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Abstract

The purpose of this study is to determine the effects of a drinking water education program in a rural community on the perceived threat of nitrate-contaminated water by pregnant women. The proposed study aims to reach out to at least 120 pregnant women in their first trimester. Data will be collected using a Protection Motivation Theory (PMT) scale pretest and posttest that will gauge pregnant women’s perceived threat of nitrate-contaminated drinking water before and after the education program. The data will be analyzed using descriptive and inferential statistics. A paired sample t-test will be used to determine the effects of the drinking water education program. Limitations to the study include accessibility to the target population, the self-reporting questionnaire, and limited time spent with the participants.

Background & Significance

- Consumption of nitrate-contaminated drinking water in the first trimester of pregnancy causes birth defects. The San Joaquin Valley (SJV) in California has a history of high rates of nitrate contamination in water.
- SJV has a large population with lower SES and low rates of formal education.
- Program is intended to increase awareness and encourage health promoting behaviors.
- Consumption of nitrate contaminated water can lead to birth defects.

Research Question: Does a clean water education program for pregnant women in rural San Joaquin Valley increase their perceived threat of nitrate-contaminated water?

Hypothesis: A clean water education program for pregnant women in rural San Joaquin Valley increases their perceived threat of nitrate-contaminated water.

Methods

- Protection Motivation Theory survey
  - 20 questions using 5-point Likert scale
  - Strongly Disagree to Strongly Agree
  - Quasi-experimental, pretest and posttest
  - 120 pregnant women utilizing public health clinics in the SJV.

Analysis

- Evaluate demographic data using descriptive statistics.
- Change in participant threat perception evaluated after education using paired sample t-test.

Discussion

Expected Findings: Drinking water education program will increase the perceived threat of nitrate contaminated water.

Implications:
- Future implementation of drinking water programs.
- Contributes to health behaviors of the community.
- Prompt future research about other contaminants in drinking water.

Interprofessional Roles and Responsibilities

- Counseling: Cultural consideration, SES status, communication using bilingual materials
- Environmental Health: Identify contaminated sources, prevent exposure, impact on human health

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