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Marshall, Cassondra J

Gomez, Anu Manchikanti

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Young men's awareness and knowledge of intrauterine devices in the United States

Cassondra J. Marshall[a]
Anu Manchikanti Gomez[*b]

Affiliations
(a) School of Public Health, University of California, Berkeley, 50 University Hall MC 7360 Berkeley, CA 94720-7360
(b) School of Social Welfare, University of California, Berkeley, 120 Haviland Hall MC 7400, Berkeley, CA 94720-7400

* *Corresponding author:*
Anu Manchikanti Gomez
School of Social Welfare
University of California, Berkeley
120 Haviland Hall MC 7400
Berkeley, CA 94720-7400
anugomez@berkeley.edu

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Abstract

Objective: Increasing use of long-acting methods of contraception, such as intrauterine devices (IUDs), has been recognized as a promising strategy to reduce the incidence of unintended pregnancy. While men may play an important role in promoting or discouraging contraceptive use, very little research has examined men's knowledge of and attitudes toward IUDs.

Study Design: We used data from the 903 men included in the 2009 National Survey of Reproductive and Contraceptive Knowledge to examine their awareness and knowledge of IUDs and other contraceptive methods by several individual-level characteristics.

Results: Men's awareness and perceived knowledge of IUDs is low in comparison to condoms and birth control pills. Men's perceived knowledge of IUDs was lower than their objective knowledge, as measured by true-false questions about IUDs, suggesting men may be more knowledgeable of IUDs than they perceive. In the multivariate models, men who were uninsured (AOR, 0.4; 95% CI, 0.2-0.6), identified as Christian (AOR, 0.6; 95% CI, 0.3-1.0), and who had never had a sexual health visit (AOR, 0.6; 95% CI, 0.4-1.0) were less likely to have heard of IUDs. Among men who had heard of the method, Hispanic men were less likely (AOR, 0.2; 95% CI, 0.1-0.5) to be more knowledgeable of the method.

Conclusion: Young men report low awareness of IUDs in comparison to other methods, and this varies by demographic characteristics including health insurance status. Family planning programs should consider targeted knowledge promotion for young men, with a focus on contraceptive methods besides condoms and oral contraception.

Implications

Male partners are influential in contraceptive use, yet little research has examined their IUD knowledge. Our findings indicate that healthcare providers may play important role in increasing young men's knowledge of contraceptive methods, including IUDs. This study highlights the need to better incorporate young men into contraception research and programs.

INTRODUCTION

Increasing use of long-acting methods of contraception, such as IUDs, has been recognized as a promising strategy to reduce the incidence of unintended pregnancy [1,2]. Despite the many positive attributes of the IUD, use remains low in the US, though levels of use are increasing. In 2006-08, 5.5% of women using contraception in the U.S. were currently using an IUD, compared to 2.0% in 2002 [3]. While efforts are currently underway to train healthcare providers with the appropriate knowledge and skills to enable IUD use and the Affordable Care Act legislation should make IUDs available without cost sharing, less attention has focused on the critical role of individual- and couple-level factors [4,5].

Research has shown that male partners have an important influence on contraceptive use in heterosexual relationships [6–13]. This small body of research indicates that men are indeed involved and interested in being involved in contraceptive decision-making [8,10,11]. Furthermore, lack of access to accurate information about contraception among men may inhibit communication within couples and promote the use of male-centered methods, such as withdrawal and condoms [10,12,13]. While men may play an important role in promoting or discouraging contraceptive use, very little research has examined men's knowledge of and attitudes toward IUDs. Research has shown low levels of IUD knowledge among men, which may inhibit men's participation in decision-making [8–10,12,14,15]. One recent study that specifically examined knowledge and use of IUDs found that men were far more likely to have low IUD knowledge than women [16].

Research and interventions focused on IUDs have nearly exclusively focused on women [17–22]. A better understanding of men's knowledge of and attitudes toward IUDs is needed to aid in the development of new programmatic approaches that recognize the importance of intimate partners and relationships in contraceptive use, satisfaction and continuation. The present analysis builds on prior research with the National Survey of Reproductive and Contraceptive Knowledge that examined men's knowledge of and attitudes towards a range of contraceptive methods [14–16]. This analysis differs from previous studies by comparing perceived versus objective knowledge of IUDs and other contraceptive methods, and by examining a broad set of socio-demographic characteristics as correlates of IUD knowledge. The objective of this analysis is three-fold: 1) to describe young men's IUD knowledge; 2) to compare the levels of men's knowledge about IUDs to knowledge of other contraceptive methods; and 3) to examine the relationship between individual-level characteristics and IUD knowledge and awareness.

MATERIAL AND METHODS

Data

We analyzed data from the 2009 National Survey of Reproductive and Contraceptive Knowledge (NSRCK), which was commissioned by The National Campaign to Prevent Teen and Unplanned Pregnancy and conducted by the Guttmacher Institute. This survey, also known as the Fog Zone survey, assessed the attitudes and behavior of unmarried young adults regarding pregnancy, contraception and related issues. The NSRCK collected information from 1800 unmarried 18- to 29-year-old women and men in the United States. Sampling was conducted so that weighted results are nationally representative in terms of gender, age and race and ethnicity. Details of the NSRKC sampling methodology can be found elsewhere [23]. We analyzed data from the 903

men included in the sample. Because the data were publicly available and de-identified, the Committee on the Protection of Human Subjects at the University of California, Berkeley deemed this analysis exempt from review.

Measures

Awareness of contraceptive methods was assessed based on questions that asked respondents to indicate if they had ever heard of each contraceptive method. **Perceived contraceptive knowledge** was assessed based on a question that asked respondents who had heard of birth control pills, condoms, injectable contraception, or IUDs to report how much they feel they know about each method (nothing, a little, a lot, everything). **Objective contraceptive knowledge** was measured based on a series of true/false statements assessing understanding of correct use, effectiveness and other facts about birth control pills, condoms, injectable contraception, and IUDs. These questions have been used in several other analyses of men's and women's contraceptive awareness and knowledge [14–16,22,24]. Four summary knowledge scores were calculated for each method based on the number of correct answers to these questions. Following the approach of Dempsey et al., we created dichotomous variables using the mean number of correct answers as a cut point: a score below the mean was considered "less knowledgeable" about the specific method; a score at the mean or higher was considered "more knowledgeable" [16]. The true/false statements measuring IUD knowledge were: 1) All IUDs are banned from use in the United States; 2) A young woman can use an IUD, even if she has never had a child; 3) Women who use IUDs cannot use tampons; 4) To obtain an IUD, a woman must undergo a surgical operation; 5) An IUD cannot be felt by a woman's partner during sex; and 6) IUDs can move around in a woman's body.

Analysis

We calculated univariate statistics to obtain the distribution of perceived and objective knowledge for IUDs, condoms, birth control pills, and injectable contraception. Chi-squared tests were used to assess overall differences in self-report and objective IUD knowledge by the sociodemographic variables. We used bivariate and multivariate logistic regression to test the relationship between sociodemographic characteristics and the two dependent variables of interest, awareness of IUDs and objective IUD knowledge. The following sociodemographic variables were included in the multivariate models: age, race/ethnicity, educational attainment, health insurance status, nativity, public assistance in the past year, religion, current relationship status/sexual activity, ever had a sex education class, ever had a doctor's visit for sexual health services, and ever gotten a woman pregnant. All analyses were conducted in SAS, version 9.3. We used the appropriate sample weight and design variables in SAS SURVEY procedures. Results are reported at the $p<.05$ level.

RESULTS

The mean age of participants was 22.7 years. The majority of the sample identified as non-Hispanic white, were privately insured, were born in the United States, spoke English at home, did not rely on public assistance, had completed high school, had a prior sex education class, and identified as religious (Table 1). Less than half had ever visited a doctor for sexual health services. Just over half of the men were in a current sexual relationship with a woman, and about a fifth had previously gotten a woman pregnant.

More than a third of men reported that they had never heard of the IUD (Table 2). The majority of men had heard of the IUD but reported knowing nothing or little about it, and only 2% reported they knew a lot or everything. Self-reported knowledge of the four contraceptive methods examined varied. Knowledge of condoms was quite high, with the majority of men reporting they knew a lot or everything about the method. Striking differences were noted when comparing the proportion of men that had never heard of certain methods. Similar to IUDs, over 30% of men had never heard of injectable contraception. However, very few men reported never hearing of condoms or birth control pills. In terms of the objective measures of contraceptive knowledge, the majority of young men were considered to be more knowledgeable of condoms and IUDs, while fewer than half were more knowledgeable of injectable contraception and pills. Even though men were far more aware of birth control pills than IUDs, they appeared to have greater knowledge of IUDs than pills, based on their answers to the true-false statements in the survey.

Comparing the self-assessment of IUD knowledge with objective IUD knowledge highlighted that men were more knowledgeable than they perceived. Among men who had heard of the method, while very few (2%) reported they knew a lot or everything about IUDs, approximately 35% of men answered at least 5 of the 6 true/false statements correctly (data not shown). Unlike IUD knowledge, men's high objective knowledge of condoms was consistent with their high perceived knowledge.

Results from bivariate and multivariate analyses assessing differences in IUD awareness are shown in Table 3. Bivariate findings revealed race/ethnicity, educational attainment, insurance

status, nativity status, and having had a sex education class were significantly associated with IUD awareness. For example, non-Hispanic black and Hispanic men were less likely to have heard of IUDs than non-Hispanic white men as were uninsured men and those with Medicaid insurance compared to private insurance. Men who had ever had a sex education class were more likely to have heard of IUDs. In the multivariate model, insurance status remained a significant predictor of IUD awareness. In addition, men who never had a sexual health visit were less likely to have heard of IUDs. Race, education, nativity and sex education were no longer associated with having heard of IUDs in the multivariate models.

Regarding objective IUD knowledge, race/ethnicity was the only covariate significantly associated with being more knowledgeable of IUDs in both bivariate and multivariate models. In the multivariate models, Hispanic ethnicity remained the only significant predictor of objective IUD knowledge.

DISCUSSION

In this nationally representative sample of young adult men, IUD knowledge was low. We found that a considerable proportion of men had never heard of an IUD as a method of birth control and, of those who had, the vast majority felt they did not know much. Our examination of IUD knowledge compared to knowledge of other birth control methods revealed that far more men had heard of male condoms and birth control pills than of IUDs. Unsurprisingly, the vast majority of men reported they knew a lot about male condoms. This is expected, given that male condoms are the only male-dependent method of birth control and that women in the United States much more frequently use condoms and birth control pills than IUDs [25].

We found a number of differences in IUD knowledge by sociodemographic characteristics. In the multivariate models, more socially disadvantaged groups, including those with less than a high school education and who are uninsured or rely on public insurance, were less likely to have heard of IUDs. Among men who had heard of IUDs as a method of birth control, the variable most strongly associated with being less knowledgeable about IUDs was Hispanic ethnicity. A previous analysis of women in this dataset similarly found low knowledge of IUDs among Hispanics [24]. These findings may reflect the fact that, compared to more socially advantaged groups, these groups have typically experienced lower access and increased barriers to obtaining quality health care and therefore the most effective methods of contraception. The findings that men who had a sexual health visit in the past year were more likely to have heard of IUDs and that men without health insurance were much less likely to have heard of IUDs highlights the role of the health care system – particularly healthcare providers – in promoting contraceptive knowledge. At the same time, the importance of interactions with the health care system in this analysis may be reflective of an overall lack of engagement with men's role in family planning. Providing high quality sexual health care to men is crucial, but men should be engaged in other settings, including communities and schools, in order to better shape family planning programs and services. Research has shown that women are more likely to report they receive contraceptive information from doctors and nurses, whereas men are likely to receive information from other sources [26]. Given that less than half our sample had ever visited a doctor for sexual health services, it is also important to consider avenues for contraceptive education beyond healthcare providers.

Relationship status, sexual experience, or past experience of a pregnancy was not associated with having heard of an IUD. This is somewhat surprising, given the research that shows males' reliance on their female partners as a source for contraceptive information, suggesting that men with partners may be more aware of contraceptive methods [26]. We hypothesized that a previous sexual education class would be associated with greater awareness and knowledge of IUDs. We found that men who had ever had a sexual education class were more likely to have heard of IUDs at the bivariate level; however, this was no longer significant in the multivariate model. We also found no significant association between sex education and IUD knowledge. Although the vast majority of our sample had a previous sex education class, we were unable to ascertain the quality or content of this education, which may have influenced our results.

These findings should be considered in light of the study's limitations. First, we are unable to make causal associations with these cross-sectional data. Second, there were likely many factors associated with IUD knowledge that were not included in our multivariate models. Another limitation is the very small number of individuals identifying as Asian and other races in this sample, which were combined into one heterogeneous group in the analysis. One of our primary outcome measures – objective IUD knowledge – was based on responses to six true-false questions. Participants had a high likelihood of a correct answer even if they "guessed," and these six questions do not fully capture IUD knowledge. In future surveys, researchers should actively encourage respondents to select the "I don't know" answer rather than guessing to increase the quality of IUD knowledge measurement. In addition, these results may not be generalizable to married men or men outside of the 18 to 29 age range. A final limitation is that the data presented in this analysis, while valuable, may be dated. There have been many

programmatic efforts to increase knowledge of long-acting reversible contraceptive methods, including IUDs, over the past five years. While nearly all of these efforts have targeted women, it is possible men's awareness and knowledge has increased during this time.

Despite these limitations, this study makes an important contribution as being one of the first to critically examine men's IUD knowledge and awareness. Additional research is needed to explore the impact that sex education classes and programs can have on increasing both men's knowledge and use of the most effective contraceptive methods. Future research should also examine men's perceptions of the impact of IUDs on sexual pleasure. In addition, research with more diverse samples, including men from understudied racial and ethnic minorities, is crucially needed. The findings of the present study underscore the need to incorporate men into contraception research and programs, acknowledging the dyadic nature of pregnancy prevention and that increasing knowledge and familiarity with IUDs requires a more comprehensive approach that includes both men and women.

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References

[1] American College of Obstetricians and Gynecologists Committee on Gynecologic Practice, Long-Acting Reversible Contraception Working Group. ACOG Committee Opinion no. 450: Increasing use of contraceptive implants and intrauterine devices to reduce unintended pregnancy. Obstet Gynecol 2009;114:1434–8. doi:10.1097/AOG.0b013e3181c6f965.

[2] Speidel JJ, Harper CC, Shields WC. The potential of long-acting reversible contraception to decrease unintended pregnancy. Contraception 2008;78:197–200. doi:10.1016/j.contraception.2008.06.001.

[3] Mosher WD, Jones J. Use of contraception in the United States: 1982-2008. Vital Health Stat 23 2010:1–44.

[4] Health Resources and Services Administration. Women's Preventive Services Guidelines. http://www.hrsa.gov/womensguidelines/ (accessed March 6, 2015).

[5] Bixby Center for Global Reproductive Health. The Kenneth J. Ryan Residency Training Program in Abortion and Family Planning. http://www.ryanprogram.org/ (accessed March 6, 2015).

[6] Yee L, Simon M. The role of the social network in contraceptive decision-making among young, African American and Latina women. J Adolesc Health Off Publ Soc Adolesc Med 2010;47:374–80. doi:10.1016/j.jadohealth.2010.03.014.

[7] Grady WR, Klepinger DH, Nelson-Wally A. Contraceptive characteristics: the perceptions and priorities of men and women. Fam Plann Perspect 1999;31:168–75.

[8] Forste R, Morgan J. How relationships of U.S. men affect contraceptive use and efforts to prevent sexually transmitted diseases. Fam Plann Perspect 1998;30:56–62.

[9] Grady WR, Tanfer K, Billy JO, Lincoln-Hanson J. Men's perceptions of their roles and responsibilities regarding sex, contraception and childrearing. Fam Plann Perspect 1996;28:221–6.

[10] Merkh RD, Whittaker PG, Baker K, Hock-Long L, Armstrong K. Young unmarried men's understanding of female hormonal contraception. Contraception 2009;79:228–35. doi:10.1016/j.contraception.2008.10.007.

[11] SM Harvey, Beckman L, Doty M. Couple Dynamics in Sexual and Reproductive Decision-Making among Mexican Immigrants. Adv. Popul. Psychosoc. Perspect., London: Jessica Kingsley; 1999.

[12] Carter MW, Bergdall AR, Henry-Moss D, Hatfield-Timajchy K, Hock-Long L. A qualitative study of contraceptive understanding among young adults. Contraception 2012;86:543–50. doi:10.1016/j.contraception.2012.02.017.

[13] Raine TR, Gard JC, Boyer CB, Haider S, Brown BA, Ramirez Hernandez FA, et al. Contraceptive decision-making in sexual relationships: young men's experiences, attitudes and values. Cult Health Sex 2010;12:373–86. doi:10.1080/13691050903524769.

[14] Frost JJ, Lindberg LD, Finer LB. Young adults' contraceptive knowledge, norms and attitudes: associations with risk of unintended pregnancy. Perspect Sex Reprod Health 2012;44:107–16. doi:10.1363/4410712.

[15] Borrero S, Farkas A, Dehlendorf C, Rocca CH. Racial and ethnic differences in men's knowledge and attitudes about contraception. Contraception 2013;88:532–8. doi:10.1016/j.contraception.2013.04.002.

[16] Dempsey AR, Billingsley CC, Savage AH, Korte JE. Predictors of long-acting reversible contraception use among unmarried young adults. Am J Obstet Gynecol 2012;206:526.e1–5. doi:10.1016/j.ajog.2012.02.014.
[17] Fleming KL, Sokoloff A, Raine TR. Attitudes and beliefs about the intrauterine device among teenagers and young women. Contraception 2010;82:178–82. doi:10.1016/j.contraception.2010.02.020.
[18] Foster DG, Karasek D, Grossman D, Darney P, Schwarz EB. Interest in using intrauterine contraception when the option of self-removal is provided. Contraception 2012;85:257–62. doi:10.1016/j.contraception.2011.07.003.
[19] Whitaker AK, Johnson LM, Harwood B, Chiappetta L, Creinin MD, Gold MA. Adolescent and young adult women's knowledge of and attitudes toward the intrauterine device. Contraception 2008;78:211–7. doi:10.1016/j.contraception.2008.04.119.
[20] Secura GM, Allsworth JE, Madden T, Mullersman JL, Peipert JF. The Contraceptive CHOICE Project: reducing barriers to long-acting reversible contraception. Am J Obstet Gynecol 2010;203:115.e1–7. doi:10.1016/j.ajog.2010.04.017.
[21] Gomez AM, Clark JB. The relationship between contraceptive features preferred by young women and interest in IUDs: an exploratory analysis. Perspect Sex Reprod Health 2014;46:157–63. doi:10.1363/46e2014.
[22] Gomez AM, Hartofelis EC, Finlayson S, Clark JB. Do knowledge and attitudes regarding intrauterine devices predict interest in their use? Women's Health Issues 2015. doi:10.1016/j.whi.2015.03.011.
[23] Kaye K, Suellentrop K, Sloup C. The Fog Zone: How Misperceptions, Magical Thinking, and Ambivalence Put Young Adults at Risk for Unplanned Pregnancy. Washington, DC: The National Campaign to Prevent Teen and Unplanned Pregnancy; 2009.
[24] Craig AD, Dehlendorf C, Borrero S, Harper CC, Rocca CH. Exploring young adults' contraceptive knowledge and attitudes: disparities by race/ethnicity and age. Women's Health Issues 2014;24:e281–9. doi:10.1016/j.whi.2014.02.003.
[25] Daniels K, Mosher WD. Contraceptive methods women have ever used: United States, 1982-2010. Natl Health Stat Rep 2013:1–15.
[26] Khurana A, Bleakley A. Young adults' sources of contraceptive information: variations based on demographic characteristics and sexual risk behaviors. Contraception 2015;91:157–63. doi:10.1016/j.contraception.2014.09.012.

Table 1. Male Respondent Characteristics, National Survey of Reproductive and Contraceptive Knowledge (n=903)

Characteristic	n	%[a]
Age in years (mean, SE)	22.7	0.2
Race/Ethnicity		
Non-Hispanic white	482	60.6
Non-Hispanic black	134	11.8
Hispanic	214	19.8
Asian/Other	73	7.8
Insurance status in past year		
Medicaid only	43	5.5
Medicaid and private	71	7.7
Private insurance	510	53.9
Other insurance	23	1.6
Uninsured	256	31.2
Educational attainment		
Less than high school	132	17.2
High school graduate/GED	288	31.7
Associates degree or some college	364	35.3
Bachelors or graduate degree	117	15.8
Nativity		
United States	774	85.5
Somewhere else	127	14.5
Language spoken at home		
English	734	81.7
Spanish	118	11.5
Other	48	6.8
Public assistance in past year	48	7.0
Religion		
Catholic	206	19.9
Christian	214	21.3
Protestant	163	19.5
Jewish or other	55	8.2
None	237	29.1
Sexual experience and relationship status		
Current sexual relationship	420	51.7
Sexually experienced but no current sexual relationship	321	35.5
Never sexually active	162	12.8
Had sex education class	706	79.1
Ever visited a doctor for sexual health services	301	40.2
Previous pregnancy	152	21.8

Note: [a]Weighted percentages.

Table 2. Young Men's Perceived and Objective Knowledge of Various Contraceptive Methods

	Perceived Knowledge (n=903)			Objective Knowledge (among those who had heard of method)[a]	
	Never Heard of Method (%)	Heard, Know nothing or little (%)	Heard, Know a lot or everything (%)	Less Knowledgeable (%)	More Knowledgeable (%)
IUD	35.5	62.4	2.1	37.8	62.2
Pill	5.6	78.3	15.9	62.7	37.3
Injectable	31.3	66.0	2.7	52.6	47.4
Condom	0.9	28.7	70.4	37.5	62.5

Abbreviations. IUD, intrauterine device.

[a]Sample size is different for each method since a different number of men had heard of each method. IUD n=568; Pill n=862; Injectable n=598; Condom n=893.

Table 3. Bivariate and Multivariate Regression Results for Correlates of Young Men's IUD Awareness

Variable	Unadjusted OR	95% CI	Adjusted OR[a]	95% CI
Age	1.02	[0.97, 1.08]	1.02	[0.95, 1.10]
Race/Ethnicity				
Non-Hispanic White	Ref		Ref	
Non-Hispanic Black	**0.49***	**[0.28, 0.86]**	0.63	[0.32, 1.25]
Hispanic	**0.41*****	**[0.25, 0.66]**	0.78	[0.41, 1.45]
Asian/Other	**0.49***	**[0.25, 0.94]**	0.72	[0.34, 1.56]
Insurance Status				
Private Insurance	Ref		Ref	
Medicaid only	**0.27****	**[0.11, 0.65]**	0.42	[0.14, 1.25]
Medicaid and private	**0.41***	**[0.19, 0.88]**	**0.33***	**[0.13, 0.83]**
Other insurance	0.84	[0.28, 2.48]	0.99	[0.27, 3.62]
Uninsured	**0.34*****	**[0.22, 0.53]**	**0.37*****	**[0.22,0.63]**
Educational Attainment				
Less than high school	Ref		Ref	
High school graduate/GED	**3.15*****	**[1.74, 5.72]**	**3.14****	**[1.53, 6.42]**
Associates degree or some college	**3.10*****	**[1.72, 5.72]**	**2.22***	**[1.10, 4.48]**
Bachelors or graduate degree	**3.93*****	**[1.86, 8.30]**	2.31	[0.91, 5.82]
Nativity				
United States	Ref		Ref	
Somewhere else	**0.31*****	**[0.19, 0.51]**	0.54	[0.27, 1.07]
Public assistance in past year				
No	Ref		Ref	
Yes	1.22	[0.43, 3.42]	1.33	[0.53, 3.32]
Religion				
None	Ref		Ref	
Catholic	0.74	[0.41, 1.30]	0.78	[0.42, 1.43]
Christian	0.59	[0.34, 1.00]	**0.55***	**[0.30, 0.99]**
Protestant	1.22	[0.64, 2.30]	0.91	[0.48, 1.71]
Jewish or other	1.32	[0.55, 3.20]	1.47	[0.59, 3.63]
Sexual experience and relationship status				
Current sexual relationship	Ref		Ref	
Sexually experienced but no current sexual relationship	0.88	[0.57, 1.36]	1.08	[0.66, 1.75]
Never sexually active	0.75	[0.44, 1.25]	0.82	[0.44, 1.56]
Had sex education class				
No	Ref		Ref	
Yes	**1.93****	**[1.24, 2.99]**	1.06	[0.64, 1.75]
Ever visited a doctor for sexual health services				
No	0.67	[0.44, 1.02]	**0.62***	**[0.39, 1.00]**
Yes	Ref		Ref	
Previous pregnancy				
No	Ref		Ref	
Yes	1.03	[0.61, 2.28]	1.13	[0.62, 2.05]

Notes: *p<.05. **p<.01. ***p<.001. Significant results are bolded.

[a]n=856, which is smaller than the total sample size (n=903) due to missing responses.

Table 4. Bivariate and Multivariate Regression Results for Correlates of Being More Knowledgeable of IUDs Among Young Men Who Had Heard of IUDs

Variable	Unadjusted OR	95% CI	Adjusted OR[a]	95% CI
Age	0.98	[0.91, 1.05]	0.93	[0.85, 1.02]
Race/Ethnicity				
Non-Hispanic white	Ref		Ref	
Non- Hispanic black	**0.432***	**[0.21, 0.90]**	0.48	[0.21, 1.10]
Hispanic	**0.266*****	**[0.14, 0.52]**	**0.246*****	**[0.12, 0.53]**
Asian/Other	0.56	[0.25, 1.26]	0.52	[0.19, 1.45]
Insurance status in past year				
Private insurance	Ref		Ref	
Medicaid only	0.38	[0.12, 1.19]	0.94	[0.24, 3.65]
Medicaid and private	0.79	[0.32, 1.92]	1.24	[0.41, 3.77]
Other insurance	0.91	[0.25, 3.35]	0.59	[0.16, 2.15]
Uninsured	0.68	[0.37, 1.25]	1.35	[0.68,2.70]
Educational Attainment				
Less than high school	Ref		Ref	
High school graduate/GED	0.81	[0.36, 1.82]	0.66	[0.28, 1.57]
Associates degree or some college	1.77	[0.80, 3.94]	1.47	[0.62, 3.46]
Bachelors or graduate degree	2.35	[0.93, 5.94]	2.48	[0.80, 7.74]
Nativity				
United States	Ref		Ref	
Somewhere else	0.55	[0.26, 1.15]	1.00	[0.38, 2.67]
Public assistance in past year				
No	Ref		Ref	
Yes	1.09	[0.29, 4.07]	1.61	[0.41, 6.32]
Religion				
Catholic	0.81	[0.40, 1.63]	0.92	[0.44, 1.91]
Christian	0.88	[0.44, 1.77]	0.87	[0.41, 1.86]
Protestant	1.31	[0.65, 2.62]	1.02	[0.49, 2.13]
Jewish or Other	0.98	[0.36, 2.69]	0.83	[0.28, 2.53]
None	Ref		Ref	
Sexual experience and relationship status				
Current sexual relationship	Ref		Ref	
Sexually experienced but no current sexual relationship	1.01	[0.60, 1.69]	0.87	[0.49, 1.55]
Never sexually active	1.21	[0.62, 2.36]	0.87	[0.39, 1.97]
Had sex education class				
No	Ref			
Yes	0.77	[0.43, 1.38]	0.58	[0.29, 1.13]
Ever visited a doctor for sexual health services				
No	1.19	[0.73, 1.94]	0.91	[0.51, 1.64]
Yes	Ref		Ref	
Previous pregnancy				
No	Ref		Ref	
Yes	0.74	[0.40, 1.36]	0.83	[0.38, 1.81]

Notes: *p<.05. **p<.01. ***p<.001. Significant results are bolded.
[a]n=543, which is smaller than the total number of men who had heard of IUDs (n=568) due to missing responses.