

Associations Between Online and Offline Risk-Taking in Emerging Adulthood

Family Social Science
COLLEGE OF EDUCATION
+ HUMAN DEVELOPMENT

Kate Gliske, Jodi Dworkin, and Jessie Rudi

UNIVERSITY
OF MINNESOTA
Driven to DiscoverSM



Background

Emerging adulthood is a developmental period beginning towards the end of adolescence that couples a lower level of parental monitoring with a higher tolerance from society for engaging in risky behaviors (Sussman & Arnett, 2014). In the US, a number of risky behaviors peak during this time, including binge drinking, drug use, and unprotected sexual activity (Park et al., 2006).

The rise of the internet has provided another context in which emerging adults can engage in normative risk-taking behavior. However, little is known about online risk-taking, or the extent to which it is associated with offline risk-taking, such as substance use.

Hypothesis

The goal of the current study was to explore the heterogeneity in self-reported online risk-taking among college students using a finite number of discrete online risk-taking profiles. We hypothesized that offline risk-taking, typified by self-reported substance use, would be associated with class membership to higher online risk-taking classes.

Method

This study used a subsample ($n = 246$) of youth from a larger study of high school and college students. Participants were recruited to take a 20-minute online survey through Amazon's MTurk online labor market.

Participants

- All participants were college students: 11.1% 1st year, 25.5% 2nd year, 29.6% 3rd year, 23.5% 4th year, and 10.3% 5th year student or beyond
- 34.6% were living with a parent, 35.7% reported living in off-campus housing, and 24% reported living in on-campus housing
- 65.3% of students were White, 13.1% were Black, 9.4% were Asian, 6.5% were Hispanic, and 5.8% were mixed race

Measures

- Youth reported on frequency of **lifetime alcohol use** (0 to 100 or more days), **binge drinking in the past 30 days** (0 to 20 or more days), **lifetime marijuana use** (0 to 100 or more times), and **lifetime use of other illegal drugs or misuse of prescription drugs** (0 to 100 or more times).
- The current study focused on six online risk-taking behaviors (yes/no):
 - (1) shared a password, (2) contacted online by someone you didn't know, (3) sent sexually suggestive photos, (4) received sexually suggestive photos or videos, (5) met someone face-to-face that you met online, and (6) met someone online who became a good friend

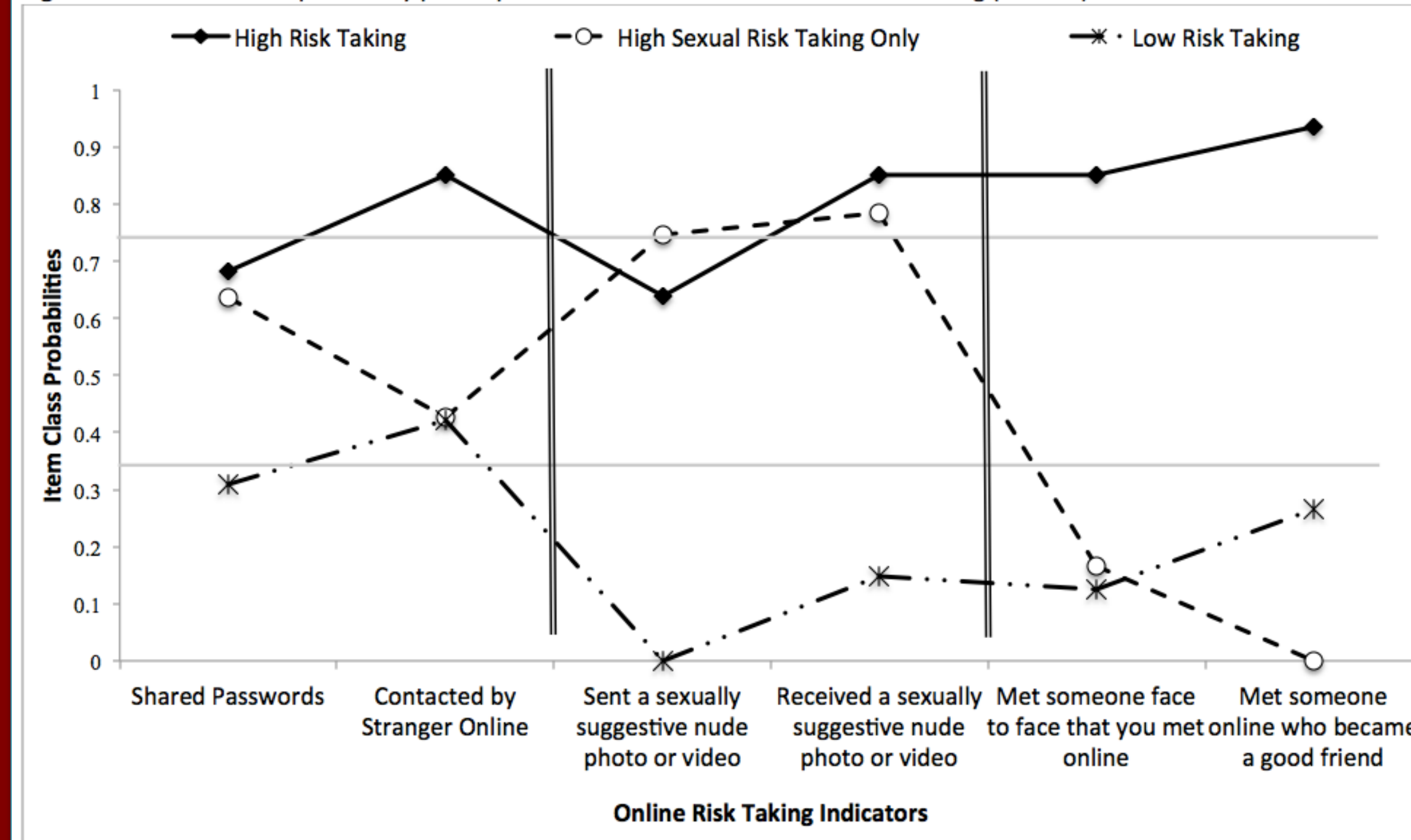
Data Analysis

First, latent class analysis (LCA) was used to identify sub-groups of emerging adults based on if they reported engaging in six online risk-taking behaviors. LCA is a "person-centered" approach that allows for the identification of subgroups of individuals based on their response patterns to a number of indicators (Lanza & Rhoades, 2011). LCA is predicated on the assumption that a population is heterogeneous in regards to the relationships between a set of variables, allowing researchers to describe similarities and differences among how individuals endorse a set of variables (Masyn, 2013).

Next, to evaluate the relationship between online risk-taking classes and offline risk-taking, four models of substance use were tested using a modified 3-step multinomial logistic regression analysis.

Results

Figure 1 Conditional item probability profile plot for the 3-class model of online risk-taking (N = 246)



Note. The high risk taking class included 87 people (35.4%), the high sexual risk taking only class included 36 people (14.6%), and the low risk taking class included 123 people (50.0%)

Latent Class Analysis

- A 3-class solution was determined to be the best fit to the data.
 - Absolute fit** - a 3-class solution was favored by the likelihood ratio Chi square goodness-of-fit test (X^2_{LRT}), where a significant p value indicates a lack of adequate model fit.
 - Relative fit** - a 3-class solution was favored by the Lo-Mendell Rubin likelihood ratio test (LMR-LRT), where a failure to reject the null hypothesis suggests there is no difference between a model with k classes compared to a model with $k + 1$ classes. Additionally, the Bayesian Information Criterion (BIC), Consistent Akaike's Information Criterion (CAIC), and Approximate Weight of Evidence Criterion (AWE) favored a 3-class solution, where lower values indicate a better fitting model.
 - Classification diagnostics** - the 3-class solution had superior class separation and homogeneity.
- Three classes were identified:
 - High in risk-taking across all indicators (35.4% of sample)
 - High only in sexual risk-taking (14.6% of sample)
 - Low in risk-taking across all indicators (50.0% of sample)

Latent Class Regression

- Four models of substance use were tested using R3STEP multinomial regression (Table 1).
- Based on the low risk-taking class,
 - lifetime alcohol use (odds ratio [OR] = 1.27; $p < 0.01$),
 - lifetime marijuana use (OR = 1.29; $p < 0.001$), and
 - lifetime illegal drug use (OR = 1.45; $p < .01$)
 were significantly associated with group membership in the high risk-taking class.

Results

Table 1 Odds of latent class membership among four models of offline substance use

	Wald test	High risk-taking class versus low risk taking class			High sexual risk-taking only class versus low risk taking class		
		B	SE	OR (95% CI)	B	SE	OR (95% CI)
Model 1 (n = 245)	0.07						
Female		0.21	0.33	1.24 (0.72-2.14)	-0.48	0.54	.62 (0.26-1.49)
Age		0.04	0.13	1.04 (0.84-1.29)	0.02	0.19	1.02 (0.75-1.39)
Lifetime alcohol use		0.24	0.08	1.27** (1.12-1.48)	0.14	0.18	1.15 (0.95-1.45)
Model 2 (n = 245)	0.43						
Female		0.14	0.33	1.15 (0.67-1.96)	-0.53	0.55	0.59 (0.24-1.45)
Age		0.08	0.12	1.08 (0.88-1.31)	0.04	0.18	1.04 (0.77-1.40)
Binge drinking in last 30 days		0.20	0.11	1.22* (1.03-1.45)	0.19	0.15	1.20 (0.94-1.54)
Model 3 (n = 243)	<0.05						
Female		0.27	0.34	1.31 (0.76-2.28)	-0.58	0.58	0.56 (0.22-1.44)
Age		0.07	0.13	1.07 (0.86-1.34)	0.04	0.19	1.04 (0.77-1.41)
Lifetime marijuana use		0.26	0.07	1.29*** (1.14-1.46)	0.15	0.10	1.16 (0.99-1.37)
Model 4 (n = 244)	0.14						
Female		0.28	0.34	1.32 (0.76-2.31)	-0.34	0.55	0.71 (0.29-1.75)
Age		0.08	0.13	1.08 (0.88-1.33)	0.05	0.18	1.05 (0.79-1.40)
Lifetime illegal drug use		0.38	0.14	1.45** (1.16-1.82)	0.33	0.17	1.38* (1.05-1.83)

Note. OR = odds ratio; CI = confidence interval; ** $p < 0.01$; *** $p < 0.001$; * $p < 0.10$.

Discussion and Implications

- This study contributes to the literature, first, by considering online risk-taking, and second, by considering the relationships between online risk-taking and substance use.
- Three unique classes of online risk-taking emerged; sexual risk-taking distinguished the third class.
- Age and gender were not associated with class membership.
- Greater substance use gave students a greater odds of being in the high risk-taking class.
- Substance use was not significantly associated with membership in the online sexual risk-taking class compared to the low online risk-taking class, suggesting a subgroup of college students who are not using substances but are taking risks online.
 - This is important information for parent and family program professionals on university campuses -- college students who are not taking risks offline, may still be taking risks online. We know little about the ways in which and the outcomes of student online risk-taking behavior.
- Future research should explore the relationships between online and offline risk-taking across diverse populations.

Key References

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