

# Participation in School-Wide Screening for STDs and Perception of STD Risk

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## Abstract

**Background:** Administrators of school-wide screenings for chlamydia and gonorrhea have suggested that participants may self-select for testing because they perceive themselves at risk of STD. But whether participants in school-wide screenings for STDs are individuals who perceive themselves at risk of STD has not been ascertained.

**Objectives:** To determine whether participants in school-wide screenings for chlamydia and gonorrhea are individuals who perceive themselves at risk of STD and factors associated with STD risk perception among high school adolescents.

**Methods:** During school years 2003-2004 and 2004-2005, 3336 participants in a school-wide screening for chlamydia and gonorrhea in New Orleans were asked in a paper-and-pencil, self-administered survey, to assess their chances of getting infected with an STD on a 5-point Likert type scale.

**Results:** Overall, 64.5% of all participants in screening (95% CI: 62.9% to 66.2%) thought their chances of getting infected with an STD were *none*, *not very high* or *medium* and 35.5% (95% CI: 33.8% to 37.1%) thought their chances of getting infected with an STD were *pretty high* or *very high*. Perception of *pretty high* or *very high* risk of STD was independently significantly associated with greater knowledge of STDs (p<0.001) and with a previous infection with chlamydia or gonorrhea or having reported a risky sexual behavior in the past (p=0.04).

**Conclusions:** If only students who perceived themselves at high risk of STD self-selected for testing, no more than 36% of all students tested would have participated.

## Background

- Participation in screenings for sexually transmitted diseases (STDs) in schools is voluntary.
- This raises concerns that students who voluntarily participate in school-based screenings for STDs may self-select for participation based on certain common characteristics, biasing thereby the outcomes of these screening programs.
- Concerns have been expressed in a number of reports that voluntary participants in school-based screenings for chlamydia and gonorrhea may self-select for participation because they perceive themselves at risk of STD.<sup>1-3</sup>

## Objectives

- To determine perception of STD risk of high school adolescents;
- To determine factors associated with perception of STD risk among high school adolescents.

## Methods

•Every year since the school year 1995-1996, students in selected high schools in a New Orleans public school district serving a predominantly African American school population were offered a school-based screening for chlamydia and gonorrhea using nucleic acid amplification tests in urine specimens.

•During school years 2003-2004 and 2004-2005, students screened were asked in a paper-and-pencil, self-administered survey, to confidentially assess their risk of STD by completing the statement “your chances of getting infected with a sexually transmitted disease are” with *none*, *not very high*, *medium*, *pretty high*, and *very high*.

•Participants were also asked in the survey about their knowledge of selected facts concerning STDs. They were asked to indicate with check marks whether they knew that chlamydia and gonorrhea were transmitted sexually, to indicate with check marks among the two conditions the one(s) that can be cured, and to select “yes”, “no”, or “I don’t know” for questions on whether STDs could be asymptomatic and prevented.<sup>4</sup>

•Students who thought their chances of getting infected with an STD were *pretty high* or *very high* were categorized as perceiving themselves at high risk of STD, and those who thought their chances were *none*, *not very high* or *medium* were categorized as not perceiving themselves at high risk of STD.

•Data collected in 2003-2004 and in 2004-2005 were merged into the main screening database. This allowed the determination of whether or not a student had previously attended a school where screening had been conducted, his/her participation in previous screenings, and his/her chlamydia and gonorrhea test results during previous screenings.

•During school years 2000-2001, 2001-2002, and 2002-2003, students screened were asked about their sexual behaviors, including the number of lifetime sex partners (2000-2001 and 2001-2002), the number of sex partners in the past 3 months (2000-2001, 2001-2002 and 2002-2003), and condom use at last sexual encounter (2002-2003).

•With these historical sexual behavior data and chlamydia and gonorrhea test results during previous screenings, a history of STD risk was defined among students who had participated in previous screenings, as a previous positive test result for chlamydia or gonorrhea, or having reported at least one of the following behaviors: **≥4 lifetime sex partners**, **≥2 sex partners in the past 3 months**, **non-use of condom at last sexual encounter**.

## Results

Age characteristics and perception of STD risk among survey respondents						
		Males (n=1,782)		Females (n=1,554)		Total (n=3,336)
		Mean	Median	Mean	Median	Mean      Median
Age (years)		16.95*	17.00	16.73*	17.00	16.85      17.00
Perceived themselves at high risk of STD		%	95% CI	%	95% CI	%      95% CI
Yes	<i>Very high</i>	21.3	19.5, 23.3	23.9	21.9, 26.2	22.5      21.1, 24.0
	<i>Pretty high</i>	13.9	12.3, 15.6	11.8	10.3, 13.6	12.9      11.8, 14.1
	<b>Subtotal</b>	<b>35.2</b>	<b>33.0, 37.5</b>	<b>35.8</b>	<b>33.4, 38.2</b>	<b>35.5</b> <b>33.8, 37.1</b>
No	<i>Medium</i>	14.9	13.3, 16.6	9.3	8.0, 10.9	12.3      11.2, 13.5
	<i>Not very high</i>	19.9	18.1, 21.8	17.6	15.8, 19.6	18.8      17.5, 20.2
	<i>None</i>	30.1	28.0, 32.3	37.3	34.9, 39.7	33.4      31.8, 35.1
<b>Subtotal</b>		<b>64.8</b>	<b>62.5, 67.0</b>	<b>64.2</b>	<b>61.8, 66.6</b>	<b>64.5</b> <b>62.9, 66.2</b>

\*p<0.001

\*\*adjusted for age

**Variables associated with perception of high risk of STD in Logistic regression**

**Among all 3,336 respondents**  
*greater knowledge of STDs*  
(Adjusted OR: 1.15; p<0.001)\*

**Among 914 students tested at least once during previous screenings**  
*greater knowledge of STDs*  
(Adjusted OR: 1.20; p<0.001)\*\*  
*a history of STD risk*  
(Adjusted OR: 1.36; p=0.04)\*\*

\*adjusted for age, current chlamydia or gonorrhea test results, and previous attendance in schools where screening was conducted

## Conclusions

- That 64% of students tested for chlamydia and gonorrhea ranked their own risk below the *pretty high* threshold on our risk scale at the time of testing implies that if only students who perceived themselves at high risk of STD self-selected for testing, no more than 36% of all those tested would have participated.
- Thus, these findings do not support the untested suggestion that participants in the New Orleans school-wide screening for chlamydia and gonorrhea could be self-selecting for testing because they perceived themselves at risk of STDs.<sup>3</sup>
- Studies conducted on adolescent populations in places as diverse as the US, New Zealand and Nepal have consistently shown that most adolescents do not perceive themselves at high risk of STDs.<sup>5-7</sup>
- The consistency in adolescents’ perception of not being at high risk of STD across continents<sup>5-7</sup> constitutes a strong indicator that overall, most participants in school-based chlamydia and gonorrhea screenings are likely to be individuals who do not perceive themselves at high risk of STDs.
- Like in New Orleans, most students who participated in chlamydia screening in schools in Christchurch, New Zealand, did not perceive themselves at high risk of STDs.<sup>6</sup>
- Greater knowledge of selected STD facts and a previous infection with chlamydia or gonorrhea or having reported a risky sexual behavior in the past were independent predictors of respondents’ perception of high risk of STDs.
- These findings together with a previous analysis of these data<sup>4</sup> point towards the following mechanism of STD risk perception: adolescents who acquire an STD and who are treated for their infection and counseled about STDs 1) learn about STDs personally<sup>4</sup> and become 2) conscious of the consequences of their sexual behaviors and 3) awaken to their own sense of vulnerability towards STDs; through these experiences, they become more likely than those who have not had similar experiences to perceive themselves at high risk of STDs.

## References

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