ORIGINAL ARTICLE

Where Do Teens Go to Get the 411 on Sexual Health? A Teen Intern in Clinical Research with Teens

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Abstract

Research Setting: The research for the study reported here was conducted in conjunction with the Biomedical and Health Sciences Internship for High School Students at the University of California, San Francisco, Department of Pediatrics. The eight-week intensive summer program promotes interest in science, medicine, and health among young people by introducing students to the professional world of science, broadly defined. Interns are expected to assist in a specific research project that addresses a scientific question. They participate in a variety of lectures and are exposed to faculty members, medical students, and college graduates working as research assistants in a rich academic and clinical research setting. This study was conducted within Kaiser Permanente (KP) of Northern California as part of a larger study aimed at increasing Chlamydia screening among sexually active adolescents. It was approved by Committee on Human Research, the institutional review board (IRB) for the University of California, San Francisco and the IRB for KP Northern California.

Objective: There were two primary objectives of this study: first, we sought to identify where teenagers obtain information about sexual health; second, we examined whether aspects of a clinician's communication style with a teen during a health care visit were associated with the teen choosing that clinician as a primary source of sexual health information (as compared with parents, peers, teachers, the news media, and other sources).

Results: Teens who perceived that their clinician communicated with respect and explained information in ways that they could understand were more likely to cite their clinician as a source of sexual health information. Having time alone (confidentiality) with a physician was also associated with teens' selection of a clinician as a primary information source. Whether the clinician asked about sex during the health care visit was significantly associated with males selecting the clinician as a primary source of sexual health information. An important finding, at least for males, because teens do not always bring up the topic.

Background

Chlamydia trachomatis is the most common reportable bacterial sexually transmitted infection (STI) in the United States, with the highest rates among adolescents between the ages of 15 and 24 years.[1] Most chlamydial infections are asymptomatic and, if untreated, can lead to pelvic inflammatory disease, ectopic pregnancy, and infertility.[2–6] Interventions have successfully increased rates of screening and treatment of chlamydial infections.[2–7] Despite recommendations to screen sexually active adolescents for Chlamydia at least annually,[8–12] little progress is being made—the most recent data show that only 36% of adolescents between the ages of 16 and 20 years are screened.[13] There is a wide variety of reasons for poor Chlamydia screening rates; of particular interest for the study reported here were factors relating to the styles of clinicians' communication with their adolescent patients. According to the National Longitudinal Study of Adolescent Health, few teens are aware of the risks of chlamydial infections.[14] Teens with low perceived knowledge of STIs have been found to have significantly higher odds of engaging in risky sexual behaviors.[15] Although not sufficient, knowledge is an essential component in prevention efforts and treatment of asymptomatic STIs—namely, Chlamydia. Therefore, it is important to understand who and what teens turn to for information about sexual health. In addition, because clinicians can be an important source of accurate information, we also examined factors associated with teens' ranking their clinician as a source of sexual health information. Prior research has demonstrated that teens are more likely to disclose sensitive health information (sexual history) to their clinician if the

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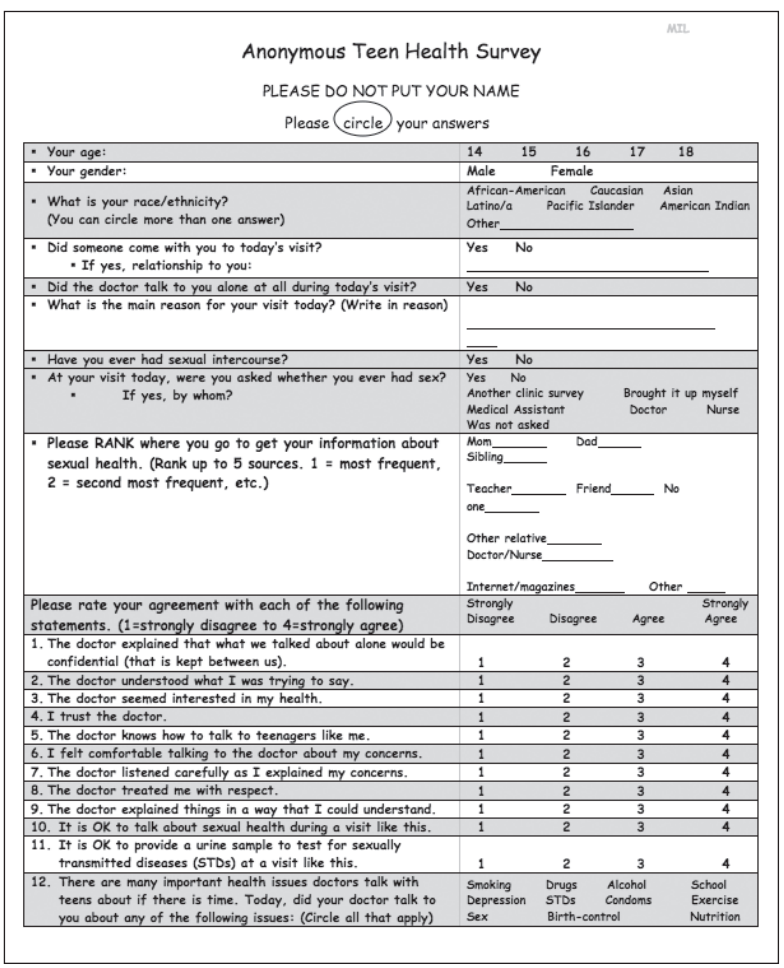
clinician had previous conversations with them regarding sex or sexual health[16] and if the clinician explains that the visit is confidential.[17,18] Decades of research have also identified what clinician communication qualities are important to teens (eg, responsiveness, being a good listener, being caring, respectfulness).[19–21] The current study took this work a step further by examining the association between important aspects of clinicians' communication and with teens' selection of their clinician as a primary source of sexual health information. In addition, we provide updated information on where adolescents go for sexual health information among teens who have access to health care.

Methods

Self-report surveys (Figure 1) were administrated to adolescents, age 14 to 18 years, after an urgent-care visit at one of the four participating Kaiser Permanente Northern California Pediatric Departments. The survey was anonymous, voluntary, and brief (one page). When a teen gave verbal consent, a research associate handed the teen the survey. The teen completed the survey in private (no one else was with the teen during survey completion), dropped it in a one-way collection box, and received a gift certificate redeemable at a local store as a thank-you for participation. The first part of the survey asked for basic demographics: age, sex, and race or ethnicity. It then asked a few questions about the encounter (eg: Did your clinician ask you about sex? Did anyone accompany you at the visit? Have you ever had sex?). It then asked teens to rank where they go to get information about sexual health (with 1 being the most frequent source, 2 being the second most frequent source, and so on). Teens were given a list of possible choices, and they could write in a source if it was not listed. If they ranked a given source of sexual health information as a 1, 2, or 3, that source was considered to be a primary source. Logistic regression examined associations of clinician communication variables with clinician as a source of sexual health information. Analyses were conducted separately for females and males and adjusted for age. Multivariate analyses were then conducted by fitting a model with variables having a p value < .1 from the logistic regression.



Anonymous Teen Health Survey

PLEASE DO NOT PUT YOUR NAME

Please circle your answers

▪ Your age:	14 15 16 17 18
▪ Your gender:	Male Female
▪ What is your race/ethnicity? (You can circle more than one answer)	African-American Caucasian Asian Latino/a Pacific Islander American Indian Other_____
▪ Did someone come with you to today's visit? ▪ If yes, relationship to you:	Yes No _____
▪ Did the doctor talk to you alone at all during today's visit?	Yes No
▪ What is the main reason for your visit today? (Write in reason)	_____ ___
▪ Have you ever had sexual intercourse?	Yes No
▪ At your visit today, were you asked whether you ever had sex? ▪ If yes, by whom?	Yes No Another clinic survey Brought it up myself Medical Assistant Doctor Nurse Was not asked
▪ Please RANK where you go to get your information about sexual health. (Rank up to 5 sources. 1 = most frequent, 2 = second most frequent, etc.)	Mom_____ Dad_____ Sibling_____ Teacher_____ Friend_____ No one_____ Other relative_____ Doctor/Nurse_____ Internet/magazines_____ Other _____

Please rate your agreement with each of the following statements. (1=strongly disagree to 4=strongly agree)	Strongly Disagree	Disagree	Agree	Strongly Agree
1. The doctor explained that what we talked about alone would be confidential (that is kept between us).	1	2	3	4
2. The doctor understood what I was trying to say.	1	2	3	4
3. The doctor seemed interested in my health.	1	2	3	4
4. I trust the doctor.	1	2	3	4
5. The doctor knows how to talk to teenagers like me.	1	2	3	4
6. I felt comfortable talking to the doctor about my concerns.	1	2	3	4
7. The doctor listened carefully as I explained my concerns.	1	2	3	4
8. The doctor treated me with respect.	1	2	3	4
9. The doctor explained things in a way that I could understand.	1	2	3	4
10. It is OK to talk about sexual health during a visit like this.	1	2	3	4
11. It is OK to provide a urine sample to test for sexually transmitted diseases (STDs) at a visit like this.	1	2	3	4
12. There are many important health issues doctors talk with teens about if there is time. Today, did your doctor talk to you about any of the following issues: (Circle all that apply)	Smoking Depression Sex	Drugs STDs Birth-control	Alcohol Condoms	School Exercise Nutrition

Figure 1. Anonymous Teen Health Survey

Results

A total of 365 teens (89% response rate) completed the survey; 58% were female. The mean age of respondents was 15.6 years. The sample was ethnically diverse, with 29% Caucasian, 27% Latino, 15% Asian, 14% multiethnic, 6% Pacific Islander, 5% African American, and 4% other. We found several gender differences regarding whom teens reported as their source of sexual health information (Table 1). Females (50%) tended to be more likely than males (38%) to seek sexual health information from mothers ($p = 0.003$), whereas males were more likely than females to get information from their fathers (31% vs 25%, respectively; $p < 0.001$). In addition, females were more likely than males to report their clinician as a primary source of sexual health information (38% vs 30% respectively; $p = 0.049$). Lastly, males (16%) were more likely than females (8%) to report not having any source of sexual health information. Logistic regression analysis showed that females who stated that their clinician "explained things in a way they could understand" and "provider asked about sex" were significantly associated with clinician as a primary source for sexual health information. For males, the association was significant for "doctor treated me with respect," "asked about sex," and "had time alone

with doctor." However, in multivariate analyses, the only significant associations were age for females (odds ratio [OR], 1.25; 95% confidence interval [CI], 0.928–1.68; $p < 0.01$) and clinician asking about sex at the visit for males (OR, 3.24; 95% CI, 1.56–6.73; $p < 0.01$).

Table 1. Sex differences in sources of sexual health information

Source	Percentage teen females (n)	Percentage teen males (n)	p value
Friend	56 (119)	48 (83)	.205
Mother	50 (103)	38 (67)	.003
Teacher	41 (90)	48 (79)	.436
Clinician	38 (90)	30 (54)	.049
Internet	28 (64)	20 (37)	.190
Father	25 (30)	31 (53)	<.001
Sibling	17 (39)	16 (28)	.887
Other relative	14 (32)	10 (18)	.366
No information source	8 (19)	16 (23)	.015

Conclusion

Though there are more than two decades of research using both qualitative and quantitative methods regarding clinician communication about sensitive health topics with teens,[20,21] ours is the first study to examine teens' assessment of key clinician communication variables with the teens' rating the clinician as a source of sexual health information immediately after their encounter with the clinician. We found that teens who perceived that their clinician communicated with respect and explained information in ways that they could understand were more likely to cite their clinician as a source of sexual health information. Confidentiality has been found to be a key factor in teens' decisions to seek needed health care for sensitive services.[17,18] Similarly, we found that having time alone (confidentiality) with the clinician was also associated with teens' selection of a clinician as a primary source of sexual health information. Surprisingly, not all of these factors remained significant in multivariate analyses. What did remain significant, at least for males selecting their physician as an information source, was whether the clinician asked about sex during the visit. Though adolescents often expect clinicians to discuss sensitive health issues and generally trust their advice,[22,23] teens do not often initiate these conversations, so it is important for clinicians to do so.[16,24]

In terms of who or what teens turn to for sexual health information, friends were the most frequently cited source of sexual health information for teens in our study, followed, in decreasing order, by mothers, teachers, physicians, the Internet, fathers, and other relatives, with notable sex differences. However, recent research is finding that whom teens turn to may vary by type of health problem.[25] As has been found in prior research,[26,27] teen females were more likely to talk to their mothers than males were, and males were more likely to talk with their fathers than females were. In addition, females were more likely than males to report their clinician as a source of sexual health information. This finding may be confounded with data that suggest that clinicians tend to ask females about sex more frequently than they ask males. An astounding finding was that although all of the teens in our study received health care, only 33% reported their clinician as a primary source of sexual health information and 11% reported having no source for such information (with males significantly more likely than females reporting no information source). It should be noted that our study did not control for potential confounding effects of clinician age, ethnicity, clinic setting, or type of visit (urgent versus well care)—all of which could influence clinician–teen interaction during visits. In addition, our findings may not be generalizable to teens outside of this pediatric setting and to those without any health care.

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Implications

Clinicians can play an important role in delivering important and accurate information about STI prevention as well as to screen teens for asymptomatic chlamydial infections. Because STI risk assessment and screening are confidential health services, it is important for clinicians to routinely have time alone with teens to initiate and engage them in such confidential conversations. Doing so may increase the proportion of teens who turn to their clinician for important and accurate sexual health information.

Future research should examine how other aspects of clinician and parental communication can influence teens' choices for seeking sexual health information. It is clear that there are sex differences in whom teens turn to for sexual health information; however, these differences must be further investigated, and particular attention must be given to making sensitive services equally attractive and effective for both females and males—preferably prior to their sexual debut, to deter or at least delay it, as well as to prevent STIs, HIV and AIDS, and pregnancy. Future interventions should be aimed at developing and evaluating both system-level interventions and clinician education programs for

increasing physician comfort, cultural sensitivity, and skill when communicating with teens about sexual health. In addition, more work needs to be done to understand how to best partner with parents in this effort, because parents are an important source of sexual health information for many teens. ❖

From the mentor-author

With a long-standing interest in mentoring adolescents, I welcomed the opportunity to mentor Yana and have been her mentor for three consecutive summers. Having a teen perspective on our research team gave us all a richer appreciation for integrating youth development into our research program. We plan to build on the formative work that Yana has done as we continue to administer these surveys and explore issues of how clinician communication influences not only whom teens turn to for sensitive health information but also how clinician communication influences their attitudes toward disclosing sensitive, personal health risk behaviors and their willingness to be screened for common asymptomatic sexually transmitted infections (eg, Chlamydia). Research shows that mentoring is most effective when part of a formal program (ie, one that has a screening process for mentors and participants, applies some type of matching criteria, and provides ongoing support for mentors and program participants). More information on the high school internship program at the University of California, San Francisco, is available at: www.pediatrics.medschool.ucsf.edu/youth/training/intern.aspx.

—Kathleen Tebb, PhD

From the student-author

The Biomedical and Health Sciences Internship for High School Students at the University of California, San Francisco did more than just expose me to science and medicine. It taught me more about myself than I have learned in all 17 years of my life. I discovered my strengths and interests, finding out more about my personality in addition to dealing with questions people had for me about what I want to be and why. Simply, it taught me to think about who I am. Most importantly, it taught me not to be scared and to never think, *I can't*, without even trying or considering. Before I entered the program, being a physician was just something I said that I wanted to be but never thought that I was strong enough to become. I never thought I had the amount of skills needed or the type of knowledge to succeed, but now, I wonder why I thought that way. I figured out that if you really want to do something in life, nobody has the power to stop you. If I really want to become a physician, no amount of books or words on a page or people in a room can stop me from pushing myself forward.

—Yana Reznik

Editor's Note

Kathleen Tebb, PhD, was the primary research mentor and coauthor of this article with Yana Reznik, a high school student at the time this research was done.

Disclosure Statement

The author(s) have no conflicts of interest to disclose.

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Giving a Fish a Bath

Telling a teenager the facts of life is like giving a fish a bath.

— Arnold H Glasgow, Psychologist