

ABSTRACT

TITLE: The Association Between Postpartum Depression and Preconception Vitamin Supplementation: A Secondary Analysis of the 2016-2018 Pregnancy Risk Assessment Monitoring System (PRAMS) Data

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Postpartum depression (PPD), a critical public health issue affecting up to 1 in 8 women in the United States, is responsible for causing new mothers to experience feelings of misery, sadness, irritability, and/or anxiety. It has been suggested that postpartum depression may be mediated by micronutrient intake, although research that examines the association between preconception vitamin supplementation and PPD is lacking, thereby warranting further analysis. The purpose of this study was to determine if there is relationship between postpartum depression and vitamin supplementation prior to conception through secondary data analysis of the 2016-2018 Pregnancy Risk Assessment Monitoring System (PRAMS) surveillance data. The PRAMS (Phase 8) survey represented 83% of all live births in the United States (n=108,110 mothers) and provides demographic, socioeconomic, and behavioral information. Overall, 12.85% (n=14,978) developed PPD and 48% (n=51,247) reported they took a vitamin supplement at least once per week in the month before pregnancy. The results of a crude logistic regression showed a significant association between vitamin supplementation and PPD (OR 0.69; 95%CI 0.69-0.73). After adjusting for covariates, the association remained (OR 0.93; 95%CI 0.87-1.00). There was no significant association in the adjusted regression regarding dose relationship and PPD. Given

the promising results of the association between vitamin supplementation and PPD, future research should further analyze specific micronutrient roles in the development of PPD. The results of this research can help dietitians gain a better understanding of maternal mental health and nutrition supplementation to further educate women of child-bearing age, particularly those intending to conceive.