Background and Significance

- Gestational Diabetes Mellitus (GDM) is defined as glucose intolerance that is first recognized during pregnancy (American Congress of Obstetricians and Gynecologists (ACOG), 2013).

- The general consensus is that GDM affects between 4-7% of all pregnancies in the United States (Berggren, Boggess, Funk, Jonsson, & Stuebe, 2012).

- Hispanic women have a two to four times greater risk of developing GDM than non-Hispanic white women (Chasen-Taber et al., 2010).

- Gestational Diabetes Mellitus is associated with adverse outcomes in pregnancy for both the mother and the baby.

- Hispanic women face many barriers to GDM care:
  - most sedentary lifestyle of all Americans (Chasen-Taber, 2012)
  - more likely to enter pregnancy overweight or obese with an increase of obesity by over half that of white women (Chasen-Taber, 2012)
  - Contributing factors include culture, socioeconomic status, and language barriers, as well as limited access to interventions that promote healthy lifestyles (Chasen-Taber, 2012).
  - Hispanic women have also been found to have higher levels of perceived stress (Chasen-Taber et al., 2010).
Problem Statement

- Hispanics currently make up 16.7% of the United States, with projections to reach 30% by 2050 (Centers for Disease Control, 2013). As this population increases, the potential deleterious effects to women of childbearing age from GDM will continue to grow. This overall increase may cause a rise in healthcare costs, increased risk for chronic disease, and potential impact on children in their adulthood. While many studies articulate the incidence, risks and barriers Hispanic women with GDM face, very few discuss the interventions needed to address these issues (Berry et al., 2013).

Details

- Literature review identified gaps. Very little research is available that has addressed educational interventions that decrease risk, improve outcomes, and increase knowledge levels among women with GDM. Research addressing Hispanic women with Type II DM was reviewed to increase literature base.
- Theoretical Foundation used was the Health Belief Model. The HBM has been used widely in diabetes research, and applications are positive. Education and knowledge alone are insufficient to produce results, cost and barriers must be addressed.
- Variables for the study
  - Independent
    - The independent variable in this study was the provision of a targeted educational intervention. This intervention included a coordinated education session offered as often as necessary to meet participant needs and availability.
  - Dependent
    - The dependent variable was the patient’s level of understanding, after participation in the education intervention.
Questions, Aims, Hypotheses

Research Questions
- Does knowledge of GDM increase in Hispanic females when culturally sensitive education is provided?
- Does the perception of social support increase in an education setting of exclusively Hispanic females diagnosed with GDM?

Study Aims
- The aims of this study were:
  - To determine if knowledge of GDM, diabetes management, and potential diabetes complications increases when a targeted education intervention is provided.
  - To determine if the perception of social support is increased when women attend group education sessions and are allowed time to share and have the opportunity to interact with each other.

Hypotheses
- A targeted educational intervention for Hispanic women with GDM will increase their knowledge of self-care
- Increased social support through group interaction will enhance GDM knowledge among Hispanic women diagnosed with GDM

Methods
- Quantitative survey design
- This study utilized a design with pre-post test evaluation. All Hispanic women who met inclusion criteria at time of identification and were attending prenatal care at Bay Area Midwifery Center diagnosed with Gestational Diabetes Mellitus (GDM) between November 1, 2014 and February 11, 2015 were considered for the study.
- The initial survey was administered during the diagnostic visit, assessing baseline knowledge and attitudes regarding GDM.
- The patient was then invited to attend a free education session where they would learn about the diagnosis of GDM, the implications of GDM, self-blood glucose monitoring, healthy eating and exercise.
- Immediately following the education session, the participants were given a repeat survey to assess changes in knowledge and changes in attitudes.
Results

- Seventeen women were identified as potential participants.
- The study ultimately was able to recruit seven women into full participation.
- SPSS Statistics Version 22.0 utilized to analyze data.
- The mean score on the pre intervention survey was 5.8571, and the post intervention mean was 14.2857.
- The study is statistically significant ($t=-8.67$, $p<0.001$). The tripled mean score and the strong statistical significance indicate that the educational intervention was effective in increasing knowledge.

What Does This Mean?

- Hispanic women can greatly benefit from a targeted education intervention to improve outcomes from the sequelae of GDM. While the participation level was low, the ability to show statistical significance and demonstrate the potential for the outcomes of this study- to increase knowledge and change attitudes is very high. This is evidenced by the change in mean knowledge acquisition, as well as the $p$ value of .000.
More Importantly... What Did I Learn in the Process??

- When planning/completing a project, it is imperative to factor time.
- Adjustments may need to be made to adapt to your study population.
- My n was very low. While this was distressing for the doctoral student, I believe it highlighted the exact problem that I was trying to address: Hispanic women face many barriers to GDM care and have decreased knowledge regarding the diagnosis of GDM. For the doctoral student however, have alternate plans delineated in the beginning if there is difficulty recruiting.
- Consider utilizing the qualitative data you may receive.
- If you discover new evidence, utilize that evidence to improve processes and improve patient outcomes.

References