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## Daily college student drinking patterns across the first year of college

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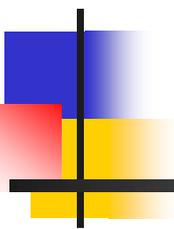
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# Daily College Student Drinking Patterns Across the First Year of College

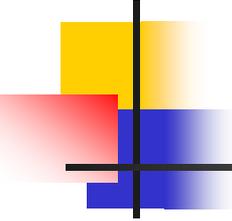
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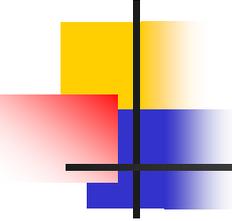
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# Introduction

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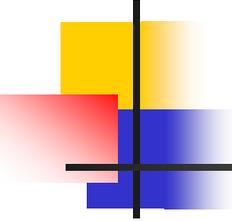
- Each year, college student drinking continues to lead to deaths, physical assaults, injuries, and sexual assaults and thus is cause for serious concern (NIAAA, 2002).
- The alarming nature of college drinking statistics notwithstanding, there are many college students who drink without experiencing any adverse outcomes.
- Clearly, student drinkers are not all alike.
- Unfortunately, the currently available data, oftentimes gathered for epidemiological and intervention purposes, largely focus on macro-level trends.



# Purpose of this Study

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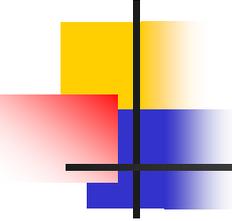
- While macro-level databases provide invaluable information about overall prevalence levels and general drinking careers, they are limited in their ability to delineate individual variations in drinking behavior or to test for the presence of important subpopulations of drinking styles, behaviors, and patterns.
- Thus, data delineating the details of drinking behaviors are necessary to augment the data available on macrolevel trends of consumption.
- In this study, we used a two-stage person-centered approach to examine patterns of daily drinking over the first year of college in two cohorts and then examined whether different types of drinkers experienced negative consequences differentially.



# Method

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- Procedure
  - First year college students were recruited at three New England colleges
  - Bi-weekly online reports
- Participants
  - N=768 first year college students
  - 56.8% female
  - 18.3 (SD=0.5) years of age
  - Race:
    - 69.0% White
    - 12.8% Asian
    - 7.3% Black
    - 7.1% Latino

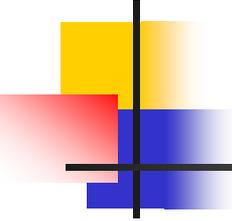


# Method (cont.)

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- Measures

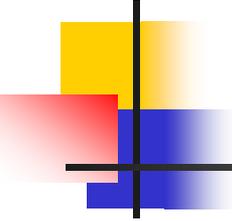
- Alcohol consumption: bi-weekly recall of daily drinking rates for the preceding 7 days
- Negative consequences of alcohol consumption: bi-weekly summaries of whether or not specific negative consequences were experienced in the immediately preceding week



# Data Analysis

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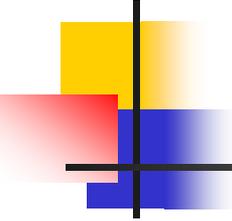
- Examining patterns of daily drinking
  - Per student time series analyses (TSA) were used to identify person-specific significant differences in average drinking levels between specific time periods of interest:
    - Thursdays
    - Weekends
    - Spring semester
    - First 6-weeks of classes
  - A cluster analysis then identified sub-populations of drinking patterns based on the person-specific significant TSA estimates in addition to other characteristics of drinking:
    - Percent of drinking days
    - Maximum number of drinks
    - Number of days after arriving on campus until first drink
- Testing for significant differences in experienced negative consequences between the identified groups
  - Analysis of variance was used to test for differences in negative consequences between groups characterized by different drinking patterns



# Exclusions

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- Only students who reported drinking at least one drink while classes were in session (70.7%) were included in the analyses.
  - Rationale: Abstainers were excluded because they do not have any variations in drinking behavior, and thus cannot inform analyses of change.
- Additionally, our analyses focused on drinking occurring on days while classes were in session (including weekends).
  - Rationale: Drinking outside of this timeframe (e.g., over Thanksgiving, New Year's Eve, spring break) differs from drinking while students are at college in important ways, as reported elsewhere (Del Boca, Darkes, Greenbaum, & Goldman, 2004), and our goal was to identify and distinguish typical drinking patterns in this population.

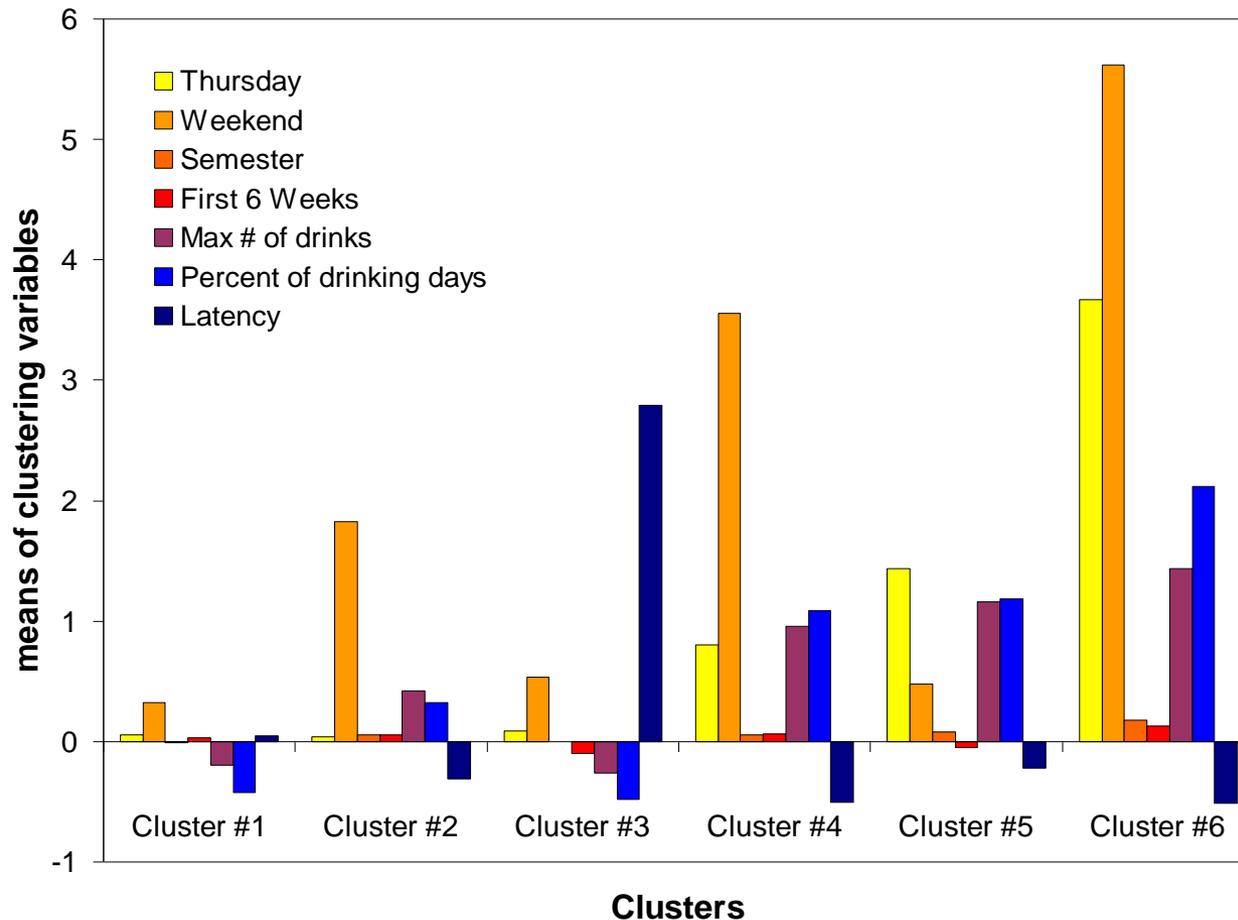


# Results – Six Patterns

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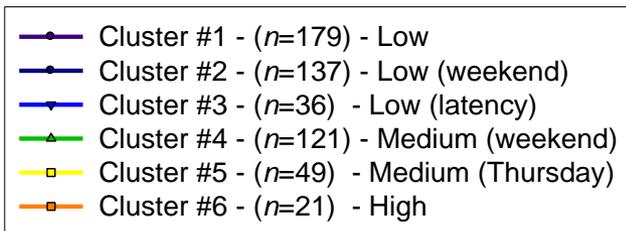
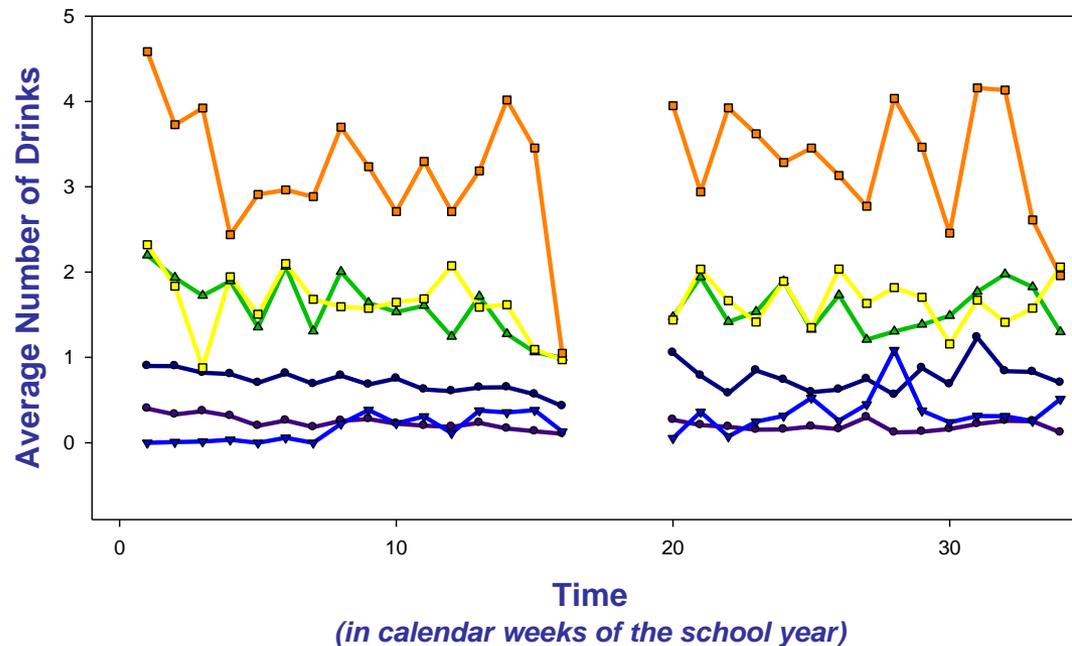
- Among students who reported at least one drink, six different groups of drinking patterns were identified:
  - Three low drinking groups (23.3%, 17.8%, 4.7%), differentiated by weekend drinking and number of days on campus until first drink
  - Two medium drinking groups (15.7%, 6.4%), differentiated by weekend drinking
  - One high drinking group (2.7%), marked by Thursday and weekend drinking.

# Figure 1. Cluster Description



- Based on inverse Scree plot, cubic clustering criteria, pseudo  $F$  and pseudo  $t$  statistics, six clusters were retained

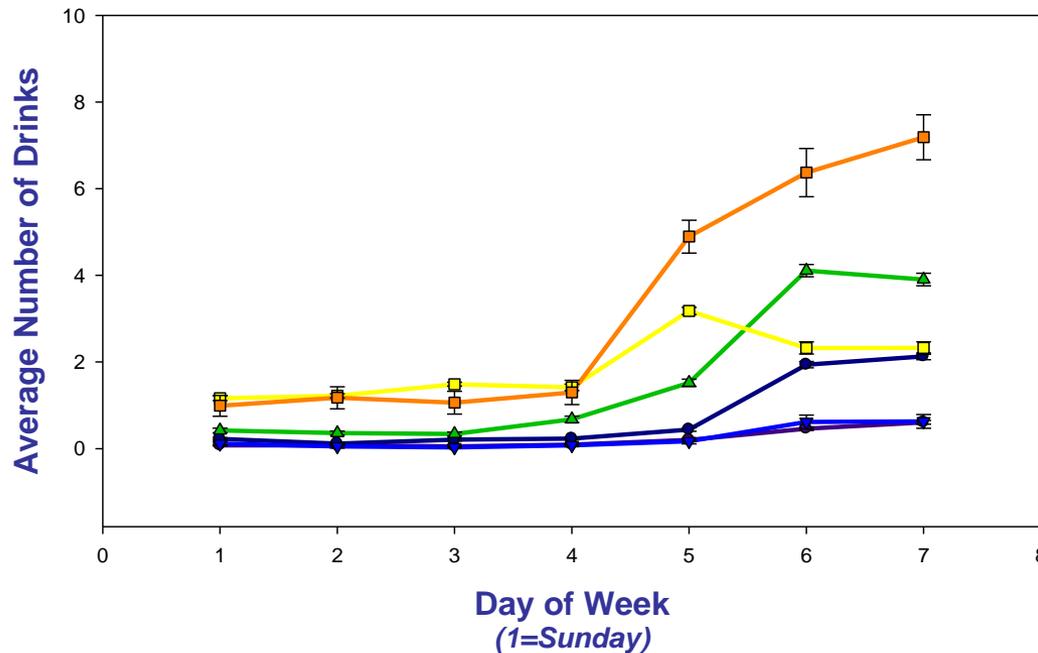
# Figure 2. Six Drinking Patterns Across the First Year of College



- Figure 1 is a descriptive summary of the identified drinking patterns over time
- Drinking patterns are descriptively labeled based on average alcohol consumption as well as cluster-specific characterizations

# Figure 3.

## Per Weekday Drinking



- Figure 2 displays averages per person per weekday per cluster
- Error bars are given for standard errors

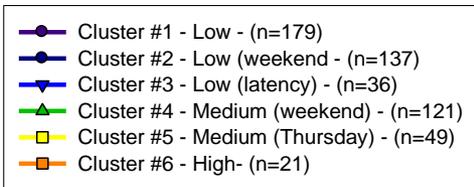
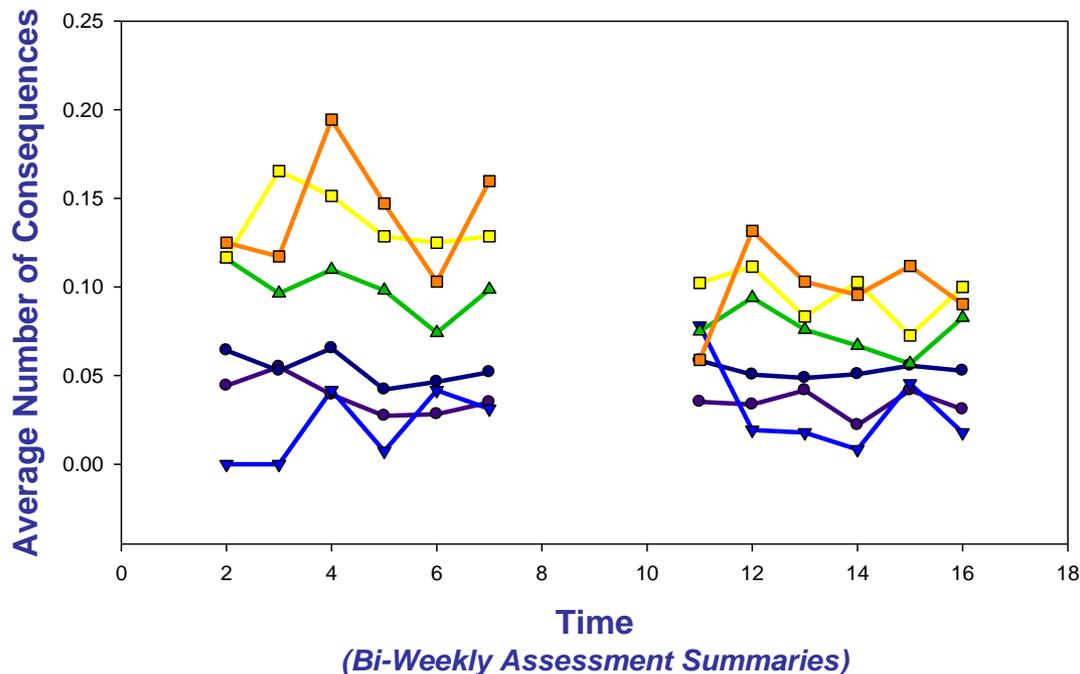
# Results –

## Negative Consequences

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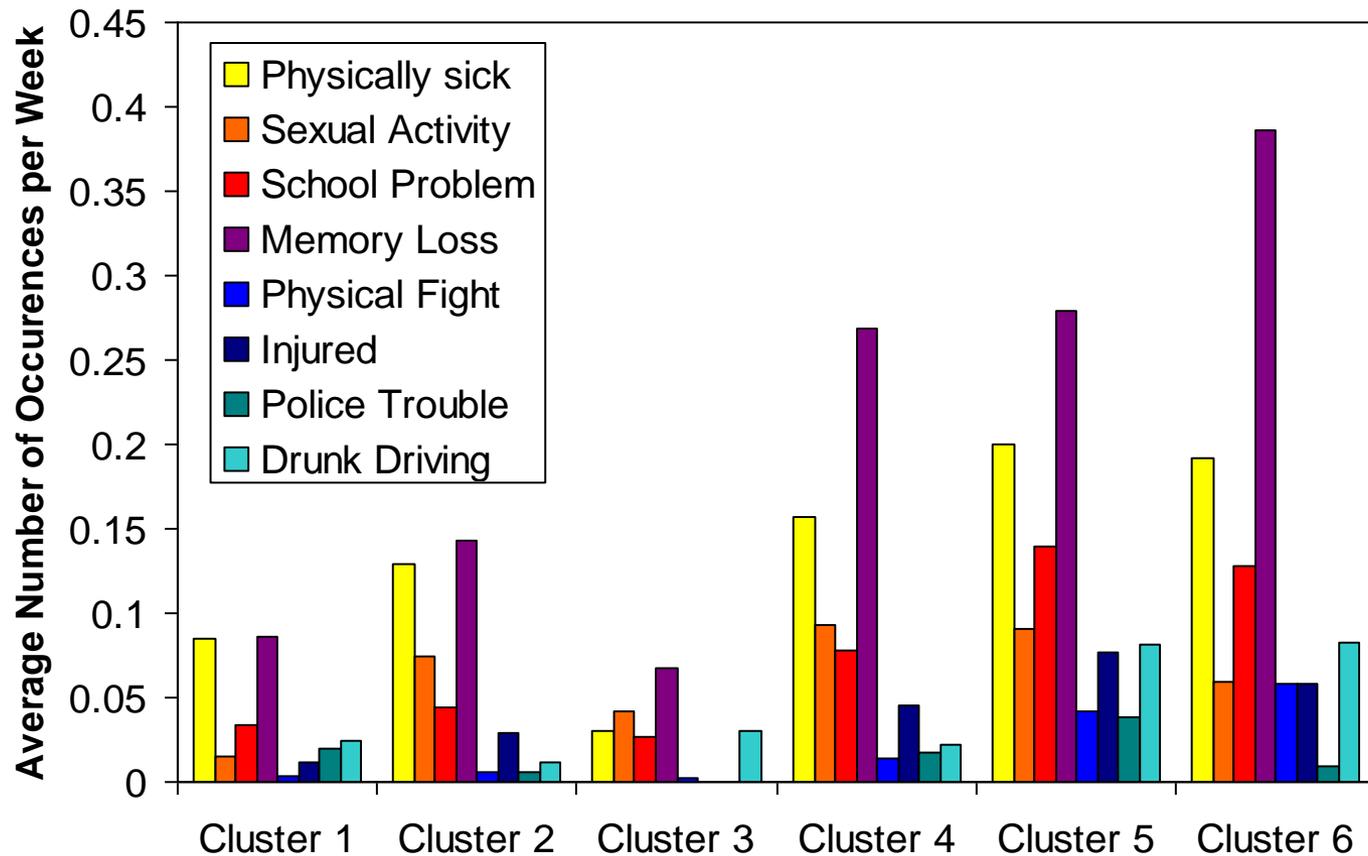
- The average number of negative consequences experienced per student per week differed between groups ( $F(5,537)=25.05, p<.01$ ).
- Medium and high drinking groups were comparable in terms of the average number of experienced negative consequences ( $F(2,188)=2.58$ ) but markedly higher than the low drinking groups.
- Among the low drinking groups ( $F(2,349)=13.4, p<.01$ ), the drinking group marked by weekend drinking experienced more negative consequences than the other two low drinking groups.

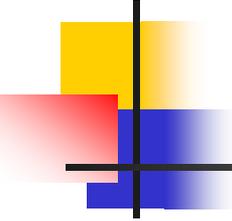
# Figure 4. Negative Consequences over Time



- Included negative consequences are:
  - Physically sick
  - Sexual activity
  - School problem
  - Memory loss
  - Physical fight
  - Injured
  - Police trouble
  - Drunk driving

# Figure 5. Types of Negative Consequences per Cluster

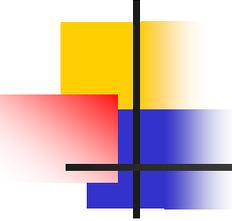




# Discussion

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- In line with previous research (Greenbaum, Del Boca, & Darkes, 2005), these findings demonstrate that student drinkers are not all alike, and might benefit from tailored prevention strategies, as suggested by the NIAAA Task Force on College Drinking (NIAAA, 2002).
- Of the dimensions studied, Thursday drinking, weekend drinking, and the number of days until the first drink contributed the most to the characterization of six patterns of drinking.
- These finding might have implications for guiding campus policies, such as for example policies regarding Friday classes, or help tailor intervention efforts to specific populations.



# References and Acknowledgments

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- References

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- Acknowledgements

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