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The Moderating Effect of Women's Alcohol Misuse on the Relationship Between Intimate Partner Violence Victimization and Postpartum Depression

Julianne C. Hellmuth, Ph.D.¹, Kristina Coop Gordon, Ph.D.², Todd M. Moore, Ph.D.², and Gregory L. Stuart, Ph.D.²

¹Medical University of South Carolina, Department of Psychiatry and Behavioral Sciences, Charleston, South Carolina

²University of Tennessee-Knoxville, Department of Psychology, Knoxville, Tennessee

Abstract

Background and Objectives—We examined the moderating effect of women's alcohol misuse on the relationship between intimate partner violence (IPV) victimization and postpartum depression.

Methods—Self-report data were collected from 122 women. Analyses controlled for women's baseline depression severity and partner alcohol misuse.

Results—Women's alcohol misuse moderated the relationship between psychological IPV victimization and postpartum depression only at high levels of the moderator.

Discussion and Conclusions—Findings highlight the mental health risk posed by the combination of psychological IPV and alcohol misuse postpartum.

Scientific Significance—Findings emphasize the need to investigate the understudied topic of women's postpartum alcohol misuse.

Keywords

Alcohol; depression; postpartum; pregnancy; women's IPV victimization

Studies examining women's postpartum alcohol misuse are scant, but preliminary findings indicate that it is highly prevalent and associated with a variety of negative health outcomes including depression¹. In other populations of women, alcohol misuse is strongly and consistently linked to two influential health problems: depression and intimate partner violence victimization (IPV)². However, research linking alcohol misuse, depression, and IPV among postpartum women is limited. For example, the only study to our knowledge to

Correspondence concerning this article should be addressed to Julianne C. Hellmuth, Division of Clinical Neurosciences, Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina, Charleston, South Carolina 29401. Hellmuth@musc.edu. Telephone: (843) 792-5569. Fax: (843) 792-5932. Drs. Kristina Coop Gordon, Todd M. Moore, and Gregory L. Stuart can be reached at the Department of Psychology, Ausin Peay Building, University of Tennessee, Knoxville, Tennessee 37996.

Declaration of Interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this paper.

assess relationships among these factors examined alcohol misuse among women's partners only. Lobato and colleagues³ found that when partners misused alcohol, there were four times greater odds that women would endorse postpartum depression, but only if more than one instance of IPV victimization had occurred.

The present study aims to address two gaps in the literature. First, although research has documented the prevalence and correlates of women's postpartum alcohol misuse, depression, and IPV separately, no studies have examined the potential moderating effects of women's alcohol misuse on the relationship between IPV victimization and postpartum depression. The self-medication hypothesis⁴ suggests that some women may use alcohol to manage the distress associated with IPV victimization and its negative mental health sequelae. However, self-medication with substance use is often associated with increases, rather than decreases, in mental health problem severity⁴. This theoretical framework may explain why alcohol misuse could strengthen the relationship between IPV victimization and depression among women.

Second, more research has focused on women's physical (i.e. hitting) rather than psychological (i.e. name-calling) IPV victimization, although they frequently co-occur². Because psychological IPV may have equally detrimental and persistent negative effects on women's mental health compared to physical IPV², it is important to examine the combined influence of women's psychological IPV victimization and women's alcohol misuse on postpartum depression. Therefore, the present study tested the hypothesis that the relationship between psychological and physical IPV victimization and postpartum depression will vary depending on the severity of their alcohol misuse.

Method

Study Participants

All study procedures were IRB-approved. Data were derived from a larger study of wellbeing during pregnancy, in which 180 women in their first 18 weeks of pregnancy were recruited from two university affiliated health clinics in the southeastern U.S. Inclusion criteria dictated that participants spoke fluent English, were 18 years or older, and had monthly contact with their partner or child's father. Approximately half of the participants who completed follow-up had daily contact with their partner throughout the study. Participants were remunerated. The final sample employed in this study consisted of 122 participants who completed baseline and follow-up assessments at six weeks postpartum.

Measures

Depression—The Center for Epidemiological Studies Depression Scale CES-D;⁵ consists of 20 items. Each item was scored on a scale of 1–4 (1=“rarely or none of the time,” 2=“some or a little of the time”, 3= “occasionally or a moderate amount of time”, and 4= “most or all of the time”). Responses were summed to obtain a total severity score. Cronbach's $\alpha = .74$ at baseline and .88 at follow-up.

Intimate Partner Violence—The psychological and physical IPV victimization subscales of the 78-item Revised Conflict Tactics Scale CTS-2⁶ were employed. The reference period

at follow-up was the time period since their baseline assessment was completed. The frequency of each behavior was recoded such that the midpoint of each range is the score value (*never*=0, *once*=1, *twice*=2, *3–5 times*=4, *6–10 times*=8, *11–20 times*=15, *more than 20 times*=25). These values were summed to obtain a total frequency score for each subscale⁶. The psychological IPV victimization subscale consisted of eight items (Cronbach's $\alpha = .73$ at follow-up). The physical IPV victimization subscale consisted of 12 items (Cronbach's $\alpha = .69$ at follow-up).

Alcohol Misuse—The 10-item Alcohol Use Disorders Identification Test (AUDIT)⁷ was used to identify problematic alcohol use patterns among women. Participants' reports of their partners' alcohol misuse was assessed using a modified version of the AUDIT (AUDIT-P)⁸. Each item was scored from 0–4, then summed to obtain a total severity score. This measure was modified for the current study to examine a period of 6 months. At follow-up, Cronbach's $\alpha = .78$ and $.86$ for the AUDIT and AUDIT-P.

Data Analysis

Consistent with the techniques outlined by Hayes⁹, ordinary least squares regressions with main and conditional effects were estimated through use of the SPSS macro MODPROBE¹⁰. Two separate models were run examining the relationship between 1) follow-up psychological IPV victimization and 2) follow-up physical IPV victimization and postpartum (i.e. follow-up) depression severity. In both models, IPV victimization, women's follow-up alcohol misuse, and an interaction term representing the product of the two were entered as independent variables. All analyses controlled for women's baseline depression symptom severity and follow-up partner alcohol misuse. MODPROBE also conducts simple slope analyses to probe interactions when the moderator (women's alcohol misuse) was equal to its sample mean as well as at high (one standard deviation above the mean) and low levels (one standard deviation below the mean) of the moderator variable.

Results

Descriptive statistics and bivariate correlations are presented in Table 1. Postpartum alcohol misuse was highly prevalent among women in this sample, but it was not correlated with any variables examined here. Results indicated that baseline depression ($\beta = .42$, $t(115) = 4.82$, $p < .001$), psychological IPV victimization ($\beta = .24$, $t(115) = 3.85$, $p < .001$), and physical IPV victimization ($\beta = .39$, $t(115) = 3.01$, $p < .01$) were significantly related to women's postpartum depression. Moderation analyses indicated that the independent variables collectively explained a significant proportion of the variance in women's postpartum depression ($R^2 = .36$, $F(1, 115) = 11.02$, $p < .001$). Women's alcohol misuse moderated the relationship between psychological IPV victimization and postpartum depression ($\beta [SE] = .03 [.01]$, $t = 1.96$, $p = .05$) such that increases in victimization were associated with increases in depression at high ($\beta [SE] = .31 [.09]$, $t = 3.60$, $p < .001$; 95% CI = .14–.48), but not low ($\beta [SE] = .08 [.08]$, $t = 1.04$, $p = .30$, 95% CI = $-.07$ –.23), levels of alcohol use. The improvement in the amount of variance accounted for by the model when the interaction was included was modest, but statistically significant ($R^2 = .02$, $F = 3.83$, $p = .05$). The interaction between physical IPV

victimization and women's alcohol misuse was not significantly related to postpartum depression (β [SE] = $-.01$ [.04], $t = -.23$, $p = .82$).

Discussion

Previous literature has largely overlooked the characteristics and impact of women's alcohol use postpartum, instead focusing on women's alcohol use during pregnancy or on the drinking behaviors of women's partners. The present study adds to the existing literature by focusing on women's alcohol use during the critical postpartum time period. Our findings highlight the mental health risk that postpartum women may incur in the presence of both psychological IPV victimization and alcohol misuse. While this study cannot attribute a unidirectional causal relationship between these variables, our findings provide novel, yet modest and preliminary support of the application of the self-medication hypothesis to women postpartum. Perhaps lower levels of psychological IPV victimization are less likely to result in women's alcohol misuse and exacerbation of depression. Alternatively, women may misuse alcohol in response to more severe postpartum depression, and more severe psychological IPV results. Future studies are necessary to investigate causal pathways between these variables more thoroughly to identify the role of alcohol misuse more precisely.

Women's alcohol misuse did not moderate the association between physical IPV victimization and postpartum depression. This finding may be related to the unique and often more salient mental health consequences of psychological IPV compared to physical IPV². Further, this finding may result from a low prevalence of physical IPV victimization during the postpartum period in this study. Therefore, our null findings regarding an interaction effect between women's physical IPV victimization and alcohol misuse should be replicated.

This study is limited by a small convenience sample and potentially limited statistical power. The scarcity of literature examining the prevalence and severity of women's postpartum alcohol misuse leads to difficulty assessing the representativeness of the alcohol misuse in our sample. Therefore, the extent to which our findings are generalizable to other samples of postpartum women is unknown. It is essential that future studies collect more information about women's drinking behaviors in the weeks and months following childbirth. This study can also be improved upon by employing interview methods of data collection and corroborating partner reports to facilitate the use of more sophisticated data analytic methods.

In summary, our findings suggest that future studies should develop interventions for delivery during postpartum. If replicated, our findings suggest that reducing women's alcohol misuse may be an effective pathway to minimizing postpartum depression, especially in the presence of IPV victimization. Future research should also examine the influence of women's alcohol use and IPV perpetration at multiple time points.

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Figure 1.
Interactive effects of Psychological IPV Victimization and Women's Alcohol Misuse on Postpartum Depression

Table 1

Descriptive Statistics and Bivariate Correlations Among Study Variables

	Observed Range	Mean (SD)	Prevalence	1.	2.	3.	4.	5.
1. Baseline Depression	1–60	17.14 (10.50)	91 (50.6%)					
2. Postpartum Depression	0–47	14.80 (11.09)	43 (35.2%)	.50**				
3. Psychological IPV Victimization	0–107	9.09 (17.98)	66 (54.1%)	.23*	.32**			
4. Physical IPV Victimization	0–52	1.53 (7.56)	13 (10.7%)	.17	.08	.49**		
5. Alcohol Misuse	0–20	9.59 (4.23)	95 (77.9%)	.04	.01	.07	–.03	
6. Partner Alcohol Misuse	0–27	2.65 (5.14)	12 (9.8%)	.03	.24*	.33**	.32**	.19

Note. IPV =Intimate partner violence.

*
p < .05.

**
p < .01.

Prevalence of IPV reflects the number and percentage of women who reported at least one incident of that type of IPV. Prevalence of alcohol misuse and depression variables represent the number and percentage of women who reported AUDIT and AUDIT-P scores 6 and 8, respectively, and CES-D scores of 16 or higher.