

Adolescent Drinking Partnerships and Problem Behaviors

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ABSTRACT

Although experimenting with alcohol and romantic partnerships increases over adolescence, there is little research on adolescent drinking behaviors in the context of romantic partnerships. Thus, it is difficult to identify the influences of drinking partnerships on a myriad of adolescent problem behaviors, including intrapersonal (low self-esteem; depression; adolescent alcohol use; delinquency), interpersonal (peer alcohol use; low family support; intimate partner violence) and school level behaviors (low grade point average and school attachment, more school problems). Data come from the Add Health (Waves I and II), a longitudinal study of adolescent health-related behaviors and outcomes. Approximately 2,023 respondents reported at least one opposite-sex relationship in the last 18 months. A k-means iterative cluster analysis identified four Wave I clusters: (a) Light and Infrequent, (b) Discrepant Male Heavy and Frequent, (c) Discrepant Female Heavy and Frequent, and (d) Heavy and Frequent Drinkers. In general, discrepant heavy male and heavy female drinking partnerships involved individuals at risk for later problems, consequences which varied by gender and type of problem. Findings can inform future prevention designs to reduce problems for adolescents by identifying risky drinking partnerships.

Keywords

Add Health, Adolescent alcohol use, Drinking partnerships, Romantic relationships.

Introduction

Adolescence is a period of experimenting with alcohol use, with approximately 39% of 8th graders, 58% of 10th graders, and 72% of 12th graders having consumed alcohol [1]. Adolescence is also a time in which dating and romantic relationships become important in adolescents' lives [2], with national estimates indicating that 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 [3]. Although experimenting with alcohol and romantic partnerships increases over adolescence, there is little research on adolescent drinking behaviors and consequences in the context of romantic partnerships. The experiences that arise during this time have the potential to influence later life decisions and behaviors. Heavy drinking of individuals is connected to immediate and long-term consequences such as lower academic achievement, family problems, delinquency, and depression [4-8]. Thus, it is likely that drinking within a romantic relationship, especially during adolescence, will have an impact on subsequent

behaviors that are important in adolescent lives.

Although adolescents may be engaging in romantic relationships and drinking alcohol, it is possible that romantic partnerships are no more or less influential than friend-based relationships. Peer influences have been an important factor in predicting adolescent [4] and young adult drinking [9]. An abundance of research has examined alcohol use within peer settings, but not through the patterning of romantic partners' drinking. To our knowledge, this study will be the first to examine romantic drinking partnerships to decipher whether there are similar or distinct patterns of drinking in adolescents' romantic relationships, and to examine outcomes of such drinking partnerships. One critical reason to understand the development of drinking partnerships from adolescence into young adulthood is that spouse drinking, not peer drinking, becomes the key influence on young adult [10,11] and adult drinking behaviors [12,13]; however, little is known on the impact of romantic partners during adolescence regarding drinking behaviors and outcomes. Research on young adult couples and alcohol-related problems conclude that issues arise only within discrepantly drinking or heavy drinking couples [10,14], underscoring again the importance of considering the dyadic context of drinking. The

current study will utilize a dyadic perspective which considers whether each adolescent partner's drinking is congruent or discrepant with the other's drinking, and how these partnerships then impact adolescent behaviors.

Drinking partnerships

In young adult married couples, Roberts and Leonard (1998) identified a typology of marital drinking partnerships based on the quantity and frequency of alcohol intake. Some types of drinking partnerships [10,11,13,14], especially ones where partners' drinking is discrepant (i.e., couple dissimilar), are strongly related to risky behaviors, such as alcohol-related problems, relationship problems and violence [15]. Drinking partnerships were based on couple patterns of typical quantity and frequency of alcohol intake, context in which drinking occurs, and similarities or differences between partners' drinking levels. Dating, cohabiting, and married young adult couples (ages 18 - 26) also displayed congruent and discrepant drinking partnerships [10,11,13]. With minor differences, these studies identified four to five groups of drinking partnerships.

With most studies examining young adult couples, little is known on how dyadic drinking patterns among dating partners have an impact on adolescents' lives. Overall, dating and married couples exhibit different patterns of alcohol consumption because married couples tend to drink less [16-19]. Among young adult daters, more congruent drinkers were characterized as having better relationship quality than discrepantly drinking partnerships [10,20]. These results may reflect a more general phenomenon where partner similarity both attracts couples and reinforces couple behaviors. Fleming et al. acknowledged that little research has examined whether alcohol plays a role in the relationship quality and dissolution of dating relationships [20]. However, with alcohol use experimentation beginning during the adolescent years, as well as adolescents' interest in romantic partners, how these two areas may interact and impact adolescent behaviors is still unknown.

In addition, the effects of drinking on couple outcomes have found significant gender differences. A number of studies have shown that female drinking was strongly associated with their perceptions of their male partners' drinking [21,22], as well as the actual drinking of husbands [17,23]. However, there have been reports of the opposite effect – where wives' drinking influenced husbands' drinking [24,25] and where males were more influenced by their female partners' drinking from adolescence to young adulthood [26]. The current study also addresses gender differences and gender in interaction with adolescent couple drinking pattern and outcomes. Although the literature does not provide evidence for clear gender expectations, especially in adolescent romantic relationships, generally adolescent males drink more heavily than adolescent females [27].

Although social psychologists have accumulated a vast literature on processes of partner selection in adult relationships [28], little is known about the nature of partner choices during adolescence or their significance in adolescent behaviors. There is reason to

suspect that adolescents may select romantic partners differently from the way they select friends, placing greater expectations (i.e., intimacy and support) on romantic partner qualities, behaviors, and characteristics [29]. Thus, adding an understanding of the nature and significance of romantic experiences may contribute additional significant understanding in predicting adolescent outcomes. To our knowledge, no research has compared the drinking of adolescent 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. In addition, most of the literature on adolescent alcohol use looks at alcohol as an outcome variable; however our focus for this study is on drinking within romantic relationships as a predictor, rather than an outcome. According to the risk factor typology of Hawkins et al. [30] and Petraitis et al. [31], the following behaviors may be problematic due to drinking and subsequently drinking partnerships within romantic relationships: intrapersonal variables within the individual (depression; low self-esteem; alcohol use; delinquency); interpersonal variables such as peer alcohol use, low family support, and intimate partner violence (IPV); and school level behaviors (low academic achievement, low school attachment, and school problems).

Intrapersonal factors

Research demonstrates that alcohol use and delinquency during adolescence and young adulthood are associated [32]. And the experiences with alcohol and delinquency that occur earlier in life are assumed to lead to future riskier values, attitudes, and behaviors [33]. However, little is known regarding drinking partnerships among adolescents and how it may impact adolescent delinquency.

Adolescent drinking, and specifically within a drinking relationship, may be associated with higher depression and lower self-esteem. Studies have found a strong association between depression and alcohol use among women [34,35], with evidence suggesting that wives in discrepant drinking partnerships tended to suffer from more depression compared to other drinking partnerships [14]. However, little is known about how a problematic drinking partnership within adolescence may lead to depression, especially for adolescent women. Along with depression, lower self-esteem has been found to be a consequence arising from problematic drinking behaviors. Low self-esteem ranks among the strongest predictors of emotional and behavioral problems. Compared to individuals with high self-esteem, those with low self-esteem tend to be more anxious, depressed, lonely, jealous, shy, and generally unhappy [36]. Furthermore, they are more inclined to behave in ways that pose a danger to themselves or others: low self-esteem is associated with the abuse of alcohol and other drugs, and membership in deviant groups [37-39]. It seems likely that those individuals in discrepant and heavy drinking partnerships may also have lower self-esteem. For example, individuals with low self-esteem may think they could not do better, which creates a barrier for them to leave unhealthy relationships, such as those with heavy and discrepant drinking partners. The low esteem individual who drinks may derive reassurance from a partner's willingness to be together in spite of drinking, leading them to stay with a partner

who is very different from them, especially in terms of drinking alcohol.

Interpersonal factors

Given the developmental trajectory of drinking for adolescents, it seems likely that alcohol behavior would generalize from forming friendships with drinking peers to relationships with romantic partners. Peer drinking behaviors may serve as predictors of drinking within romantic relationships because peers often play an active role in introducing adolescents to alcohol [40]. Researchers speculate that when adolescents are in drinking situations or given opportunities to drink, they may follow patterns of alcohol use they recall from their peer groups [41]. Thus, the behaviors of peers are relevant contexts in which to understand the development of adolescent drinking partnerships. Furthermore, in the context of drinking romantic partnerships, maintaining friendships with drinking peers means that there is a culture of drinking sustained over time.

Research has found that drinking partnerships are associated with family issues, so it seems likely that certain problematic adolescent drinking partnerships may pose problems for adolescents' relationships with their parents. According to Mason and Windle [42], protective family factors against drinking peers and seeking substance-using friends are socialization in which the family unit discouraged drinking and a supportive family unit. Similarly, Barnes and Farrell [43], reported that a positive family environment was associated with few peers and friends who drank, as well as increased self-efficacy to refuse alcohol.

Research concludes that a common factor in romantic relationships that include heavy drinking is intimate partner violence [44-50]. Leadley et al. examined the association between drinking partnerships and IPV with married and cohabitating couples and found female-to-male and male-to-female perpetration and victimization were predicted by different combinations of alcohol use within couples [47]. The couples who were discrepantly drinking (e.g., different quantity and different frequency) in their relationships reported more violence and more conflict [47]. The discrepant drinking couples were 3.5 times more likely to experience IPV compared to moderate drinking couples. The explanatory mechanism is couples' drinking incongruence – the greater the couple drinking incongruence (regardless of which partner is discrepant), the greater the expected level of relationship conflict and violence. Beyond drinking partnerships of adult couples, the present study extends this framework to examine the association between alcohol use and IPV among adolescent dating couples. Alcohol use in adolescent dating relationships is a risk factor for IPV [51]. This study examines the pattern of adolescent couple drinking and IPV.

School level factors

One of the most important contexts during adolescence includes school-related behaviors, such as academic achievement, school attachment and school problems. Adolescent drinkers generally have lower academic achievement compared to nondrinkers [4].

Dornbusch and colleagues found that adolescents who lacked connection to school associated with more deviant peers; however, research that examines drinking within romantic relationships and the effects on school behaviors is limited [52].

Purpose and Hypotheses

Although research has focused primarily on young adult and adult drinking partnerships in various relationships, the current study extends prior research in a number of ways. It uses a national and longitudinal sample of adolescent couple data and tests the generalizability of the findings across gender. This study examines how adolescent drinking partnerships (i.e., within dating heterosexual romantic relationships) are associated with later consequences in adolescence by focusing on one primary hypothesis: Those in heavy and discrepant drinking partnerships will experience more intrapersonal, interpersonal and school level problems as compared to more congruent drinking partnerships.

Method

Overall sample

Data are drawn from Add Health, which is a school-based, longitudinal study of health-related behaviors of adolescents and their outcomes in young adulthood that began in 1995 [53]. Add Health consists of multiple data sets organized around a school sample that represents a stratified random sample of all high schools in the United States. In the in-school sample, questionnaires were collected from more than 90,000 adolescents from 134 schools. All students who completed the in-school questionnaire, or who were on a school roster were eligible for inclusion in the Wave I in-home sample (N = 20,745 participants and their parents, usually mothers) with data collected between April and December 1995. Adolescents in Grades 7 through 12 from 80 high schools and 52 feeder middle schools were randomly selected and stratified by gender. Between April and August of 1996, approximately 1 year after the collection of the Wave I in-home data set, over 14,000 of the participants were assessed for a second time as part of the Wave II in-home sample (N = 14,738). Instead of using “boys” and “girls” to refer to these male and female participants, we use the biological designation with the understanding that there may be participants who are not cis-gender.

Study sample

Romantic partner core sample

As part of the in-home interviews in Wave I, participants were asked to provide information for up to three romantic relationships. “Romantic” partners were identified through the following: “In the last 18 months—since [month, year]—have you had a special romantic relationship with anyone?” If the respondent answered “no,” that they had not had a special romantic relationship with anyone, additional probes were used including, “In the last 18 months, (a) did you ever hold hands with someone who was not a member of your family? (b) Did you ever kiss someone on the mouth who was not a member of your family? (c) Did you ever tell someone who was not a member of your family that you liked or loved them? (d) Did you do these things with the same person?” If they answer “yes” to all four questions, the reference person was

considered a romantic partner. Approximately 65% of adolescents in the core Wave I sample indicated that they had a romantic relationship in the last 18 months [3,54].

Similar to previous studies using Wave II romantic data [55,56], romantic partners were deleted if there was no Add Health data for that individual in both Wave I and II, or if drinking variables were not available, leaving 2023 heterosexual paired adolescent couples at Wave I. At Wave II, approximately 17% of the couples remained in the same romantic relationship as at Wave I. Males' ethnic identity were 57% White/Caucasian, 19% African American, 15% Hispanic, 7% Asian American, and 1% Native American, whereas females were 59% White/Caucasian, 17% African American, 15% Hispanic, 7% Asian American, and 1% Native American. The average age for males was 16.73 (SD = 1.52) and for females was 16.29 (SD = 1.48) at Wave II (which was collected 1 year after Wave I). In this study, predictors (pattern of couple drinking) were assessed at Wave I and outcomes were assessed at Wave II. Approval for this study was received from the primary author's university institutional review board.

Measures

Drinking partnerships (Wave I)

Drinking partnership patterns were derived from four items: frequency, quantity of alcohol consumption, heavy episodic drinking (4/5 more drinks for females/males), and getting drunk. Frequency of alcohol consumption was estimated for each participant by adolescents 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. [11,13,57], were used to

develop drinking partnerships. This study used a k-means iterative cluster analysis of the eight drinking variables for males and females: typical quantity of alcohol consumed, frequency, heavy episodic drinking, and getting drunk. In order to compare drinking partnerships across studies, the current drinking partnership analysis set the number of clusters to four. The resulting clusters were very similar to those of the Wiersma et al. [11,13,16] studies with young adult couples: (1) "Congruent Light and Infrequent" (62%), (2) "Discrepant Male Heavy and Frequent" (20%), (3) "Discrepant Female Heavy and Frequent" (8%), and (4) "Congruent Heavy and Frequent" (10%). Table 1 provides means and standard deviations of drinking variables by cluster and gender. As seen, the significant differences across groups, and gender within groups, reflects the labelling of the cluster. Although there were significant differences in drinking among males and females in the more congruent groups (Low and Infrequent, Heavy and Frequent), the magnitude of male-female differences in the discrepant groups (Discrepant Male Heavy and Frequent, Discrepant Female Heavy and Frequent) was considerable. In addition, there were also significant differences between male drinking in the Discrepant Male Heavy and Frequent cluster compared to female drinking in the Discrepant Female Heavy and Frequent cluster: males drank more frequently, in higher quantities, and more heavily than females.

Intrapersonal level variables (Wave II)

Delinquency was assessed using self-reports on different items that constituted general nonviolent delinquent acts. These 11 items included: painting graffiti or signs on someone else's property or in a public place; deliberately damaging property that didn't belong to them; lying to parents/guardians about where they had been or whom they were with; taking something from a store without paying for it; running away from home; driving a car without the owner's permission; stealing something worth more than \$50; going into a house or building to steal something; selling marijuana or other drugs; stealing something worth less than \$50; and being loud, rowdy, or unruly in a public place. Responses ranged from 0 = never to 3 = 5 or more times (Males: M = .25, SD = .32; Females: M = .19, SD = .24; alpha was .82); higher scores reflect higher delinquency.

Depression: Participants responded to 12 items, such as "In the

Variable	Cluster Means				F	η ²
	Light & Infrequent	Discrepant Male Heavy & Frequent	Discrepant Female Heavy & Frequent	Heavy & Frequent		
WAVE 1	n = 1265	n = 409	n = 155	n = 194		
Male Frequency	.78 (1.00) ^{ab1}	3.47 (1.09) ^{ac2}	.94 (1.03) ^{cd3}	3.50 (1.12) ^{bd4}	946.18*	.58
Female Frequency	.67 (.88) ^{abc1}	.99 (.91) ^{adc2}	3.12 (.93) ^{bd3}	3.08 (.92) ^{ce4}	675.41*	.50
Male Quantity	1.45 (2.54) ^{ab5}	7.82 (3.42) ^{ad6}	1.99 (2.86) ^{de7}	8.26 (3.22) ^{be8}	724.98*	.52
Female Quantity	1.23 (2.27) ^{abc5}	1.98 (2.50) ^{ade6}	6.27 (3.91) ^{bc7}	6.58 (3.24) ^{ce8}	367.84*	.35
Male Heavy	.22 (.56) ^{ab}	3.21 (1.34) ^{acd9}	.32 (.61) ^{ce10}	3.46 (1.31) ^{bde11}	1759.7*	.72
Female Heavy	.18 (.52) ^{ab}	.28 (.52) ^{cd9}	2.32 (1.46) ^{ace10}	2.87 (1.28) ^{bde11}	1045.28*	.61
Male Drunk	.29 (.57) ^{ab12}	2.79 (1.29) ^{acd13}	.42 (.68) ^{ce14}	2.99 (1.30) ^{bde15}	1238.45*	.65
Female Drunk	.19 (.41) ^{abc12}	.42 (.62) ^{ade13}	2.74 (1.09) ^{bd14}	2.52 (1.04) ^{cef15}	1462.57*	.69

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

past 12 months, how often have you laughed a lot” and “...how often have you cried a lot.” Responses were recoded when needed, and ranged from 0 = never to 3 = most or all of the time (Males: $M = .55$, $SD = .34$; Females: $M = .63$, $SD = .42$; $\alpha = .81$); higher scores reflect higher depression.

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?” The response scale ranged from 1 = strongly disagree to 5 = strongly agree (Males: $M = 4.27$, $SD = .55$; Females: $M = 4.13$, $SD = .60$; $\alpha = .80$); higher scores reflect higher self-esteem.

Alcohol use was assessed using frequency and quantity of drinking in the past 12 months. Items were multiplied to form the average volume for participants’ drinking at Wave II (Males: $M = 9.12$, $SD = 14.08$; Females: $M = 5.54$, $SD = 9.25$); higher scores reflect higher volume drinking.

Interpersonal level variables (Wave II)

Peer alcohol use was assessed by asking participants to answer the following question: “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 (Males: $M = 1.41$, $SD = 1.23$; Females: $M = 1.22$, $SD = 1.17$); higher scores reflect more peer drinkers.

Intimate partner violence: At Wave II, adolescents were asked five questions on violence victimization [58], e.g., Did your partner call you names, insult you, or treat you disrespectfully? Did your partner swear at you? Did your partner threaten you with violence? Did your partner push or shove you? Did your partner throw something at you?). The answers were coded as 0 = no and 1 = yes with approximately 395 males (34%) and 456 (34%) females reporting some violence within these heterosexual adolescent couples.

Family support: Two scales were constructed to examine the associations between adolescent relationships with both their fathers and mothers. Both scales used four items each to measure the closeness, warmth, and level of communication within parent-child relationships. Items included “How close do you feel to (name of dad or mom)?” and “Are you satisfied with the way (name of dad or mom) and you communicate with each other?” Responses were given on a 5-point scale (1 = not close at all to 5 = high). Items were reverse coded so a high score on these scales represents high quality relationships with parents (Males: $M = 4.30$, $SD = .56$; Females: $M = 4.18$, $SD = .71$; $\alpha = .88$).

School level variables (Wave II)

Academic Achievement: Participants’ most recent grades on a 4-point scale in Math, Science, History, and English were used to calculate GPA. The alpha for this four-item GPA scale was .75 (Males: $M = 2.68$, $SD = .76$; Females: $M = 2.94$, $SD = .72$).

School attachment scale 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, which ranged from 1 (strongly agree) to 5 (strongly disagree), were reverse coded so a high score on the resulting measure represents high levels of school attachment (Males: $M = 3.88$, $SD = .74$; Females: $M = 3.84$, $SD = .75$; $\alpha = .72$).

School problems scale was formed by averaging two items assessing adolescents’ problems at school, such as if they had been suspended or expelled, ranging from 0 = no to 1 = yes (9% males and 4% of females).

Results

Analyses were conducted with a multivariate repeated measures analysis of variance with male and female couple members (gender) as the repeated measure. There were significant effects of Wave I cluster drinking partnership (Wilks’ Lambda = .68, $p < .001$), gender (Wilks’ Lambda = .86, $p < .001$), and cluster by gender (Wilks’ Lambda = .80, $p < .001$). Follow-up analyses involved univariate F tests and multiple mean comparisons with Neuman-Keuls, $p < .05$. Table 2 provides the means and standard deviations within group and gender and results that tested for significant between- and within-group differences. Because of the significant interaction, the results that test the hypothesis are presented within gender. The hypothesis is supported if Discrepant Male (Female) Heavy and Frequent cluster members have scores on the Wave II variables that indicate more problems than those of the Light and Infrequent cluster members as well as the Heavy and Frequent cluster members. Strong support would be seen if negative consequences fall on both partners from the Discrepant Heavy and Frequent clusters.

Males

Males within the Discrepant Male Heavy and Frequent group compared to males in the Low and Infrequent group reported significantly higher delinquency, drinking, and number of peer drinkers, less family support, less school attachment, and more school problems. However, males in the Discrepant Male Heavy and Frequent group were not significantly different from males in the (congruent) Heavy and Frequent group. Taken together, it appeared that male drinking was the driving force in outcomes regardless of being paired with a nondrinking or drinking female partner.

What about males with lower drinking? Was being in a discrepant drinking partnership a negative factor for them? When compared to males in the Low and Infrequent group, the males in the group with Wave I higher female drinking were higher on their own Wave II drinking. Contrary to support for the hypothesis, their Wave II self-esteem was higher than males in the Low and Infrequent group. Shifting the comparison to the Heavy and Frequent group, males in the Discrepant Female Heavy and Frequent group were lower on Wave II drinking and peer drinking. Thus, although these males were higher than males in the low and infrequent group, apparently, the Wave I discrepancy of being in a partnership with higher drinking females did not advance their drinking to resemble

Variable	Light & Infrequent	Discrepant Male Heavy & Frequent	Discrepant Female Heavy & Frequent	Heavy & Frequent	F	n
WAVE 2 OUTCOMES	n = 1013	n = 302	n = 119	n = 141		
Intrapersonal Level						
Male Delinquency	.22 (.28) ^{ab1}	.35 (.44) ^{ac9}	.25 (.25) ^c	.30 (.37) ^b	12.37**	.03
Female Delinquency	.16 (.22) ^{ab1}	.17 (.21) ^{cd9}	.34 (.36) ^{ace}	.26 (.27) ^{bde}	23.92**	.04
Male Depression	.53 (.34) ²	.56 (.35) ¹⁰	.61 (.34) ¹⁵	.56 (.39) ²²	1.71	.00
Female Depression	.57 (.40) ^{abc2}	.66 (.42) ^{ad10}	.90 (.43) ^{bde15}	.70 (.44) ^{ce22}	24.89**	.05
Male Self-Esteem	4.29 (.56) ^{a3}	4.19 (.57) ^b	4.32 (.48) ^{ab16}	4.27 (.53) ²³	2.39	.01
Female Self-Esteem	4.18 (.59) ^{ab3}	4.12 (.60) ^c	3.88 (.67) ^{ac16}	4.03 (.62) ^{b23}	10.57**	.02
Male Drinking	5.17 (9.83) ^{abc4}	18.22 (17.74) ^{ad11}	8.84 (12.85) ^{bde17}	21.10 (18.60) ^{ce24}	106.11**	.19
Female Drinking	3.11 (7.00) ^{abc4}	6.66 (9.52) ^{ade11}	15.04 (13.39) ^{bd17}	13.21 (10.85) ^{ce24}	117.66**	.19
Interpersonal Level						
Male Peer Drinking	1.15 (1.17) ^{ab5}	1.98 (1.56) ^{ac12}	1.42 (1.22) ^{cd18}	2.17 (1.13) ^{bd}	51.24**	.10
Female Peer Drinking	.91 (1.04) ^{abc5}	1.46 (1.18) ^{ade12}	2.23 (1.04) ^{bd18}	2.11 (1.09) ^{ce}	98.89**	.16
Male IPV	.34 (.47)	.35 (.48)	.33 (.47) ¹⁹	.36 (.48)	.13	.00
Female IPV	.28 (.45) ^{ab}	.36 (.48) ^c	.60 (.49) ^{acd19}	.43 (.50) ^{bd}	17.54**	.04
Male Family support	4.33 (.57) ^{a6}	4.22 (.53) ^a	4.28 (.67) ²⁰	4.27 (.48) ²⁵	3.08*	.01
Female Family Support	4.26 (.67) ^{ab6}	4.17 (.72) ^c	3.75 (.84) ^{acd20}	4.06 (.68) ^{bd25}	20.03**	.04
School Level						
Male GPA	2.72 (.75) ^{a7}	2.64 (.78) ¹³	2.68 (.71)	2.48 (.76) ^{a26}	3.22*	.01
Female GPA	3.01 (.71) ^{abc7}	2.87 (.72) ^{ad13}	2.62 (.79) ^{bd}	2.75 (.67) ^{c26}	14.19**	.03
Male School Attachment	3.93 (.72) ^a	3.75 (.83) ^a	3.80 (.78) ²¹	3.79 (.75)	4.38*	.01
Female School Attachment	3.90 (.73) ^{ab}	3.90 (.74) ^{cd}	3.42 (.74) ^{ac21}	3.61 (.76) ^{bd}	18.36**	.04
Male School Problems	.07 (.19) ^{ab8}	.13 (.23) ^{a14}	.10 (.20) ^c	.19 (.30) ^{bc27}	12.31**	.03
Female School Problems	.03 (.13) ^{ab8}	.05 (.15) ^{c14}	.11 (.23) ^{ac}	.08 (.20) ^{b27}	12.27**	.02

Table 2: Wave II Consequences as a Function of Wave I Drinking Partnerships. Note: n=1575. 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, $p < .05$. * $p < .05$ ** $p < .001$.

that of males in the congruent Heavy and Frequent group. Contrary to the hypothesis, there appeared to be few negatives for males in the Discrepant Female Heavy and Frequent group.

Females

The results for females painted a different picture. Females in the Discrepant Female Heavy and Frequent group demonstrated more problems than females in the Low and Infrequent group on delinquency, depression, self-esteem, drinking, peer drinking, IPV, family support, GPA, school attachment, and school problems. Furthermore, females in this discrepant group also demonstrated more problems on delinquency, depression, IPV, and family support than females in the Heavy and Frequent group. Among the adolescent women in this study, being in a discrepant drinking partnership and drinking more than their male partner was a risk for a number of serious problems, including intimate partner violence.

With respect to being female with a heavier drinking male partner, there were also negative consequences compared to Low and Infrequent female group members in depression, drinking, peer drinking, and GPA. However, being a lower drinking female in the Discrepant Male Heavy and Infrequent group compared to being

a more congruent drinker in the Heavy and Frequent group meant lower delinquency, drinking, peer drinking, and higher school attachment. When male partners drank heavily and frequently, female partners could experience some protection through less drinking of their own but not as much as those lower drinking females who were paired with a lower drinking male partner.

Discussion

The current study utilized a one-year longitudinal approach to assess the consequences in adolescence that may result from the various congruent and discrepant drinking partnerships within adolescent romantic relationships. Overall, the findings demonstrate that there are multiple types of adolescent drinking partnerships associated with intrapersonal, interpersonal, and school level problems. Lower levels of drinking and fewer problems characterized the congruent Light and Infrequent adolescent couples, and they most often reported the highest levels of healthier outcomes. The hypothesis of greater negative consequences for those in discrepant drinking partnerships was largely supported when the comparison was with the Light and Infrequent group and when results involved female participants in the Discrepant Female Heavy and Frequent group compared to both congruent drinking female groups (Light and

Infrequent and Heavy and Frequent).

There were surprising results in that differences across groups for males seemed to depend upon the level of male drinking rather than whether there was a discrepancy with a female romantic partner. That is, among adolescent males, the drinking levels of the female partner just did not seem to matter. Of interest to those seeking to prevent intimate partner violence, IPV was quite similar across clusters for males, but not for females. The adolescent women in this study reported significantly higher IPV victimization within the Discrepant Female Heavy and Frequent cluster compared to females in all other groups. The nuance provided by this study is that heavy drinking in the context of drinking partnerships indicates a particular risk for female adolescents when they drink much higher than their male partners.

Prominent in the findings were the number of negative outcomes for individuals in the congruent Heavy and Frequent group which was characterized by more problems than other groups. Patterns revealed that the Congruent Heavy group was a devastating partnership for adolescents with respect to drinking: this group reported the highest rates of drinking and number of peer drinkers compared to other groups, hence both couple members were drinking frequently and heavily, along with their peers, across two years during adolescence. However, consistent with other research [10,13,57], these congruent and heavy drinkers were similar to other cluster members on later adolescent problems even at the same time as they reported higher drinking-related issues. Perhaps due to their congruity these adolescent couples were not experiencing the most adverse outcomes in non-drinking-related areas. It seemed that this group was indeed not the riskiest group for males and females, as the discrepant clusters were experiencing more problems, especially among the female adolescents. Thus, it may be that drinking enhances certain adolescents' romantic relationships due to compatibility – being together and drinking may be a common interest – but only for so long. As the relationship continues, drinking problems eventually may hinder the relationship, leading to problematic intrapersonal, interpersonal, and school level problems. These findings are parallel to cross-sectional research designs using college-aged dating couples indicating that heavy congruent drinking does not seem to be a problem [10], however longitudinal research finds that these congruent heavy drinking couples eventually experience the worst outcomes [10,13]. A strong takeaway point from the drinking partnership research is that congruence in drinking is not protective over time for most outcomes when drinking is heavy and frequent. However, future research needs to examine adolescent outcomes over a longer period of time, rather than the one-year time span as in the current study.

As expected, gender played an important role in drinking cluster patterns. Adolescent males reported higher rates of alcohol use compared to females. Females within the Discrepant Female Heavy and Frequent group cluster reported more Wave II problems than other females, and, indeed, demonstrated more than twice the number of significant negative outcomes (14 of them) compared

to congruent groups than did males in the Discrepant Male Heavy and Frequent group (6 of them).

Most alarming within the findings was that females within the Discrepant Female Heavy and Frequent cluster were reporting the highest levels of IPV victimization (60% experienced some type of psychological or physical abuse), even though their original male partners were consuming a significantly lower volume of alcohol (average volume of 8) compared to other clusters. It should be noted that the majority of these couples were not reporting any relationship violence, and only 34% of the sample did report victimization, which was primarily psychological violence (such as swearing or calling names). Nonetheless, these were adolescent women reporting this level of victimization. Promoting the common sense idea that adolescent women should not drink is not enough as adolescent females drink. The greater vulnerability was in the context of a partnership with an adolescent male who was drinking at lower levels. The higher self-esteem reported by these male partners is of concern if such self-esteem is tied to taking advantage of a drinking partner. Victimization requires a perpetrator. It is important that future research continues to examine other contextual characteristics within these discrepant drinking partnerships, including what these relationships were like and how lower family support played a role. Qualitative interviews would help to shed light on the dynamics of these young adolescent couples. For example, were the adolescent lower drinking males yelling at their partners about their excessive drinking? Or were they acting as if these partners were prey? Future research should examine these individuals years later during young adulthood to see if they are still within the same or other risky partnerships and if they are still experiencing relationship violence. The developing literature on drinking and IPV among college students needs to be extended to younger adolescents [59].

Strengths and weaknesses

This study had several advantages over past research. First, the current study explored data from both adolescent couple members using a nationally representative sample. The Add Health followed the same individuals over the course of one year in adolescence, which allowed for the current study to examine the association of individuals' drinking in earlier types of romantic relationships with their adolescent behaviors one year later. However, future analyses should examine if adolescents are already experiencing these problematic behaviors at Wave I as problematic behaviors may already be present in these relationships. Thus, analyses should be approached with caution, given that the current study did not control for previous behaviors, primarily due to missing data issues. In addition, there were several areas that were not addressed within these adolescent romantic relationships, such as romantic relationship quality (i.e., satisfaction, commitment), alcohol problems or abuse, as these were not assessed in the Add Health Waves I or II. As well, the romantic relationship at Wave I rarely extended to Wave II.

In conclusion, the current study sheds light on adolescent drinking partnerships and identifies particular risks associated with

drinking patterns among adolescent relationships. Adolescent males who drank frequently and heavily may be at risk for serious problems, regardless of the drinking on the part of their partners. In longitudinal research, these adolescent males may experience a number of negative effects [13]. As for females, those who drank higher and more frequently compared to their male partners experienced substantially more problems, including IPV. It is imperative that prevention programming focus on these risky and discrepant drinking partnerships among heavy drinking female adolescents and their male partners.

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