Title:
Vitamin D and Preeclampsia

Alexandria K. Haddix, SN
Meaghan Tipton, SN
Kelly Brown, SN

School of Nursing, Cedarville University, Cedarville, OH, USA

ACCEPTED

Session Title:
Rising Stars of Research and Scholarship Invited Student Posters

Slot:
RS PST1: Sunday, 17 November 2019: 11:45 AM-12:15 PM

Applicable Category:
Students

Keywords:
Nursing, Preeclampsia and Vitamin D

References:


**Abstract Summary:**

This poster presents a Literature Review of the effects of Vitamin D on Preeclampsia. The Johns Hopkins Nursing Evidence-Based Practice model was used to guide the evaluation of resources describing the effects of Vitamin D on preeclampsia and their statistical significance.

**Content Outline:**

1. Introduction
   1. What is Preeclampsia?
   2. Why is it relevant?
2. PICO Question
3. Interview and Methods
Topic Selection:
Rising Stars of Research and Scholarship Invited Student Posters (25201)

Abstract Text:

**Background:** Preeclampsia is a complex disease that occurs in pregnant women after 20 weeks gestation with dire maternal and fetal consequences that complicates up to eight percent of pregnancies (Mirzakhani et al., 2016). Deficient Vitamin D levels below 30 nanograms per milliliter (Mirzakhani et al., 2016) have been connected to the incidence of preeclampsia, but Vitamin D supplementation is not commonly used to prevent preeclampsia in women at risk.

**PICO:** In pregnant women at risk for preeclampsia, how does Vitamin D supplementation, compared to no Vitamin D supplementation, help prevent preeclampsia?

**Methods:** The databases PubMed, Cochrane Collection Plus, CINAHL Plus with Full Text, and OneSearch were searched. Article inclusion criteria were: discusses women at risk for preeclampsia and must specifically discuss the effect of Vitamin D supplementation on preeclampsia. Exclusion criteria were: articles not recent within the past five years (2013-2018), and articles were not full text. Randomized control trials (RCTs), meta-analyses, systematic reviews, and non-experimental studies were analyzed. An interview with a Registered Nurse working in labor and delivery was conducted to examine the current scope of practice.

**Results:** Ten articles were selected that fit inclusion and exclusion criteria. Appendix D of the Johns Hopkins Nursing Based-Practice (JHNEBP) model was used to determine that three articles were Level I evidence, four were Level II evidence, and three were Level III evidence. Five articles found that Vitamin D supplementation was statistically significant in decreasing the risk of preeclampsia in pregnant women. Four articles found that Vitamin D supplementation was not statistically significant, but still had positive results.

**Discussion:** We recommend further investigation into the use of Vitamin D to decrease the risk of preeclampsia by randomized control trials, along with a possible pilot of change after further investigation. After further investigation, Vitamin D could be a low-cost, effective, and simplistic method of decreasing preeclampsia.