



# Internal and External Factors Associated with Illicit Prescription Drug Use in College Students



Robyn A. Dolson, Eric Tompkins, & Tanya L. Tompkins  
Linfield College

## Introduction & Aims

### Introduction

- 14.5% of college-aged individuals have reported illicit prescription drug use (Substance Abuse and Mental Health Services Administration [SAMHSA], 2006). From the first year of college to the second, stimulant and analgesic use have increased 300% and 85.7%, respectively (Arria et al., 2008).
- Because emerging adulthood is a time of increased risk for illicit prescription drug use, it is essential that factors contributing to this use be understood to more effectively guide prevention efforts (Hawkins & Weis, 1985).
- While some have suggested this increased use is due to perceived safety, the steep increase of use in college highlights the need to investigate factors specific to college life that may contribute to illicit prescription drug use (Arria et al., 2008).

### Research Question 1:

- What **internal** factors are associated with illicit prescription drug use and perceptions of harm for college students?
  - Hypothesis 1: Perceptions of harm will be inversely associated with illicit prescription drug use.
  - Hypothesis 2: Lower GPAs will be associated with more illicit prescription drug use.
  - Hypothesis 3: Reports of higher stress will be positively correlated with illicit prescription drug use.

### Research Question 2:

- What **external** factors are associated with illicit prescription drug use and perceptions of harm?
  - Hypothesis 1: Participants living on campus will report higher rates of use and lower perceptions of harm than those living off.
  - Hypothesis 2: Public school participants will report higher rates of use and lower perceptions of harm.

### Research Question 3:

- Do perceptions of harm and rates of use vary by gender?

## Method

### Participants

- 447 college students
- Females: 340 Males: 105 (two participants did not indicate gender)
- Mean age: 19.95 years ( $SD = 1.46$ )
- Predominantly Caucasian (78.9%), Asian or Asian-Pacific Islander (11.2%), Native American (2.5%), Hispanic (5.2%), African-American (1.3%), Middle Eastern or East Indian (.9%), 2 declined to answer
- Living situation: On-campus (73.3%), Off-campus (26.7%)
- Type of institution: Private (78.4%) Public (21.6%)

## Method

### Procedures

- Psychology department chairs from four public and private academic institutions across Oregon were contacted via email with information about the study and asked to invite students to participate.
- Interested students completed the survey online.

### Measures

**Illicit Prescription Drug Use** was assessed with a single item, "Have you consumed any prescription drugs in the past 6 months that were either not prescribed to you or not prescribed for the purpose in which you took them?"

**Perceptions of harm** (Johnston, O'Malley, & Bachman, 2004)

- Participants rated perceived harm of illicit prescription drugs if consumed once in the course of 6 months on a 4-point Likert scale, 1 (no harm) to 4 (a lot of harm) and 0 (I don't know).

**Student-life Stress Inventory (SSI)** (Gadzella, 1991)

- 51 stressors and reactions to stressors were rated on a 5-point Likert scale from 1 (never) to 5 (most of the time). All items were summed with higher scores reflecting higher levels of stress.

e.g. "I have experienced failures in accomplishing the goals that I

## Results

- In accordance with previous research, perceived harm was inversely correlated with use (Arria et al., 2008).
- Stress was positively associated with use but not with perceived harm (see Table 1).
- GPA was also negatively associated with use but not perceptions of harm (see Table 1.).

Table 1. Point Biserial and Pearson's Correlation Coefficients of GPA, Use, Perceptions of Harm, and Stress

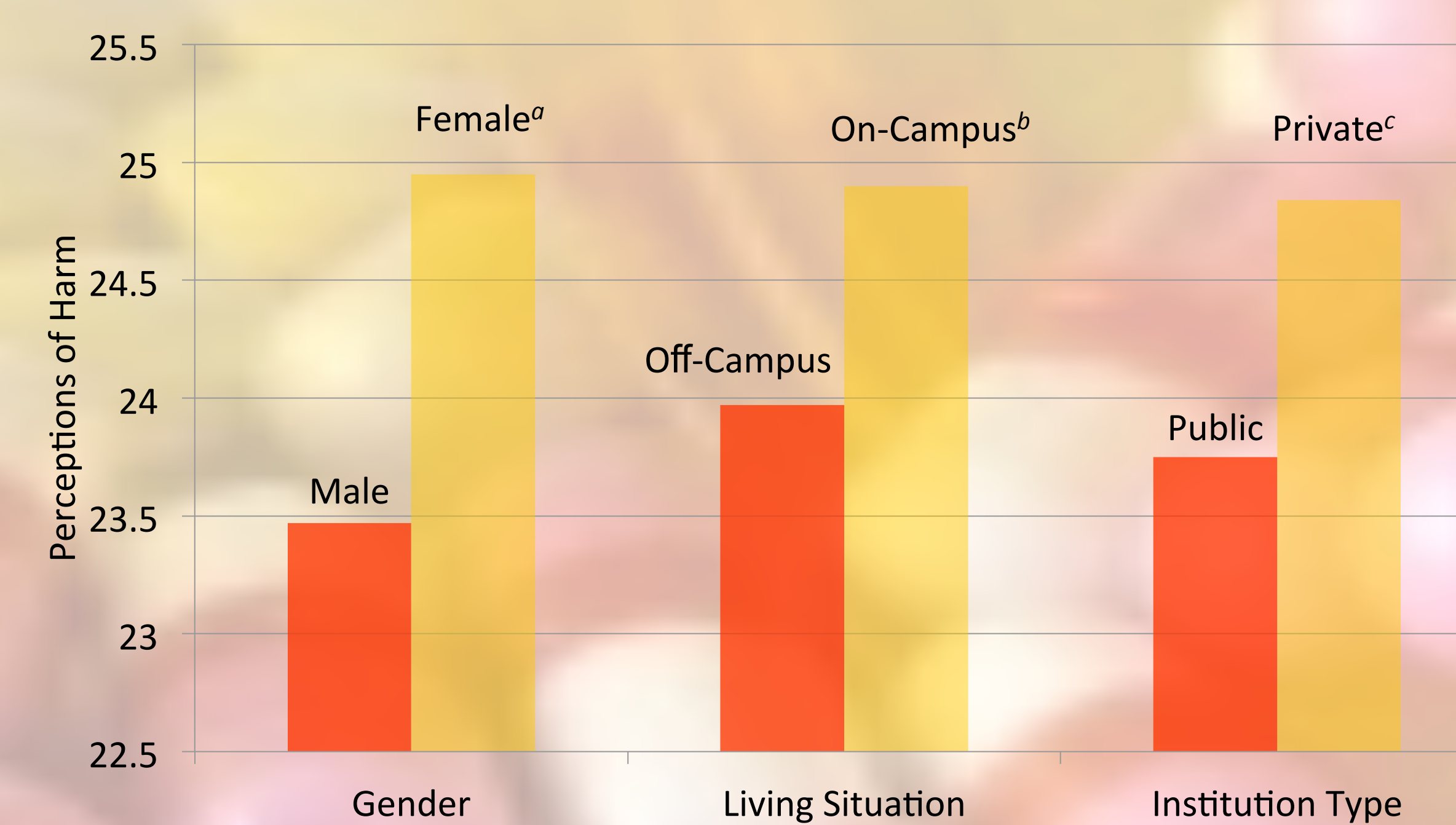
Variable	1	2	3	4
1. GPA	--			
2. Use	-.12*	--		
3. Perception of Harm	.04	-.20**	--	
4. Stress	-.07	.16**	-.01	--

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

## Results

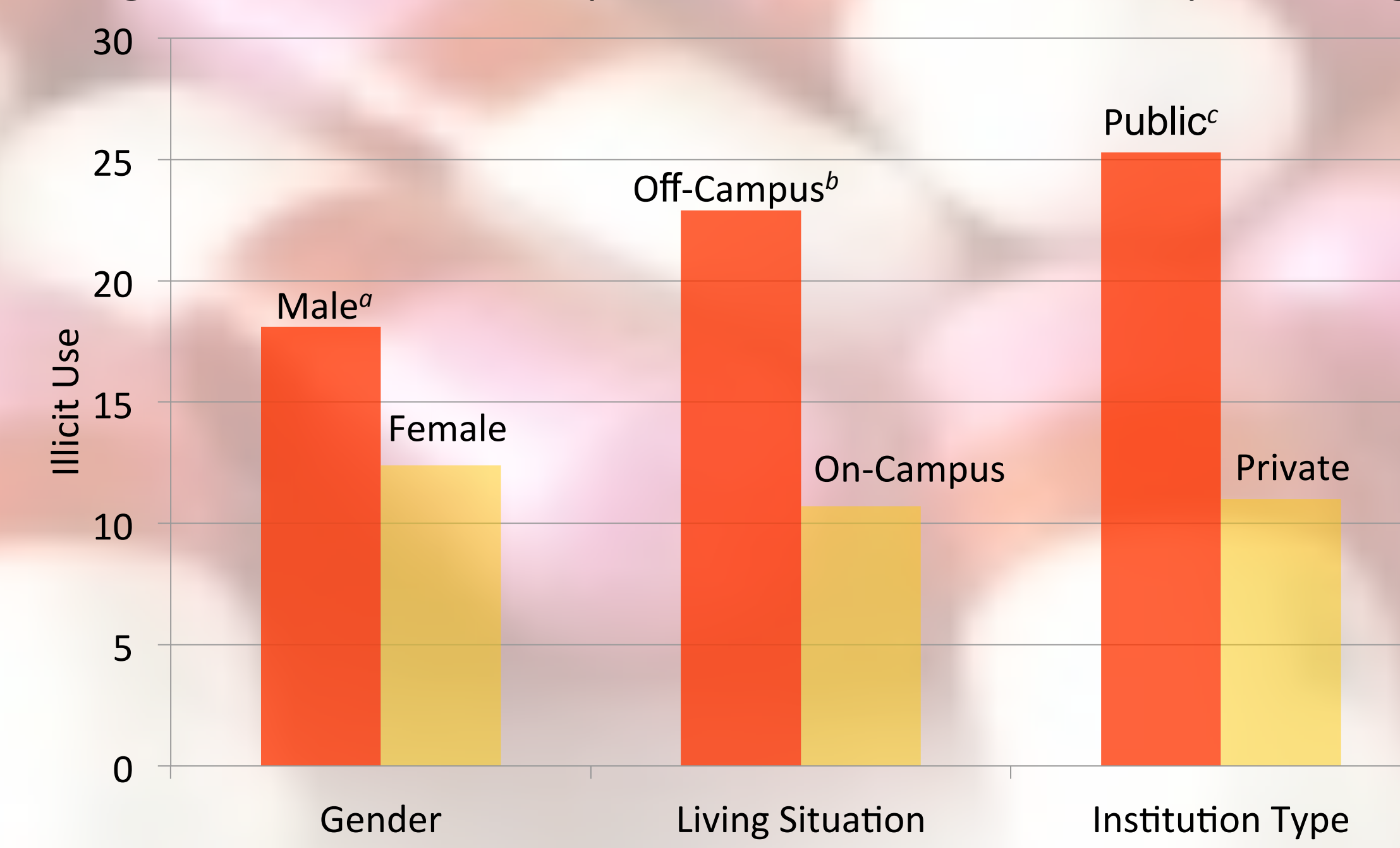
- Based on the findings presented in Table 1, an exploratory moderation analysis suggested that GPA moderates the relationship between perceived harm and general use. Specifically, virtually no relationship between perceived harm and use were found for low achieving students ( $r = -.07$ ) whereas a strong negative relationship for high achieving students ( $r = -.34$ ) was found between these variables.
- Participants reported a generally high level of perceived harm with females reporting higher levels than males (Figure 1).
- Those living on campus had a higher overall perception of harm than those living off campus (Figure 1).
- Perceptions of harm also varied by institution type with private schools having higher perceptions of harm (Figure 1).

Figure 1. Between Group Differences in Perceptions of Harm



<sup>a</sup>  $t(414) = -3.45, p < .001$ . <sup>b</sup>  $t(415) = 2.28, p < .05$ . <sup>c</sup>  $t(413) = 2.49, p < .05$ .

Figure 2. Between Group Differences in Illicit Prescription Drug Use



<sup>a</sup>  $t(154) = 1.36, ns$ . <sup>b</sup>  $t(165) = -2.86, p < .01$ . <sup>c</sup>  $t(122) = -2.99, p < .01$ .

## Results

- Mirroring national statistics, nearly 14% of our sample reported illicit use. These rates did not vary by gender (Figure 2).
- Participants living on campus reported less illicit prescription drug use than those living off campus (Figure 2).
- Students attending public institutions had higher levels of use than students attending private institutions (Figure 2).

## Conclusion

- As expected, our findings were consistent with past national studies regarding rates of use, with a significant portion of the college population reporting illicit prescription use within the past 6 months.
- Consistent with others who have found intelligence to be a factor in drug use and type (Kanazawa & Hellberg, 2010), our findings support the idea that achievement may serve a protective role in accounting for illicit prescription use among this population.

- Employing a stress inventory specific to college students, the current study replicates and extends prior studies which have found an association between stress and illicit drug use (Broman, 2005).
- Although findings for living situation were not in the predicted direction, institution type was associated with use and perceptions of harm in expected ways. Both patterns of associations may be explained by the same factors.

- Battistich and Hom's (1997) research with children has suggested that a heightened sense of community within schools may reduce illicit drug use. Whether sense of community may serve a mediating role in explaining direct relationships between institution type and both illicit *prescription* use and perceptions of harm remains to be seen. The relationships between living situation and both illicit prescription use and perceptions of harm warrant similar exploration.

- Prior research has found support for perceived social norms predicting drug use behavior (Martens et al., 2006). Perceived norms, which may vary as a function of living situation and institution type, may also be an important piece in understanding discrepancies in use and perceptions of harm.

- Future research should explore how sense of community and perceived norms influence rates and perceptions of harm for illicit prescription drug use on college campuses.

- Despite prevention efforts, drug use continues to increase in college populations. Consequently, it is imperative to translate these findings into improved prevention programs targeting both genders, at times of stress, particularly those living off campus, at public universities, with lower GPAs.