

# Risk of Unwanted Sex for College Women: Evidence for a Red Zone

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**Abstract. Objective:** University and college health and counseling centers frequently warn female students about the *red zone*—a period early in a student's first year at college during which she may be at higher risk for unwanted sexual experiences (UWS). The authors designed this study to assess temporal risk for UWS in 1st- and 2nd-year college women. **Participants and Methods:** In March 2006, the authors randomly selected 50 first-year and 52 second-year students (representing one-sixth of each class year) to complete a modified Sexual Experiences Survey. **Results:** First-year women were at higher risk for UWS than were second-year women—particularly, early in the fall semester. The authors observed a significant linear effect during participants' combined first years in school, with more reports of UWS occurring early in the year. **Conclusion:** This study provides support for a red zone and highlights the need for investigating local norms for UWS.

**Keywords:** college students, red zone, unwanted sexual experiences, women's health

Many colleges and universities' Web-based and print-media publications warn incoming female students about the *red zone*—a period of time early in one's first year at college or university during which women are thought to be at particularly high risk for unwanted sexual experiences (UWS). Warshaw<sup>1</sup> appears to have been the first to use the term when she referred to a period that starts at one's arrival on campus and ends with the first holiday break. She states, "Again and again, women are raped during these weeks by men they meet on campus."<sup>1(p157)</sup> Personnel in student affairs, public safety offices, and college health centers now use *red zone* frequently, and it appears often in student handbooks. For example, Utah State University, the Univer-

sity of Massachusetts at Dartmouth, Franklin & Marshall College, Indiana University of Pennsylvania, Longwood University, East Oregon University, Trinity College, and the University of Cincinnati are just some of the colleges and universities that have red zone information on their Web sites, in published materials, or as part of college programming.

However, little, if any, empirical data support the idea of a red zone, and there is no general consensus on its parameters. Utah State University annually holds a "Red Zone Week" in September because of their belief that "the red zone refers to the time period between August and November when there is a heightened risk of sexual assault among college students."<sup>2</sup> The Women's Resource Center at the University of Massachusetts at Dartmouth describes the red zone as "the time period between freshman move-in and fall break wherein there is a particularly high incidence of sexual assaults on college campuses. During this time, first-year students are at a higher risk of victimization."<sup>3(p1)</sup> The Student Health and Wellness Center of Longwood University<sup>4</sup> considers the red zone as "the period of time in which students are most vulnerable to experiencing unwanted sex. The Red Zone takes place between the time when students return to campus and the end of the first week of classes." The Women's Center at Franklin & Marshall defines the red zone as the first 6 weeks of the fall semester.<sup>5</sup>

## UWS Among College Students

Prevalence rates that researchers have documented repeatedly in both small and large studies show that sexual assault continues to be a serious public health problem on many US college campuses.<sup>6-8</sup> At the same time, college students rarely describe these experiences as rape or sexual assault, preferring instead to characterize them as unwanted sex, presumably because most of these events take place among students who are acquainted with each other.<sup>5-6</sup> Although we follow this usage in the present article, we also want to

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emphasize that *unwanted sex* as defined for present purposes is consistent with common collegiate, legal, and research-based conceptions of sexual assault. Furthermore, UWS victims experience serious psychological consequences, including posttraumatic stress.<sup>9</sup> The types of UWS we examined were unwanted sexual touching, as well as attempted and completed unwanted anal and vaginal intercourse.

### Temporal Risk for UWS

Despite frequent use of the red zone concept in college student health publications and on listservs used by sexual assault educators, we know of only 1 study whose authors directly tested the relationship between time and UWS reporting (ie, *temporal risk*).<sup>11</sup> As part of this study, Flack et al<sup>11</sup> reviewed both the narrative use of the red zone idea and relevant empirical research and found that most researchers who have assessed time as a dimension of UWS have done so rather broadly.<sup>12</sup> Some compared UWS rates across different class years, usually finding that students in earlier years report higher rates of UWS than do upperclassmen.<sup>13</sup> However, the single study whose researchers grouped UWS reports by calendar month (a national survey conducted by Fisher et al<sup>14</sup>) yielded no significant temporal differences. Thus, although some evidence points to higher risk of UWS in the first 2 years of college, none sufficiently supports the more temporally specific red zone.

Flack et al<sup>11</sup> recently assessed temporal risk on a single, relatively small campus. They surveyed 104 first-year and 101 randomly selected second-year students using a modified version of the revised Sexual Experiences Survey (SES).<sup>15</sup> If a participant reported unwanted sexual touching or attempted or completed unwanted anal, oral, or vaginal intercourse, the researchers asked when the event took place. The researchers chose time periods they believed were meaningful to students (eg, orientation week; first week of classes; first month, but after first week; after first month, but before fall break) and thus presumably easier for them to remember. In that study, the only elevation in incidence rates across all time periods occurred for female students in the fall of their second year, between the end of September and mid-October. During this period, sorority pledging (ie, the time period in which students are affiliated with but not yet full members of the organization) takes place on this campus, and the various social activities associated with pledging (eg, fraternity parties, which often entail alcohol intoxication and sexual activity) may explain the increase in risk. Ostrander and Schwartz,<sup>16</sup> Warshaw,<sup>1</sup> and others have proposed that events such as these are risk factors for sexual assault. If replicated in the current study, these findings will suggest that temporal risk for sexual assault may be associated with certain characteristics of social or cultural groups on campus, rather than new students' lack of familiarity with college life.

### The Present Study

We designed the present study, in part, to retest the red zone concept on a campus that differed in important

respects from the one tested by Flack et al.<sup>11</sup> Specifically, the college population used in this study, although small and located in a rural setting, differed in that it had a stringent alcohol policy, a brief winter semester between the fall and spring, and no Greek system. We hypothesized that if the red zone exists on this campus, then first-year students should show increases in rates of UWS early in their year, in comparison with second-year students over that same time period. Likewise, the red zone would be supported by second-year students reporting more UWS early during their first year, relative to their second year. Although not fitting the extant notion of a red zone, preliminary focus group data indicated that an analysis of temporal risk during the winter semester, in which there is a reduced academic load and heavier drinking, would also be appropriate in this sample.

## METHODS

### Participants

Participants were 102 female college students at a small coeducational liberal arts college on the east coast. Fifty were first-year students, and 52 were second-year students. We sent an e-mail invitation to participate in a survey studying sex on college campuses to 200 women whom we chose randomly from the university's 600 female students. The 102 participants who responded represented 51% of those asked to participate and 17% of all first- and second-year women. All participants were aged 18 to 20 years. See Table 1 for additional demographic information.

### Materials

The data reported in this article come from participants' responses to an online modified Sexual Experience Survey (SES).<sup>15</sup> Questions assessed 7 UWS categories: unwanted sexual touching; attempted unwanted anal, oral, and vaginal sex; and completed unwanted anal, oral, and vaginal sex. The original SES has demonstrated good reliability and validity.<sup>7,17</sup> The SES has demonstrated test-retest reliability (.93 over 1 week for female victims) and construct validity (Pearson correlation of .73 between SES and interview-reported victimization) among college students,<sup>18</sup> as well as convergent validity and preliminary evidence of discriminant validity among African American female adolescents.<sup>19,20</sup> Although internal consistency is often reported for the SES, Koss et al<sup>21</sup> have argued that this index of reliability is inappropriate because the SES is not based on a latent variable model.

The revised version differs primarily in that we added attempted UWS and updated some of the language. Questions about each type of UWS assessed events that had taken place only while the students were at the university. If a participant provided a positive answer to any UWS question, they were then prompted to answer an additional item about the frequencies of such incidents during different time periods on campus. Because, as previously described, we wanted to facilitate students' temporal recall, we chose 6 time periods that corresponded with



**TABLE 1. Demographic Characteristics (N = 102)**

Characteristic	<i>n</i>	%
Race		
Caucasian	76	75
Asian American	9	9
African American	2	2
Other	14	14
Religious affiliation		
None	38	37
Protestant	27	27
Catholic	17	17
Jewish	6	6
Muslim	1	1
Other	13	13
Sexual orientation		
Heterosexual	96	94
Bisexual	5	5
Homosexual	0	0
Questioning	1	1
Parental annual income (\$)		
< 50,000	18	18
50,000–100,000	23	23
100,000–150,000	17	17
150,000–200,000	14	14
> 200,000	28	28
Not reported	2	2

major events in the academic calendar: Period 1 (orientation and first week), Period 2 (the first week through the first month), Period 3 (the first month to Thanksgiving), Period 4 (Thanksgiving through the end of the fall semester), Period 5 (the 1-month winter semester), and Period 6 (the first month of the spring semester). The versions used with first- and second-year students differed only in the number of time periods because the latter had spent more time at the university than had the former and could report on the end of their spring semester during their freshman year.

### Procedure

The institution's research review board approved all procedures. We randomly selected 100 women each from the first-year and second-year classes and sent them a recruitment e-mail. The e-mail contained a brief description of the study, the approximate time required to complete the survey (1 hour), a link to an online survey, and the advertisement for a \$300 raffle for participants. We sent the initial e-mail just after the first month of the spring semester (March 2006). We sent follow-up messages to nonresponders to encourage participation.

Potential participants clicked on a link to the online survey. Materials on the Web site were a consent form, the survey, a debriefing, and instructions for raffle registration. We kept registration information separate from survey responses to ensure participants' anonymity. The debriefing reiterated the purpose of the study and provided information about local resources for assault victims.

### Data Reduction and Planned Analyses

We investigated UWS for 1st-year students during their first year. We also asked 2nd-year students (sophomores) to report any occurrence of UWS during their first or current (second) year at college. For clarity, when referring to these 3 UWS groups, the first-year class will be referred to as 1st years, sophomores reporting on UWS that occurred in their first year are 2nd years/year 1, and sophomores reporting on current UWS are 2nd years/year 2. *Period* will refer to Periods 1–6, which are described in the Materials section, indicating the 6 discrete time periods between orientation and the first month of the spring semester.

We based statistical analyses on a standardized measure of UWS during each time period. We divided the number of reports of each type of UWS by the number of days during that period for each participant; this transformation standardized incidence rates across time. We analyzed incidence rates using repeated measures analyses of variance (ANOVAs) with Period and Type as within-subjects variables. The red zone hypothesis would be supported if we observed a Class  $\times$  Period interaction in which 1st years would have higher rates of UWS in earlier periods than would 2nd year/year 2 women. Higher rates during a winter semester red zone would be supported by a significant quadratic effect for the winter semester (period 5) relative to the 2 periods adjacent to it (periods 4 and 6).

### RESULTS

Table 2 shows prevalence rates for the 3 types of UWS for all participants. Rates were highest for unwanted touching relative to attempted unwanted sex and completed unwanted sex. Rates were also higher for 1st-years than for both 2nd-year student groups. Overall, 25% of participants reported some type of UWS in their first 2 years at college. Incidence rates for unwanted sexual touching were 22% ( $n = 21$ ); 15% ( $n = 15$ ) for attempted unwanted anal, vaginal, or oral sex; and 5% ( $n = 5$ ) for completed unwanted anal, vaginal, or oral sex. Two women defined their experience as rape.

### Analysis 1

We tested the red zone hypothesis using a  $2 \times 3 \times 6$  repeated measures ANOVA; Class was the between-subjects factor (1st years vs 2nd years/year 2), with Type (touching vs attempted vs completed) and Period (1–6) as within-subjects factors. We found significant effects for Class ( $F[1, 100] = 6.36, p < .05$ ), with 1st years reporting more UWS than did 2nd years/year 2. Thus, 1st years reported more UWS than did sophomores. We also observed significant effects for Type ( $F[1.3, 133] = 3.69, p < .05$ ) and Period ( $F[2.3, 233] = 3.74, p < .05$ ). A significant Class  $\times$  Period interaction ( $F[2.3, 232] = 3.86, p < .05$ ) supported the idea of the red zone. Subsequent analyses of the within-subject contrasts ( $F[1, 100] = 6.1, p < .05$ ) demonstrated a linear effect, with more incidents occurring to 1st years in the early time periods relative to the later periods (see Figure 1). This effect was further



**TABLE 2. Risk for Unwanted Sex, as a Function of Year and Type**

Year	Touching		Attempted		Completed	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
1st-year class–year 1 <sup>a</sup>	11	22	10	20	3	6
2nd-year class–year 1 <sup>b</sup>	8	15	3	6	2	4
2nd-year class–year 2 <sup>b</sup>	2	4	2	4	—	—

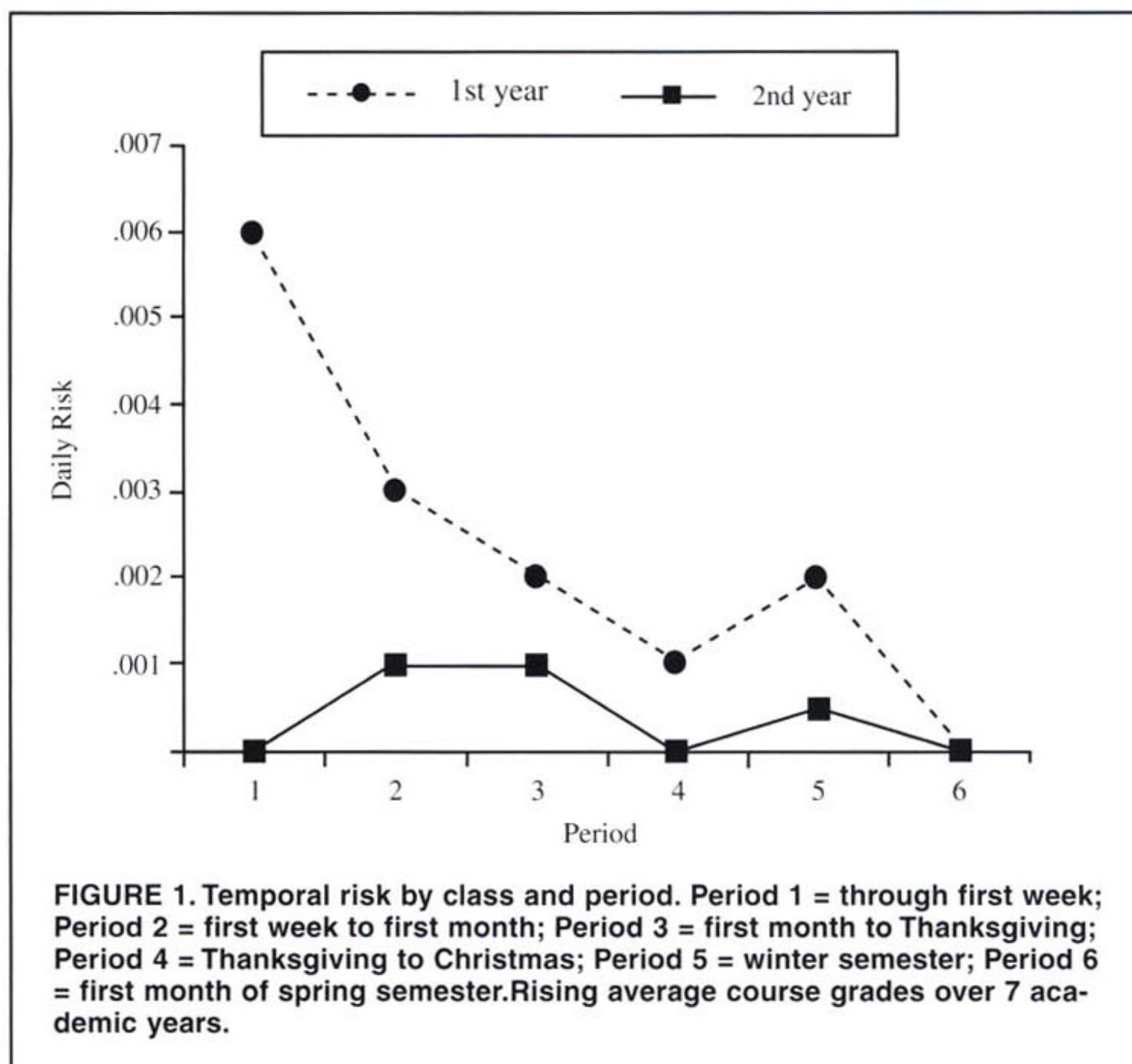
<sup>a</sup>*N* = 50, <sup>b</sup>*N* = 52

modified by a 3-way Class  $\times$  Type  $\times$  Period interaction ( $F[3.8, 380] = 2.93, p < .05$ ), indicating that early risk was greatest for unwanted sexual touching. When we removed unwanted sexual touching from the analyses (to look at the Period effects solely in the more significant forms of UWS), a significant effect remained for the Class  $\times$  Period interaction ( $F[2.0, 203] = 3.37, p < .05$ ), demonstrating more attempted and completed unwanted sex early in the college experiences of first-year as compared with second-year women.

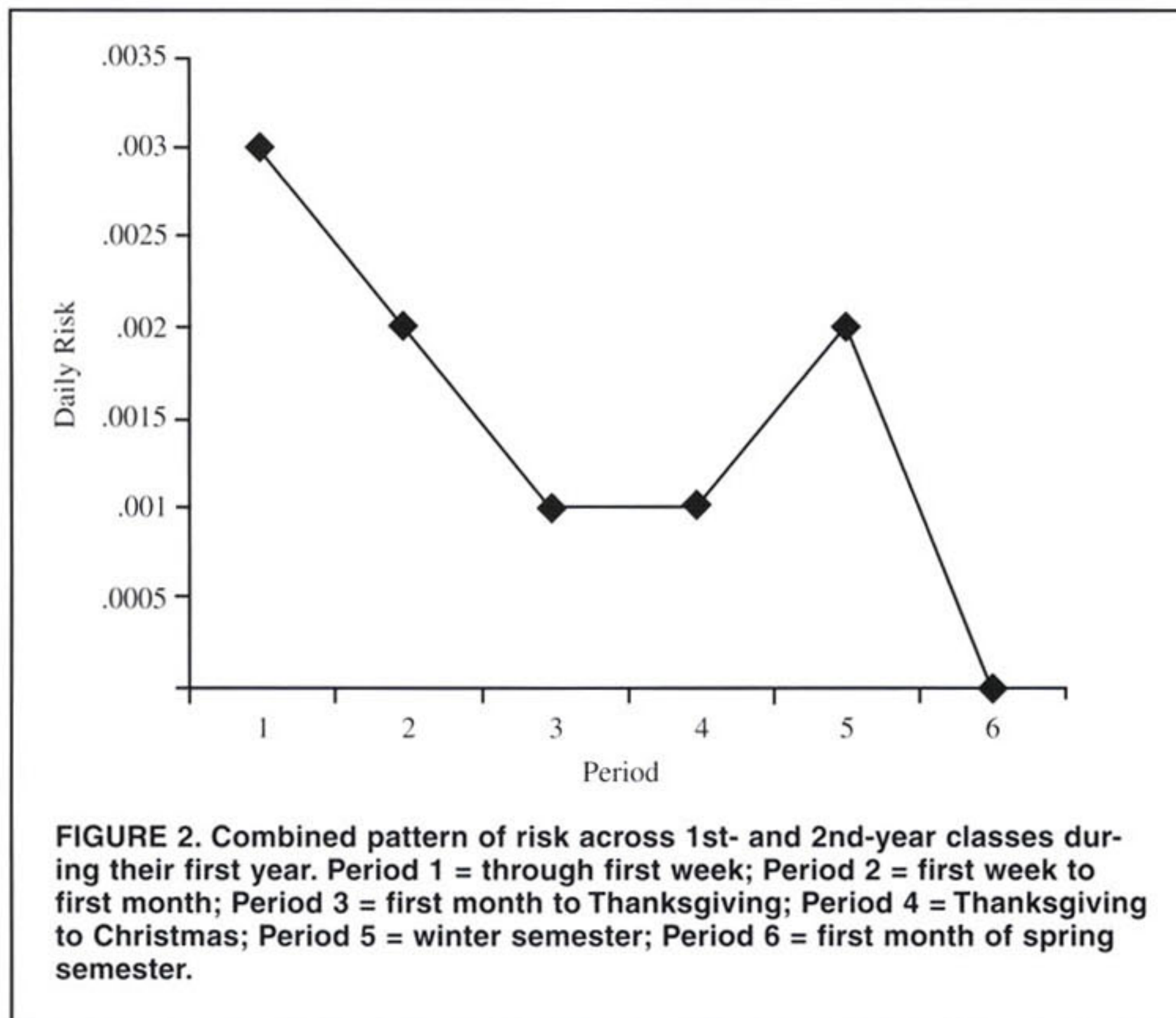
### Analysis 2

We evaluated overall temporal risk during the first year by comparing the UWS reports of 2nd years/year 1 (fall

2004) to the experiences of 1st years (fall 2005). This analysis combines the first-year experiences of the 2 classes to assess first-year patterns of risk in a larger sample ( $N = 102$ ). We used a Class  $\times$  Type  $\times$  Period repeated measures ANOVA to analyze differences between the 2 groups. We found no overall Class effect ( $F[1, 100] = 1.87, p = ns$ ), meaning that the 2 groups did not differ significantly in UWS during their respective first years. However, a significant Period effect was present ( $F[5, 96] = 2.81, p < .05$ ). Tests of within-subjects contrasts indicate that this effect was linear ( $F[1, 100] = 5.97, p < .05$ ), with UWS occurring more often at earlier times in the year (see Figure 2). We found no significant interactions of Period with Class or Type.







### Analysis 3

We also analyzed temporal risk by comparing reports of UWS from the 2nd years/year 1 with 2nd years/year 2. This completely within-subjects analysis allowed for the removal of any between-group error. If temporal risk was present during the first year but not during the second year, then either a Year effect or a Year  $\times$  Period effect should have been present. The 2 (Year)  $\times$  3 (Type)  $\times$  6 (Period) ANOVA showed a significant effect for Year ( $F[1, 51] = 4.47, p < .05$ ), with more UWS reported during the first as compared with the second year. This effect did not interact with Period ( $F[5, 47] = 0.90, p = ns$ ) or Type ( $F[2, 50] = 3.09, p = ns$ ).

### Analysis 4

We analyzed incidents for the winter semester using an ANOVA with 3 levels of Period (periods 4–6), Type (touching vs attempted sex vs completed sex), and Class (1st years, 2nd years/year 1, 2nd years/year 2). Thus, we assessed winter semester effects in a combined fashion for all participants. We treated Class as an entirely between-subjects variable in this analysis, which resulted in some loss of power but allowed for the assessment of combined effects of all 3 groups. The analysis supported a quadratic effect for Period ( $F[1, 101] = 7.91, p < .05$ ), indicating a significant increase in events during period 5 relative to periods 4 and 6. This effect can be seen in Figures 1 and 2. Period did not interact with Type, indicating that all types of UWS increased during the winter semester relative to the immediately adjacent periods. It also did not interact with

Class, indicating that all 3 groups showed this increased risk during the winter semester.

### COMMENT

#### Summary of Findings

The data provided substantial but incomplete support for the red zone. First years reported more UWS in early fall 2005 than did 2nd years/year 1. This difference diminished as the year went on. Similarly, when looking at the first year of both classes combined, we found a significant linear effect for Period, with more reports of UWS earlier in the year than later. However, the within-subjects data from the 2nd years (comparing their second-year experience with their first-year experience) did not support the classic idea of the red zone. Although these participants did report significantly more incidents in their first year relative to their second year, they did not report significantly more UWS early in their first year relative to their second year.

The data were also consistent with the existence of other red zones—some of which reflect national data and other more local norms. Consistent with other studies, 1st years were generally at higher risk for UWS than were 2nd years. This main effect for Year was present in both the within- and between-subjects analyses. Likewise, multiple analyses supported the idea of increased temporal risk during the brief winter semester for all participants.

As a whole, the data support the idea of temporal risk in this sample but indicate that temporal risk may be more complicated than indicated by the classic red zone that is widely publicized on school Web sites and printed materials.



In this sample, there appeared to be an increased risk for students during the first months of their first semester that reemerged during the winter semester. This winter semester effect was also present for the 2nd years. These findings are consistent with ideas raised in 3 focus groups, run prior to the onset of the study, in which students indicated that the winter semester was a time of more socializing, less work, more free time, and heavier drinking. In general, the pattern in this data set highlights the value of collecting local data with respect to the red zone—a point that Flack et al<sup>11</sup> made in their study in which they found a red zone to correspond with a period of heavy drinking and sorority rush. These differential patterns across schools are consistent with different school cultures. For example, the present sample comes from a school that has no Greek system, allows no kegs on campus, and requires that all parties serving alcohol be registered. According to student focus groups, the majority of underage drinking (as is the case in this study because of the restriction to first- and second-year students) occurs in smaller parties in student rooms—a pattern likely to be different from other institutions. Local factors—such as school size, winter semester, alcohol policies, Greek system, and type of residential life infrastructure—are likely to create different patterns of temporal risk that may not be consistent with a classic red zone.

### Implications

One recommendation arising from this study is that staff at student health centers, offices of safety and security, and student affairs offices should discuss with students local norms for risk. For example, a campus would be poorly served by being informed of a classic red zone if risk on that campus is equally high during a winter semester, a homecoming weekend, or Greek rush. Theoretically, education about the classic red zone may place women at higher risk during lower-risk time periods if they perceive those times to be relatively safe. Student focus groups may be valuable in identifying periods of temporal risk for a given college or university. For example, in focus groups we conducted prior to this study, participants identified behaviors that we used to generate hypotheses about early first-year and winter-semester risk. For example, they reported frequent use of the eagerly awaited, college-published “facebook” (a hardcopy booklet that publishes the pictures and names of incoming first years) as the basis on which upper-class men invite attractive under-class women to select parties. Likewise, the reputation of the winter semester as a party semester indicated that this also might be a time of increased risk. Using such qualitative data to complement quantitative data may provide a more reliable basis for educating students about the risk factors for sexual assault on different campuses.

### Limitations

Our response rate (51%) is consistent with other studies of this type and represents 1 out of 6 first- and second-year female students on campus at the time of the study. Sample

characteristics were consistent with the overall classes in age, religious affiliation, income, and ethnicity. As is the case in the college as a whole, 24% of the participants were international or nonwhite students. The college wide statistics on sexual orientation are unknown. Although the sample appears representative and reflects a large proportion of available students, the sample is still fairly small and represents only first- and second-year women. For this reason and others outlined earlier in the discussion, we caution against overgeneralization of these findings to other institutions.

A pattern in the data warrants another caution. Second years/year 1 reported somewhat lower rates of unwanted sex across all 3 types of UWS relative to first years (see Table 1). Although these differences were not significant, they suggest retrospective bias in that students are less likely to report UWS with passing time. The negative effects of traumatic experiences diminish with time in the majority of individuals who experience trauma.<sup>18</sup> Dissipation of the adverse outcomes associated with such experiences (eg, stress symptoms, anger, guilt) may make individuals less likely to retrospectively label a sexual experience as unwanted even if they experienced it as such at the time. Longitudinal studies evaluating UWS on an ongoing basis (perhaps using e-mail reminders linked to an online survey) are one way of overcoming such limitations.

We need to know more about temporal risk and the consequences of UWS on college and university campuses. The data from this study highlight the value of talking with students, surveying the population, and investigating local norms. Administrators could use such data to educate the student body about temporal risk associated with UWS.

More broadly, research on temporal risk is needed on college campuses that differ in size and other characteristics (eg, public vs private, secular vs faith-based, presence vs absence of fraternal organizations). Information about the occurrence and timing of UWS among college students outside of the United States is almost entirely lacking, as is research on UWS among US students during study-abroad programs. Because previous victimization is often a predictor of future victimization, investigators should also examine the relationship between the occurrence and timing of UWS prior to college (eg, in high school or prep school) and after matriculation. In addition to victimization studies, information is needed on the temporal nature of UWS perpetration.

Although having information on temporal risk is valuable, there is still much to be learned about other UWS risk factors and consequences. Although many researchers have investigated the effects of completed sexual assault, far less is known about the consequences of events such as unwanted touching and unwanted attempted sex. This is of considerable concern because these events seem to occur at much higher rates than does completed unwanted sex. In addition, traditional scales for posttraumatic stress disorder, which typically measure symptoms of re-experiencing, avoidance, and hyperarousal, may be inadequate



in assessing the most frequent negative outcomes of unwanted touching or other types of attempted unwanted sex. Likely outcomes of such experiences include social awkwardness, guilt, feeling unsafe, and an inability to trust—negative outcomes not typically measured on standard psychometric instruments.

In general, sufficient evidence in the literature as well as from this study supports the idea that time is an important factor in understanding and addressing UWS on college campuses. In the absence of local data, however, we recommend that schools not define risk as described in the classic red zone. Presenting such information may lead to false perceptions about temporal risk, or lack of it, on their campus.

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### NOTE

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### REFERENCES

1. Warshaw R. *I never called it rape: The Ms. Report on recognizing, fighting, and surviving date and acquaintance rape*. NY: Harper Perennial, 1988.
2. Utah State University. *Red Zone Week Activity*. <http://www.usu.edu/calendar/eventDetail.cfm?eventID=1462&day=7&show=oneday&year=2005&month=9>. Accessed September 9, 2008.
3. Women's Resource Center. *The Red Zone—What Is It? Center News* [newsletter]. Dartmouth, MA: University of Massachusetts; Summer 2006.
4. Student Health and Wellness Center, Longwood University. *Red Zone Web site*. [http://www.longwood.edu/health/assault/assaultfaq/red\\_zone.htm](http://www.longwood.edu/health/assault/assaultfaq/red_zone.htm). Accessed August 21, 2007.
5. The Women's Center, Franklin & Marshall College. *The Women's Center Web site*. <http://www.fandm.edu/x7183.xml>. Accessed August 21, 2007.
6. Fisher BS, Cullen FT, Turner MG. *The Extent and Nature of the Sexual Victimization of College Women: A National-Level Analysis*. Washington, DC: Dept of Justice, National Institute of Justice; 1999.
7. Koss MP, Gidycz CA, Wisniewski N. The scope of rape: incidence and prevalence of sexual aggression and victimization in a national sample of higher education students. *J Consult Clin Psychol*. 1987;55:162–170.
8. Mohler-Kuo M, Dowdall GW, Koss MP, et al. Correlates of rape while intoxicated in a national sample of college women. *J Stud Alcohol*. 2004;65:37–45.
9. Flack WF, Daubman KA, Caron ML, et al. Risk factors and consequences for unwanted sex among university students: hooking up, alcohol, and stress response. *J Interpers Violence*. 2007;22:139–157.
10. Sampson R. *Acquaintance Rape of College Students*. Washington, DC: US Dept of Justice, Office of Community Oriented Policing Services; 2002.
11. Flack WF, Caron ML, Leinen SJ, et al. "The red zone": temporal risk for unwanted sex among college students. *J Interpers Violence*. 2008;23:1177–1196.
12. Humphrey JA, White JW. Women's vulnerability to sexual assault from adolescence to young adulthood. *J Adolesc Health*. 2000;27:419–424.
13. Finley C, Corty E. Rape on campus: the prevalence of sexual assault while enrolled in college. *J Coll Stud Dev*. 1993;34:113–117.
14. Fisher BS, Cullen FT, Turner MG. *The Sexual Victimization of College Women*. Washington, DC: Dept of Justice, National Institute of Justice; 2000. Publication No. NCJ 182369.
15. Koss MP, Bachar KJ; SES Collaborative. *Sexual Experiences Survey—Long Form Victim*. Version V. Tucson, AZ: University of Arizona; 2004.
16. Ostrander C, Schwartz J. *Crime at College: The Student Guide to Personal Safety*. Ithaca, NY: New Strategist; 1994.
17. Koss MP, Oros CJ. Sexual Experiences Survey: a research instrument investigating sexual aggression and victimization. *J Consult Clin Psychol*. 1982;50:455–457.
18. Kessler RC, Sonnega A, Bromet E, et al. Posttraumatic stress disorder in the National Comorbidity Survey. *Arch Gen Psychiat*. 1995;52:1048–1060.
19. Koss MP, Gidycz CA. Sexual experiences survey: reliability and validity. *J Consult Clin Psychol*. 1985;5:422–423.
20. Cecil H, Matson SC. Sexual victimization among African American adolescent females: examination of the reliability and validity of the sexual experiences survey. *J Interpers Violence*. 2006;21:89–104.
21. Koss MP, Abbey A, Campbell R, et al. Revising the SES: a collaborative process to improve assessment of sexual aggression and victimization. *Psychol Women Q*. 2007;31:357–370.