

***ALCOHOL USE AND INTERPERSONAL
RELATIONSHIPS: PATHWAYS FROM
ADOLESCENCE INTO YOUNG ADULTHOOD***

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Project Goal

- The overarching goal of this project was to investigate the impact of alcohol use in adolescent (ages 13-18) romantic relationship dyads and the implications that these drinking patterns have on young adult (ages 18-24) behaviors.

Learning Objectives

1. Types of adolescent romantic drinking partnerships, based on previous work with young adult drinking partnerships using cluster analysis
2. How these partnerships are associated with adolescent problem behaviors
3. How these partnerships are associated with young adult behaviors
4. Gender differences among the findings

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- Interventions designed to reduce the #1 drug problem in the United States (SAMHSA, 2003) have primarily focused on influences from strangers or peers (Prinstein & Dodge, 2008), while ignoring the impact of romantic relationships.
- No research to date has examined adolescent drinking behaviors in the context of their romantic partnerships, and subsequently how these impact adolescent/young adult behaviors.

Why is adolescent drinking important to study?



- Adolescence is a period of experimenting with alcohol use
 - 39% of 8th graders, 58% of 10th graders, and 72% of 12th graders having consumed alcohol (Johnston et al., 2008)
- Adolescence is also a time in which dating and romantic relationships become important in adolescents' lives (Furman, 2002)
 - 25% of 12 year olds, almost 50% of 15 year olds, and more than 70% of 18 year olds reported having a romantic relationship in the previous 18 months (Carver et al., 2003).



Drinking Partnerships



- Roberts & Leonard (1998): Married couples
 - Identified 5 “drinking partnerships”
 - Based on the (a) typical quantity/frequency of alcohol intake, (b) drinking context, and (c) match between husbands and wives’ drinking levels.
- Wiersma and colleagues (2008; 2010; 2014) have followed up the drinking partnerships research by using Add Health data to examine dating, cohabiting, and married young adult couples’ drinking partnerships.

CONGRUENT VS. DISCREPANT

- Compatibility between romantic partners predicts positive relationship quality
- Dissimilar couples experience more conflict, negativity, and ambivalence about the relationship (Houts et al., 1996)
- Couple drinking compatibility should increase the likelihood of continuing the relationship and reduce problematic outcomes such as alcohol-related problems
- However, if both are high in alcohol...

Roberts & Leonard (1998) study with married couples

CLUSTER 1	CLUSTER 2	CLUSTER 3	CLUSTER 4	CLUSTER 5
<p>“Light Social Drinkers”</p>	<p><i>“Husband Heavy Drinkers”</i></p>	<p>“Light Intimate Drinkers”</p>	<p><i>“Heavy Out-Of-Home Drinkers”</i></p>	<p><i>“Frequent Intimate Drinkers”</i></p>
<p>**Both husbands & wives report high marital functioning and no adverse consequences</p>	<p><i>**Husbands report lower levels of marital functioning. Wives report higher levels of depression, and poor marital functioning.</i></p>	<p>**No adverse drinking consequences</p>	<p><i>**Husbands report lower levels of marital functioning. More adverse consequences reported by both members.</i></p>	<p><i>**High levels of marital adjustment & intimacy.</i></p>

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Wiersma et al. (2008; 2010; 2014) - dating, cohabiting, & married couples

“Congruent Light & Infrequent Drinkers”	“Discrepant Male Heavy Drinkers”	“Discrepant Female Heavy Drinkers”	“Congruent Frequent & Heavy Drinkers”	
<i>**Reported highest levels of relationship satisfaction, commitment, less dissolution, & lowest negative consequences.</i>	<i>**Reported lower romantic quality, highest levels of negative consequences (alcohol use, problems)</i>	<i>**Reported high alcohol use, consequences, problems</i>	<i>**Reported highest levels of commitment, but highest dissolution 6 years later; highest reports of alcohol use/abuse/problems/consequences</i>	

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- No research to date has compared the drinking for romantic partners and the impact that these behaviors have on adolescent problems and behaviors
- Behaviors that compromise health are often placed within a framework of deviance or risk taking (Hawkins et al., 1992; Petratis et al., 1995)

How does this influence adolescent outcomes?

- *Intrapersonal variables* such as personality attributes (low self-esteem; depression; adolescent alcohol use; delinquency)
- *Interpersonal variables* such as peer alcohol use, low family support, and intimate partner violence (IPV)
- *School level* behaviors (low grade point average and school attachment, more school problems)

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- Progression from adolescence to young adulthood is marked by successive participation in certain social roles, such as education, employment, and having a committed romantic relationship
- Timing of entry into and out of these roles is characterized as normal, age-appropriate **behaviors** (Featherman & Sorensen, 1982; Hogan, 1978; 1981; Marini, 1981, e.g., the role-compatibility theory; Yamaguchi, 1990)

How does this influence *young adult* outcomes?

- Alcohol use in adolescence may interfere with the attainment of conventional, social roles in adulthood
- Early drinking has been associated with problematic young adult behaviors (Grant et al., 2004)
- Problems undermine the achievement of many important developmental tasks
 - Incomplete education, delayed entry into work and career (Cahalan, 1970; Ellikson, Tucker, & Klein, 2003), delayed or unachieved romantic commitments

Figure 1. Conceptual Model for the Project



Project Goals

- Examines adolescent dating couples in order to compare drinking typologies that occur in these relationships
- Uses cluster analyses in order to identify differences and similarities in drinking patterns
 - How do these impact adolescent risky behaviors?
 - How do these impact young adult risky behaviors?
- Data come from the National Longitudinal Study of Adolescent Health (Add Health)

Aims & Hypotheses

This study will explore drinking partnerships in *adolescent dating couples* using the Add Health.

- **Aim #1:** What types of adolescent romantic *drinking partnerships* exist, based on Roberts and Leonard (1998) and Wiersma and colleagues (2008; 2010; 2014) work? (1a) Examine profiles of romantic drinking; (1b) compare and contrast the profiles and covariates of drinking partnerships.
- **Aim #2:** What is the impact of adolescent drinking partnerships on adolescent behaviors? Those in heavy and discrepant drinking partnerships will experience more intra, interpersonal, and school level problems as compared to congruent drinking partnerships.
- **Aim #3:** What is the impact of adolescent drinking partnerships on young adult behaviors? Those in heavy and discrepant adolescent drinking partnerships will experience more alcohol-related and relationship problems as compared to congruent drinking partnerships.

Method

- Data (Add Health) using Wave I, II, III

STUDY 1: Uses Waves I and II (adolescent only)

2,023 paired romantic partners (Mean age = 15 at WI)

- 58% Caucasian
- Heterosexual

STUDY 2: Uses Waves I, II, & III (adolescent & young adult)

806 paired dating couples (Mean age = 21 at WIII)

- 6 years later at WIII
- 51% Caucasian
- Heterosexual

STUDY 1

Study 1 Measures

Control variables (Age and ethnicity coded 0 = *White/Caucasian* and 1 = *other*)

Dependent variables

Intrapersonal level variables

- *Self-esteem* was assessed with 4 items including “Do you agree or disagree that you have many good qualities” and “Do you agree or disagree that you have a lot to be proud of?” Response scale ranged from 1 = *strongly disagree* to 5 = *strongly agree* ($M = 4.16$).
- *Depression* was assessed with 12 items, such as “In the past 12 months, how often have you laughed a lot” and “...how often have you cried a lot.” Responses ranged from 0 = *never* to 3 = *most or all of the time* ($M = .54$; $\alpha = .83$).
- *Alcohol use* for frequency and quantity of drinking in the past 12 months were multiplied to form the average volume for participants’ drinking at Wave II ($M = 9.32$, Range 0-108 drinks per month).
- *Adolescent Delinquency* was assessed using 11 items: “painting graffiti or sign/s on someone else’s property or in a public place”. Responses ranged from 0=never to 3=5 or more times. Alpha was .82 at Wave I.

Study 1 Measures

Dependent variables

Interpersonal level variables

- *Peer alcohol use* was assessed by: "Of your 3 best friends, how many drink alcohol at least once a month?" Responses ranged from 0 = none of my friends, 1 = *one friend*, 2 = *two friends*, and 3 = *three friends*.
- *Intimate partner violence*. Both minor and severe male-to-female partner violence (MFPV) and female-to-male partner violence (FMPV) were assessed by eight questions. Responses ranged from 0 (*never*) to 6 (*more than 20 times*; $\alpha = .84$).
- *Family support*. Two scales were constructed to examine the associations between adolescents' relationships with their fathers and mothers. Both scales used four items to measure the closeness, warmth, and level of communication within parent-child relationships. Items included "How close do you feel to (name of dad)?" and "Are you satisfied with the way (name of dad) you communicate with each other?" Responses were given on a 5-point scale. Items were reverse coded so a high score on these scales represents high quality relationships with parents. The alphas for the Father-Relationship and Mother-Relationship scales were .89 and .85, respectively.

Study 1 Measures

Dependent variables

School level variables

- *GPA*. Participants' most recent grades in Math, Science, History, and English were used to calculate GPA. The alpha was .75.
- *School attachment* was formed by averaging three items assessing whether participants felt close to people at their school, part of their school, and happy at their school during the last year. Responses ranged from 1 (*strongly agree*) to 5 (*strongly disagree*). The alpha was .72.
- *School problems* was formed by averaging together whether the adolescents had to repeat a grade, received an out of school suspension, and had been expelled from school. Responses were 0 = no and 1 = yes. These three items were averaged together with higher scores indicating more school problems ($M = 0.17$, $\alpha = 0.48$).

Study 1 Measures

- *Drinking partnerships* (Wave I) were derived from four items: frequency, quantity of alcohol consumption, heavy episodic drinking (4/5 more drinks for women/men), and getting drunk.
 - Frequency of alcohol consumption was estimated by partners individually answering: “During the past 12 months, on how many days did you drink alcohol?” Heavy episodic drinking was estimated by: “During the past 12 months, on how many days did you drink 4/5 drinks?” Getting drunk was assessed by: “During the past 12 months, on how many days did you get drunk?” Fixed responses for these 3 questions ranged from 1 = *1 or 2 days in the past 12 months* to 6 = *every day or almost every day*. In addition, open-ended responses were given for quantity of alcohol consumed: “Think of all the times you have had a drink during the past 12 months. How many drinks did you usually have each time?”
- Procedures similar to Wiersma et al. (2010; 2014) were used to develop adolescent couple drinking partnerships. This study used a *k*-means iterative cluster analysis of the eight drinking variables for males and females.
- The current drinking partnership analysis set the number of clusters to 4 (similar to those of Wiersma et al. (2010; 2014):
 - (1) “Congruent Light and Infrequent” (Light 63%),
 - (2) “Discrepant Male Heavy and Frequent” (Discrepant Male 20%),
 - (3) “Discrepant Female Heavy and Frequent” (Discrepant Female 8%), and
 - (4) “Congruent Heavy and Frequent” (Heavy 10%)

Table 1. Profile of Adolescent (Wave I) Dating Drinking Partnerships by Cluster

Variable	Cluster Means				<i>F</i>
	1 Light & Infrequent	2 Discrepant Male Heavy & Frequent	3 Discrepant Female Heavy & Frequent	4 Heavy & Frequent	
<i>WAVE 1</i>	<i>n = 1265</i>	<i>n = 409</i>	<i>n = 155</i>	<i>n = 194</i>	
Male Frequency	.78 (1.00) ^{ab1}	3.47 (1.09) ^{ac2}	.94 (1.03) ^{cd3}	3.50 (1.12) ^{bd4}	946.18*
Female Frequency	.67 (.88) ^{abc1}	.99 (.91) ^{ade2}	3.12 (.93) ^{bd3}	3.08 (.92) ^{ce4}	675.41*
Male Quantity	1.45 (2.54) ^{ab5}	7.82 (3.42) ^{ad6}	1.99 (2.86) ^{de7}	8.26 (3.22) ^{be8}	724.98*
Female Quantity	1.23 (2.27) ^{abc5}	1.98 (2.50) ^{ade6}	6.27 (3.91) ^{bc7}	6.58 (3.24) ^{ce8}	367.84*
Male Heavy	.22 (.56) ^{ab}	3.21 (1.34) ^{acd9}	.32 (.61) ^{ce10}	3.46 (1.31) ^{bde11}	1759.7*
Female Heavy	.18 (.52) ^{ab}	.28 (.52) ^{cd9}	2.32 (1.46) ^{ace10}	2.87 (1.28) ^{bde11}	1045.28*
Male Drunk	.29 (.57) ^{ab12}	2.79 (1.29) ^{acd13}	.42 (.68) ^{ce14}	2.99 (1.30) ^{bde15}	1238.45*
Female Drunk	.19 (.41) ^{abc12}	.42 (.62) ^{ade13}	2.74 (1.09) ^{bdf14}	2.52 (1.04) ^{cef15}	1462.57*

Note: *n=2023*. Means with matching superscripts differ significantly at $p < .05$ by Neuman-Keuls test. Matching numbers in a column indicate significant gender difference paired *t*-test, $p < .05$.

* $p < .001$

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Variable	1 Light & Infrequent	2 Discrepant Male Heavy & Frequent	3 Discrepant Female Heavy & Frequent	4 Heavy & Frequent	<i>F</i>
WAVE 2 OUTCOMES					
<i>Intrapersonal Level</i>					
Male Delinquency	.22 (.28) ^{ab1}	.35 (.44) ^{ac2}	.25 (.25) ^c	.30 (.37) ^b	12.37***
Female Delinquency	.16 (.22) ^{ab1}	.17 (.21) ^{cd2}	.34 (.36) ^{ace}	.26 (.27) ^{bde}	23.92***
Male Depression	.53 (.35) ³	.56 (.35) ⁴	.61 (.34) ⁵	.56 (.39) ⁶	<i>ns</i>
Female Depression	.57 (.40) ^{abc3}	.66 (.42) ^{ad4}	.90 (.43) ^{bde5}	.70 (.43) ^{ce6}	24.89***
Male Self-Esteem	4.29 (.56) ⁷	4.19 (.57)	4.33 (.48) ⁸	4.27 (.53) ⁹	2.39*
Female Self-Esteem	4.18 (.59) ^{ab7}	4.12 (.60) ^c	3.88 (.67) ^{ac8}	4.03 (.62) ^{b9}	10.57***
Male Drinking	.61 (.96) ^{abc10}	1.80 (1.37) ^{ade11}	.96 (1.21) ^{bdf12}	2.14 (1.56) ^{cef13}	123.71***
Female Drinking	.75 (1.21) ^{abc10}	1.35 (1.53) ^{ade11}	2.84 (1.74) ^{bd12}	2.69 (1.63) ^{cd13}	150.60***
<i>Interpersonal Level</i>					
Male Peer Drinking	1.15 (1.17) ^{ab14}	1.98 (1.16) ^{ac15}	1.42 (1.22) ^{cd16}	2.17 (1.13) ^{bd}	51.24***
Female Peer Drinking	.91 (1.04) ^{abc14}	1.46 (1.18) ^{ade15}	2.23 (1.04) ^{bd16}	2.11 (1.09) ^{ce}	98.89***
Male IPV	.09 (.16) ¹⁷	.11 (.18)	.08 (.16) ¹⁸	.12 (.21)	<i>ns</i>
Female IPV	.07 (.16) ^{abc17}	.11 (.18) ^{ad}	.19 (.21) ^{bde18}	.12 (.20) ^{ce}	17.21***
Male Family support	4.33 (.57) ^{a19}	4.21 (.53) ^a	4.28 (.67) ²⁰	4.27 (.48)	3.08*
Female Family Support	4.26 (.67) ^{ab19}	4.17 (.72) ^c	3.75 (.84) ^{acd20}	4.06 (.68) ^{bd}	20.03***
<i>School Level</i>					
Male GPA	2.72 (.75) ^{a21}	2.64 (.78) ²²	2.68 (.71)	2.48 (.76) ^{a23}	3.22*
Female GPA	3.01 (.71) ^{abc21}	2.88 (.72) ^{ad22}	2.62 (.79) ^{bd}	2.75 (.67) ^{c23}	14.19***
Male School Attachment	3.93 (.71) ^a	3.75 (.83) ^a	3.80 (.78) ²⁴	3.79 (.75)	4.38**
Female School Attachment	3.90 (.73) ^{ab}	3.90 (.74) ^{cd}	3.42 (.74) ^{ac24}	3.61 (.76) ^{bd}	18.36***
Male School Problems	.07 (.19) ^{ab25}	.13 (.23) ^{a26}	.10 (.20) ^c	.19 (.30) ^{bc27}	12.31***
Female School Problems	.03 (.13) ^{ab25}	.05 (.15) ^{c26}	.11 (.23) ^{ac}	.08 (.20) ^{b27}	12.27***

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Note: $n=2023$. Means with matching superscripts differ significantly at $p < .05$ by Neuman-Keuls test. Matching numbers in a column indicate significant gender difference paired t -test, $p < .05$.

* $p < .05$ ** $p < .01$ *** $p < .01$

Variable	1 Light & Infrequent	2 Discrepant Male Heavy & Frequent	3 Discrepant Female Heavy & Frequent	4 Heavy & Frequent	<i>F</i>
WAVE 2 OUTCOMES					
<i>Intrapersonal Level</i>					
Male Delinquency	.22 (.28) ^{ab1}	.35 (.44) ^{ac2}	.25 (.25) ^c	.30 (.37) ^b	12.37***
Female Delinquency	.16 (.22) ^{ab1}	.17 (.21) ^{cd2}	.34 (.36) ^{ace}	.26 (.27) ^{bde}	23.92***
Male Depression	.53 (.35) ³	.56 (.35) ⁴	.61 (.34) ⁵	.56 (.39) ⁶	<i>ns</i>
Female Depression	.57 (.40) ^{abc3}	.66 (.42) ^{ad4}	.90 (.43) ^{bde5}	.70 (.43) ^{ce6}	24.89***
Male Self-Esteem	4.29 (.56) ⁷	4.19 (.57)	4.33 (.48) ⁸	4.27 (.53) ⁹	2.39*
Female Self-Esteem	4.18 (.59) ^{ab7}	4.12 (.60) ^c	3.88 (.67) ^{ac8}	4.03 (.62) ^{b9}	10.57***
Male Drinking	.61 (.96) ^{abc10}	1.80 (1.37) ^{ade11}	.96 (1.21) ^{bdf12}	2.14 (1.56) ^{cef13}	123.71***
Female Drinking	.75 (1.21) ^{abc10}	1.35 (1.53) ^{ade11}	2.84 (1.74) ^{bd12}	2.69 (1.63) ^{cd13}	150.60***
<i>Interpersonal Level</i>					
Male Peer Drinking	1.15 (1.17) ^{ab14}	1.98 (1.16) ^{ac15}	1.42 (1.22) ^{cd16}	2.17 (1.13) ^{bd}	51.24***
Female Peer Drinking	.91 (1.04) ^{abc14}	1.46 (1.18) ^{ade15}	2.23 (1.04) ^{bd16}	2.11 (1.09) ^{ce}	98.89***
Male IPV	.09 (.16) ¹⁷	.11 (.18)	.08 (.16) ¹⁸	.12 (.21)	<i>ns</i>
Female IPV	.07 (.16) ^{abc17}	.11 (.18) ^{ad}	.19 (.21) ^{bde18}	.12 (.20) ^{ce}	17.21***
Male Family support	4.33 (.57) ^{a19}	4.21 (.53) ^a	4.28 (.67) ²⁰	4.27 (.48)	3.08*
Female Family Support	4.26 (.67) ^{ab19}	4.17 (.72) ^c	3.75 (.84) ^{acd20}	4.06 (.68) ^{bd}	20.03***
<i>School Level</i>					
Male GPA	2.72 (.75) ^{a21}	2.64 (.78) ²²	2.68 (.71)	2.48 (.76) ^{a23}	3.22*
Female GPA	3.01 (.71) ^{abc21}	2.88 (.72) ^{ad22}	2.62 (.79) ^{bd}	2.75 (.67) ^{c23}	14.19***
Male School Attachment	3.93 (.71) ^a	3.75 (.83) ^a	3.80 (.78) ²⁴	3.79 (.75)	4.38**
Female School Attachment	3.90 (.73) ^{ab}	3.90 (.74) ^{cd}	3.42 (.74) ^{ac24}	3.61 (.76) ^{bd}	18.36***
Male School Problems	.07 (.19) ^{ab25}	.13 (.23) ^{a26}	.10 (.20) ^c	.19 (.30) ^{bc27}	12.31***
Female School Problems	.03 (.13) ^{ab25}	.05 (.15) ^{c26}	.11 (.23) ^{ac}	.08 (.20) ^{b27}	12.27***

Note: $n=2023$. Means with matching superscripts differ significantly at $p < .05$ by Neuman-Keuls test. Matching numbers in a column indicate significant gender difference paired t -test, $p < .05$.

* $p < .05$ ** $p < .01$ *** $p < .01$

Figure 1. Wave II Delinquency as a Function of Wave I Drinking Partnerships

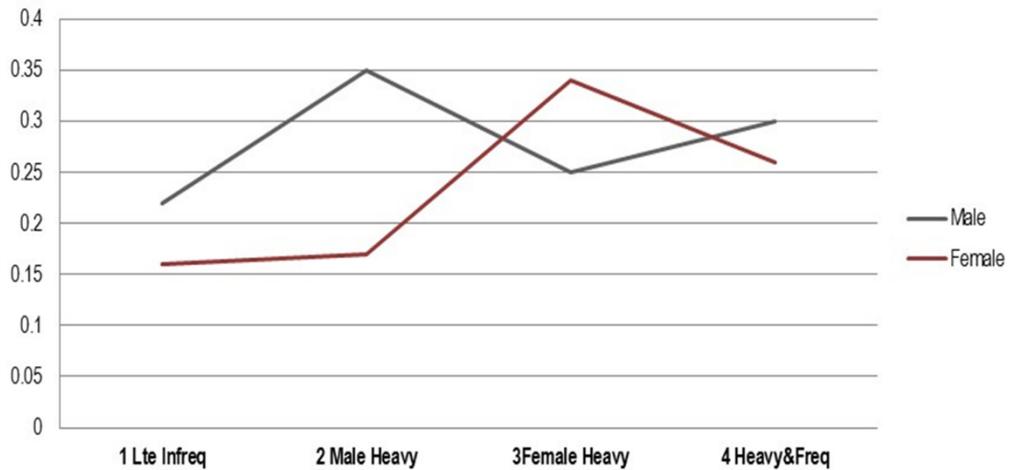
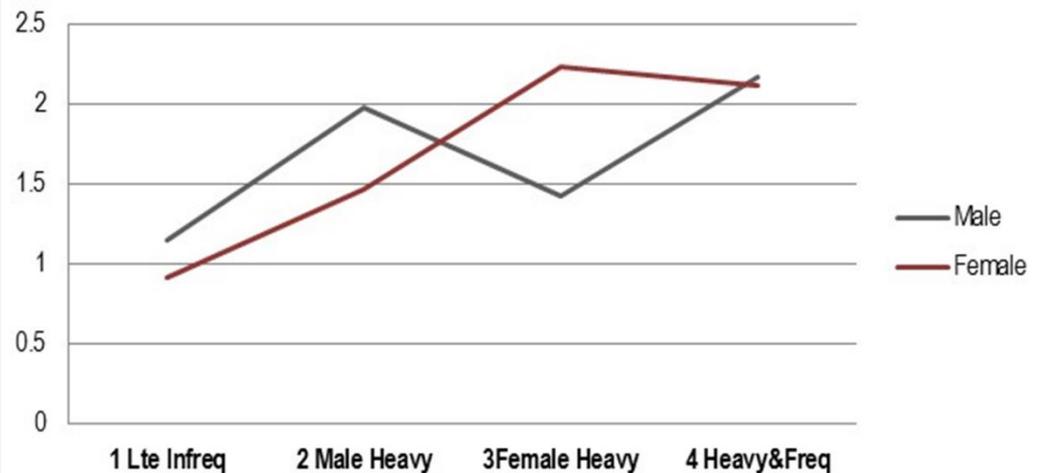


Figure 2. Wave II Peer Drinking as a Function of Wave I Drinking Partnerships



Variable	1 Light & Infrequent	2 Discrepant Male Heavy & Frequent	3 Discrepant Female Heavy & Frequent	4 Heavy & Frequent	<i>F</i>
WAVE 2 OUTCOMES					
<i>Intrapersonal Level</i>					
Male Delinquency	.22 (.28) ^{ab1}	.35 (.44) ^{ac2}	.25 (.25) ^c	.30 (.37) ^b	12.37***
Female Delinquency	.16 (.22) ^{ab1}	.17 (.21) ^{cd2}	.34 (.36) ^{ace}	.26 (.27) ^{bde}	23.92***
Male Depression	.53 (.35) ³	.56 (.35) ⁴	.61 (.34) ⁵	.56 (.39) ⁶	<i>ns</i>
Female Depression	.57 (.40) ^{abc3}	.66 (.42) ^{ad4}	.90 (.43) ^{bde5}	.70 (.43) ^{ce6}	24.89***
Male Self-Esteem	4.29 (.56) ⁷	4.19 (.57)	4.33 (.48) ⁸	4.27 (.53) ⁹	2.39*
Female Self-Esteem	4.18 (.59) ^{ab7}	4.12 (.60) ^c	3.88 (.67) ^{ac8}	4.03 (.62) ^{b9}	10.57***
Male Drinking	.61 (.96) ^{abc10}	1.80 (1.37) ^{ade11}	.96 (1.21) ^{bdf12}	2.14 (1.56) ^{cef13}	123.71***
Female Drinking	.75 (1.21) ^{abc10}	1.35 (1.53) ^{ade11}	2.84 (1.74) ^{bd12}	2.69 (1.63) ^{cd13}	150.60***
<i>Interpersonal Level</i>					
Male Peer Drinking	1.15 (1.17) ^{ab14}	1.98 (1.16) ^{ac15}	1.42 (1.22) ^{cd16}	2.17 (1.13) ^{bd}	51.24***
Female Peer Drinking	.91 (1.04) ^{abc14}	1.46 (1.18) ^{ade15}	2.23 (1.04) ^{bd16}	2.11 (1.09) ^{ce}	98.89***
Male IPV	.09 (.16) ¹⁷	.11 (.18)	.08 (.16) ¹⁸	.12 (.21)	<i>ns</i>
Female IPV	.07 (.16) ^{abc17}	.11 (.18) ^{ad}	.19 (.21) ^{bde18}	.12 (.20) ^{ce}	17.21***
Male Family support	4.33 (.57) ^{a19}	4.21 (.53) ^a	4.28 (.67) ²⁰	4.27 (.48)	3.08*
Female Family Support	4.26 (.67) ^{ab19}	4.17 (.72) ^c	3.75 (.84) ^{acd20}	4.06 (.68) ^{bd}	20.03***
<i>School Level</i>					
Male GPA	2.72 (.75) ^{a21}	2.64 (.78) ²²	2.68 (.71)	2.48 (.76) ^{a23}	3.22*
Female GPA	3.01 (.71) ^{abc21}	2.88 (.72) ^{ad22}	2.62 (.79) ^{bd}	2.75 (.67) ^{c23}	4.19***
Male School Attachment	3.93 (.71) ^a	3.75 (.83) ^a	3.80 (.78) ²⁴	3.79 (.75)	4.38**
Female School Attachment	3.90 (.73) ^{ab}	3.90 (.74) ^{cd}	3.42 (.74) ^{ac24}	3.61 (.76) ^{bd}	18.36***
Male School Problems	.07 (.19) ^{ab25}	.13 (.23) ^{a26}	.10 (.20) ^c	.19 (.30) ^{bc27}	12.31***
Female School Problems	.03 (.13) ^{ab25}	.05 (.15) ^{c26}	.11 (.23) ^{ac}	.08 (.20) ^{b27}	12.27***

Note: $n=2023$. Means with matching superscripts differ significantly at $p < .05$ by Neuman-Keuls test. Matching numbers in a column indicate significant gender difference paired t -test, $p < .05$.

* $p < .05$ ** $p < .01$ *** $p < .01$

Summary of Study 1 Findings

- Significant cluster main effects: male/female delinquency, female depression, male/female self-esteem, male/female drinking (W2); male/female # of peer drinkers, female partner violence, male/female family support; male/female GPA, male/female school attachment, and male/female school problems
- Significant gender main effects on all outcomes, except for delinquency, peer drinking, & IPV
- Significant gender by cluster interactions on all outcomes, except for GPA

Study 1 Conclusions

- In general, there are similar types of drinking partnerships in adolescence as there are in young adulthood (Wiersma et al., 2008; 2010; 2014) and adulthood (Roberts & Leonard, 1998).
- Discrepant heavy male and heavy female drinking partnerships are problematic for adolescent outcomes
 - higher reports of delinquency, female depression, later adolescent drinking, number of peer drinkers, partner violence, school problems
 - lower reports of self-esteem, family support, GPA, and school attachment

STUDY 2

Study 2 Measures

Control variables (Age and ethnicity coded 0 = *White/Caucasian* and 1 = *other*)

Dependent variables

- **Wave III** (6 years later) measures included: **depression** ($M = .53$, $SD = .01$, range = 0-2.42), **drinking** (frequency x quantity; $M = 15.37$, $SD = .50$, range = 0-126 drinks per month), **years of education** ($M = 13.35$, $SD = .07$), **in school** (1 = *yes*, $M = .36$, $SD = .02$) and **relationship status** (single [0], dating [1], cohabiting [2], married [3]; $M = 1.60$, $SD = .03$).

Independent variables

- *Drinking partnerships* (Wave I) were derived from four items: frequency, quantity of alcohol consumption, heavy episodic drinking (4/5 more drinks for women/men), and getting drunk. Same as Study 1.

Wave III Young Adult Behaviors as a Function of Wave I Adolescent Drinking Partnerships

Variable	1 Light & Infrequent	2 Discrepant Male Heavy & Frequent	3 Discrepant Female Heavy & Frequent	4 Heavy & Frequent	<i>F</i>	η^2
Male Depression	.45 (.02) ¹	.43 (.03) ⁵	.45 (.04) ⁸	.48 (.02) ¹⁰	.78	.00
Female Depression	.58 (.03) ¹	.60 (.03) ⁵	.68 (.05) ⁸	.56 (.03) ¹⁰	1.72	.01
Male Drinking	16.33 (1.16) ^{a2}	22.93 (1.60) ^{a6}	18.26 (2.35) ⁹	20.20 (1.24) ¹¹	4.21*	.02
Female Drinking	8.77 (.75) ^{a2}	11.41 (1.03) ⁶	11.95 (1.51) ⁹	13.48 (.80) ^{a11}	6.30**	.02
Male Education	13.30 (.11) ³	13.16 (.15) ⁷	13.05 (.22)	13.30 (.12) ¹²	.47	.00
Female Education	13.65 (.11) ^{a3}	13.57 (.16) ⁷	12.92 (.23) ^{ab}	13.82 (.12) ^{b12}	4.29*	.02
Male In-School	.40 (.03) ^{a4}	.35 (.04)	.26 (.05)	.25 (.03) ^{a13}	4.96*	.02
Female In-School	.51 (.03) ^{ab4}	.40 (.04)	.32 (.06) ^a	.40 (.03) ^{b13}	4.45*	.02
Male Relationship Status	1.49 (.05)	1.54 (.06)	1.58 (.09)	1.61 (.05)	1.13	.00
Female Relationship Status	1.55 (.05)	1.62 (.07)	1.80 (.10)	1.60 (.05)	1.59	.01

Note: *n*=808. Means with matching superscripts in rows differ significantly at *p* < .05 by Neuman-Keuls test. Matching numbers in a column indicate significant gender difference paired *t*-test, *p* < .05.

* *p* < .01 ** *p* < .01

Wave III Young Adult Behaviors as a Function of Wave I Adolescent Drinking Partnerships

Variable	1 Light & Infrequent	2 Discrepant Male Heavy & Frequent	3 Discrepant Female Heavy & Frequent	4 Heavy & Frequent	<i>F</i>	η^2
Male Depression	.45 (.02) ¹	.43 (.03) ⁵	.45 (.04) ⁸	.48 (.02) ¹⁰	.78	.00
Female Depression	.58 (.03) ¹	.60 (.03) ⁵	.68 (.05) ⁸	.56 (.03) ¹⁰	1.72	.01
Male Drinking	16.33 (1.16) ^{a2}	22.93 (1.60) ^{a6}	18.26 (2.35) ⁹	20.20 (1.24) ¹¹	4.21*	.02
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Male Education	13.30 (.11) ³	13.16 (.15) ⁷	13.05 (.22)	13.30 (.12) ¹²	.47	.00
Female Education	13.65 (.11) ^{a3}	13.57 (.16) ⁷	12.92 (.23) ^{ab}	13.82 (.12) ^{b12}	4.29*	.02
Male In-School	.40 (.03) ^{a4}	.35 (.04)	.26 (.05)	.25 (.03) ^{a13}	4.96*	.02
Female In-School	.51 (.03) ^{ab4}	.40 (.04)	.32 (.06) ^a	.40 (.03) ^{b13}	4.45*	.02
Male Relationship Status	1.49 (.05)	1.54 (.06)	1.58 (.09)	1.61 (.05)	1.13	.00
Female Relationship Status	1.55 (.05)	1.62 (.07)	1.80 (.10)	1.60 (.05)	1.59	.01

Note: *n*=808. Means with matching superscripts in rows differ significantly at *p* < .05 by Neuman-Keuls test. Matching numbers in a column indicate significant gender difference paired *t*-test, *p* < .05.

* *p* < .01 ** *p* < .01

Wave III Young Adult Behaviors as a Function of Wave I Adolescent Drinking Partnerships

Variable	1 Light & Infrequent	2 Discrepant Male Heavy & Frequent	3 Discrepant Female Heavy & Frequent	4 Heavy & Frequent	<i>F</i>	η^2
Male Depression	.45 (.02) ¹	.43 (.03) ⁵	.45 (.04) ⁸	.48 (.02) ¹⁰	.78	.00
Female Depression	.58 (.03) ¹	.60 (.03) ⁵	.68 (.05) ⁸	.56 (.03) ¹⁰	1.72	.01
Male Drinking	16.33 (1.16) ^{a2}	22.93 (1.60) ^{a6}	18.26 (2.35) ⁹	20.20 (1.24) ¹¹	4.21*	.02
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Male Education	13.30 (.11) ³	13.16 (.15) ⁷	13.05 (.22)	13.30 (.12) ¹²	.47	.00
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Male In-School	.40 (.03) ^{a4}	.35 (.04)	.26 (.05)	.25 (.03) ^{a13}	4.96*	.02
Female In-School	.51 (.03) ^{ab4}	.40 (.04)	.32 (.06) ^a	.40 (.03) ^{b13}	4.45*	.02
Male Relationship Status	1.49 (.05)	1.54 (.06)	1.58 (.09)	1.61 (.05)	1.13	.00
Female Relationship Status	1.55 (.05)	1.62 (.07)	1.80 (.10)	1.60 (.05)	1.59	.01

Note: *n*=808. Means with matching superscripts in rows differ significantly at $p < .05$ by Neuman-Keuls test. Matching numbers in a column indicate significant gender difference paired *t*-test, $p < .05$.

* $p < .01$ ** $p < .01$

Figure 1. Wave III Young Adult Drinking as a Function of Adolescent Drinking Partnerships

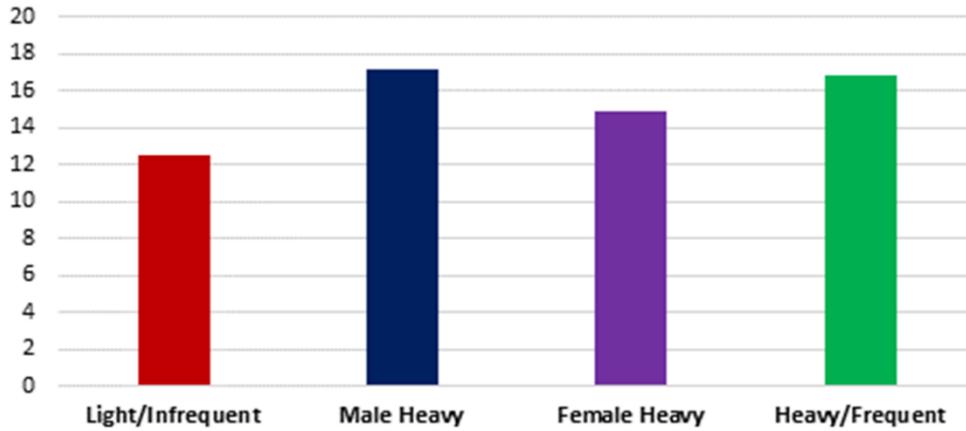
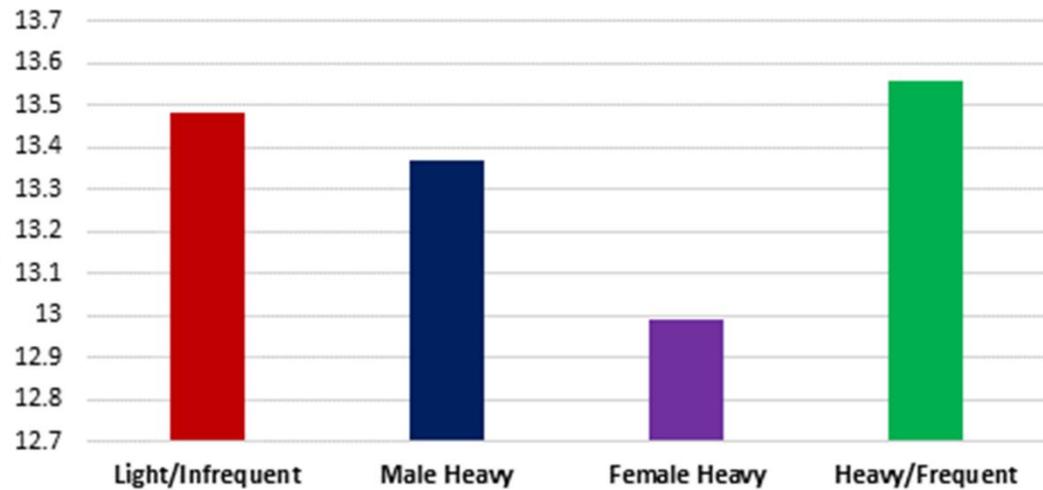


Figure 2. Wave III Level of Education as a Function of Adolescent Drinking Partnerships



Summary of Study 2 Findings

- Significant main effect of gender: women drank less, but were more likely to be in school, and have a higher education compared to men
- No cluster effects on Wave III depression or relationship status
- **Young adult drinking was significantly higher in the discrepant male heavy and heavy/frequent drinking partnerships as compared to the light/infrequent**
- **Education level was significantly lower for discrepant female heavy compared to heavy/frequent drinking partnerships**
- Young adults were **more often enrolled** in a college/university in the **light/infrequent** as compared to the **female discrepant** and **heavy/frequent** groups

Study 2 Conclusions

- In general, the drinking partnerships in adolescence were associated with important, later young adult behaviors
- Adolescent partnerships with one or both heavy drinkers were problematic for young adult outcomes, including higher reports of drinking 6 years later, lower education and less enrollment in a college/university

PRESENT STUDY SIGNIFICANT FINDINGS

Light/Infrequent	Discrepant Male Heavy & Frequent	Discrepant Female Heavy & Frequent	Heavy & Frequent
	<p>Higher reports of delinquency, later adolescent & young adult drinking, number of peer drinkers, partner violence, school problems, lower reports of self-esteem, family support, GPA, school attachment, less likely to be in college</p>	<p>Higher reports of delinquency, female depression, later adolescent & young adult drinking, number of peer drinkers, partner violence, school problems, lower reports of self-esteem, family support, GPA, school attachment, education, less likely to be in college</p>	

PRESENT STUDY SIGNIFICANT FINDINGS

Light/Infrequent	Discrepant Male Heavy & Frequent	Discrepant Female Heavy & Frequent	Heavy & Frequent
<p>Lowest reports of adolescent and young adult behavioral problems</p>	<p>Higher reports of delinquency, later adolescent & young adult drinking, number of peer drinkers, partner violence, school problems, lower reports of self-esteem, family support, GPA, school attachment, less likely to be in college</p>	<p>Higher reports of delinquency, female depression, later adolescent & young adult drinking, number of peer drinkers, partner violence, school problems, lower reports of self-esteem, family support, GPA, school attachment, education, less likely to be in college</p>	<p>Moderate reports of delinquency, depression, highest in male drinking in adolescence, highest # of peers for males in adolescence; low self esteem; lowest male GPA; highest male school problems; highest male depression in YA; highest YA female drinking; highest reports of level of education for females and males in YA; but less likely to be currently in school in YA</p>

Overall Discussion

- Support for the existence of drinking partnerships among adolescent dating couples in romantic relationships
- Discrepant drinking couples
- Findings can inform future prevention designs to reduce problems for adolescents by identifying risky drinking partnerships.
- Studying romantic relationships and drinking has implications for broad aspects of adolescent and young adult development

Limitations & Strengths

- Limitations
 - Use of secondary data limits scope of analysis
 - Design prevents inferring a causal, directional association between alcohol consumption and relational distress and alcohol-related problems.
- Strengths
 - Paired romantic couples in different developmental phases (i.e., dating in adolescence and young adulthood)
 - National survey
 - Large sample size

Future directions

For more Information

- Dr. Jacquelyn Wiersma-Mosley is an Assistant Professor in the School of Human Environmental Sciences at the University of Arkansas. She received her Ph.D. in Human Development and Family Studies at Texas Tech University in 2008.
- Her research has primarily centered around the role of alcohol and how it is associated with adolescent and young adult romantic relationships. She has written numerous papers on the congruency versus discrepancy in drinking patterns and how this affects couples' satisfaction, commitment, alcohol-related problems, alcohol abuse, and intimate partner violence (IPV) in dating, cohabiting, and married romantic relationships.
- She received an Alcohol Beverage Medical Research Foundation (ABMRF) grant this past year to specifically examine adolescent drinking partnerships and their consequences using the Add Health dataset. For more information, please see her website (<http://hesc.uark.edu/6116.php>) or contact her at jwiersma@uark.edu.