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Notes

1. I thank Paul W. Killian for assistance with the statistical analyses.
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A Classroom Demonstration to Communicate Vulnerability of Contracting a Sexually Transmitted Disease

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Communicating the likelihood of contracting a sexually transmitted disease (STD) is an important objective for instructors teaching particular psychology courses. This article describes a classroom demonstration for stimulating consideration of personal vulnerability for contracting an STD during one's lifetime. The demonstration utilizes class participation, holds student interest, stimulates subsequent class discussion, and has resulted in generally positive feedback from students.

Young adults typically underestimate the personal risk of negative health outcomes in general (Perloff, 1987; Weinstein, 1984; Weinstein & Klein, 1996) and negative sexual outcomes, such as pregnancy (Gerrard & Luus, 1995), in particular. Incidence of sexually transmitted disease (STD) is typically greatest among young adults ages 20 to 24 years of age (Laumann, Gagnon, Michael, & Michaels, 1994; Nevid, 1995), yet adolescents (Moore & Rosenthal, 1991) and college students (Manning, Balson, Barenberg, & Moore, 1989) commonly experience a personal sense of invulnerability to STDs. As an author of a widely-used human sexuality textbook (Allgeier & Allgeier, 1995) noted, "In my experience, many of my (heterosexual, sexually active) students do not believe that they are at risk of contracting *any* STD, let alone one of the incurable viral infections, such as AIDS or herpes" (Winters & Allgeier, 1995, p. 58). Unfortunately, such perceptions of invulnerability may be problematic if they prevent individuals from taking the necessary precautions to avoid harm.

Most authors of sexuality textbooks incorporate statistical estimates in an attempt to give some sense for the general prevalence of various STDs. However, presenting population statistics to communicate prevalence may not have intuitive meaning or personal relevance to students. Additionally, separate discussion of each type of STD makes it difficult to appreciate the cumulative vulnerability for contracting any one of them. In this article, I present a classroom demonstra-

tion I find useful for communicating relative prevalence of, and vulnerability for contracting, each of several STDs. The demonstration involves a visual representation of the prevalence of STDs by using students in the class to represent the adult population in general.

Classroom Demonstration

Students draw a slip of paper out of a box as they enter the room. Each slip is either blank or contains the name of one of the STDs (a positive "diagnosis"). The proportion of slips of paper that contain each STD mirror the lifetime prevalence rate of that specific STD. For example, if 100 students attend lectures in the course and the lifetime rate of contracting a specific STD is 3%, then 3 of the 100 slips of paper contain the name of that STD. As I discuss each STD in some detail, I ask those students who drew a slip containing a diagnosis of that particular STD to stand up to represent the proportion of students in the class who can be expected to contract the STD during their lifetime. After covering each type of STD, I request that everyone who received a diagnosis stand up simultaneously to impress on the class the cumulative likelihood of contracting at least one STD at some point (about 50%; Laumann et al., 1994; Nevid, 1995).

The validity of this classroom demonstration hinges on determining accurately the lifetime prevalence rate of each STD, which is difficult to do as there is no one authoritative source for such information. Most estimates of the number of cases of STDs are based on either studies involving at-risk populations, such as people attending STD clinics, or the official governmental count of new cases of STD as reported to the Centers for Disease Control and Prevention (CDC). These sources of information are biased by several important factors and still do not give an indication of lifetime probability of contracting any particular STD at least once (for a discussion of these issues, see Laumann et al., 1994, pp. 378–379).

Table 1 integrates the latest information from two sources (Laumann et al., 1994; Nevid, 1995) on the lifetime prevalence of STDs based on more representative samples than have been used in the past. Even in what appears to be a simple table, however, one must make choices regarding which figures to use. A much smaller proportion of individuals report having had visible genital warts when compared to the official CDC estimates of infection with the human papilloma virus (HPV; the virus that causes genital warts). A similar phenomenon occurs with regard to the proportion of individuals who report having had visible lesions from genital herpes compared to CDC estimates of the overall proportion of herpes virus carriers in the United States. Because someone carrying either virus does so for life and can transmit each to sexual partners, I choose the higher estimates for the classroom demonstration. The last column in the table contains the percentages I use when conducting the demonstration.

When inspecting Table 1, HIV and AIDS are conspicuously missing. Based on the population of the United States and the estimated number of individuals with AIDS or HIV, the population prevalence appears to be approximately 0.8% for adults (see Laumann et al., 1994, p. 378). Hence, in a class of 100 or more, one could legitimately include one slip of paper containing the diagnosis "HIV," but in a smaller class there would not be enough students to accurately include an HIV diagnosis.

Table 1. The Lifetime Prevalence of Several Types of STD

STD	Percentage			
	Men	Women	Total	Demonstration
Bacterial				
Gonorrhea	9.0	4.7	6.6	7
Syphilis	0.9	0.7	0.8	1
Chlamydia	1.9	4.4	3.2	3
Viral				
Genital warts	3.3	5.9	4.7	
Human papilloma virus carrier	—	—	20.0	20
Genital herpes	1.2	2.9	2.1	
Herpes simplex virus, type 2 carrier	—	—	20.0	20
Hepatitis	1.3	0.9	1.1	1

Note. All percentages from Laumann, Gagnon, Michael, and Michaels (1994) except for human papilloma virus carrier and herpes simplex virus type 2 carrier that was taken from Nevid (1995). STD = sexually transmitted disease. Carrier status = infected but not having outward signs or symptoms of the STD.

Discussion and Evaluation

The primary advantage of this classroom demonstration is that it visually illustrates for students the relative prevalence of each type of STD as well as the overall probability of contracting an STD during a lifetime. In a recent section of a psychology of adjustment course, I used the demonstration in conjunction with covering material on human sexuality. I administered a brief anonymous questionnaire during the class meeting prior to the meeting during which I conducted the demonstration. Each student estimated the likelihood (from 0%–100%) that he or she would "contract a sexually transmitted disease at some point in your life." Students (N = 65) also saw a list of STDs and indicated what they thought is "the most common or prevalent sexually transmitted disease:" syphilis, herpes virus, gonorrhea, chlamydia, HPV/genital warts, HIV/AIDS, hepatitis. As is evident from Table 1, the correct response would be either HPV/genital warts or herpes virus.

At the start of the subsequent class meeting, I conducted the demonstration, being careful not to explicitly state which STDs were most common or what the overall likelihood of contracting an STD was (issues I would explicitly address if I were not collecting data on the effect of the demonstration). Immediately following the demonstration, students (N = 79) anonymously completed the same questionnaire items detailed previously as well as two additional items to evaluate the demonstration. First, "How useful do you think the classroom demonstration was in communicating the relative risk of contracting a sexually transmitted disease?" Students responded using a 7-point, Likert-type scale with anchors at 1 (*not at all useful*), 4 (*somewhat useful*), and 7 (*very useful*). Last, students indicated whether they would recommend using the demonstration in the future (*yes* or *no*).

As the following comparisons involved relatively low statistical power, I calculated the effect size, *d* (Cohen, 1969), associated with the differences rather than the inferential statistics (also see Rosenthal & Rosnow, 1991). With regard to self-perceived vulnerability for an STD, the predemonstration (Time 1) mean likelihood was 20.85% (*SD* = 21.83) and 26.13% (*SD* = 24.97) after the demonstration (Time 2), *d* = .22. When I removed those students who gave a 0% rating (perhaps because they plan to be sexually abstinent or monogamous for a lifetime with their current or future partner), the difference in estimates from Time 1 (M = 26.57%, *SD* = 21.33) to Time 2 (M = 33.29%, *SD* = 23.55) is somewhat larger, *d* = .30. Although these effects are somewhat small in an absolute sense, it is encouraging that there was any effect. Other classroom demonstrations designed to alter students' overly optimistic views of personal vulnerability have failed to produce any effect (Snyder, 1997), and knowledge of research results on biases in self-perception apparently does not affect the occurrence of such misperceptions among students (Friedrich, 1996).

The largest effect was evident in comparing the students' identification of the most prevalent STDs before and after the demonstration. At Time 1, 18.5% of the students correctly identified the most prevalent STDs versus 49.4% who correctly identified HPV/genital warts or herpes virus at Time 2, *d* = .61. This effect size is moderate in an absolute sense and is larger than many others found in general sex research (Oliver & Hyde, 1993).

Student evaluation of the usefulness of the demonstration was high, M = 5.44, *SD* = 1.08. All but one such rating fell between 4 (*somewhat useful*) and 7 (*very useful*). Similarly, all but 1 student out of 79 recommended using the demonstration in future courses.

This demonstration has the potential to impress on students the notion that, even if they were fortunate enough to draw a blank slip of paper (no diagnosis), approximately one half of their potential sexual partners were not so fortunate. I hope that the demonstration communicates the need to take more seriously one's vulnerability for contracting an STD or encountering a partner who has an STD, if one is sexually active with one or more partners and does not consistently take steps to prevent infection. Unfortunately, the nature of the demonstration may inadvertently communicate that contracting an STD is a chance event, similar to a lottery. However, I attempt to offset that possible interpretation with subsequent class discussion of the relative infectivity of each STD and the effectiveness of risk reduction strategies.

The demonstration also lends itself to discussion of a host of related topics and questions. For example, the relative lack of HIV diagnoses in the demonstration can lead to class discussion of the prevalence of HIV relative to the other STDs given the much greater public attention paid to the former compared to the latter. Also, as potentially glum as it may seem, the demonstration may actually present a somewhat optimistic view of the risk for college students. That is, the data from Laumann et al. (1994) should be considered conservative estimates with regard to lifetime risk of contracting an STD by contemporary young adults. The values given in Table 1 are based on the entire sample from Laumann et al.'s study (which included individuals ages 18–59 years old), yet those individuals older than 49 years old were substantially less likely to report ever having contracted an STD. It appears that contemporary college students will experience an increased risk of infection compared to the current adult population in the United States (which includes older generations)—a point I make in class.

An astute student may raise the issue of overlap in likelihood of contracting each type of STD. That is, the data from Laumann et al. (1994) are based on the proportion of the sample indicating lifetime infection with each type of STD, yet we can imagine that the sexual behavior of some individuals places them at risk for contracting multiple STDs. Hence, summing the prevalence rates for each different STD to calculate the overall lifetime prevalence rate for contracting any STD would result in an inflated estimate. The classroom demonstration as described does not address this issue. However, Laumann et al. found that few respondents who had had an STD reported having had more than one type.

Typically, at least some students who receive a positive diagnosis are reluctant to stand up and identify themselves, despite the fact that the diagnosis is hypothetical and entirely for illustrative purposes. If the instructor has created a safe classroom environment for the students to ask questions and discuss issues, noncompliance with the demonstration usually is not a problem. In fact, because some students are reluctant to identify as having a hypothetical STD, that experience can lead into a discussion of the social stigma attached to having contracted an STD and the attributions people make regarding infected individuals.

In conclusion, I find this demonstration to be an engaging method for communicating an important issue that is often lost on students otherwise: personal vulnerability for contracting an STD and the relative prevalence of different forms of STD. I find that the demonstration helps maintain student interest in an otherwise dry topic and, oftentimes, stimulates subsequent class discussion relevant to a number of related issues.

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Note

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Call for Applications/Nominations for Web Editor for the Society for the Teaching of Psychology

The Society for the Teaching of Psychology announces that it is beginning the process of selecting an editor who will be responsible for coordinating and supervising all the Society's sites on the World Wide Web. The Web Editor will serve a 3-year term that will begin in Fall of 1999.

The Web Editor's responsibilities will include (a) maintaining the Society's principal home page, (b) appointing individuals to maintain additional web sites for the Society, (c) coordinating the functionality, appearance, and content of all the Society's web sites, (d) ensuring that the Society's web pages are kept current in terms of both content and technical matters, (e) developing an online archive of Society documents and announcements, (f) serving on the Society's Executive and Publications Committees, (g) working with various Society officers and committees to chart the Society's web strategies for the future. This list of responsibilities is meant to be illustrative rather than exhaustive, and given the ever-shifting nature of the Internet, the editor's responsibilities may change over time.

The Search Committee is especially interested in candidates who are active members of the Society, have previous experience maintaining web sites, and can commit sufficient time and other resources to maintain a high-quality presence for the Society on the Internet.

Self-nominations are welcome. Applicants should send a letter detailing their relevant experience and qualifications for the position; their vision of what the Society should attempt to accomplish with its web sites; a current copy of their curriculum vitae; and the names, addresses, and telephone numbers of three individuals who can speak of their qualifications for the position. Persons making nominations of other individuals should do so in writing to the Chair of the Search Committee and should ask nominees to send the information described above.

Applications, letters of nomination, and inquiries should be sent to:

Wayne Weiten
Department of Psychology
Santa Clara University
500 El Camino Real
Santa Clara, CA 95053.

All materials must be received by April 23, 1999.