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# Friends-Based Protective Strategies and Unwanted Sexual Experiences: A Daily Diary Examination of First Year College Women

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## Abstract

Risk for unwanted sexual experiences can emerge in social contexts—the same contexts that early college women navigate with their friends. Though friends naturally engage in prevention strategies, less is known about how capable guardianship influences risk. Using multilevel structural equation modeling, the present study examined guardianship at the person and situation levels. First-year college women ( $N = 132$ ) completed eight weekends of daily surveys. We examined whether guardianship (e.g., more friends present, greater proportion of female friends, no intoxicated friends) would reduce unwanted sexual experience risk and if this relation was mediated by friends-based strategy use. An alternative model was also tested with the same predictors, but with unwanted sexual experiences as the mediator and friends-based strategy use as the outcome. Over half (58%) of extended weekend nights with friends involved drinking or using drugs. Friends-based strategies were used on 29% of nights. Across models, being with one or more intoxicated friends was associated with friends-based strategy use and an unwanted sexual experience, but only at the situation level. Parents, educators, and policy makers can encourage college women to draw on their social

networks to enhance safety. Interventions could incorporate more universal strategies for responding to risk in social contexts.

**Keywords:** college women, friends, alcohol use, social contexts, protective strategies, unwanted sexual experiences

The first year of college is an important transition for young women, with many moving onto the college campus for a newfound freedom and independence. This transition, however, is also marked by substantial risk for heavy drinking and unwanted sexual experiences (Blayney et al., 2016; Fromme et al., 2008; Meisel & Barnett, 2017; Parks et al., 2008). Sexual victimization, the most widely studied unwanted sexual experience, involves a range of nonconsensual sexual activity (i.e., touching to rape) and has been found to impact 20–25% of college women (Fedina et al., 2018). At the lower end of the severity spectrum is unwanted sexual attention (i.e., persistent or unreciprocated sexual comments, gestures, or requests), which is reported by well over one-third of first-year college women (41%; Hill & Silva, 2005). Unwanted sexual experiences are typically perpetrated by male friends or casual acquaintances and often occur when drinking and in social contexts (Blayney & Read, 2018; Sinozich & Langton, 2014). Within our larger culture exists a collective set of attitudes and beliefs that normalize and reinforce violence against women (i.e., “rape supportive culture”; Schwartz et al., 2001). College campuses are not immune to such influences and social contexts often have context-specific norms that reinforce men’s sexual aggression (Tinkler et al., 2018). As a result, men might engage in opportunistic offending, in which they mostly adhere to situational norms but also engage in lower-severity offenses (i.e., unwanted sexual attention, touching) because they can “get away with it” (Graham et al., 2014). Surprisingly, little is known about how first-year college women navigate and respond to unwanted sexual experience risk in social contexts. This information is important, as perpetrators may target first-year college women for a variety of reasons, including having less experience in drinking contexts, being less familiar with male peers’ reputations, and being more motivated to fit in (e.g., Hines et al., 2012). Understanding risk at both the person level (i.e., differences between individuals or “between-person”) and situation level (i.e., differences within an individual or “within-person”) could provide more fine-grained information on how to enhance first-year college women’s safety in social contexts.

Routine activity theory (Cohen & Felson, 1979) was originally developed as a macro-level theory to explain shifting crime rates (Meier & Miethe, 1993), but over time and in combination with lifestyle exposure theory (Hindelang et al., 1978) it has been used as a micro-level theory to understand crime from the perpetrator’s point of view. For our purposes, we refer to this framework as routine activity theories. This framework, alongside a feminist perspective (e.g., Franklin et al., 2012; Mustaine & Tewksbury, 2002; Schwartz & Pitts, 1995), can assist in our understanding of college women’s risk for unwanted sexual experiences. Routine activity theories posit that risk increases in contexts where there are potential perpetrators, vulnerable targets, and a lack of capable guardians. According to these theories, perpetrators select into contexts where potential targets may be available (exposure to potential perpetrators). In these contexts, perpetrators are looking for targets

whose ability to resist may be compromised in some way (target vulnerability)—for instance, from intoxication. Target selection is often based on opportunity, and thus, perpetrators seek out targets who do not have others who are able or willing to step up and protect them (lack of capable guardians). From a more feminist lens, and consistent with bystander-based approaches, we consider guardianship as a way to enhance safety by promoting a “culture of helping and support.” Of particular interest to the present study is the role of capable guardians in preventing or responding to risk in social contexts.

### *Friends as Capable Guardians*

Friends are important in the transition to college life (Buote et al., 2007) and are also central to early college women’s drinking and involvement in social contexts (Borsari & Carey, 2006). Given that risk for unwanted sexual experiences can emerge in social contexts (Blayney & Read, 2018; Sinozich & Langton, 2014), friends could play a critical role in reducing women’s vulnerability. Compared to college men, college women report greater intentions to intervene in sexually aggressive situations (Burn, 2009; McMahon, 2010). Because friends share a sense of responsibility for each other’s safety (Blayney et al., 2021b), intervention in college women is more likely to occur when the potential victim is a friend as opposed to a stranger (Bennett et al., 2014; Blayney et al., 2018; Blayney et al., 2021b; Katz et al., 2015). As capable guardians, female friends may help deter risk by their mere presence (i.e., making it harder for a potential perpetrator to isolate someone due to group size) but also by actively intervening in situations, including those involving lower severity opportunistic offenses like unwanted sexual attention or touching.

Qualitative work indicates that college women naturalistically draw on their female friends to help prevent or respond to unwanted sexual experience risk through bystander-based protective strategies (Blayney et al., 2021b; Brooks, 2008). Friends-based protective strategies include keeping tabs on friends, using signals to convey potential danger, interrupting escalating situations, taking responsibility for friends, and relying on male friends as an extra source of protection (Blayney et al., 2021b; Brooks, 2008). However, barriers to using protective strategies exist, even in friend groups. Common barriers to implementing strategies with friends include intoxication, preoccupation, situation ambiguity, and social consequences (Blayney et al., 2021b). Intoxication may be an especially important barrier to capable guardianship, as it can increase target vulnerability but also interfere with friends’ recognition and response to sexual aggression (e.g., noticing sexual aggression, interpreting it as a situation that requires intervention, taking action on behalf of a friend; Ham et al., 2019; Leone et al., 2018; Wiersma-Mosley et al., 2020). Though college women believe these strategies to be helpful (Blayney et al., 2021b), many questions remain unanswered. For example, how do guardianship factors (e.g., number of friends present, proportion of female friends, being with one or more intoxicated friends) relate to unwanted sexual experience risk in social contexts? Could friends-based protective strategy use be a key mechanism in this association? Further, are there person- or situation-specific differences that influence such risk? With the present study, we sought to address these gaps.

### *The Present Study*

Using daily diary methods and drawing from routine activity theories (Cohen & Felson, 1979; Hindelang et al., 1978) alongside a feminist perspective (e.g., Franklin et al., 2012; Mustaine & Tewksbury, 2002; Schwartz & Pitts, 1995), we sought to deepen our understanding of capable guardianship by examining the role that friends play in preventing or responding to first-year college women's unwanted sexual experience risk. In this study, unwanted sexual experiences comprised a wide range, including sexual attention, sexual touching, attempted rape, and completed rape. Investigating such factors does not mean that women or their friends are responsible for what happens to them. In fact, friends may not just buffer initial risk but might also interrupt by intervening (Blayney et al., 2018; Blayney et al., 2021b). Nevertheless, ultimately the responsibility for sexual aggression rests solely on the perpetrators who commit these acts. Given the lack of quantitative research in this area, our hypotheses were built largely on prior qualitative findings (Blayney et al., 2021b). We hypothesized that (1) capable guardianship (e.g., more friends present, greater proportion of female friends, not being with intoxicated friends) would be associated with reduced risk for unwanted sexual experiences and (2) this relation would be mediated by friends-based strategy use. Given the exploratory nature of this study, and to better understand whether friends-based strategy use was preventative or reactive, we also considered an alternative model in which the association between capable guardianship and friends-based strategy use was mediated by unwanted sexual experiences. We expected the hypothesized associations to be evident at both the person and situation level. For example, we expected that individuals with more capable guardianship on average would have a lower risk for unwanted sexual experiences across the study (person-level), and that nights with more capable guardianship would also have a lower risk for an unwanted sexual experience on that night (situation-level). Information of this kind could inform whether interventions should include targeted approaches for high-risk individuals, more universal approaches for high-risk contexts, or both.

## **Method**

### *Participants and Procedures*

First-year college women who drank alcohol were recruited for a larger study on individual and contextual risk factors for unwanted sexual experiences (Blayney et al., 2021a). Data were collected in 2017–2018. This study had two components: (1) an in-person lab session and (2) the daily diary portion. Participants were recruited from a medium-sized university in the northeastern United States in one of two ways. Students from introductory psychology classes completed an online screening survey to participate in research for class credit, and college women were also recruited from flyers and were asked to contact the lab to be screened over the phone by trained research staff. Eligible participants were ages 18–20, in their first college year, sexually attracted to men, and reported drinking alcohol at least once per week in the past six months. Several factors informed these inclusion criteria. First, the ages of 18–20, which traditionally overlap with the first college year, are associated with elevated risk for sexual victimization (Sinozich & Langton, 2014). In the larger study, participants completed a risk perception measure that asked women to

imagine themselves in a variety of dating situations with men. Focusing on women who reported any sexual attraction to men was necessary so that participants could realistically project themselves into the dating vignettes. Lastly, compared to nondrinkers, college women who regularly drink are at higher risk for sexual victimization (Testa & Livingston, 2018).

The larger study involved a lab session followed by eight weekends of daily surveys. Lab sessions included tasks (e.g., risk perception vignettes), self-report questionnaires, and a brief tutorial on weekend survey procedures. Participants received \$20 or research credit. The weekend portion of the study began the Friday following the participant's lab session (which were conducted Sundays through Thursdays). For eight consecutive weekends, participants completed one, five-minute online survey each Friday, Saturday, and Sunday (total surveys = 24 possible). On these days, participants received a text or email at 9:00 a.m. with a survey link and unique pin. Surveys were available until 5:00 p.m. and assessed women's experiences last night from 5 p.m. until they went to bed. Survey reminders were communicated by text, email, and/or phone call. Participants could earn up to \$60 based on the number of surveys completed and up to \$40 in bonuses. Bonuses were dependent on the number of surveys submitted each weekend (e.g., \$5 weekend bonus for all three surveys, \$3 weekend bonus for two out of three surveys). Participants received weekly reminders on Thursday afternoons about bonuses, gift card drawings, or time remaining in the study. Women who submitted at least 80% of their surveys were entered into a drawing for one of three \$50 gift cards. All procedures were approved by the University's Institutional Review Board.

Of the 134 participants who completed the lab session, two declined to participate in the daily diary. The final sample included 132 women ( $M_{\text{age}} = 18.32$ ,  $SD = 0.48$ ), with most participants living in the dorms (82%;  $n = 108$ ). The sample was 61% White ( $n = 81$ ), 20% Asian ( $n = 26$ ), 8% Black/African American ( $n = 10$ ), 6% Hispanic/Latinx ( $n = 8$ ), and 5% multiracial or other ( $n = 7$ ). On average, in the past six months, participants drank 2.48 days per week ( $SD = 0.94$ ) and had 11.64 drinks per week ( $SD = 7.62$ ).

## **Measures**

### *Lab Session*

**Sexual Victimization History.** Participants completed two measures to assess sexual victimization before the study. To measure childhood victimization (i.e., before age 14), 11 items were drawn from the Computer Assisted Maltreatment Inventory (DiLillo et al., 2010) to assess unwanted sexual exposure, touching, and penetration (response options: 0 = *never* to 4 = *10+ times*). To measure adult victimization (i.e., after age 14), participants were presented with the 35-item Sexual Experiences Survey—Short Form Victimization (SES-SFV; Koss et al., 2007). The SES-SFV assessed unwanted sexual contact, attempted rape, and completed rape (response options: 0 = *0 times* to 3 = *3+ times*). Rape items included oral, vaginal, and anal penetration. Responses based on these measures were recoded as 0 = *no prior sexual victimization history* or 1 = *prior sexual victimization history*.

*Daily Weekend Surveys*

**Social Contexts.** In each survey, participants were presented a list of seven locations and asked where they went last night. From the list, multiple locations could be endorsed (response options: 0 = *no*, 1 = *yes*). Locations were (a) participant's dorm/apartment/house, (b) friend's dorm/apartment/house, (c) someone else's dorm/apartment/house, (d) party/parties, (e) school, (f) work, and (g) "other" location. For each endorsed location, participants reported on the social composition of that location. Response options included 0 = *just me*, 1 = *one other person*, 2 = *small group (~2–5 people)*, 3 = *medium group (~6–15 people)*, and 4 = *large group (15+ people)*. An open-ended follow-up item asked participants to describe the "other" location. Contexts and social composition are used for descriptive purposes only.

**Participant Subjective Intoxication.** In each survey, participants reported on whether they used alcohol (response options: 0 = *no*, 1 = *yes*) or other drugs last night (response options: 0 = *no*, 1 = *yes*). If the response was yes to either, they were asked how intoxicated they felt (response options: 1 = *not at all* to 5 = *extremely*).

**Number of Friends Present.** Participants were asked if they were with friends last night (response options: 0 = *no*, 1 = *yes*). If yes, participants reported how many friends they hung out with (response options: open ended). In addition, participants were asked what they did and where they went with friends. Items to assess activities with friends included studying, hanging out, partying, getting food, and "other." From the list, multiple activities could be endorsed (response options: 0 = *no*, 1 = *yes*). Activities with friends were used for descriptive purposes only.

**Proportion of Friends Who Were Female.** Participants were asked, "Of the \_\_ friends you hung out with last night, how many were female?" Response options were open ended but capped at the total number of friends present. The proportion of female friends was then calculated by dividing the number of female friends by the total number of friends for that night.

**Being with One or More Intoxicated Friends.** Participants then reported on whether any of their friends used alcohol or other drugs last night (response options: 0 = *no*, 1 = *yes*). If participants responded yes to this item, they were asked whether their friends appeared intoxicated (response options: 0 = *no*, 1 = *yes*).

**Friends-Based Protective Strategy Use.** Friends' strategy use was assessed with an item developed for this study, "Last night, did your friends use any strategies with you to stay safe? Example—stay together" (response options: 0 = *no*, 1 = *yes*). An open-ended follow-up item was used for participants to describe the specific strategies used with friends.

**Unwanted Sexual Experiences.** In each survey, a modified SES-SFV (Koss et al., 2007) was used to assess unwanted sexual experiences that occurred last night by presenting the behavioral items (i.e., sexual touching, attempted rape, completed rape) but not the methods

of coercion (i.e., coercion, threats or force, incapacitation). Rape items included oral, vaginal, and anal penetration. In addition to sexual victimization, we assessed unwanted sexual attention (“Someone kept hitting on you even though you gave them the message that you weren’t interested?”). Response options were 0 = *no*, 1 = *yes*, and 2 = *not sure*. The *not sure* option was infrequently endorsed without one or more other *yes* responses (total = 7 cases) but still represented uncertainty in consent. Thus, responses were recoded as 0 = *no unwanted sexual experience* and 1 = *unwanted sexual experience* (i.e., *yes* or *not sure*). When endorsed, follow-up questions asked about the perpetrator’s gender, relationship with the participant, setting of the incident, and the perpetrator’s alcohol use and intoxication. Follow-up items were used for descriptive purposes only.

### ***Data Analytic Plan***

Descriptive statistics were first calculated to characterize capable guardianship, friends-based strategy use, and unwanted sexual experiences. To describe participant responses to the specific friends-based strategies used, content coding (Hsieh & Shannon, 2005) of open-ended responses was conducted by the first and fourth author. Both authors reviewed open-ended responses independently to get acquainted with the data. Preliminary codes of friends-based strategies were then developed and discussed through an iterative process of defining, refining, and coding the data as a two-member team. Salience, frequency, and extensiveness of data informed the coding process (e.g., Creswell & Poth, 2017; Krueger & Casey, 2000). Discrepancies were resolved through discussion. Presentation of this information is for descriptive purposes only.

Next, drawing on the notion of friends as capable guardians, our hypothesized model examined (1) whether capable guardianship would be associated with reduced risk for unwanted sexual experiences and (2) whether this relation was mediated by any friends-based strategy use. Capable guardianship was represented by three separate items: having more friends present, having a greater proportion of female friends present, and not being with one or more intoxicated friends. Given the exploratory nature of this study, and to better understand whether friends-based strategy use was preventative or reactive, we also tested an alternative model in which the same predictors were included, but unwanted sexual experiences was the mediator and any friends-based strategy use was the outcome. Because prior sexual victimization history is a risk factor for subsequent victimization (Gidycz et al., 2008), we controlled for this in our analyses. We also controlled for weekend day and participant intoxication. Given the nested nature of the data (i.e., surveys within participants), and our aims of examining indirect effects, data were analyzed using multi-level structural equation modeling (MSEM) in Mplus version 8.0 (Muthén & Muthén, 1998-2017). MSEM allows for the investigation of both person- and situation-level effects while also preventing the conflation of these effects (Preacher et al., 2010). Mplus decomposes the observed variables, which contain both person- and situation-level variance, into two separate uncorrelated latent variables (Asparouhov & Muthén, 2008). Person-level variance reflects individual differences in the observed variables (i.e., person mean or average score across the study) while situation-level variance reflects daily departures from the person mean (i.e., score on a given occasion minus average score).



Mediation analyses were performed using a 1-1-1 MSEM with fixed slopes (Preacher et al., 2010, 2011). Because many of the predictors and outcomes were binary, mean- and variance-adjusted weighted least squares estimators (WLSMV) were used to appropriately model categorical indicators. WLSMV estimation implements a pairwise missing data strategy with pairwise deletion, which allows participants to be retained in analyses even if they have missing data. Model fit was determined by estimation of several fit indices, including the Comparative Fit Index (CFI), Tucker Lewis Index (TLI), the Root Mean Square Error of Approximation (RMSEA), and the within- and between-cluster Standardized Root-Mean-Square Residuals (SRMR). Acceptable model fit was based on  $RMSEA \leq 0.06$ , CFI and TLI  $\geq 0.95$ , and  $SRMR \leq 0.08$  (Hu & Bentler, 1999). We computed 95% confidence intervals (CI) for indirect effects in R (R Core Team, 2017) using Monte Carlo simulation (Preacher & Selig, 2012).

Lastly, we conducted sensitivity analyses to determine whether capable guardianship was different for lower severity (i.e., unwanted sexual attention + sexual touching) versus higher severity (i.e., attempted + completed rape) incidents. As such, four additional models were examined (two for the hypothesized model and two for the alternative model).

## Results

### *Descriptive Statistics*

Correlations can be found in Table 1. Out of a possible 3,168 surveys (132 participants  $\times$  24 surveys), participants submitted surveys on 2,912 person nights (92%). On average, participants completed 22.06 surveys ( $SD = 5.20$ , Range = 1– 24). Given that participants needed to report being with friends in order for friends-based strategies to be used, the dataset was further reduced to include only nights with friends. Thus, analyses were based on 1,689 person nights (58% of total nights). Participants were with friends most often at their friend's home (45%), their own homes (38%), at a party (29%), or "other" location (18%; e.g., public place like a mall or restaurant, bar, entertainment venue). In terms of the larger social context, on average, participants reported that time spent in friends' homes and the "other" location typically involved small- to medium-sized groups. In their own homes, participants were usually with a small group. Finally, parties tended to be composed of medium- to large-sized groups. Across locations, participants and their friends were hanging out (66%), partying (37%), getting food (23%), and/or studying (14%). On average, participants were with 4.98 friends ( $SD = 4.09$ ), and of those, 3.25 were female ( $SD = 3.23$ ). Roughly 58% of friend nights involved friends drinking or using other drugs (975 person nights), and on 85% of these nights (830 person nights), friends were visibly intoxicated. As expected, these nights were also ones where participants were using alcohol or other drugs ( $ps < .001$ ).

**Table 1.** Person- and Situation-Level Bivariate Correlations

Variable	ICC	Correlations							
		1	2	3	4	5	6	7	8
1. Friends-based strategy use	0.31	—	0.19	0.25*	0.14	0.33**	0.24*	—	0.18
2. Unwanted sexual experiences	0.07	0.22***	—	0.04	-0.03	0.24**	0.12	—	0.43***
3. Proportion of female friends	0.32	0.05	0.00	—	0.21	0.25*	0.29***	—	0.02
4. Number of friends present	0.21	0.26***	0.12***	-0.12**	—	0.11	-0.08	—	-0.10
5. One or more intoxicated friends	0.20	0.41***	0.20***	-0.04	0.37***	—	0.82***	—	0.27***
6. Participant intoxication	0.19	0.38***	0.21***	-0.01	0.33***	0.67***	—	—	0.26**
7. Weekend night	0.00	0.17***	0.08**	-0.03	0.13***	0.24***	0.22***	—	—
8. Prior SV history	—	—	—	—	—	—	—	—	—

**Note:** ICC = intraclass correlation coefficient. SV = sexual victimization. Person-level correlations are shown on the upper diagonal, and situation-level correlations are shown on the lower diagonal. To compute bivariate correlations and significance levels, the MLR estimator was used in Mplus without specifying categorical variables.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Participants reported friends-based strategy use on 29% of nights (483 person nights). Content coding of the open-ended responses indicated that the most commonly reported strategies were sticking together (81%), leaving together (10%), checking in with each other (5%), monitoring each other's alcohol use (3%), and interrupting escalating situations (1%).

On roughly 7% of friend nights (123 person nights), 48% of the sample (64 participants) reported an unwanted sexual experience. Regarding the most severe experience on these nights, 55% of reports were unwanted sexual attention, 30% sexual touching, 9% attempted rape, and 6% completed rape. Perpetrators were male (98%) and not well known to participants (54% strangers, 22% casual acquaintances). Roughly 15% of perpetrators were male friends. Further examination of perpetrator type by unwanted sexual experience revealed that unwanted sexual attention was commonly perpetrated by strangers (39 person nights), casual acquaintances (16 person nights), and friends (10 person nights). Similarly, strangers (21 person nights), casual acquaintances (8 person nights), and friends (6 person nights) were responsible for unwanted sexual touching. Attempted and completed rape were less common and showed a different perpetration pattern. For attempted rape, perpetrators were largely romantic partners (4 person nights), strangers (3 person nights), ex-romantic partners (2 person nights), and casual acquaintances (2 person nights). For completed rape, perpetrators were strangers (3 person nights), friends (3 person nights), and casual acquaintances (1 person night). Incidents occurred most at parties (52%) and private spaces (25%). The majority of unwanted sexual experiences (85%) involved the participant drinking. On average, participants reported 5.61 drinks ( $SD = 2.86$ ) and were moderately

intoxicated ( $M = 3.39$ ,  $SD = 1.10$ ). Fewer, but still over half (51%), of these incidents involved the perpetrator drinking. On average, participants estimated the perpetrator drank 4.98 drinks ( $SD = 3.73$ ) and was moderately intoxicated ( $M = 2.99$ ,  $SD = 1.20$ ). Most incidents occurred between 11:00 p.m. and 2:30 a.m. Roughly 44% ( $n = 58$ ) of the sample reported a prior sexual victimization history. Women with prior sexual victimization histories reported unwanted sexual experience nights at a rate of two times higher (69%) than that of their nonvictimized peers (31%),  $\chi^2(1) = 23.44$ ,  $p < .001$ .

### ***Multilevel Structural Equation Modeling***

#### *Hypothesized Model*

The hypothesized model (Model 1a; Figure 1, Table 2) had excellent fit: RMSEA = .036, CFI = .996, TLI = .969, SRMR<sub>within</sub> = .000, SRMR<sub>between</sub> = .091. At the situation level, a greater proportion of female friends ( $B = 0.59$ ,  $p < .001$ ) and being with one or more intoxicated friends ( $B = 1.10$ ,  $p < .001$ ) were positively associated with any friends-based strategy use. Surprisingly, any friends-based strategy use was positively associated with an unwanted sexual experience ( $B = 0.27$ ,  $p = .002$ ). Being with one or more intoxicated friends, number of friends present, and proportion of female friends were not associated with an unwanted sexual experience ( $ps = .065-.822$ ). In examining mediation, any friends-based strategy use was found to mediate the relation from (1) greater proportion of female friends to an unwanted sexual experience ( $B = 0.16$ ,  $p = .014$ , 95% CI [.047, .299]) and (2) being with one or more intoxicated friends to an unwanted sexual experience ( $B = 0.30$ ,  $p = .003$ , 95% CI [.106, .496]). In these situations, there was a higher likelihood of any friendsbased strategy use, and in turn, a higher likelihood of an unwanted sexual experience.

At the person level, individuals who were with one or more intoxicated friends more often were more likely to report any friends-based strategy use ( $B = 1.09$ ,  $p = .006$ ). However, any friends-based strategy use was not associated with unwanted sexual experiences ( $p = .838$ ). No direct or indirect effects from other capable guardianship factors (number of friends present, proportion of female friends) to unwanted sexual experiences were observed ( $ps = .140-.551$ ).



**Table 2.** Hypothesized Model—Friends-Based Strategy Use as a Mediator (Model 1a)

	Situation Level			Person Level		
	<i>b</i>	<i>SE</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>p</i>
<b>Direct Effects on Friends-Based Strategy Use</b>						
Number of friends	0.01	0.02	0.412	0.01	0.08	0.949
Proportion of female friends	0.59	0.15	< 0.001	0.77	0.70	0.266
One or more intoxicated friends	1.10	0.12	< 0.001	1.09	0.40	0.006
Participant intoxication	-0.12	0.06	0.059	-0.52	0.39	0.178
Weekend night	0.06	0.06	0.302	—	—	—
<b>Direct Effects on Unwanted Sexual Experiences</b>						
Number of friends	-0.03	0.09	0.756	-0.06	0.08	0.282
Proportion of female friends	-0.05	0.20	0.822	0.30	0.50	0.551
One or more intoxicated friends	0.42	0.23	0.065	0.65	0.44	0.140
Participant intoxication	-0.03	0.10	0.762	-0.50	0.33	0.129
Weekend night	-0.03	0.09	0.756	—	—	—
Friends-based strategy use	0.27	0.09	0.002	-0.02	0.10	0.838
Prior sexual victimization history	—	—	—	0.54	0.17	0.001
<b>Indirect Effects via Friends-Based Strategy Use</b>						
Number of friends	0.01	0.01	[-0.004, 0.013]	0.00	0.01	[-0.014, 0.025]
Proportion of female friends	0.16	0.06	[0.047, 0.299]	-0.02	0.08	[-0.268, 0.202]
One or more intoxicated friends	0.30	0.10	[0.106, 0.496]	-0.02	0.11	[-0.255, 0.229]

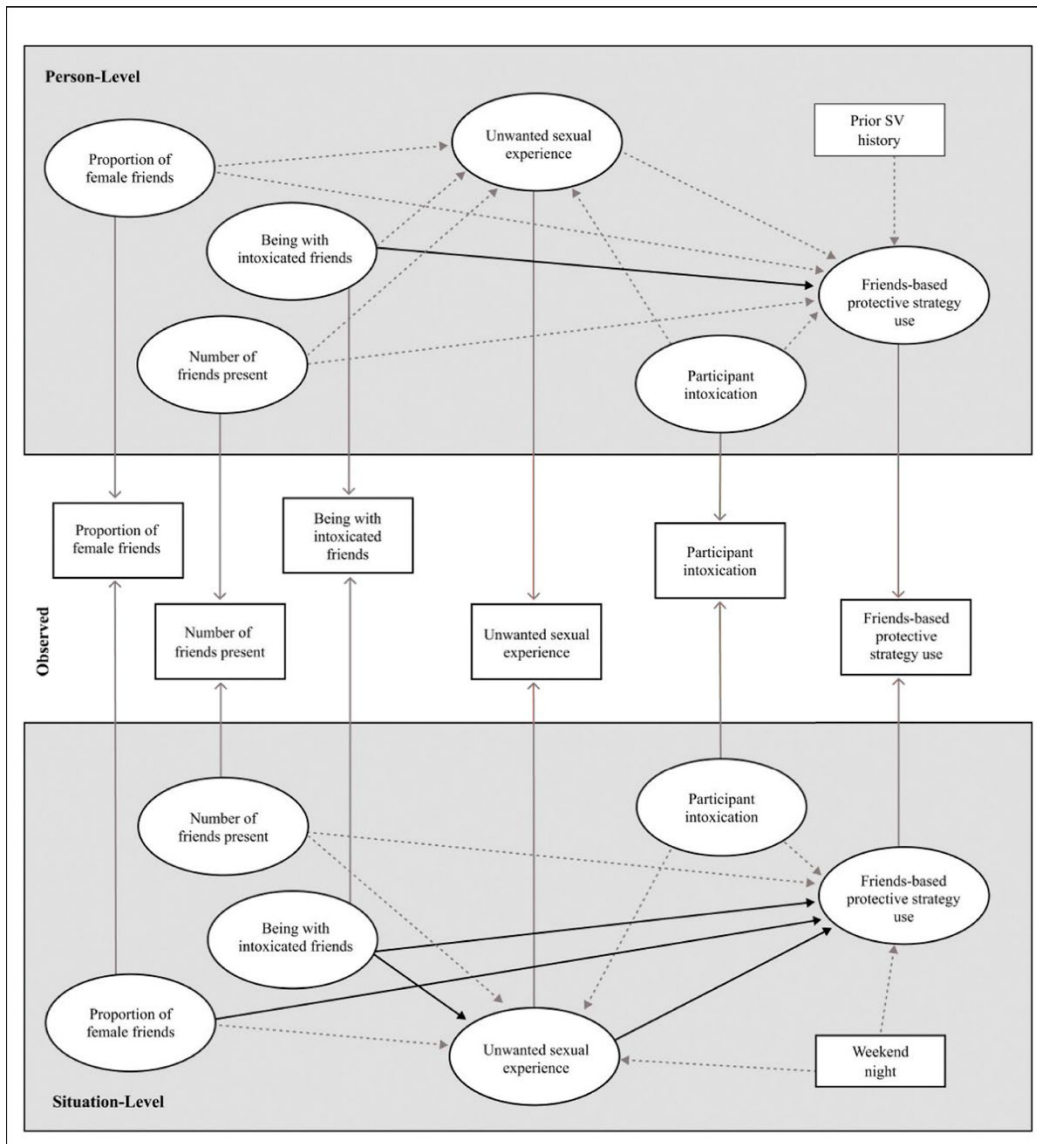
### Sensitivity Analyses

To determine whether this varied by severity, subsequent analyses disaggregated the outcome into (1) lower severity (Model 1b) and (2) higher severity (Model 1c) incidents. Both models had excellent fit: Model 1b RMSEA = .036, CFI = .996, TLI = .969, SRMR<sub>within</sub> = .000, SRMR<sub>between</sub> = .091; Model 1c RMSEA = .036, CFI = .996, TLI = .965, SRMR<sub>within</sub> = .000, SRMR<sub>between</sub> = .086. The results of the lower severity model (Model 1b) fully replicated the pattern of the main hypothesized model (Model 1a) with regards to significance and direction of effects. The higher severity model (Model 1c) also replicated Model 1a at the person level but not the situation level. Thus, sensitivity analyses suggest findings were most consistent with lower severity incidents.

### Alternative Model

Given the unexpected findings between any friends-based strategy use and unwanted sexual experiences, we then examined an alternative model (Model 2a; Figure 2, Table 3) in which the outcome and mediator were reversed. The alternative model fit was excellent: RMSEA = .046, CFI = .994, TLI = .950, SRMR<sub>within</sub> = .000, SRMR<sub>between</sub> = .120. At the situation level, being with one or more intoxicated friends ( $B = 0.69, p < .001$ ) was positively associated with an unwanted sexual experience. In turn, an unwanted sexual experience was positively associated with any friends-based strategy use ( $B = 0.27, p = .002$ ). A greater proportion of female friends ( $B = 0.58, p < .001$ ) and being with one or more intoxicated friends ( $B = 0.96, p < .001$ ) were positively associated with any friends-based strategy use, but number of friends was not ( $p = .339$ ). Notably, unwanted sexual experiences mediated the relation from being with one or more intoxicated friends to any friends-based strategy use ( $B$

= 0.19,  $p < .001$ , 95% CI [.075, .290]). In other words, on nights with one or more intoxicated friends present, there was a higher likelihood of an unwanted sexual experience. In turn, an unwanted sexual experience predicted a higher likelihood of using any friends-based strategies.



**Figure 2.** Alternative Model—Unwanted Sexual Experiences as a Mediator (Model 2a). **Note:** SV = Sexual victimization. Models controlled for prior sexual victimization history, participant intoxication, and weekend night. Covariances among endogenous variables were estimated but are not depicted for simplicity. Solid black lines represent significant paths. Dashed gray lines represent nonsignificant paths.  
\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

**Table 3.** Alternative Model—Unwanted Sexual Experiences as a Mediator (Model 2a)

	Situation Level			Person Level		
	<i>b</i>	<i>SE</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>p</i>
Direct Effects on Unwanted Sexual Experiences						
Number of friends	-0.01	0.02	0.753	-0.06	0.06	0.285
Proportion of female friends	0.11	0.19	0.563	0.27	0.48	0.570
One or more intoxicated friends	0.69	0.17	< 0.001	0.61	0.40	0.134
Participant intoxication	-0.06	0.09	0.520	-0.48	0.32	0.132
Weekend night	-0.01	0.09	0.910	—	—	—
Direct Effects on Friends-Based Strategy Use						
Number of friends	0.02	0.02	0.339	0.001	0.10	0.990
Proportion of female friends	0.58	0.16	< 0.001	0.82	0.73	0.258
One or more intoxicated friends	0.96	0.12	< 0.001	1.18	0.45	0.009
Participant intoxication	-0.11	0.07	0.108	-0.58	0.44	0.188
Weekend night	0.07	0.06	0.247	—	—	—
Prior sexual victimization history	—	—	—	0.37	0.22	0.096
Unwanted sexual experiences	0.27	0.09	0.002	-0.08	0.37	0.841
Indirect Effects via Unwanted Sexual Experiences						
Number of friends	-0.01	0.01	[-0.012, 0.013]	0.01	0.02	[-0.044, 0.085]
Proportion of female friends	0.03	0.05	[-0.072, 0.142]	-0.02	0.11	[-1.154, 0.573]
One or more intoxicated friends	0.19	0.05	[0.075, 0.290]	-0.05	0.23	[-0.063, 0.508]

At the person-level, there were no direct associations between capable guardianship (e.g., number of friends present, proportion of female friends, being with one or more intoxicated friends) and unwanted sexual experiences ( $ps = .132-.570$ ). Further, unwanted sexual experiences were not associated with any friends-based strategy use ( $p = .841$ ). Only being with one or more intoxicated friends had a significant direct effect on any friends-based strategy use ( $B = 1.18, p = .009$ ) and there were no indirect effects.

#### *Sensitivity Analyses*

Two additional models were run to disaggregate lower severity (Model 2b) and higher severity (Model 2c) incidents but this time as mediators. Both models had excellent fit: Model 2b RMSEA = .046, CFI = .994, TLI = .951, SRMR<sub>within</sub> = .000, SRMR<sub>between</sub> = .120; Model 2c RMSEA = .034, CFI = .996, TLI = .969, SRMR<sub>within</sub> = .000, SRMR<sub>between</sub> = .089. The results of the lower severity model (Model 2b) fully replicated that of the alternative model (Model 2a). Differences again were found in the higher severity model (Model 2c). In this model, no predictors were associated with higher severity incidents ( $ps = .387-.814$ ) at the person or situation level. At the situation level, being with one or more intoxicated friends was positively associated with any friends-based strategy use ( $B = 1.40, p = .002$ ). Thus, sensitivity analyses suggest findings may have been driven by lower severity experiences.

#### **Discussion**

Drawing from routine activity theories alongside a feminist perspective, this study represents the first known investigation of capable guardianship, friends-based strategy use,

and unwanted sexual experiences at the daily level. Friends represent an important resource to help early college women navigate social contexts. Indeed, women indicated their friends used a protective strategy with them on nearly a third of the nights they spent together. Notably, these effects were most prominent at the situation level, suggesting that interventions could benefit from incorporating universal approaches to address friend groups' safety in social contexts.

### *Friends-Based Protective Strategies*

Adding to prior work on the importance of friends in prevention efforts (Armstrong et al., 2014; Blayney et al., 2018; Blayney et al., 2021b; Brooks, 2008), the nature of friends-based protective strategy use was captured on weekend nights during the first year of college. The most commonly reported strategies—sticking together, checking in, and leaving together—were consistent with providing guardianship through monitoring and represented 96% of all strategies described. Reducing target vulnerability by monitoring friends' alcohol made up only 3% of reports, and active bystander intervention involving interrupting escalating situations was rarely reported (1%). Although friends could plausibly have used other strategies that participants did not notice or recognize as protective, the current findings suggest that the majority of naturalistic friends-based protective strategies are largely passive actions that focus on safety in numbers. These findings build on prior qualitative research (Blayney et al., 2021b; Brooks, 2008), which highlight the importance of keeping tabs on each other, a focal point of many campus-based bystander interventions more broadly.

### *The Role of Capable Guardianship*

We then examined predictors of friends-based strategy use at the person and situation levels. First, we expected that having a greater number of friends present would increase the odds that at least one friend would use a protective strategy. However, contrary to these expectations, we found no association between group size and strategy use at either level. As discussed in focus groups (Blayney et al., 2021b), the size of the friend group has the potential to either help or hinder protective strategy use. This null finding, taken together with those below, suggest that composition of the friend group may be more important than group size. Second, partially consistent with expectations, having a greater proportion of female friends present was associated with any friends-based protective strategy use. This was noted at the situation-level, suggesting that sticking together in a given situation may be somewhat normative when around more female friends. The significance of within-person but not between-person associations highlights the importance of context. That is, any strategy use was predicted by the presence of female friends on a given night—not individual differences in the proportion of female friends one has overall.

Third, based on prior research (Blayney et al., 2021b; Ham et al., 2019; Leone et al., 2018; Wiersma-Mosley et al., 2020), we expected that being with one or more intoxicated friends would impair protective strategy use after controlling for participant intoxication. However, being with one or more intoxicated friends was associated with greater odds of any friend using a protective strategy. This association was robust in that it was significant both at the person and situation levels. It is possible that women who are drinking are



more aware they can be easily targeted and thus are more likely to watch out for each other. Further, we examined *any* intoxication, though this effect may be influenced by *level of* intoxication at the time of strategy use. Because the current assessment focused on any friend within the group, the intoxicated friend may not be the one who employed the protective strategies. Instead, it is possible that the presence of one or more intoxicated friends may signal that the participant would need to use protective practices like sticking together (across the study or on a given night). Past qualitative work suggests that college women sometimes designate a friend to be responsible for keeping an eye on the group (“the mom role”; Blayney et al., 2021b), and this person may be the one to use protective strategies when intoxicated friends are unable to.

### ***Unwanted Sexual Experiences***

Social movements, such as #MeToo and #TimesUp, have brought greater public awareness to the widespread problem of sexual victimization. Despite these efforts, rape supportive attitudes and beliefs persist as the dominant discourse in our culture and college campuses are not immune to these larger cultural influences. Consistent with previous studies (Fedina et al., 2018; Hill & Silva, 2005), unwanted sexual attention and sexual touching were common in the college context. These incidents often involved alcohol, consistent with the notion that perpetrators may target intoxicated women (Davis et al., 2015). Social drinking contexts are prime locations for potential perpetrators to engage in opportunistic offending, whereby men mostly adhere to context-specific norms but also engage in lower severity offenses because “they can” (Graham et al., 2014). In this study, perpetrators tended to be less well known to participants. The higher number of stranger perpetrators in this study was likely because first-year college women are new to social drinking contexts and, thus, less familiar with those who typically frequent these contexts (e.g., Hines et al., 2012). It is possible, however, that familiarity with these individuals (i.e., perpetrators) shifts over time with continued involvement in these contexts.

Building on capable guardianship predictors of strategy use, findings revealed that any friends-based protective strategies often coincided with nights when unwanted sexual experiences occurred. Through use of two competing models, we examined mechanisms that might help explain these associations. In the hypothesized model (Model 1a), we first explored whether any friends-based protective strategies might serve as a mediator through which capable guardians prevent unwanted sexual experiences. As discussed above, a greater proportion of female friends as well as being with one or more intoxicated friends was associated with a greater likelihood of any strategy use on a given night. To our surprise, this, in turn, was associated with an unwanted sexual experience on that night. This situation-level finding suggests that the mere presence of more female friends does not deter perpetrators from targeting women, especially when women are with one or more intoxicated friends that night. Indeed, previous studies have found that perpetrators seek out women who look intoxicated (Davis et al., 2015; Graham et al., 2014) and these men are typically drinking alcohol too. As such, within social contexts, it may not be fully possible to prevent unwanted sexual experiences, especially lower severity offenses like unwanted sexual attention and touching.

Given the lack of research in this area, an alternative model was tested. In this model (Model 2a), we explored whether an unwanted sexual experience might serve as a mediator through which capable guardians respond with friends-based strategy use. Findings revealed only one significant indirect pathway: nights when participants were with one or more intoxicated friends was associated with greater odds of an unwanted sexual experience, which in turn increased the likelihood of any friends-based strategy use. This finding is largely consistent with prior research, which has found a strong association between social drinking contexts and sexual victimization (Testa & Livingston, 2018). Indeed, half (51%) of all unwanted sexual experiences in the present study involved a perpetrator who had been drinking, consistent with prior rates reported by others (Abbey et al., 1998; Walsh et al., 2021). Although it is possible the intoxicated friend became the perpetrator, only 8% of perpetrators in the present study had been a friend from earlier in the night. Instead, a more common scenario is that when an early college woman attends a social event where friends are drinking, she may encounter potential perpetrators who are not well known and also drinking, such as strangers and casual acquaintances. When these individuals become sexually aggressive, usually in the form of lower severity offenses, findings suggest friends are likely to respond to the situation with strategies to protect each other. This may be an attempt to prevent further escalation of the situation. Given that prior work suggests bystanders' capacity to intervene is impaired by intoxication (Ham et al., 2019; Leone et al., 2018; Wiersma-Mosley et al., 2020), it is possible that the need for strategy use becomes apparent in the situation only after an incident occurs. In this way, friends-based strategy use may be more commonly a response to unwanted sexual experiences than a proactive prevention tactic. This is likely given the prevalence of lower severity opportunistic offending that occurs in social contexts.

Sensitivity analyses were added to explore whether findings replicated for lower severity versus higher severity incidents. Though replication was found in the lower severity models, results from the higher severity models should be interpreted with caution as these incidents were endorsed less frequently (18 person nights) relative to lower severity incidents (105 person nights). Future research to determine whether friends-based strategies are most effective for lower severity compared to higher severity victimization is needed.

### *Practice Implications*

Unwanted sexual attention and sexual touching are common in the college context (Fedina et al., 2018; Hill & Silva, 2005; Humphrey & White, 2000). Although active intervention strategies (e.g., interrupting escalating situations) were salient in prior focus groups (Blayney et al., 2021b), the present study indicates these strategies may be rare in practice and instead involve largely passive approaches (e.g., staying together). More nuanced friends-based protective strategies such as sending signals (e.g., making eye contact when uncomfortable) were also identified by college women in focus groups, many of whom were in their later college years (Blayney et al., 2021b). These "more senior" college women may have refined strategies since their first year, particularly as friend groups become more established and friends are better able to read each other's cues. Although more work is needed to understand precisely when in risky situations friends choose to engage in

protective strategies, interventions can begin to draw on these findings to target situational vulnerability by addressing guardianship factors associated with friends-based strategy use. The situation-level findings suggest the need for campus-based interventions to incorporate more universal approaches to address early college women's safety in social contexts by drawing on friend groups. Interventions could also consider ways to introduce early college women to more active strategies for responding to risk.

### *Limitations and Future Directions*

Limits to generalizability should be noted, as this sample involved first-year college women who were sexually attracted to men and who drank alcohol. This is especially important as women of more diverse sexual identities show higher rates of both alcohol use and sexual victimization (Johnson et al., 2016). Another limitation is that we did not assess friendship closeness or shared responsibility for friends' safety. There were also limitations with how friends-based strategy use was assessed. We focused our interpretation of friends-based strategy use as friends using strategies, though we recognize that a strategy used by friends may have been encouraging the participants to use a protective strategy for themselves. We used a general question about protective strategies, which was not specific to what "risk" needed to be reduced nor for whom it was meant to specifically protect. Moreover, this item may not have elicited self-report of subtler friends-based approaches to ensure safety. Thus, future work should consider developing a behaviorally specific measure of friends-based protective strategies (e.g., keeping tabs on friends, using signals to convey potential danger, interrupting escalating situations, taking responsibility for friends, relying on male friends) and barriers to strategy use (e.g., intoxication, preoccupation, situation ambiguity, social consequences) to standardize assessment. In addition, other methods (i.e., social network approaches) can build on this work to better understand capable guardianship and friends-based strategy use within friend groups. Though a strength of this study was examining competing mediation models, it could not determine the temporal ordering of when friends-based strategies were used and when unwanted sexual experiences occurred. Finally, our understanding of risk was based on one component of routine activity theories, which has potential to impact other aspects of risk (exposure to potential perpetrators, target vulnerability). While this study focused on friend nights, it is possible that any given night did not involve exposure to potential perpetrators and/or target vulnerability.

### *Conclusion*

This study was designed to shed light on how capable guardianship might relate to risk at the person and situation level. Findings suggest that friends-based strategy use is likely a response to situations with unwanted sexual experiences rather than prevention. Although more work is needed to understand precisely when in risky situations friends choose to engage in protective strategies, interventions can begin to draw on these findings to target situational vulnerability by addressing guardianship factors associated with friends-based strategy use.

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