

## **Cardiovascular Disease Risk Knowledge and Risk Perception Among Women with a History of Preeclampsia**

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### **Introduction**

Preeclampsia is associated with an increased risk of cardiovascular disease (CVD), the leading cause of death for women in the U.S., and may represent the earliest warning sign of CVD risk in a woman's life. However, many women with a history of preeclampsia have limited CVD risk awareness, and knowledge alone may not be enough to drive behavior change without a sense of personal risk and confidence to act. We assessed CVD risk knowledge and related perceptions using the Attitudes and Beliefs about Cardiovascular Disease (ABCD) Risk Questionnaire among women with a history of preeclampsia and explored whether these measures differed by cardiovascular health classification.

### **Methods**

A prospective observational study of women with a history of preeclampsia between 5-10 years postpartum was conducted at Woman's Hospital in Baton Rouge, Louisiana in 2023. We analyzed questionnaire data from participants (n = 40) collected in REDCap and calculated a Knowledge Score (0–15; higher = more CVD risk knowledge) and subscale scores for perceived CVD risk, health beliefs, CVD risk reduction, and readiness to change. Health data were also collected from the participants to determine their cardiovascular health. CV health classification was determined by the number of metabolic syndrome criteria that were met out of the 5 possible conditions (0=Good, 1-2=Moderate, ≥3=Poor). Spearman correlations assessed associations between Knowledge Scores and subscales. Kruskal–Wallis tests compared scores across cardiovascular health classification groups (Good n = 5, Moderate n = 23, Poor n = 12).

### **Results**

Greater CVD risk knowledge was associated with stronger perceived benefits of healthy behaviors ( $\rho = 0.33$ ,  $p = .040$ ). CVD risk knowledge was not significantly correlated with perceived risk (dread risk  $\rho = 0.23$ ,  $p = .159$ ; risk  $\rho = 0.07$ ,  $p = .654$ ; unknown risk  $\rho = 0.01$ ,  $p = .977$ ), other health beliefs (susceptibility  $\rho = -0.07$ ,  $p = .657$ ; severity  $\rho = -0.05$ ,  $p = .759$ ; barriers  $\rho = -0.15$ ,  $p = .352$ ), self-efficacy ( $\rho = 0.22$ ,  $p = .171$ ), or readiness to change (all  $p > .05$ ). No significant differences in knowledge or subscale scores were observed across cardiovascular health classification groups (all  $p > .05$ ).

### **Discussion/Conclusion**

In this cohort, CVD risk knowledge was associated with recognizing the benefits of preventive behaviors but was not linked to perceived personal risk, susceptibility, self-efficacy, or readiness to change, suggesting a gap between CVD risk knowledge and risk perception. Notably, scores did not differ across cardiovascular health classification groups, suggesting that greater cardiometabolic burden did not translate into increased CVD risk knowledge or risk perception. Limitations include small sample size and limited power for group comparisons. Future studies should include larger sample sizes and evaluate whether targeted counseling improves risk awareness and encourage CVD risk reduction after preeclampsia.