## Measurement

Survey items and summated scales were validated by referencing existing literature and parent surveys related to adolescent sexual health and by in-depth review from a panel of content domain and survey methodology experts. Parent support for CEA was measured using a scale composed of the following three items: (a) teenagers need information about how to correctly use condoms to prevent the spread of HIV and other sexually transmitted infections, (b) high school classroom lessons about condoms should include actual condoms so students can see and touch them, and (c) condoms should be made available to students in high schools. Response options were on a 4-point Likert-type scale: *strongly disagree* = 1, *disagree* = 2, *agree* = 3, and *strongly agree* = 4. The mean score across the three items indicated level of support for CEA. Coefficient alpha for the scale was .74.

Belief in condom effectiveness was measured using a scale composed of the following three items: (a) If used properly, how effective do you think condoms are in preventing the transmission of HIV? (b) . . . in preventing sexually transmitted infections other than HIV? and (c) . . . in preventing pregnancy? Response options were on a 4-point Likert-type scale: *not at all effective* = 1, *not too effective* = 2, *somewhat effective* = 3, *very effective* = 4. The mean score across the three items indicated belief in level of condom effectiveness. Coefficient alpha for the scale was .84.

Finally, one item measured belief in teen condom-use responsibility: "Teenagers who use condoms during sex are being responsible." Response options included *strongly disagree* = 1, *somewhat disagree* = 2, *somewhat agree* = 3, and *strongly agree* = 4. For analysis, we recoded this item into a dichotomous variable (not responsible vs. responsible).

## Data Analysis

Analyses were performed using STATA 11 and 12. Frequencies and cross-tabulations were used to summarize demographic and sociodemographic characteristics, belief in condom effectiveness, belief in teen condom-use responsibility, and support for CEA. Belief and support mean score differences across demographic and sociodemographic subgroups were tested for statistical significance using linear regression analyses.

Multivariable analyses were conducted using hierarchical linear regression analysis with parent support of CEA as the

**Table 1.** Demographic and Sociodemographic Characteristics of Parents.

Demographic or Sociodemographic Characteristic	<i>n</i>	%
<b>Gender</b>		
Female	805	73.5
Male	293	26.5
<b>Age</b>		
Under 30	173	15.8
30-39	379	34.8
40-49	378	34.3
50 and over	163	15.1
<b>Hispanic ethnicity</b>		
Hispanic	436	43.1
Non-Hispanic	657	56.9
<b>Education</b>		
Less than high school	161	14.9
High school or GED	220	20.4
Some college	294	25.6
College	243	22.9
Graduate school	175	16.2
<b>Religious affiliation</b>		
Catholic	449	42.9
Protestant	182	15.3
Evangelical	224	20.1
Other	70	6.7
None	168	15.0
<b>Religious-service attendance</b>		
Rarely/never/few times a year	529	47.0
1-3 times per month	191	17.7
Once a week or more	373	35.3
<b>Political ideology</b>		
Conservative	451	41.8
Moderate	341	30.6
Liberal	301	27.6

Note. *N* = 1,093. Numbers are unweighted and percentages are weighted. Other religious affiliation includes Muslim, Buddhist, Jewish, and Mormon.

dependent variable. Employing principles explicated by Victora (Victora, Huttly, Fuchs, & Olinto, 1997), regression models were organized hierarchically with order of entry determined by a factor's conceptual nearness to the dependent variable, such that most distal and relatively immutable factors were entered first and the more proximal factors entered subsequently. Step 1 included demographic factors (gender, age, and Hispanic ethnicity). Step 2 added sociodemographic factors (education, religious affiliation, political ideology, and religious service attendance). Step 3 added parent beliefs in condom effectiveness and teen condom-use responsibility.

## Results

Parents reported high levels of support for CEA ( $M = 3.23$ ,  $SD = 0.03$ ). As shown in Table 2, 92% of parents said they somewhat or strongly agreed that teenagers need information

about how to correctly use condoms to prevent the spread of HIV and other STIs. In addition, 84% of parents somewhat or strongly agreed that actual condoms should be used in the classroom so students can see and touch them, whereas 61% somewhat or strongly agreed that condoms should be made available to students in high school.

Parents also reported believing in high levels of condom effectiveness ( $M = 3.36$ ,  $SD = 0.02$ ). Ninety-two percent of parents believed that condoms are very or somewhat effective at preventing HIV, and 94% believed they are effective at preventing other STIs and pregnancy. In addition, 84% of the parents agreed that teens who use condoms during sex are being responsible.

Table 3 presents the bivariate results for levels of support for CEA as well as levels of condom effectiveness beliefs by each demographic and sociodemographic factor. Female parents ( $p < .03$ ), younger parents ( $p < .001$ ), Hispanic parents ( $p < .001$ ), parents with less education ( $p < .001$ ), Catholic parents ( $p < .001$ ), and liberal parents ( $p < .001$ ) were more supportive of CEA. No significant difference in condom effectiveness beliefs were found based on parent gender, age, or Hispanic ethnicity, but parents who identified as Evangelicals ( $p < .001$ ), who were conservative ( $p < .001$ ), and who reported higher levels of religious service attendance ( $p < .001$ ) believed condoms to be less effective.

Results from the hierarchical regression analysis of factors associated with parent support for CEA are reported in Table 4. Step 1 included the three demographic factors (gender, age, and Hispanic ethnicity),  $F(5, 1,275) = 12.87$ ,  $p < .001$ ,  $R^2 = .055$ . Hispanic ethnicity, age between 30 and 50 years, and female gender were each independently predictive of support for CEA. Step 2 added the four sociodemographic factors (education, religious affiliation, religious service attendance, and political ideology),  $F_{inc}(12, 1,263) = 20.02$ ,  $p = .000$ ,  $R^2 = .206$ ,  $\Delta R^2 = .151$ . Parents with a graduate degree had significantly lower levels of support for CEA than did parents who did not finish high school, as did Evangelical parents compared with parents with no religious affiliation. Parents who attend religious services once a week or more had significantly lower levels of support for CEA than parents who attend rarely/never/a few times a year. Conservative parents had significantly lower levels of support and liberal parents had significantly higher levels of support than did moderate parents. Beliefs in condom effectiveness and belief in teen condom-use responsibility were added in Step 3,  $F_{inc}(2, 1,261) = 124.58$ ,  $p = .000$ ,  $R^2 = .367$ ,  $\Delta R^2 = .131$ . Both factors had a significant positive association with parent support for CEA. Each was independently predictive of support for CEA after adjusting for all the factors in the previous two steps.

## Discussion

We investigated parent support for CEA, with CEA operationalized as teaching about condoms, using condoms in classroom demonstrations, and making condoms available

**Table 2.** Parents' Responses to the Items Comprising Measures of Parent Support for CEA, Belief in Condom Effectiveness, and Belief in Teen Condom-Use Responsibility.

Question	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Parent support for CEA			Strongly disagree	Somewhat disagree	Somewhat agree		Strongly agree	
Teenagers need information about how to correctly use condoms to prevent the spread of HIV and other sexually transmitted infections.	35	3.2	52	4.7	188	17.2	813	75.0
High school classroom lessons about condoms should include actual condoms so students can see and touch them.	104	9.9	71	6.6	240	21.4	672	62.1
Condoms should be made available to students in high schools.	258	23.8	164	15.3	280	25.9	381	35.0
Belief in condom effectiveness			Not at all effective	Not too effective	Somewhat effective		Very effective	
How effective do you think condoms are in preventing the transmission of HIV?	23	2.4	58	5.3	487	45.0	511	47.4
How effective do you think condoms are in preventing sexually transmitted infections other than HIV?	18	1.8	46	4.4	548	49.8	468	44.0
How effective do you think condoms are in preventing pregnancy?	15	1.5	50	4.5	553	49.9	471	44.1
Belief in teen condom-use responsibility			Disagree	Agree				
Teenagers who use condoms during sex are being responsible.	170	15.6	923	84.4				

Note. *N* = 1,093. CEA = condom education and availability. Numbers are unweighted and percentages are weighted.

for students in schools. The parents in our study were largely supportive of all these practices. At the same time, parent support for CEA varied significantly by several demographic and sociodemographic factors, in some cases as hypothesized and in other cases contrary to hypotheses.

Among the primary demographic factors tested, consistent with our hypotheses, mothers were more supportive of CEA than were fathers, and younger parents were more supportive than were older parents. Contrary to our hypothesis, however, Hispanic parents were more supportive of CEA than were non-Hispanic parents. These findings held in both the bivariate and multivariable analyses.

Among the sociodemographic factors assessed, as hypothesized, CEA support increased with decreasing religious service attendance, evangelical parents had lower levels of support than non-evangelical Christians, and support was highest among liberal parents and lowest among conservative parents as compared with moderate parents. We also found a negative relationship between parent education and CEA support, which replicates the findings of a similar study in North Carolina (Ito et al., 2006). Those authors concluded that more educated parents might feel better equipped to discuss sexuality issues with their children as compared with parents with lower education. Thus, parents with higher education may prefer that sexuality discussions happen in the home rather than at the school. We also found Catholic parents to be more supportive than non-Catholic parents in the bivariate analyses. In the multivariable analyses, however, being Catholic no longer was associated with CEA support when controlling for being Hispanic—which was highly

correlated with being Catholic. Given this high correlation, Hispanic status may be driving the association between religion and support for CEA. Past research suggests that Hispanic parents are less comfortable discussing sexuality with their children than are non-Hispanic White parents; therefore, they may prefer to have sexuality discussions occur in the context of the school (Meneses, Orrell-Valente, Guendelman, Oman, & Irwin, 2006).

Parent beliefs were associated with support for CEA independent of the effects of all demographic and sociodemographic factors. As hypothesized, belief in condom effectiveness and belief in teen condom-use responsibility were each independently and positively associated with parent support for CEA. Previous studies have examined parent belief in condom effectiveness, but not in relation to support for CEA. We argue that belief in condom effectiveness plays a central role in determining parent support for CEA because most parents want their adolescent to receive information and education that is medically accurate and pragmatically useful. Furthermore, if parents do not believe that teens who use condoms during sex are being responsible (possibly because they do not want their child to be sexually active), they will be less likely to support CEA, regardless of their belief in condom effectiveness.

We note several potential limitations of this study. Nearly three quarters of the parents in our study were female, and this could have biased our results if their views were systematically different from those of male parents. Bivariate analysis did reveal significant parent gender differences in support for CEA (with mothers more supportive than fathers) but not

**Table 3.** Mean Level of Support for CEA and Condom Effectiveness Belief.

Demographic or Sociodemographic Characteristic	CEA			Condom Effectiveness		
	<i>M</i>	<i>SD</i>	<i>p</i>	<i>M</i>	<i>SD</i>	<i>p</i>
Gender			.003			.278
Female	3.28	0.03		3.35	0.02	
Male	3.11	0.05		3.40	0.04	
Age			<.001			.104
Under 30	3.45	0.06		3.38	0.04	
30-39	3.24	0.04		3.42	0.03	
40-49	3.15	0.05		3.31	0.04	
50 and over	3.20	0.07		3.34	0.05	
Hispanic ethnicity			<.001			.085
Hispanic	3.43	0.03		3.32	0.03	
Non-Hispanic	3.09	0.04		3.39	0.02	
Education			<.001			.237
Less than high school	3.46	0.05		3.28	0.06	
High school or GED	3.40	0.05		3.37	0.04	
Some college	3.22	0.05		3.33	0.04	
College	3.09	0.06		3.38	0.04	
Graduate school	3.07	0.07		3.44	0.05	
Religious affiliation			<.001			<.011
Catholic	3.42	0.03		3.34	0.03	
Protestant	3.09	0.07		3.41	0.04	
Evangelical	2.95	0.07		3.26	0.05	
Other	2.91	0.11		3.42	0.08	
None	3.39	0.06		3.48	0.04	
Religious-service attendance			<.001			<.001
Rarely/never/few times a year	3.43	0.03		3.44	0.02	
1-3 times per month	3.27	0.06		3.43	0.04	
Once a week or more	2.97	0.05		3.22	0.04	
Political ideology			<.001			<.001
Conservative	3.02	0.05		3.26	0.03	
Moderate	3.28	0.04		3.39	0.03	
Liberal	3.51	0.04		3.48	0.03	

Note. *N* = 1093. CEA = condom education and availability. Numbers are unweighted and percentages are weighted. Other religious affiliation includes Muslim, Buddhist, Jewish, and Mormon. Significance values are from multiple linear regression analyses.

in belief in condom effectiveness. One advantage of this study as compared with many other studies of this type is our inclusion of a Spanish-language option for completing the phone interview. Nevertheless, California is a diverse state and the resources to accommodate all the languages spoken in California would be unrealistic. Therefore, our sample may be biased toward English and Spanish speakers if they are systematically different from other language speakers in their support for CEA. Furthermore, the sampling frame was based on the population of all households with a landline telephone in California, and therefore, this study did not include parents who used exclusively Internet-based or cellular phone service.

The findings of this study have several potential policy implications. A large majority of parents across California support CEA as part of comprehensive sexuality education

in school, and although some groups are less supportive than others, the differences are not large. Even among the groups least supportive of CEA, such as evangelicals, frequent religious service attenders, and ideological conservatives, more than half of respondents were somewhat or strongly supportive of CEA. Support of CEA is associated with belief in condom effectiveness. Thus, increasing access among parents to medically accurate information and education on condom effectiveness might increase support for CEA even further.

In program and policy discussion about teen pregnancy and STI prevention, much attention has been paid to Hispanic teens, largely due to this group's higher birth rate and lower levels of self-reported condom use, as well as a common belief that Hispanic parents tend to be more socially conservative (Centers for Disease Control and

**Table 4.** Summary of Hierarchical Regression Analysis for Factors Associated With Parent Support for CEA.

Variable	B	SE B	$\beta$	p
Step 1				
Gender (female)	0.116	0.058	.063	.049
Age				
Below 30 (reference)				
30-39	-0.153	0.069	-.092	.027
40-49	-0.191	0.074	-.114	.010
50 and over	-0.116	0.085	-.052	.174
Hispanic ethnicity (Hispanic)	0.299	0.051	.188	.000
Step 2				
Education				
Less than high school (reference)				
High school or GED	0.014	0.070	.007	.848
Some college	-0.110	0.078	-.060	.161
College	-0.166	0.087	-.086	.057
Graduate school	-0.273	0.092	-.123	.003
Religious affiliation				
Catholic	0.034	0.081	.021	.675
Protestant	-0.132	0.084	-.058	.116
Evangelical	-0.198	0.091	-.098	.030
Other	-0.200	0.122	-.059	.100
None (reference)				
Religious-service attendance				
Rarely/never/few times a year (reference)				
1-3 times per month	-0.076	0.059	-.036	.198
Once a week or more	-0.356	0.057	-.215	.000
Political ideology				
Conservative	-0.258	0.058	-.157	.000
Moderate (reference)				
Liberal	0.172	0.054	.093	.001
Step 3				
Belief in condom effectiveness	0.347	0.042	.264	.000
Belief in teen condom-use responsibility (responsible)	0.501	0.077	.232	.000

Note.  $N = 1,093$ . CEA = condom education and availability. Each variable is adjusted for all other variables in the same and earlier steps.  $R^2 = .055$  for Step 1 ( $p < .001$ );  $\Delta R^2 = .151$  for Step 2 ( $p < .001$ );  $\Delta R^2 = .131$  for Step 3 ( $p < .000$ ).

Prevention, 2012; Gilbert et al., 2004; Ryan et al., 2005). Based on these notions and several studies on parent-child communication (Jerman & Constantine, 2010; Romo, Cruz, & Neilands, 2011) we had hypothesized that non-Hispanic parents would be more supportive of CEA than would Hispanic parents, but we found the opposite to be true. A likely explanation is that Hispanic parents, while tending to be socially conservative, are prioritizing pragmatic health promotion values over ideological values when it comes to the well-being of their children (Constantine et al., 2007). In any case, this finding suggests that underrecognized and underutilized support for CEA among Hispanic parents could be a valuable resource to employ in developing and promoting CEA.

During the last decade, California and much of the United States have made progress in reducing teen births

and, to a lesser extent, certain STIs among some groups of youth. Yet there is still much room for improvement, especially in reducing rates and disparities of STIs such as chlamydia and gonorrhea (Hallfors, Iritani, Miller, & Bauer, 2007; Jerman & Constantine, 2010). Access to and effective use of condoms among sexually active teens are a critical component of further reductions in teen births and teen STIs, and CEA programs have the potential to increase both access and use. At least, the results of this study have shown willingness on the part of a majority of parents in California to support making condoms a part of the educational environment. Additional research on condom availability programs and a national survey of parents' attitudes toward such programs could help further justify and support widespread implementation of CEA programs.



## Acknowledgments

Survey data were collected by Quantum Market Research in Oakland, CA. The authors thank Dr. Brenda Eskenazi for review and suggestions. An earlier version of this article was presented at the Biennial Meeting of the Society for Research on Child Development in Seattle, WA (April, 2013).

## Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Funding

The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article:

This work was supported by grants from the Ford Foundation, the William and Flora Hewlett Foundation, and The California Wellness Foundation.

## References

- Blake, S. M., Ledsky, R., Goodenow, C., Sawyer, R., Lohrmann, D., & Windsor, R. (2003). Condom availability programs in Massachusetts high schools: Relationships with condom use and sexual behavior. *American Journal of Public Health, 93*, 955-962. doi:10.2105/AJPH.93.6.955
- Bleakley, A., Hennessy, M., & Fishbein, M. (2006). Public opinion on sex education in US schools. *Archives of Pediatrics & Adolescent Medicine, 160*, 1151-1156. doi:10.1001/archpedi.160.11.1151
- Centers for Disease Control and Prevention. (2012). Prepregnancy contraceptive use among teens with unintended pregnancies resulting in live births—Pregnancy Risk Assessment Monitoring System (PRAMS), 2004-2008. *Morbidity and Mortality Weekly Report, 61*(2), 25-29. Retrieved from <http://www.cdc.gov/mmwr/pdf/wk/mm6102.pdf>
- Constantine, N. A., Jerman, P., & Huang, A. X. (2007). California parents' preferences and beliefs regarding school-based sex education policy. *Perspectives on Sexual and Reproductive Health, 39*, 167-175. doi:10.1363/3916707
- Eisenberg, M. E., Bearinger, L. H., Sieving, R. E., Swain, C., & Resnick, M. D. (2004). Parents' beliefs about condoms and oral contraceptives: Are they medically accurate? *Perspectives on Sexual and Reproductive Health, 36*, 50-57. doi:10.1363/psrh.36.50.04
- Eisenberg, M. E., Bernat, D. H., Bearinger, L. H., & Resnick, M. D. (2008). Support for comprehensive sexuality education: Perspectives from parents of school-age youth. *Journal of Adolescent Health, 42*, 352-359. doi:10.1016/j.jadohealth.2007.09.019
- Eisenberg, M. E., Bernat, D. H., Bearinger, L. H., & Resnick, M. D. (2009). Condom provision and education in Minnesota public schools: A telephone survey of parents. *Journal of School Health, 79*, 416-424. doi:10.1111/j.1746-1561.2009.00429.x
- Epstein, S. (2006). The new attack on sexuality research: Morality and the politics of knowledge production. *Sexuality Research & Social Policy, 3*, 1-12. doi:10.1525/srsp.2006.3.1.01
- Fields, J., & Tolman, D. L. (2006). Risky business: Sexuality education and research in U.S. schools. *Sexuality Research & Social Policy, 3*, 63-76. doi:10.1525/srsp.2006.3.4.63
- Gallo, M. F., Steiner, M. J., Warner, L., Hylton-Kong, T., Figueroa, J. P., Hobbs, M. M., & Behets, F. M. (2007). Self-reported condom use is associated with reduced risk of chlamydia, gonorrhea, and trichomoniasis. *Sexually Transmitted Diseases, 34*, 829-833. doi:10.1097/OLQ.0b013e318073bd71
- Gilbert, W. M., Jandial, D., Field, N. T., Bigelow, P., & Danielsen, B. (2004). Birth outcomes in teenage pregnancies. *Journal of Maternal-Fetal and Neonatal Medicine, 16*, 265-270. doi:10.1080/14767050400018064
- Guttmacher, S., Lieberman, L., Ward, D., Freudenberg, N., Radosh, A., & Des Jarlais, D. (1997). Condom availability in New York City public high schools: Relationships to condom use and sexual behavior. *American Journal of Public Health, 87*, 1427-1433. doi:10.2105/AJPH.87.9.1427
- Hallfors, D. D., Iritani, B. J., Miller, W. C., & Bauer, D. J. (2007). Sexual and drug behavior patterns and HIV and STD racial disparities: The need for new directions. *American Journal of Public Health, 97*, 125-132. doi:10.2105/AJPH.2005.075747
- Holmes, K. K., Levine, R., & Weaver, M. (2004). Effectiveness of condoms in preventing sexually transmitted infections. *Bulletin of the World Health Organization, 82*, 454-461.
- Ito, K. E., Gizlice, Z., Owen-O'Dowd, J., Foust, E., Leone, P. A., & Miller, W. C. (2006). Parent opinion of sexuality education in a state with mandated abstinence education: Does policy match parental preference? *Journal of Adolescent Health, 39*, 634-641. doi:10.1016/j.jadohealth.2006.04.022
- Jerman, P., & Constantine, N. (2010). Demographic and psychological predictors of parent-adolescent communication about sex: A representative statewide analysis. *Journal of Youth and Adolescence, 39*, 1164-1174.
- Jerman, P., Constantine, N. A., & Nevarez, C. R. (2012). *No time for complacency: Teen births in California. 2012 spring update*. Retrieved from <http://teenbirths.phi.org/2012TeenBirthsReport%282010data%29.pdf>
- Lindley, L. L., Reininger, B. M., & Saunders, R. P. (2001). Support for school-based reproductive health services among South Carolina voters. *Journal of School Health, 71*, 66-72. doi:10.1111/j.1746-1561.2001.tb06494.x
- Lindley, L. L., Reininger, B. M., Vincent, M. L., Richter, D. L., Saunders, R. P., & Shi, L. (1998). Support for school-based sexuality education among South Carolina voters. *Journal of School Health, 68*, 205-212. doi:10.1111/j.1746-1561.1998.tb01304.x
- Martin, J. A., Kung, H.-C., Mathews, T. J., Hoyert, D. L., Strobino, D. M., Guyer, B., & Sutton, S. R. (2008). Annual summary of vital statistics: 2006. *Pediatrics, 121*, 788-801. doi:10.1542/peds.2007-3753
- Meneses, L. M., Orrell-Valente, J. K., Guendelman, S. R., Oman, D., & Irwin, C. E. (2006). Racial/ethnic differences in mother-daughter communication about sex. *Journal of Adolescent Health, 39*, 128-131. doi:10.1016/j.jadohealth.2005.08.005
- Romo, L. F., Cruz, M. E., & Neilands, T. B. (2011). Mother-daughter communication and college women's confidence to communicate with family members and doctors about the human papillomavirus and sexual health. *Journal of Pediatric and Adolescent Gynecology, 24*, 256-262. doi:10.1016/j.jpjg.2011.02.006
- Ryan, S., Franzetta, K., & Manlove, J. (2005). *Hispanic teen pregnancy and birth rates: Looking behind the numbers* (Publication No. 2005-01). Retrieved from <http://www.childtrends.org/>

- Schuster, M. A., Bell, R. M., Berry, S. H., & Kanouse, D. E. (1998). Impact of a high school condom availability program on sexual attitudes and behaviors. *Family Planning Perspectives, 30*, 67-72, 88.
- Victora, C. G., Huttly, S. R., Fuchs, S. C., & Olinto, M. T. (1997). The role of conceptual frameworks in epidemiological analysis: A hierarchical approach. *International Journal of Epidemiology, 26*, 224-227. doi:10.1093/ije/26.1.224
- Yarber, W. L., Milhausen, R. R., Crosby, R. A., & Torabi, M. R. (2005). Public opinion about condoms for HIV and STD prevention: A Midwestern state telephone survey. *Perspectives on Sexual and Reproductive Health, 37*, 148-154. doi:10.1363/psrh.37.148.05