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# Sexual Violence on Campus: No Evidence that Studies Are Biased Due to Self-Selection

Marina N. Rosenthal

*University of Oregon*, [mnrosenthal@gmail.com](mailto:mnrosenthal@gmail.com)

Jennifer J. Freyd

*University of Oregon*, [jjfreyd@gmail.com](mailto:jjfreyd@gmail.com)

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# Sexual Violence on Campus: No Evidence that Studies Are Biased Due to Self-Selection

## **Abstract**

Numerous research studies suggest that at least one in five female college students is sexually assaulted while enrolled. However, many studies exploring sexual violence prevalence on campus use methodology permitting students to self-select into the study based on interest in the topic (i.e., students receive an email offering them the opportunity to participate in a study on sexual violence). Self-selection may bias these prevalence estimates of campus sexual violence. To explore this issue, we surveyed two samples of college women on their experiences of sexual assault. We recruited Sample 1 in a typical way: by emailing a randomly selected subset of students provided by the university registrar and inviting participation with information about the survey topic. We recruited Sample 2 using a human subjects pool where students in introductory psychology and linguistics courses sign up for studies without prior knowledge about the topic of the research they will participate in (hence greatly minimizing the risk of self-selection). The two samples yielded nearly identical victimization rates. Over a quarter of participants in both our samples had experienced sexual contact without consent, consistent with recent research from the Association of American Universities. College victimization estimates do not appear to be biased by self-selection based on knowledge of the survey topic.

## **Keywords**

sexual violence, rape, college sexual assault, methods, self-selection, victimization

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## **Acknowledgements**

We thank our research team members Jennifer Gómez, Alec Smidt, and Carly Smith. Additionally, we thank the Administrator Researcher Campus Climate Consortium (ARC3) for compiling many of the measures utilized in this study. We thank the Office of the President of the University of Oregon for providing funding for this study. Data files can be made available to interested researchers; please email the first author for access to data.

## SEXUAL VIOLENCE ON CAMPUS: NO EVIDENCE THAT STUDIES ARE BIASED DUE TO SELF-SELECTION

**Marina N. Rosenthal**

<https://orcid.org/0000-0003-2072-3989>

*University of Oregon, USA*

**Jennifer J. Freyd**

<https://orcid.org/0000-0002-9650-9199>

*University of Oregon, USA*

### ABSTRACT

Numerous research studies suggest that at least one in five female college students is sexually assaulted while enrolled. However, many studies exploring sexual violence prevalence on campus use methodology permitting students to self-select into the study based on interest in the topic (i.e., students receive an email offering them the opportunity to participate in a study on sexual violence). Self-selection may bias these prevalence estimates of campus sexual violence. To explore this issue, we surveyed two samples of college women on their experiences of sexual assault. We recruited Sample 1 in a typical way: by emailing a randomly selected subset of students provided by the university registrar and inviting participation with information about the survey topic. We recruited Sample 2 using a human subjects pool where students in introductory psychology and linguistics courses sign up for studies without prior knowledge about the topic of the research they will participate in (hence greatly minimizing the risk of self-selection). The two samples yielded nearly identical victimization rates. Over a quarter of participants in both our samples had experienced sexual contact without consent, consistent with recent research from the Association of American Universities. College victimization estimates do not appear to be biased by self-selection based on knowledge of the survey topic.

### KEYWORDS

sexual violence, rape, campus, methods, self-selection, victimization

**A**LTHOUGH SEXUAL ASSAULT is a well-documented problem on college and university campuses; some question the accuracy and magnitude of prevalence estimates (for example, Yoffe, 2015). Do one-in-four or one-in-five female undergraduates actually experience sexual assault, or are those estimates biased by methodological problems? Numerous research studies based on self-report surveys lead most sexual violence researchers to estimate that approximately 20-45% of college women report experiences that align with commonly held definitions of sexual assault (i.e., sexual contact without consent; Koss, Gidycz, & Wisniewski, 1987; Testa, VanZile-Tamsen, Livingston, & Koss, 2004; Orchowski, Untied, & Gidycz, 2013; Flack et al., 2016). However, these estimates are almost all from surveys with response rates well below 50%. A

fundamental methodological critique of these surveys is the possibility that self-selection into the survey generates biased results. We address this issue by assessing sexual assault in a sample with minimal self-selection.

### **Response Rates Relationship to Prevalence Estimates**

One way to evaluate the association of response rate with sexual victimization rate is by comparing across studies that use the same measures but vary in response rates. The Association of American Universities (AAU) offers such data; the AAU surveyed students on 27 different campuses with a final sample of 150,072 participants. Students were compensated for participating with various incentives across the different schools (including drawings, gift cards, and no incentive). Among undergraduate women, 23.1% had experienced “sexual assault and sexual misconduct due to physical force, threats of physical force, or incapacitation,” and 10.8% experienced unwanted penetration (Cantor et al., 2015). The AAU study also offers perspective on prevalence rates by academic year: 17.1% of first-year, 20.8% of second-year, 23.4% of third-year, and 27.2% of fourth-year students had experienced sexual contact without consent since enrolling in college.

Self-selection is clearly one potential threat to the generalizability of results from survey research; if the factors that lead participants to opt into a study are correlated with the measures of interest, the results will be biased (Freyd, 2012). Researchers try to avoid such contamination in various ways. In a study of sexual victimization, for instance, researchers look for incentives that are not known to be associated with the crucial variables of interest, for instance monetary or material payment. It is likely that students without a particular slant on the topic will be more interested in participating in a study with a stronger monetary or material incentive.

In sexual victimization research there has been wide variation in the use of incentives. Some campus victimization studies compensated all participants (e.g., Gómez, Rosenthal, Smith, & Freyd, 2015). Other studies (i.e., Flack et al., 2016) offered entry into a drawing for compensation. Some universities included in the AAU Climate Survey did not compensate their participants at all (Cantor et al., 2015). Particularly when incentives are weak or non-existent, it is reasonable to wonder whether some eligible participants in these studies may have chosen whether to participate based on their previous experiences or attitudes. Given that climate studies are being used to improve campus policies, it is important to clarify whether prevalence rates gleaned from these studies over-estimate or under-estimate the rate of sexual assault on college campuses. On the one hand, victims might self-select into research studies on sexual violence, resulting in a higher proportion of victims in the sample than on campus in general. On the other hand, victims might be less likely to participate in research on sexual violence than non-victims. Given the known avoidance patterns inherent in posttraumatic distress, many victims may prefer not to participate in studies explicitly addressing sexual violence.

If response rates reflect self-selection based specifically on interest in or avoidance of the topic of campus sexual violence, we would expect to see that as response rates increase, victimization estimates go up or down in tandem. In short, can the high rates of victimization observed in many studies be explained away by self-selection? To answer this question, Freyd (2015) used the data provided by the AAU (Cantor et al., 2015) to examine whether response rate correlates with college

sexual assault victimization estimates. Twenty-seven schools participated in the AAU survey, and each of these schools published both response rates and victimization estimates. The response rates varied considerably among the 27 universities that participated in the AAU survey (with a mean of 19.3%, a low of 9.2%, and a high of 63.2%). There was also variation in the estimates of sexual assault victimization. For experiences of penetration with force or incapacitation, the rates varied from a low of 5.7% to a high of 14.5%; for nonconsensual sexual contact with force or incapacitation, the estimates varied between 12.7% and 30.3%. But to understand the implications of this variance, we must first answer the question of whether response rates and victimization rates are correlated. Freyd (2015); see Figure 1) displays the data point for each of the 27 schools plotted by response rate and unwanted sexual contact rate for female undergraduates. A corresponding analysis comparing female undergraduate response rates to nonconsensual penetration experiences among female undergraduates produced a correlation of  $r = .01$ , ( $p = \text{n.s.}$ ) – suggesting no relationship between the two. In other words, the AAU data do not support the claim that response rate is associated with victimization estimates, thus providing little evidence for a strong self-selection argument.

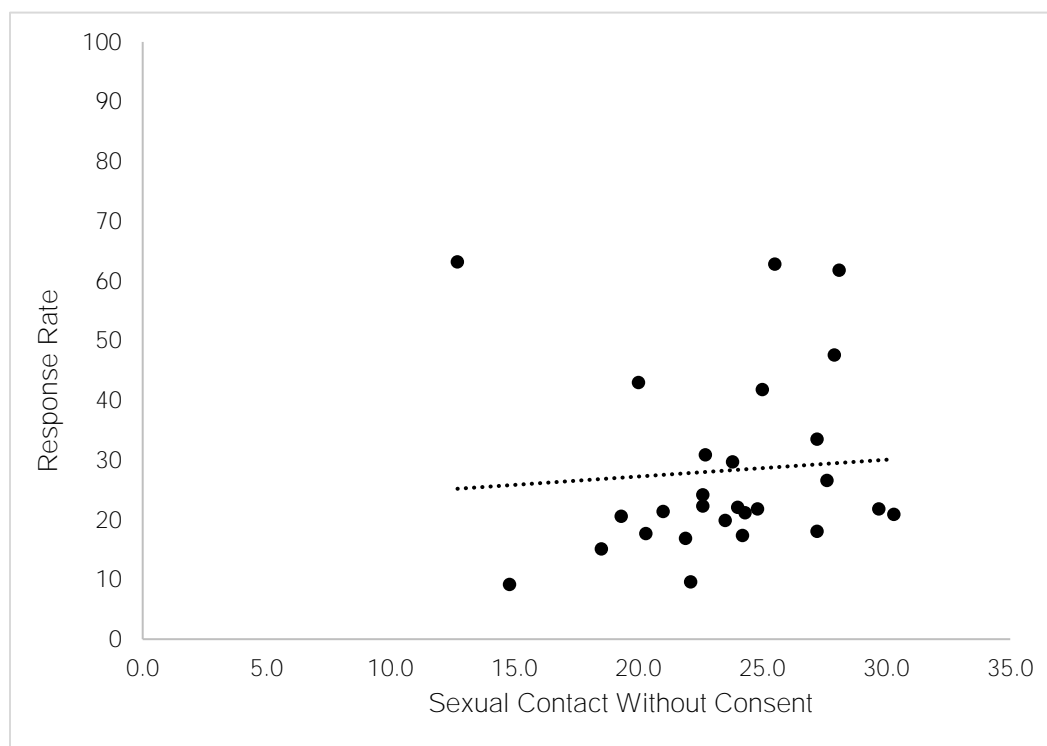


Figure 1. Scatterplot of AAU survey response rate by estimate of rate of sexual contact without consent for 27 institutions. The trend line depicted is based on data for all 27 schools that participated in the AAU study. Reprinted by permission from Freyd (2015).

The most direct way to evaluate the role of self-selection based on motivation to participate is to use a sample in which we have essentially removed the possibility of students opting in or out of the study based on knowledge of the topic. Fortunately, we have access to such a sample in our university: the Human Subjects Pool (HSP). As explained by Freyd (2012), the psychology department HSP was created in the early 1980s and specifically structured to avoid participant self-

selection into studies. Studies in our HSP are titled with short, memorable, but non-descriptive and non-referential names, typically all within a category at a given time (for instance, studies might be named after species of dogs, names of rivers, names of composers, etc.) We have an initial informed consent process for the HSP itself such that before subjects are even eligible to sign up for studies they must go through an informed consent about the HSP process, including the nature of study sign up. This consent process communicates to students why we do the blind sign-up (to avoid threats to generalizability of findings) and explains that participants can opt out of individual studies after reading the study-specific consent forms. In other words, participants have a two-tiered consent process. First, they can consent to being in the HSP itself versus an alternative assignment provided by their instructor. Most students select the HSP option. Second, if they decided to be in the HSP, they may consent to proceed with specific studies after they have signed up for them. Even before the consent material is provided to our participants, the process is explained to potential participants (via in-class presentations) and to researchers in an online training that must be completed prior to using the HSP. In the HSP consent process itself we explain our online study sign-up procedure. At the time of our research, the HSP consent document included this language:

This website is constructed to help you select and choose studies that are available for you to participate in. It automatically allows researchers to post available studies and automatically tracks the credit you have earned from these studies. When you log in, you will be able to click “Study Sign-Up” and see a list of studies available. These studies are presented in random order—different every time! You will also note that they are not named after anything meaningful—some are named after states, trees, elements of the periodic table, or breeds of dog. This is to prevent **selection bias**. This bias occurs when people know what a study is about before they sign up for it. For example, if you are very emotional, you might prefer to take a study on emotions. However, to gain meaningful knowledge about emotions, that study would need to include people broadly representative of the general population in terms of emotional experience. The studies will cover a broad range of topics in psychology and linguistics.

Signing up for a study does not require you to participate in the study. When you arrive for an experiment, the researchers will explain to you what will occur in the study. That is, they will tell you what the study involves. Not only will you get credit for reviewing this information (this period is called “informed consent”), but you also have the right to opt out immediately for any reason: Simply tell the researcher that you do not consent and that you want to leave the study. This principle of “opting out” applies to the entire study. In such a situation, you will get credit for every 15-minute block (or fraction thereof) that you spend participating. The same rules will apply if the study is likely to run longer than expected.

Your participation in the Human Subjects Pool is voluntary. If you do not wish to participate in research to fulfill your class’s “research requirement,” refer to your syllabus for alternatives or speak to your instructor. You may choose to complete an alternative assignment at any point during the class.

Students learn about good methodology in psychological science (the fundamental justification for the research participation requirement), and researchers get more generalizable data from the fulfillment of this requirement, thus making the contribution of knowledge more useful.

In the present study, we examine whether college student participants recruited via a randomly selected registrar sample (compensated with \$15 Amazon.com gift certificates) report higher or lower rates than college student participants recruited via the HSP, in which traditional self-selection is eliminated. Clarity as to whether campus climate studies that use similarly recruited registrar samples over- or under-estimate campus sexual assault rates will help schools and policymakers interpret and implement available research. In line with this need, our research question is: Will participants from the two samples report significantly different rates of unwanted sexual contact? If participants from the two samples do not report significantly different rates of unwanted sexual contact, we will have evidence that self-selection based on interest in the topic of sexual violence is not driving the high observed rates in various studies.

## Sample 1 Method

### Sample 1 Participants

Participants in Sample 1 were students at a large, public, Pacific-Northwestern university. Data in this report are based on a subset of measures from a larger study that included both undergraduate and graduate student participants (see Rosenthal, Smidt, and Freyd, 2016 for graduate student findings).

We obtained 4,000 undergraduate student emails randomly selected by the Registrar from the population of undergraduate students who had been continuously enrolled during the entire 2014-15 academic year, were currently registered for classes, and were at least 18 years old. Data were collected in late May and early June 2015, the final weeks of the Spring academic term. We anticipated a 20% response rate based on previous research on this campus with similar methodology (Gómez, Rosenthal, Smith, & Freyd, 2015). Of the 4,000 undergraduate students recruited for participation, 1,119 participated. Of these, 688 identified as female. Of these, 505 passed at least four of five attention checks and were included for analyses in the current report. Among the 183 female participants who failed the attention checks, 71 completed almost none of the measures relevant to this study (i.e., they left most items blank). The remaining 112 responded but failed the attention checks (suggesting careless responding). The response rate was at least 23.5% for female undergraduate participants (only including participants who passed the attention check). Because participation was cut off when we reached our predetermined number of participants, this rate may be an underestimation.

Of this final sample of female undergraduate students, 25.3% ( $n = 128$ ) were first-year students, 25.9% ( $n = 131$ ) were second-year students, 21% ( $n = 106$ ) were third-year students, and 27.7% ( $n = 140$ ) were fourth-year or higher students. Participants ranged in age from 18 to 49 with a mean age of 21.44 ( $SD = 3.89$ ). Most participants (87.5%) were heterosexual; 6.7% identified as bisexual, 1.6% identified as lesbian, 1.6% identified as asexual, less than 1% identified as queer, and 1.4% identified as a sexual orientation not listed. Eighty percent of participants identified as White or Caucasian. Thirteen percent identified as Asian or Asian American, 8.3% identified as Hispanic or Latino, 3.2% identified as Black or African American, 1.8% identified as Native American or Alaska Native, 1% identified

as Hawaiian or Pacific Islander, and 4% identified as a race or ethnicity not listed. Participants could select multiple ethnicities; hence, percentages exceed 100.

### **Procedure for Sample 1**

Our university's Office of Research Compliance (Institutional Review Board) approved all procedures in this online study. The general procedure of this study has been previously described in Rosenthal, Smidt, and Freyd (2016). We used Qualtrics survey software to design and distribute a survey to our randomly selected student sample. After receiving an invitation to participate, students had ten days to complete the survey. Participants received up to two emails from the research team: one initial recruitment email and one reminder email, if needed, five days later. Students who chose to participate clicked a unique link provided in the recruitment email and were directed to the Qualtrics portal to complete the survey. Five attention-check items (Oppenheimer, Meyvis, & Davidenko, 2009) were designed and placed throughout the survey to determine whether participants devoted care and attention to their responses (see Rosenthal, Smidt, and Freyd, 2016 more details). Participants were made aware of all procedures during the informed-consent process. After completing all survey measures, participants who failed no more than one attention check were compensated with \$15 Amazon.com gift certificates distributed via email. Participants were also given contact information for mental health and sexual violence resources in addition to contact information for the research team and the Office of Research Compliance.

### **Measures for Sample 1**

Participants completed numerous measures that assessed sexual harassment, sexual assault, dating violence, stalking, perceptions about the campus climate, psychological and physical health, and various attitudes as part of the larger study. The measures used for the analyses in the current report are described below. Researchers who desire access to any of the measures used in this study can email the first author. Some of the questionnaires used in this study were modified by the Administrator-Researcher Campus Climate Consortium (ARC3, 2015). ARC3 is a consortium whose members include sexual assault research scientists who developed survey measures to evaluate the problem of campus sexual assault (Kingkade, 2015).

We assessed sexual violence victimization during college with a modified version of the Sexual Experiences Survey-Revised (SES-R; Koss et al., 2007). The SES-R assesses five types of sexual victimization (fondling, oral contact, vaginal penetration, anal penetration, and attempted oral contact or vaginal and/or anal penetration). The SES-R asks about the coercion strategies experienced by victims; specifically, participants are asked whether their perpetrator used verbal coercion, assaulted them while they were intoxicated, threatened physical harm, or used physical force. Participants were asked to only report experiences that occurred since they began attending their current university. The instruction section for the SES-R prompted participants as follows: "The following questions concern sexual experiences that you may have had that were unwanted." The SES-R used in this study was modified in two ways from the typical SES-R. First, to account for more diverse gender identification, we changed the word "man" (in reference to people who have penises) to "someone" throughout the SES-R. For example, the statement "A man put his penis into my vagina, or someone inserted fingers or objects into my vagina without consent" was altered to the following: "Someone put their penis, fingers, or other objects into my vagina without my consent." Second, rather



than separately assessing for attempted vaginal, anal, and oral contact, we asked one question to assess these three types of attempted contact: “Even though it didn’t happen, someone TRIED to have oral, anal, or vaginal sex with me without my consent.” Response options for all items were 0 times, 1 time, 2 times, and 3 or more times (coded as 0, 1, 2, and 3). The SES-R has been shown to be a valid measure of sexual assault with university samples (Franklin, 2010) with acceptable reliability (Smith & Freyd, 2013). Scale reliability was good in this sample (Cronbach’s  $\alpha = .84$ ). Unwanted sexual experiences were broken into two categories: 1) any unwanted contact and 2) completed vaginal or anal penetration. We recoded participants’ responses dichotomously to obtain percentages of participants who had experienced each category. In this sense, possible scores for each category were 0 (no unwanted contact indicated) and 1 (unwanted contact indicated).

## Sample 2 Methods

### Sample 2 Participants

Participants in this study were undergraduate students at the same university as Study 1. They were recruited from the HSP, which enables Psychology and Linguistics students to receive class credit for participation in research. As previously described, participants in the HSP are not informed of the topic of research studies (studies are given a name unrelated to the study topic) before they participate and thus could not self-select into this study based on the topic (Freyd, 2012). According to data we received from the university Registrar, approximately 40% of the overall student body participates in the HSP at some point during their time at this university (J. Blick, personal communication, September 30, 2016). Over half of HSP participants are students in Introductory Psychology courses. The remaining students are enrolled in a variety of other psychology and linguistics courses (i.e., Cognitive Development, Perception, Biopsychology, Introduction to Linguistic Analysis, Psycholinguistics, etc.).

In total, 293 students participated. One hundred and ninety-five identified as female. Of the 195 female participants, 50 (25.6%) failed more than one attention check and were excluded from analyses, leaving a final sample of 145. Of the 50 female participants who failed more than one attention check, two completed almost none of the measures relevant to this study (i.e., they left most items blank). The remaining 48 responded to most items but failed the attention checks (suggesting careless responding).

Of this final sample of female participants, 49.7% ( $n = 72$ ) were first-year students, 22.8% ( $n = 33$ ) were second-year students, 17.9% ( $n = 26$ ) were third-year students, and 8.9% ( $n = 13$ ) were students in their fourth year or higher. One student did not respond to the questions. Participants ranged in age from 18 to 40, with a mean age of 19.75 ( $SD = 2.76$ ). The majority (82.8%) were heterosexual; 11% identified as bisexual, 1.4% as lesbian, 1.4% as asexual, and 3.4% as a sexual orientation not listed. Sixty-seven percent identified as White or Caucasian; 15.9% identified as Asian or Asian American, 9.7% identified as Hispanic or Latino, 7.6% identified as Black or African American, less than 1% identified as Native American or Alaska Native, less than 1% identified as Hawaiian or Pacific Islander, and 3.4% identified as a race or ethnicity not listed. Participants could select multiple ethnicities; hence these percentages exceed 100.

## **Procedure for Sample 2**

Our university's Office of Research Compliance (Institutional Review Board) approved all procedures in this online study. Data collection occurred during the academic terms of Fall 2015, Winter 2016, and Spring 2016. It is possible that some participants in Sample 2 overlapped with those in Sample 1. Participants were recruited for the study on the online scheduling system SONA. Participants who signed up received a link to Qualtrics and could complete the study on their computers at their convenience. After completing an online consent form, they responded to the same array of survey items described in Study 1. Because participants in the HSP are not ethnically diverse, we opted to over-sample ethnic minorities for this study. We did so by creating two identical surveys with which to recruit participants. One survey was open to all HSP participants. The other survey was open only to participants who had responded affirmatively to the question "I identify as an ethnic minority" in a pre-screening measure taken by Human Subjects Pool participants to see if they are eligible for additional studies. Hence, this report compiles the data from both the ethnic minority-only survey and the open-to-all survey.

## **Measures for Sample 2**

Participants completed the same large collection of measures as in Study 1. The same version of the SES-R as described in Study 1 was used to assess unwanted sexual experiences and was scored in the same manner. Scale reliability was acceptable (Cronbach's  $\alpha = .73$ ).

## **Sexual Victimization Results**

### **Overall results for Sample 1**

Twenty-seven percent of participants had experienced some form of sexual contact without consent. Thirteen percent of participants had experienced vaginal or anal penetration without consent. Participants' experiences of sexual contact without consent by year and type are detailed in Table 1.

### **Overall Results for Sample 2**

Twenty-six percent of participants experienced some kind of sexual contact without consent. Ten percent of participants experienced completed vaginal or anal penetration without consent. Participants' experiences of sexual contact without consent are broken down by year and type in Table 1.

### **Comparing Sample 1 and Sample 2**

Twenty-seven percent of participants in Sample 1 and 26.2% of participants in Sample 2 reported sexual contact without consent. A chi-square test of independence revealed no significant differences in these very similar rates ( $\chi^2 = .05$ ,  $p = .92$ , Cramer's  $V = .01$ ). The samples also did not differ significantly in terms of completed vaginal or anal penetration, with 13.1% of participants in Sample 1 and 9.7% of participants in Sample 2 indicating penetration ( $\chi^2 = 1.22$ ,  $p = .32$ , Cramer's  $V = .04$ ). Next, we conducted the same tests with only the first- and second-year students in each sample, because the HSP—which is dominated by first- and second-year students -- has so few third-year or higher students. Twenty-four percent of first- and second-year participants in Sample 1 and 24.6% of first- and second-year participants in Sample 2 reported sexual contact without consent. A chi-square test of independence revealed no significant differences in these rates ( $\chi^2 = .003$ ,  $p = 1.00$ , Cramer's  $V = .003$ ). The two samples also did not differ

significantly in terms of completed vaginal or anal penetration, with 10.4% of first- and second- year participants in Sample 1 reporting penetration in comparison to 11.4% of first- and second-year participants in Sample 2 ( $\chi^2 = .08, p = .85$ , Cramer's  $V = .02$ ). Victimization rates in the two samples are depicted in Figure 2.

**Table 1. Percentage of Students by Year Experiencing Sexual Contact Without Consent**

	<i>N</i>	Any sexual contact	Vaginal or Anal Penetration
<b>Sample 1 (Registrar)</b>			
First year	128	21.1% ( <i>n</i> = 27)	8.6% ( <i>n</i> = 11)
Second year	131	26.0% ( <i>n</i> = 34)	12.2% ( <i>n</i> = 16)
Fourth year and beyond	140	34.2% ( <i>n</i> = 48)	15.7% ( <i>n</i> = 22)
<b>Sample 2 (HSP)</b>			
First year	72	20.8% ( <i>n</i> = 15)	8.3% ( <i>n</i> = 6)
Second year	33	30.3% ( <i>n</i> = 10)	18.2% ( <i>n</i> = 6)
Third year	26	38.5% ( <i>n</i> = 10)	7.7% ( <i>n</i> = 2)
Fourth year and beyond	13	15.4% ( <i>n</i> = 2)	0% ( <i>n</i> = 0)

## Discussion

Our aim in this research was to ascertain whether participants in campus climate studies that allow for self-selection based on interest or lack thereof in the research topic generate higher or lower estimates of sexual assault prevalence than found in a sample that minimizes self-selection. We asked the following: Do participants in the two samples report different rates of unwanted sexual contact? Our findings of nearly identical estimates of victimization rates in the two samples offer preliminary evidence that self-selection is not significantly biasing the prevalence estimates gained in campus climate studies using recruitment methods that allow for self-selection. Our two samples—registrar and HSP—did not differ significantly regarding the two types of victimization experiences examined: 1) sexual contact without consent and 2) completed vaginal or anal penetration without consent. Contrary to speculation that campus climate surveys over-represent victimized participants, our data suggest that the results gleaned from a registrar sample are statistically equivalent to those from an HSP sample that greatly reduces self-selection. The findings from our two samples suggest that victimization rates cited in previous research are not erroneously high; in a sample with minimal risk of self-selection bias, 25% of college women still experienced sexual contact without consent.

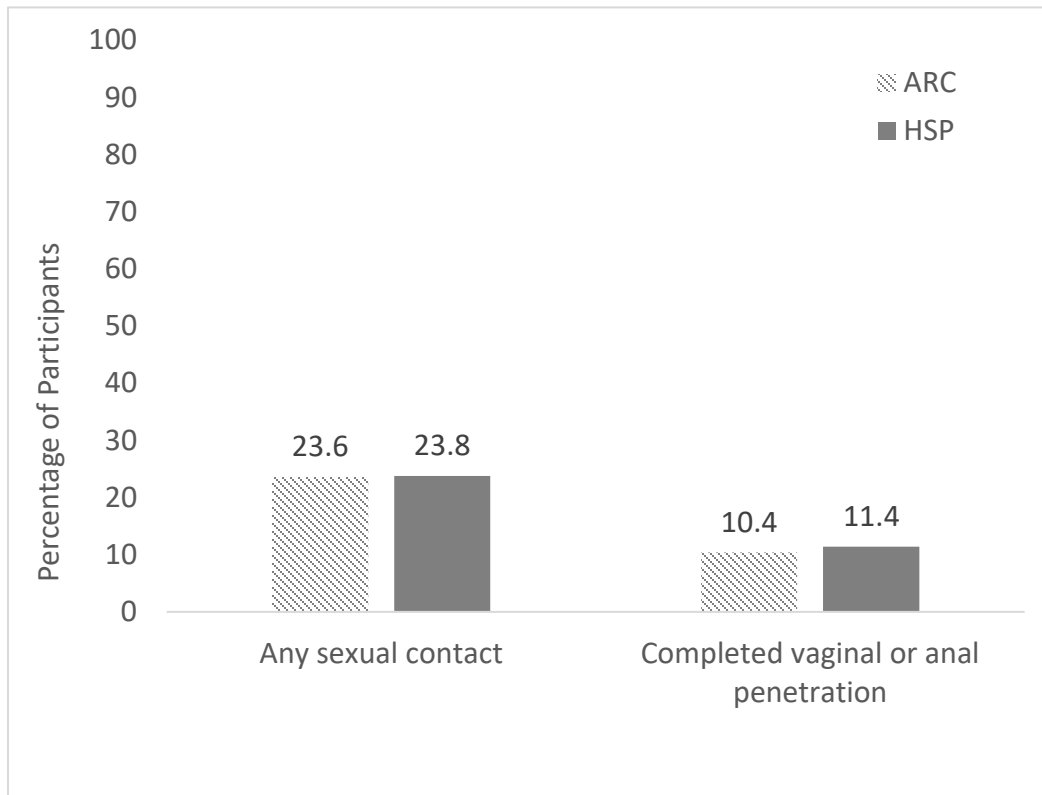


Figure 2. Victimization rates of first- and second-year students from Samples 1 (Registrar sample in which self-selection was possible) and 2 (Human Subjects Pool).

### Limitations

Our findings are limited in a number of relevant ways. First, given that few students in their third, fourth, or higher academic year participated in the HSP study, we limited our comparisons of the two samples to first- and second-year students combined. Though this discrepancy makes sense as students tend to participate in introductory psychology and linguistics classes earlier in their academic experience, it does leave us unable to thoroughly examine students who, after three or more years at the university, have likely experienced more cumulative victimization. Additionally, while the HSP has a number of benefits (the lack of self-selection a primary one), it is not a perfect mirror of the campus at large. It is possible that the 40% of students who at some point participate in the HSP differ in some way from the 60% of students on campus who never participate in the HSP.

Something else to consider in these findings is the issue of measuring sexual assault. Though we used the same measure in both studies (the SES-R; Koss et al., 2007), one barrier to comparing sexual assault prevalence rates across campuses is inconsistent methodology. Though behaviorally defined questions like those found on the SES-R are currently used by most sexual violence researchers, some studies still rely on direct questioning methods that require participants to label their experience as sexual assault, rape, or a crime. Our prevalence estimates can only be reasonably compared to other studies using similar behaviorally defined questionnaires like the SES or SES-R.

## Conclusions

The data gleaned from previous campus climate studies utilizing Registrar samples have been critiqued as potentially biased by self-selection. Most who make the argument that self-selection could bias campus climate findings assume that the results will be biased toward inflation—that is, victims of campus violence will be motivated to opt into a study on campus violence. Yet as we have noted, any potential biases could also occur in the opposite direction—it seems equally plausible that victims of campus violence might be quite uninterested in participating in a study on campus violence. We have attempted to answer this question with data rather than with assumptions or speculations. Though additional research is certainly needed, this study offers evidence that campus climate studies utilizing Registrar samples are not biased—in either direction.

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## AUTHOR BIOGRAPHIES

Marina N. Rosenthal, M.S., is a Clinical Psychology Doctoral Candidate at the University of Oregon. Her research focuses on sexual health and trauma.

Jennifer J. Freyd, Ph.D. Professor of Psychology at the University of Oregon, investigates betrayal trauma, institutional betrayal, sexual violence, gender, and disclosures of abuse. Her book *Blind to Betrayal*, co-authored with Pamela J. Birrell, was published in 2013, with seven additional translations.

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