A Diary Investigation of College Natural Drinking Groups: Individual & Group Factors, And Social Structure

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Abstract

We conducted a four-week diary investigation on group formation and the processes involved in Natural Drinking Groups (NDGs). Results show that NDGs met repeatedly and were organized around the same key players. A social role structure emerged within groups similar to that evidenced in previous interviews and this structure was stable over time. The findings revealed some consistency in the way groups formed and deconstructed over the course of multiple events. Drinking settings and circumstances played a role in group formation and deconstruction, and in the social roles coming into play. In sum, this study unveils the intricate relationships within NDGs, and how group characteristics and processes are affected during drinking events.
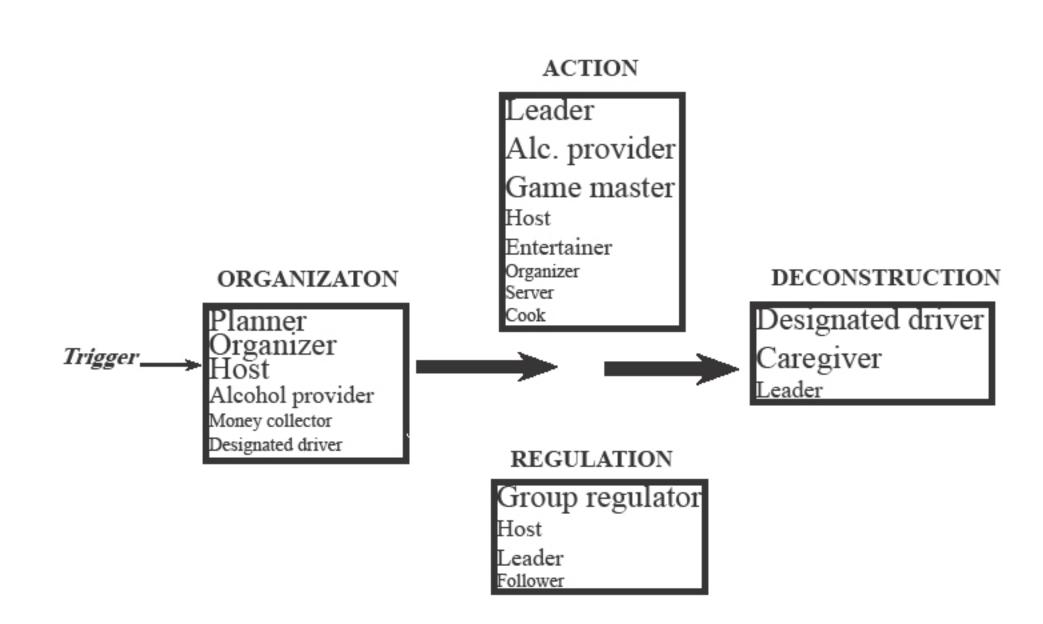
Background

Natural Drinking Groups

College students mostly drink in groups. Yet, little research substantively describes these groups. This study examined the formation, structure and continuity of NDGs and their activities in a longitudinal perspective. Our definition of a NDG is a collection of two or more people organized to share a social activity centered on drinking who are bonded by friendship or other interpersonal relationships (Lange, Johnson, & Reed, 2006).

In a previous study of NDGs (Lange, Devos-Comby, Moore, Daniel, & Homer, in press), we conducted a series of interviews with college students about their drinking groups. These interviews were then analyzed to identify roles, relationships and dynamic group properties. We also investigated how these groups formed and whether status systems appeared to develop within them. We were able to find three main stages for the groups. Within those stages, various roles appeared to take on prominence (see Figure 1). Most notable of these roles were: Leaders, Followers, Caregivers, & Alcohol Providers.

Figure 1. Stages of NDG Construction and Roles within NDGs

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Purpose

The present study describes an extension of the previous interview study. This new study increases the number of participants and events and uses a mixed methods approach to further examine the roles discovered in the previous study. Finally, we are able to examine the influence of group level characteristics on individual level drinking.

Method

Survey

- 4 assessments, 1 week apart
- All participants started the same week
- Reported on a NDG event either in the past 30 days (1st assessment) or the past 7 days (2nd, 3rd, and 4th assessments)
- Logged onto a web-based PLOG (private blog)
- Open- and close-ended survey items
- Incentive: $90 for participation in all 4 assessments Eligibility criteria: 18 to 24 years old, enrolled at the school, had alcohol in the past year and in a NDG in past month.

Sample Characteristics

- 68 participants reported at least one drinking event entry
- 55% male, 49% White, 33% seniors, 29% freshmen
- Mean age was 20.33 (sd =1.71)
- Mean number of drinks for the participant was 9.6 (sd = 6.4) on heaviest drinking day in 30 days prior study
- 77% engaged in heavy episodic drinking in 30 days prior study (5 for men / 4 for women)

Analyses

- Event-specific analyses: each NDG = unit of analysis (n=218), with up to 4 events nested within participants.
- Multi-level modeling as responses correlate over time: Need to account for clusters (i.e., violation of non-independence of measurements)
- Examined group- and individual-level predictors of individual drinking and perceived intoxication.
- Bivariate associations between IVs & DVs tested first to select predictors to be included in each model
- Results reflect associations between IVs & DVs aggregated over 4 weeks as no specific predictions about changes in drinking as effects of time

- Examined stability of roles across NDGs within participants
- Coded five roles: Hosts, Leaders, Followers, Caregivers, and Alcohol Providers as 0=absent, 1=present, each week
- General Estimating Equation (GEE) models examining predictors of roles as a function of group factors, accounting for the clustered nature of the data (up to 4 drinking events nested within 68 participants)
- Bivariate associations between IVs and DVs were tested first to select the predictors to be included in each model.

Results

Predictors of Number of Drinks (self)

- Predictors entered in bivariate associations:
  Group factors= number of group members, average age of group, percentage drinkers in group, total drinks consumed by other group members, student composition of group (mixed vs. all SDSU), party access (open to all vs. invite only), gender composition of group (all female, all male, mixed); *Participant factors*= gender, age, race, peak drinking
- Final model included: Total drinks consumed by the group and 30-day peak drinking (Table 1)
- No NDG clustering effects on self-reported number of drinks (intercept)
- Increase over time in self-reported number of drinks
- Total number of group drinks positively associated with self-reported number of drinks
- Past drinking positively associated with self-reported drinking at the event

Table 1. Individual & Group Effects on Self-reported Drinking

Random Effects	Estimate	S.E.	Wald Z	p-value
Intercept	6.60	4.55	1.45	0.146
Fixed Effects	Estimate	S.E.	Wald Z	p-value
Level 1				
Total drinks (group)	0.107	0.018	5.88	.001
Week	0.816	0.268	3.05	.01
Level 2 (participant)				
Past peak drinks	0.246	0.054	4.51	0.001

Predictors of Reported Intoxication (self)

- Same predictors entered in bivariate associations
- Final model included: average group age, percentage drinkers in group, total group drinks, participant's age and 30-day peak drinking (Table 2)
- No NDG clustering effects (intercept)
- Increase over time in self intoxication
- The older the group was, the lower the self intoxication
- Past drinking positively associated with self intoxication

Table 2. Individual & Group Effects on Self-reported Intoxication

Random Effects	Estimate	S.E.	Wald Z	p-value
Intercept	1.70	1.26	1.35	0.176
Fixed Effects	Estimate	S.E.	Wald Z	p-value
Level 1				
% drinkers in group	1.76	0.64	2.69	.008
Total drinks (group)	0.03	0.01	2.66	.009
Avg. age of group	-0.16	0.05	-3.60	.001
Week	0.25	0.13	1.97	.059
Level 2 (participant)				
Past peak drinks	0.05	0.02	2.15	0.036

Roles

- Leaders & followers present in half the groups (Table 3)
- Hosts & alcohol providers present in about one quarter of the groups
- Caregivers present in only about 10% of the groups

Table 3. Frequencies of Roles in NDGs.

Role (present)	Percent (N)
Host	24.3 (53)
Leader	50 (109)
Follower	51.4 (112)
Caregiver	11.5 (25)
Alcohol provider	28.9 (63)

Predictors of Roles

- Predictors examined for each role: total drinks consumed by group, number of group members, percentage of drinkers in group, group gender composition, party access, and student status

Table 4. Significant Predictors of Roles in NDGs.

	Odd Ratio	95% CI	Wald Chi-Square	p-value
Host				
Group age	1.04	1.02-1.07	9.77	0.01
Group size	0.31	0.17-0.56	15.06	0.001
Follower				
School	0.45	0.27-0.76	9.1	0.01
Alc. Provider				
% Drinkers	59.1	5.5-635	11.33	0.01

- As average age of group increased, likelihood of HOST present increased
- As group size increased, odds of HOST present decreased
- Odds of FOLLOWER present lower when group is all students from same school relative to a mixed group
- Greater percentage of drinkers associated with increased odds of PROVIDER present
- No significant effects for LEADER and CAREGIVER

Conclusion

Much of the analyses presented here are descriptive in nature and certainly suffer from the convenience sampling technique used, so their generalizability is not certain. However, since there are so few studies that have described NDGs, it seemed important to include the details of the groups we measured. Cultural, personal and setting factors appear likely to make each NDG somewhat unique. We find that the group characteristics and composition are predictive of the roles found within the groups. For instance, the percentage of people drinking in the group is predictive of the presence of an alcohol provider.

In our view, the fact that any investigation of NDGs will be tied to a particular setting and cultural conventions is not a fatal flaw in the construct or the need to investigate it. Indeed, that we could describe relationships between group-level variables, settings and individual behavior is testament to the importance of such investigations. The focus solely on the individual or the setting, or vague discussions of "peers" gloss over important dynamics that are likely affecting drinking decisions. For example, the more alcohol consumed by other members in the group, the greater the consumption and intoxication the participant reported.

References

Lange, J., Devos-Comby, L., Moore, R., Daniel, J., & Homer, K. (In press). Collegiate natural drinking groups: Characteristics, structure and processes. *Addiction Research & Theory.*

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