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Original Research Report

Drinking Patterns Among Older Couples: Longitudinal Associations With Negative Marital Quality

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Abstract

Objectives: Research with younger couples indicates that alcohol use has powerful effects on marital quality, but less work has examined the effects of drinking among older couples. This study examined whether dyadic patterns of drinking status among older couples are associated with negative marital quality over time.

Method: Married participants (N = 4864) from the Health and Retirement Study reported on alcohol consumption (whether they drink alcohol and average amount consumed per week) and negative marital quality (e.g., criticism and demands) across two waves (Wave 1 2006/2008 and Wave 2 2010/2012).

Results: Concordant drinking couples reported decreased negative marital quality over time, and these links were significantly greater among wives. Wives who reported drinking alcohol reported decreased negative marital quality over time when husbands also reported drinking and increased negative marital quality over time when husbands reported not drinking.

Discussion: The present findings stress the importance of considering the drinking status rather than the amount of alcohol consumed of both members of the couple when attempting to understand drinking and marital quality among older couples. These findings are particularly salient given the increased drinking among baby boomers and the importance of marital quality for health among older couples.

Keywords: Alcohol use—Dyads—Health and Retirement Study—Marital quality—Married couples

Alcohol use disorder (AUD) and heavy alcohol use are among the leading causes of mortality, disease, and disability worldwide (Grant et al., 2015; Lim et al., 2013; World Health Organization, 2014). Due to greater drinking among the baby boom generation, "an alarming rise" is expected in the number of older adults with alcohol-related problems (Trevisan, 2008). The older adult population is the fastest growing segment of the population, and alcohol use and alcohol problems are increasing among the elderly population (Eden, Maslow, Le, & Blazer, 2012). According to a recent Centers for Disease Control and Prevention (CDC) report, the most frequent binge drinkers are adults older than 65 years (CDC, 2012) and middle-aged and older adults have relatively high rates of at-risk and problem drinking (Blazer & Wu, 2009). In addition, because alcohol is metabolized more slowly among older individuals (Ferreira & Weems, 2008), they may develop problems with relatively low levels of alcohol use (Wilson, Knowles, Huang, & Fink, 2014). Older individuals are more likely to have chronic conditions and to be taking medication which may exacerbate the influence of alcohol.

Interestingly, the effects of drinking often vary by the marital context (Roberts & Leonard, 1998). Concordant drinking (e.g., when both spouses drink heavily), perhaps counterintuitively, is associated with positive marital outcomes (e.g., higher marital satisfaction and lower divorce

rates), whereas discordant drinking (e.g., heavy drinking spouse paired with a spouse who does not drink or drinks light amounts of alcohol) is associated with worse marital outcomes (Cranford, Floyd, Schulenberg, & Zucker, 2011; Leonard, Smith, & Homish, 2014; Ostermann, Sloan, & Taylor, 2005). Heavy drinking is defined differently across studies. For example, in some cases it is defined as lifetime AUDs (Cranford et al., 2011), six or more drinks at one time, drinking to intoxication at least twice a month for husbands and at least once a month for wives (Leonard et al., 2014), or three or more drinks daily (Ostermann et al., 2005). The majority of studies to date, however, have focused on younger married couples, problematic or heavy drinking, and positive marital quality (i.e., marital satisfaction). It is important to examine whether these effects occur among older couples as marital quality, particularly negative marital quality, is highly associated with health and well-being among older individuals (Birditt, Newton, Cranford, & Ryan, 2015; Kiecolt-Glaser et al., 2005; Liu & Waite, 2014).

The present study focused on negative marital relationship quality (e.g., getting on nerves, too many demands) because negative aspects of relationships tend to be more highly associated with health and well-being than positive aspects (Newsom, Nishishiba, Morgan, & Rook, 2003; Rook, 2015). Individuals report greater negativity in the spousal tie than in other close relationships and negative marital quality increases over time (Birditt, Jackey, & Antonucci, 2009). Indeed, negative marital quality has particularly important implications for health and well-being among older adults. Thus, older adults may be more sensitive to their spouse's alcohol use. It is also important to examine drinking status as well as the amount of alcohol consumed as older adults may be more affected by lower levels of alcohol use than younger adults. Accordingly, we examined links between alcohol consumption (drinking status and amount of drinking) and negative marital quality among older married couples across two waves of national data.

Theoretical Framework

The present study is guided by the newly developed *Dyadic Model of Alcohol Use and Marital Quality among Older Couples*. This model draws on interdependence theory and compatibility theories of marriage as well as theories of aging and emotion regulation and gender role theory (Roberts & Leonard, 1998). The concept of the "drinking partnership," which emphasizes the importance of discrepancy and concordance between spouses' drinking patterns, is consistent with interdependence theory, which maintains that (a) individuals in close relationships have powerful influences on one another's behaviors, goals, and outcomes and (b) the closer the tie the greater the interdependence (Kelley et al., 1983). Compatibility theories of marriage arose from interdependence theory and postulate that married partners who share similar goals and behaviors tend to have better quality relationships and less conflict (Levinger & Rands, 1985). Theories suggest that drinking concordance has a beneficial effect on marital quality because of similar beliefs about the positive effects of alcohol for intimacy, shared leisure and social activities, and more frequent marital interactions (Homish & Leonard, 2007). Thus, the first proposition of the model is that the within-person association between drinking alcohol and negative marital quality will vary depending on the partner's use of alcohol. In particular, we hypothesize that individuals' alcohol use will be associated with increased negative marital quality when their partners do not drink (discordance) but decreased negative marital quality when their partners do drink (concordance).

As couples age, drinking compatibility may become more important for relationship quality as couples place more emphasis on emotion regulation and tend to be more negatively affected by negative marital quality and marital tension. According to socioemotional selectivity theory, as people age and perceive time as more limited, they become more invested in attaining emotion-focused goals which emphasize the importance of maintaining emotionally close and meaningful relationships (Carstensen, Isaacowitz, & Charles, 1999). Thus, the model predicts that drinking concordance versus discordance at even low levels of drinking will matter for older adult couples.

The Dyadic Model of Alcohol Use and Marital Quality among Older Couples also incorporates gender role theory, which suggests that men and women have distinct roles and that women's identities are more linked to nurturance and relationships (Bernard, 1972). These culturally influenced stereotypes of masculinity and femininity also relate to drinking. Women are less likely to drink, drink less and are less likely to have alcohol-related problems than men (Chan, Neighbors, Gilson, Larimer, & Alan Marlatt, 2007; Drum, Shiovitz-Ezra, Gaumer, & Lindau, 2009). Drinking among women is often culturally disapproved because drinking is associated with masculinity, aggression, power, increased sexual behavior, and risk taking (Wilsnack, Wilsnack, & Obot, 2005). Accordingly, we predict that wives, especially those who drink, will be more affected by drinking concordance versus discordance than husbands.

Effects of Alcohol Consumption on Marital Quality

Concordant and discordant alcohol use has significant implications for marital quality among younger couples. Roberts and Leonard (1998) identified patterns of dinking among couples (aged 18–29 years) who had been married for 1 year. They found that couples in which the husband but not the wife engaged in heavy drinking were characterized by high levels of verbal aggression reported by husbands, along with low levels of marital adjustment and high levels of depression reported by wives (Roberts & Leonard, 1998). Using the same sample assessed in the first year of

marriage, Mudar, Leonard, and Soltysinski (2001) examined the effects of husband and wife drinking on marital quality (combination of marital happiness and conflict). They found that discrepant heavy drinking (i.e., 14 or more drinks a week for men and 10 or more drinks a week for women) and discrepant intoxication (drinking to intoxication once a week or more for men and 2 to 3 times a month for women), but not discrepant drinking status or regular drinking, predicted lower marital quality. Discordant heavy drinking couples (i.e., one partner drinks heavily or to intoxication and the other does not) reported lower marital quality than concordant heavy drinking couples (i.e., both are heavy drinkers or both are not heavy drinkers), and there were no gender differences in the effects. Homish and Leonard (2007) examined effects of discordant heavy drinking (drinking to intoxication and/or 6 or more drinks on one occasion) on marital satisfaction over 3 years of marriage and found that greater discordance was associated with decreased marital satisfaction. Similarly, greater discordance on heavy alcohol use was related to decreased marital satisfaction over 7 years of marriage (Homish, Leonard, Kozlowski, & Cornelius, 2009) and marital dissolution in the same sample (Leonard et al., 2014).

It is possible that the effects of concordance may be more salient for problematic drinking among younger couples than older couples. For example, studies of young couples have found discordance effects only for measures of heavy drinking and frequent intoxication, but not for any alcohol use or regular alcohol use in the past year (Quigley & Leonard, 2000). In a study of older couples, however, discordant high-risk alcohol consumption (3 or more drinks a day and/or 14 drinks per week) was not related to decreased marital quality (Moos, Schutte, Brennan, & Moos, 2011). Older couples may have adapted to patterns of heavy drinking and are thus less affected by their spouse's drinking behavior. Thus, discordance versus concordance in heavy drinking may be more relevant to younger couples. However, drinking at any level may also become problematic among older couples. Life events, such as retirement and other stresses that are associated with increased drinking, along with chronic health conditions and medication use, may make alcohol more dangerous (Blow & Barry, 2012; Glass, Prigerson, Kasl, & de Leon, 1995; Satre, Chi, Mertens, & Weisner, 2012). Because most research on concordant drinking has been conducted with younger couples, the nature and degree of concordance effects among older couples remain unknown. Thus, we consider both drinking status and amount of alcohol consumed in the present study.

Gender Differences in the Effects of Alcohol Consumption on Marital Quality

In addition to these potential age differences in the effects of concordance, several other studies on discordant drinking and marital happiness found that (a) these effects may be stronger among women and (b) women's use of alcohol may have stronger effects than men's. For example, Cranford and colleagues (2011) found that concordance between spouses' AUD status was associated with wives' (but not husbands') marital adjustment. Also, wives' AUD status was more highly associated with both husbands' and wifes' reports of marital quality than husband's AUD. Torvik and colleagues examined couples aged 20 and older in Norway and found that concordant abstainers and concordant heavy drinkers (e.g., drinking 10 or more times over 2 weeks and endorsed at least one indicator of hazardous drinking) had lower divorce rates, but that among discordant drinkers, heavy drinking only among wives was a stronger predictor of divorce than heavy drinking only among husbands (Torvik, Røysamb, Gustavson, Idstad, & Tambs, 2013).

Present Study

Most of the research to date has focused on the implications of concordant/discordant use of alcohol among younger samples. Studies of older couples have focused on the effects of heavy drinking on marital functioning (Moos et al., 2011). This study focuses on older couples and uses actor–partner interdependence models (APIMs; Kenny, Kashy, & Cook, 2006) to assess whether within-person associations between alcohol use and negative marital quality vary by the alcohol use and gender of the partner. This study is among the first to test dyadic hypotheses about whether within-person associations between drinking and negative martial quality vary by partners' drinking status (i.e., discordant vs. concordant alcohol use) among older couples, and whether these links vary by gender. In addition, we consider both drinking status (drink alcohol vs. do not drink alcohol) as well as the level of consumption in order to understand whether drinking concordance at lower levels of alcohol consumption may affect older couples. The present study examined three research questions:

(1) Is the association between actor drinking status and negative marital quality moderated by partner drinking status? We predicted that individuals' drinking would be associated with increased negative marital quality when partners do not drink (discordance) but decreased negative marital quality when partners do drink (concordance).
(2) Are there gender differences in the effects of alcohol use on negative marital quality among older couples? We predicted that drinking concordance/discordance would have a greater effect on wives' than husbands' perceptions of marital quality.
(3) Are there effects of drinking status concordance/discordance on negative marital quality beyond the amount of alcohol consumed? We predicted that drinking status would continue to predict negative marital quality after controlling for the amount of alcohol consumed.

Method

Participants

Participants were drawn from the Health and Retirement Study (HRS), a nationally representative multiwave longitudinal study of approximately 22,000 persons born in 1953 or earlier. The sample design involves interviewing individuals and their spouses or live-in partners every 2 years. Since 2006, data concerning social relationships, life circumstances, well-being, and biological indicators have been collected. This portion of the HRS interview is referred to as the enhanced face-to-face interview, and data are obtained biennially from 50% of the panel participants. The enhanced face-to-face interview includes a self-administered psychosocial questionnaire (SAQ) that contains questions about the spousal relationship (Smith et al., 2013). Respondents were asked to complete the SAQ and mail it back to the main field office at the University of Michigan. Because the enhanced face-to-face interview is conducted with 50% of the sample every 2 years, the 2010 wave provided the first longitudinal psychosocial data from the 2006 participants and the 2012 wave provided longitudinal data from the 2008 participants. Thus, in the present study, we included four waves of data: 2006/2008 which we refer to as Wave 1, and 2010/2012 which we refer to as Wave 2. The 2006/2008 waves and the 2010/2012 waves are combined because they each represent 50% of the sample and are selected randomly. Thus, with the exception of the year of data collection, they represent two halves of the same population. The two subsamples (2006–2010 and 2008–2012) are nonoverlapping and exclusive (no individual or couple is part of both subsamples). We also confirmed that the samples were not significantly different from one another in terms of alcohol consumption (average drinks per week and drinking status), negative marital quality, or covariates (i.e., age, education, years married, race, number of children, marital order, and alcohol problems) with a series of chi-square and *t* tests.

The analytic sample included 4,864 married individuals (in 2,767 couples) who had complete data on all predictors (own and spouse reports of alcohol use and negative quality in Wave 1) and covariates for Wave 1, as well as their own reports of negative marital quality in Wave 2.

A selection analysis comparing the individuals who were included with those who were removed revealed that the analytic sample had more years of education ($t = 12.05$, $p < .001$), was more likely to have ever drank ($\chi^2(1) = 45.08$, $p < .001$), was more likely to be White ($\chi^2(1) = 91.67$, $p < .001$), was married longer ($t = 4.90$, $p < .001$), and had lower negative marital quality than the married individuals who were not included ($t = -8.91$, $p < .001$). There were no significant differences between the selected sample and those who were not included in average drinks per week ($t = 0.35$, ns).

Table 1 includes sample descriptive statistics for the analytic sample. Wives were aged 63 years on average (range = 52–88 years) and husbands were aged 64 years on average (range = 52–92 years). Couples were married for an average of 33 years, and approximately two thirds of the couples were in their first marriage. Thus, it is important to note that although the sample is not representative of all U.S. couples older than 50 years, it does give us important information regarding marriage and alcohol use from which to develop further studies of more diverse couples.

Table 1. Description of Selected HRS Sample Covariates, Alcohol Use, and Negative Marital Quality

	Husbands	Wives
	(*n* = 2,524)	(*n* = 2,340)
Age, *M* (*SE*)	64 (0.16)	63 (0.16)
Education, *M* (*SE*)	14 (0.05)	13 (0.05)
Years married, *M* (*SE*)	33 (0.27)	33 (0.27)
Race (% White)	91	93
% Black	5	4
Ever drink (%)	65	58
Average drinks per week, *M* (*SE*)[a]	5.79 (0.18)	3.35 (0.14)
Negative marital quality, *M* (*SE*)		
Wave 1	1.88 (0.01)	1.99 (0.01)
Wave 2	1.86 (0.01)	1.96 (0.01)
Number of children, *M* (*SE*)	3 (0.03)	3 (0.03)
First marriage (%)	67	68
CAGE 2+ (%)	20	6

Notes: Values are weighted percentage or weighted mean. Thus, standard errors are presented rather than standard deviations.
[a]Among those who reported drinking.

Measures

Alcohol use

In Wave 1, participants were asked: "Do you ever drink any alcoholic beverages such as beer, wine, or liquor?", "In the last three months, on average, how many days per week have you had any alcohol to drink?", and "On the days that you drink, about how many drinks do you have?". We created two scores using these questions: ever drink (no = −1, yes = 1) and average drinks per week (Drinking days per week × How many drinks per day). The average drinks per week variable was truncated at 30 due to the positive skew in the distribution.

Negative marital quality

In Waves 1 and 2, participants completed brief but widely used and validated items assessing the negative qualities of the marital relationship (Schuster, Kessler, & Aseltine Jr, 1990; Walen & Lachman, 2000). Negative qualities were assessed with four items: "How often does your spouse make too many demands on you?", "How often does he or she criticize you?", "How often does he or she let you down when you are counting on them?", and "How often does he or she get on your nerves?" Response options ranged from 1 (*a lot*) to 4 (*not at all*); all items were reverse coded and

averaged so that higher scores indicated higher negative marital quality (Husbands: α = .75, Wives: α = .79).

Covariates

Years of education, years married, age, number of children, race, marital order, and lifetime alcohol problems were included as covariates. Education, years married, age, and number of children were continuous variables. Race was coded as 1 (White) or −1 (not White). Marital order was coded as 1 (first marriage) or −1 (second or subsequent marriage). Lifetime alcohol problems were assessed with the CAGE questionnaire, a 4-item screening measure for alcohol problems (Ewing, 1984; Maisto & Saitz, 2003; Mayfield, McLeod, & Hall, 1974). The acronym CAGE stands for the four questions which include the words cut, annoyed, guilty, and eye opener. In their baseline interview, participants indicated if they had ever experienced the following: (a) felt that you should cut down on your drinking, (b) been annoyed by people criticizing your drinking, (c) felt bad or guilty about drinking, and (d) ever taken a drink first thing in the morning (eye opener) to steady your nerves or get rid of a hangover. Scores of 2 or higher are considered clinically significant (Connors & Volk, 2003).

Analysis Strategy

First, descriptives were calculated and we described couple patterns of drinking. Research questions were addressed using APIMs (Kenny et al., 2006) and estimated with multilevel modeling (SAS PROC MIXED). There are two parts to the relationship between predictor and outcome in APIM: The actor effect describes the unique effect of a person's own predictor on his or her (the actor's) own outcome, whereas the partner effect describes the unique effect of their partner's predictor on the actor's outcome. The multilevel models had two levels: Level 1 refers to individuals and Level 2 refers to the couple. All continuous variables were grand mean centered, and all categorical variables were effect coded (−1, 1) before entering them in the models. All models included controls for education, years married, race, age, and the negative marital quality reported by the actor in Wave 1. Additional post hoc models were estimated to assess whether the models changed after considering marital order and number of children as well as lifetime alcohol problems. These variables were not significantly associated with negative marital quality and the same pattern of findings remained when they were included.

First, we considered whether drinking status (i.e., any alcohol consumption vs. no alcohol consumption) of both members of the couple was associated with Wave 2 negative marital quality ($W2ANegQual_{ij}$) after controlling for negative marital quality in Wave 1 $(W1ANegqual)_{ij}$. In Step 1, the predictors included actor drinking (A-everdrink) of individual *i* in couple *j*, partner drinking (P-everdrink) of individual *i* in couple *j*, and the Actor × Partner interaction of couple *j*. The Actor × Partner interaction allows for the testing of whether the effect of actor drinking on negative marital quality varies by partner drinking and represents the multiplicative effect of actor and partner drinking. In Step 2, models included interactions with gender of individual *i* in couple *j* to examine whether links between actor and partner ever drinking and relationship quality were moderated by gender. The main equations are provided below:

Step 1: $W2ANegQual_{ij} = a + b_1(\text{A-everdrink})_{ij} + b_2(\text{P-everdrink})_{ij} + b_3(\text{A-everdrink} \times \text{P-everdrink})_j + b_4(W1ANegqual)_{ij} + \text{Covariates} + e_{ij}$

Step 2: $W2ANegQual_{ij} = a + b_1(\text{A-everdrink})_{ij} + b_2(\text{P-everdrink})_{ij} + b_3(\text{A-everdrink} \times \text{P-everdrink})_j + b_4(W1ANegqual)_{ij} + b_5(\text{Gender})_{ij} + b_6(\text{A-everdrink} \times \text{Gender})_{ij} + b_7(\text{P-everdrink} \times \text{gender})_{ij} + b_8(\text{A-everdrink} \times \text{P-everdrink} \times \text{Gender})_j + \text{Covariates} + e_{ij}$

We explored significant interactions with graphs and tests of simple slopes. All models included gender, education, years married, race, age, and the negative marital quality reported by the actor in Wave 1 as covariates. Next, in order to assess whether drinking status had implications for negative marital quality beyond the amount of alcohol consumed, we estimated identical models with drinking status as well as the average number of drinks per week reported by both members of the couple as predictors of Wave 2 negative marital quality, controlling for negative marital quality in Wave 1.

We assessed whether there was a significant difference between the fit of the models by subtracting the −2 log likelihood estimations of models and examining the difference on a chi-square distribution with degrees of freedom equaling the change in number of parameters (Singer & Willett, 2003). We also calculated the proportion of between- and within-unit variance accounted for by each of the models compared with the model without predictors (Kreft & De Leeuw, 1998; Singer, 1998). However, it is important to interpret these with caution given the considerable debate in the field regarding the calculation of variance accounted for in multilevel models (Singer & Willett, 2003).

For descriptive purposes, we also included a post hoc analysis in which we examined the effects of couple drinking on negative marital quality with a four-category couple-level variable by which we could compare each of the four types of couples which included (a) both drink, (b) wife drinks and husband does not, (c) husband drinks and wife does not, and (d) neither drink). These multilevel models included the main effect of the four-category couple drinking variable and gender as well as the interaction between the couple drinking variable and gender and all covariates.

Because not all participants were asked to complete the SAQ, the HRS study team created a weight to adjust for the complex sample design and sample selection. Thus, all data were weighted with the SAQ weight, which incorporates the HRS respondent-level weight and a nonresponse

adjustment factor (greater details are provided online; Smith et al., 2013).

Results

Descriptives

Overall, 62% of the sample reported drinking alcohol, whereas 38% people reported not drinking. These prevalence rates are similar to those from other national data (Blazer & Wu, 2009). Within couples, husbands were more likely to drink than wives, ($\chi^2(1) = 36.2$, $p < .001$). Participants who were current drinkers reported an average of 4.8 drinks per week ($SE = 0.12$) with a range from 0 to 30. Standard errors are presented in the text and tables rather than standard deviations because all data were weighted before conducting analyses. Within couples, husbands reported drinking more on average than wives ($t = 15.78$, $p < .001$) in Wave 1.

Next, we describe couple patterns of drinking in terms of whether husbands and wives reported drinking. Results showed that concordant drinking was the most prevalent pattern. Among 45% of couples, both wives and husbands reported drinking, followed by neither wife nor husband drinking (29%), husband only drinking (17%), and wife only drinking (8%). Thus, in terms of drinking any alcohol, concordance and discordance characterized 74 and 25% of couples, respectively.

We next examined negative marital quality (Table 1). Describing negative marital quality is an important first step before attempting to predict change in marital quality. Wives reported greater negative marital quality than husbands at both waves (Wave 1: $t = -5.82$, $p < .001$; Wave 2: $t = -6.31$, $p < .001$). Both husbands and wives showed a significant decrease in negative marital quality over time from Wave 1 to Wave 2 (husbands: $t = 2.59$, $p < .01$; wives: $t = 2.49$, $p <. 05$).

Is the Association Between Actor Drinking Status and Negative Marital Quality Moderated by Partner Drinking Status?

First, we examined whether Wave 1 drinking status predicted negative marital quality in Wave 2 controlling for Wave 1 negative marital quality (Table 2; Model 1). Main effects of actor and partner drinking were not statistically significant. However, there was a significant interaction between actor and partner drinking status predicting change in negative marital quality (Figure 1). Tests of the simple slopes revealed that actor drinking was associated with significant decreases in negative marital quality when their partners also reported drinking ($b = -0.03$, $p < .01$). More specifically, individuals who reported drinking alcohol showed a 0.03 decrease (on a scale from 1 to 4) in their reports of negative marital quality when their partners also reported drinking. Although this effect may appear small, the finding is rather robust given that the effect occurs over a 4-year time lag and the model controlled for Wave 1 negative marital quality as well as multiple demographic covariates (education, years married, race, and age). Thus, as hypothesized, concordant drinking couples reported decreased negative marital quality over time.

Are There Gender Differences in the Effects of Alcohol Use on Negative Marital Quality Among Older Couples?

Next, we considered whether the links between drinking status and negative marital quality varied by gender (Table 2; Model 2). We entered all possible two-way interactions as well as the three-way interaction between actor drinking status, partner drinking status, and gender. There were no additional significant two-way interactions, but there was a significant three-way interaction between actor drinking status, partner drinking status, and gender predicting negative marital quality in Wave 2 (Figure 2). Analysis of simple slopes showed that wives reported increased negative marital quality over time when they reported drinking and their husbands reported not drinking ($b = 0.05$, $p < .05$). In contrast, wives reported decreased negative marital quality over time when both members of the couple reported drinking ($b = -0.04$, $p < .05$). Thus, as hypothesized, drinking concordance had a greater effect on wives' than husbands' reports of negative relationship quality. In particular, wives' reports of negative quality increased by 0.05 when their husbands reported not drinking but declined by 0.04 when husbands reported drinking. Although these effects may appear small, the findings are rather robust given that the effect occurs over a 4-year time lag and the model controlled for Wave 1 negative marital quality as well as multiple demographic covariates (education, years married, race, and age).

Are There Effects of Drinking Status Concordance/Discordance on Negative Marital Quality Beyond the Amount of Alcohol Consumed?

Because negative marital quality may vary depending on the amount of drinks per week rather than drinking status, we conducted analyses examining the average drinks per week. First, we examined the drinking status models controlling for the average drinks per week. We found that the effects of drinking status did not change. Next, we examined models in which we removed the nondrinkers and examined whether there were variations between light drinkers (less than 1 a week to 7 a week) and moderate-to-heavy drinkers (8 or more drinks per week) predicting negative relationship quality. Results from these analyses were not statistically significant.

Post Hoc Tests

We estimated a series of post hoc models to examine the stability of the findings. First we conducted an additional analysis in the multilevel models that included a four-category

Table 2. Multilevel Models Predicting Negative Marital Quality in Wave 2 as a Function of Drinking Status in Wave 1

	Model 1		Model 2	
	b	*SE*	*b*	*SE*
Intercept	1.928***	0.015	1.932***	0.015
Negative marital quality Wave 1	0.608***	0.012	0.609***	0.012
Gender (Wife)	0.022**	0.007	0.029***	0.008
Education	−0.001	0.003	−0.001	0.003
Length of marriage	−0.001	0.001	−0.001	0.001
Race (White)	−0.013	0.014	−0.013	0.014
Age	0.001	0.001	0.001	0.001
Actor drinking	−0.008	0.008	−0.003	0.009
Partner drinking	−0.011	0.008	−0.015	0.008
Actor drinking × Partner drinking	−0.025**	0.009	−0.029**	0.009
Gender × Actor drinking			0.011	0.009
Gender × Partner drinking			−0.004	0.009
Gender × Actor drinking × Partner drinking			−0.016*	0.008
−2 Log likelihood	8,023.6		8,018.6	
Proportion of between variance accounted for	.70		.70	
Proportion of within variance accounted for	.23		.23	
Change in likelihood	13.6**		18.6**	

Notes: All models were adjusted for the weighted data. Changes in likelihood are based on comparison with a covariates-only model (−2 log likelihood = 8,037.2). Estimates are unstandardized. Variance accounted for is determined in comparison with the unrestricted model.
*$p < .05$. **$p < .01$. ***$p < .001$.

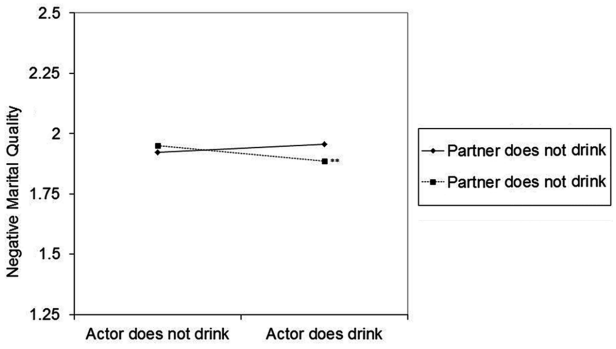

Figure 1. Predicted negative marital quality in Wave 2 as a function of ever drinking in Wave 1. The minimum negative marital quality was 1 and the maximum was 4; *y* axis represents the 20th to the 80th percentile. **$p < .01$.

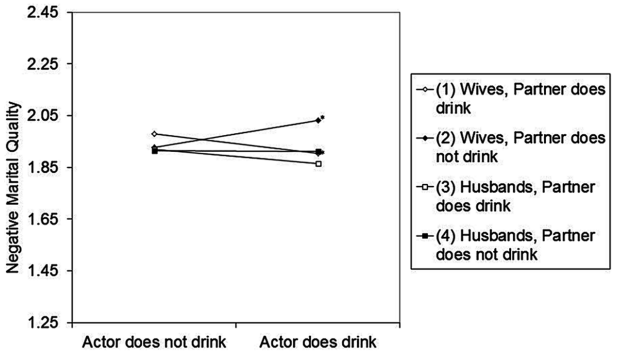

Figure 2. Predicted negative marital quality for wives in Wave 2 as a function of wifes' and husbands' reports of ever drinking in Wave 1 (controlling for all covariates). The minimum negative marital quality was 1 and the maximum was 4; *y* axis represents the 20th to the 80th percentile. *$p < .05$.

couple drinking variable and gender as well as the interaction between gender and couple drinking categories as the predictors. These models showed an effect of couple drinking categories on negative marital quality as well as an interaction between gender and couple drinking categories. We tested all possible pairwise comparisons of means by couple drinking categories and gender with a Tukey adjustment for Type 1 error (Supplementary Figure 1). Individuals in couples in which both members drank reported lower negative marital quality than those in couples where the wife drank and husband did not ($b = -0.09$; $SE = 0.03$, $p < .05$) and those in couples in which husband drank and wife did not ($b = -0.06$, $SE = 0.02$, $p < .05$). In addition, the effects of drinking concordance were stronger for wives, with wives reporting lower negative marital quality in couples in which both partners drank compared with couples in which wives drank and husbands did not ($b = -0.13$, $SE = 0.04$, $p < .05$). There were no significant variations between couples who both did not drink and any of the other groups (discordant couples or concordant drinkers).

Because negative marital quality may vary by characteristics of the marriage as well as lifetime alcohol problems, we estimated separate models examining whether including number of children, marital order, and lifetime alcohol problems (defined as endorsing two or more CAGE items) as covariates altered the findings. None of the covariates were associated with negative marital quality and the same general pattern of findings remained.

Finally, because negative marital quality may predict increased alcohol use rather than the reverse, we estimated an APIM in which actor negative marital quality, partner negative marital quality, gender, and all possible two-way and three-way interactions were included as predictors of average drinks per week in Wave 2, controlling for average drinks per week in Wave 1. There were no statistically significant associations between negative marital quality of actor or partner and average drinks per week over time.

Discussion

The present study examined whether alcohol consumption is associated with negative marital quality among older couples. This study moves beyond the previous literature by examining drinking among older rather than younger couples, focusing on negative marital quality, and by considering drinking status as well as amount of consumption. This study makes several important contributions to the literature. First, drinking status (none vs. any drinking at all) matters for marital quality among older couples, rather than the amount of alcohol consumed. Drinking status may be a better indicator of alcohol use among older adults who metabolize alcohol more slowly (Ferreira & Weems, 2008) and may develop problems with relatively low levels of alcohol use (Wilson et al., 2014). Consistent with the Dyadic Model of Alcohol Use and Marital Quality among Older Couples, concordant drinking couples reported decreased negative marital quality over time, and the effects appeared to be stronger for wives than husbands.

Drinking and Negative Marital Quality Among Older Couples

Couples who were concordant drinkers (both reported drinking) reported decreased negative marital quality over time. This is consistent with our newly developed Dyadic Model of Alcohol Use and Marital Quality among Older Couples, which postulates that the effects of drinking on negative marital quality depend on the drinking status of the individual's partner. Interestingly, drinking concordance among drinkers but not among nondrinkers was associated with reduced negative marital quality. This finding is particularly important because reducing negative marital quality may be associated with other positive health outcomes, such as improved health behaviors, especially among older adults who are more distressed by the negative aspects of their relationships (Liu & Waite, 2014).

Findings are also consistent with compatibility theories of marriage which suggest that couples who are similar tend to fare better. Studies have shown that couples who are concordant drinkers tend to report better relationship quality (Moos et al., 2011). Homish and Leonard (2007) referred to concordant drinking in couples as a "drinking partnership" in which the shared activity of alcohol consumption is indicative of increased marital interactions, contributing to lower assessments of negative marital quality. Although previous research on younger couples revealed that discordant heavy drinking (rather than only drinking status) is associated with lower marital satisfaction and divorce (Leonard et al., 2014; Mudar et al., 2001), the present study contributes to the literature by showing that concordance on drinking status (i.e., drinker vs. no drinker) appears to be more important for negative marital relationship quality among older couples than frequency or quantity of consumption. It is possible that drinking status is more important for older couples than heavy drinking because older individual are less likely to engage in heavy drinking. Alternatively, it could be that older couples have learned to adapt over time to their spouse's heavy drinking or variations in the levels of drinking.

Gender Differences in the Effect of Alcohol on Marital Quality

This study showed that the effects of spousal drinking concordance on negative relationship quality were stronger among wives than husbands. Wives who drank alcohol and had husbands who also drank reported decreased negative marital quality over time. In contrast, wives who drank but had husbands who did not drink reported increased negative quality over time. Similarly, Cranford and colleagues (2011) found that concordance between spouses on AUD status was associated with wives' (but not husbands') marital adjustment among couples in their 30s. This study expands on the previous literature and shows that, among older couples, concordance in drinking status alone is associated with marital quality especially among wives. This is consistent with the Dyadic Model of Alcohol Use and Marital Quality among Older Couples which predicted that women's perceptions of the marital tie would be more affected by drinking concordance/discordance.

Compatibility in the marital tie may be especially important to older women because of an increased focus on relationship goals in older adulthood coupled with gendered social roles in which women are taught to be more concerned with their relationships. Women tend to report greater negative quality ties than do men (Birditt et al., 2015). Further, wives are often referred to as the barometer of the marital relationship (Floyd & Markman, 1983; Hughes, Gordon, & Gaertner, 2004) and thus may be more affected by discordance or concordance in alcohol use.

Indeed, recent research shows that women's reports of the negative aspects of marriages are more highly associated with their own cardiovascular health (Liu & Waite, 2014). Additionally, because older men consume alcohol more frequently and in greater amounts than older women, this gender difference could reflect a reaction to deviation from social or cultural norms (Blow & Barry, 2012; Blow et al., 2000). Thus wives may experience more disapproval for drinking when their husbands do not drink.

These findings have implications for practice. Practitioners should be aware that older couples' marital

quality may be negatively affected by discordant alcohol use even at very low levels of discordance. This is especially true for wives who appear to be both positively affected by concordance and negatively affected by discordance. Thus, practitioners should be especially sensitive to these issues among wives. It is possible that older couples who learn ways to cope with discordance in their alcohol use might benefit in terms of lower levels of negative marital quality. Indeed, it is particularly difficult for people to quit using alcohol when they have social network members (including spouses) who drink (McCrady, 2012). As shown in previous work with younger couples, providers may use information about marital quality and the spouse's drinking patterns to inform treatment efforts aimed at older couples (O'Farrell, 2015). Also, quitting drinking due to chronic illness or medication may have unintended consequences on marriages, thus it is important to consider the drinking status of both partners.

Limitations and Future Directions

There are limitations to the current research that should be addressed in future studies. First, the measure of negative marital quality is limited in scope. Further, as with all survey research, there is the potential problem of third variables that may account for the research findings. We need to understand more about the potential processes linking alcohol use concordance or discordance to negative marital quality. For example, couples who are concordant or discordant on alcohol use may be similar or dissimilar on several other dimensions of their relationship. Concordant drinking couples may spend more time together and may engage in other leisure activities together. Discordant drinking couples may use more destructive conflict strategies (e.g., yelling and insults) or more negative regulation strategies (e.g., threats and punishment) to attempt to reduce partner drinking (Rodriguez, Dibello, & Wickham, 2016). Examination of the daily associations between alcohol use and relationship quality will provide a better understanding of how alcohol use among couples leads to changes in marital quality.

The selected sample for this study reported lower negative marital quality, they were younger, they were more educated, and more likely to be White than those who were not included in the analytic sample. Thus the findings may not apply to more diverse samples of couples. Further studies on more diverse samples of participants will advance our understanding of how broadly the findings can be generalized.

Overall, this study makes an important contribution to the literature by showing that concordance versus discordance in drinking status has implications for negative marital quality among older adults, and these implications differ for wives and husbands. We need more detailed short-term longitudinal research on older couples and alcohol use to understand the specific relationship processes that underlie links between alcohol use and negative marital quality. Understanding how individuals are affected by their spouse's drinking patterns will inform interventions that include a consideration of the marital context.

Supplementary Material

Supplementary data are available at *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences* online.

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