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Drinking to Self-medicate Mood Symptoms with the Recurrence and Persistence of Alcohol Dependence

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Reply to Boschloo et al.

Dr. Boschloo and her colleagues suggested an interesting point regarding our analyses of the association between self-medication and persistence of alcohol dependence using data from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC)¹. As Boschloo and colleagues noted, in our definition of persistent alcohol dependence, we included individuals with lifetime dependence with or without 12-month dependence at baseline and assessed the association between drinking self-medication among this group with alcohol dependence at follow-up. The association of self-medication drinking with alcohol dependence at wave 2 (follow-up) may vary depending on whether or not the participant had 12-month (current) alcohol dependence at baseline.

We assessed this query by conducting additional analyses from the NESARC sample we described in our article. The sample for these analyses included the 1547 drinkers with lifetime alcohol dependence who reported mood symptoms at baseline, provided information regarding using alcohol to self-medicate their symptoms and were re-interviewed at follow-up. All analyses took into account NESARC survey weights and other design elements. Analyses were further adjusted by propensity scores using inverse probability of treatment weighting as described in our article. We conducted stratified

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Dr. Rosa M. Crum had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis. Dr. Ramin Mojtabai performed the statistical analyses for this study.

analyses in which we assessed the association of self-medication with alcohol dependence at follow-up separately among those who did and did not meet the 12-month (current) alcohol dependence criteria at baseline. Of the 1547 individuals with lifetime alcohol dependence, 573 (36.1 %) met the criteria for current alcohol dependence at baseline, and 974 (63.9%) did not meet the criteria for current dependence. Self-medication drinking was associated with alcohol dependence at follow-up among both individuals who did as well as those who did not meet the criteria for current dependence at baseline (adjusted odds ratio (aOR)=2.05, CI=1.18–3.57, 0.012, and aOR=2.61, CI=1.43–4.74, 0.002, respectively) (Table).

We also tested the interaction of current alcohol dependence at baseline with self-medication drinking in a model predicting alcohol dependence at follow-up. A significant interaction term between self-medication and current alcohol dependence at baseline would suggest differences in the relationship of self-medication with alcohol dependence at follow-up according to whether or not individuals met criteria for current alcohol dependence at baseline. The interaction term for current alcohol dependence at baseline with self-medication did not meet criteria for statistical significance ($F[1, 61]=1.16$, $p=0.287$).

In summary, these additional analyses conducted in response to Boschloo and colleagues' suggestion indicate that drinking to self-medicate mood symptoms was associated with both the persistence of alcohol dependence among those with current alcohol dependence at baseline, and with the recurrence of dependence among individuals who had met the criteria in the more remote past, but who were in remission at the time of the baseline interview. Possible explanations for differences in findings from the paper by Boschloo and colleagues² include the methodology used as well as the sample assessed (self-medication among drinkers with mood symptoms vs. mood and anxiety symptoms as predictors).

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Table 1

Association of self-medication drinking with persistence and recurrence of alcohol dependence at follow-up by 12-month alcohol dependence status at baseline among participants with history of lifetime alcohol dependence at baseline.

	Association of self-medication with alcohol dependence at follow-up		
	<i>Persistence of alcohol dependence^a</i> (Lifetime or 12-month dependence at baseline)	<i>Persistence of alcohol dependence</i> (Lifetime and 12-month dependence at baseline)	<i>Recurrence of alcohol dependence</i> (Lifetime without 12-month dependence at baseline)
	OR (95% CI), p-value		
Unadjusted ^b	5.39 (3.98–7.28) ***	2.73 (1.78–4.17) ***	3.92 (2.31–6.64) ***
Propensity score adjusted	3.45 (2.35–5.08) ***	2.05 (1.18–3.57) *	2.61 (1.43–4.74) **

^aThis definition of persistent dependence was used in the original manuscript.

^bUnadjusted analyses were based on 1547 participants and propensity score adjusted analyses were limited to 1485 of these participants whose propensity scores fell within the common support range.

OR, odds ratio; CI, confidence interval.

*
 $p < 0.05$,

**
 $p < 0.01$,

 $p < 0.001$.