



# An Educational Program to Address Maternal Health Disparities and High Infant Mortality in Pitt County, NC

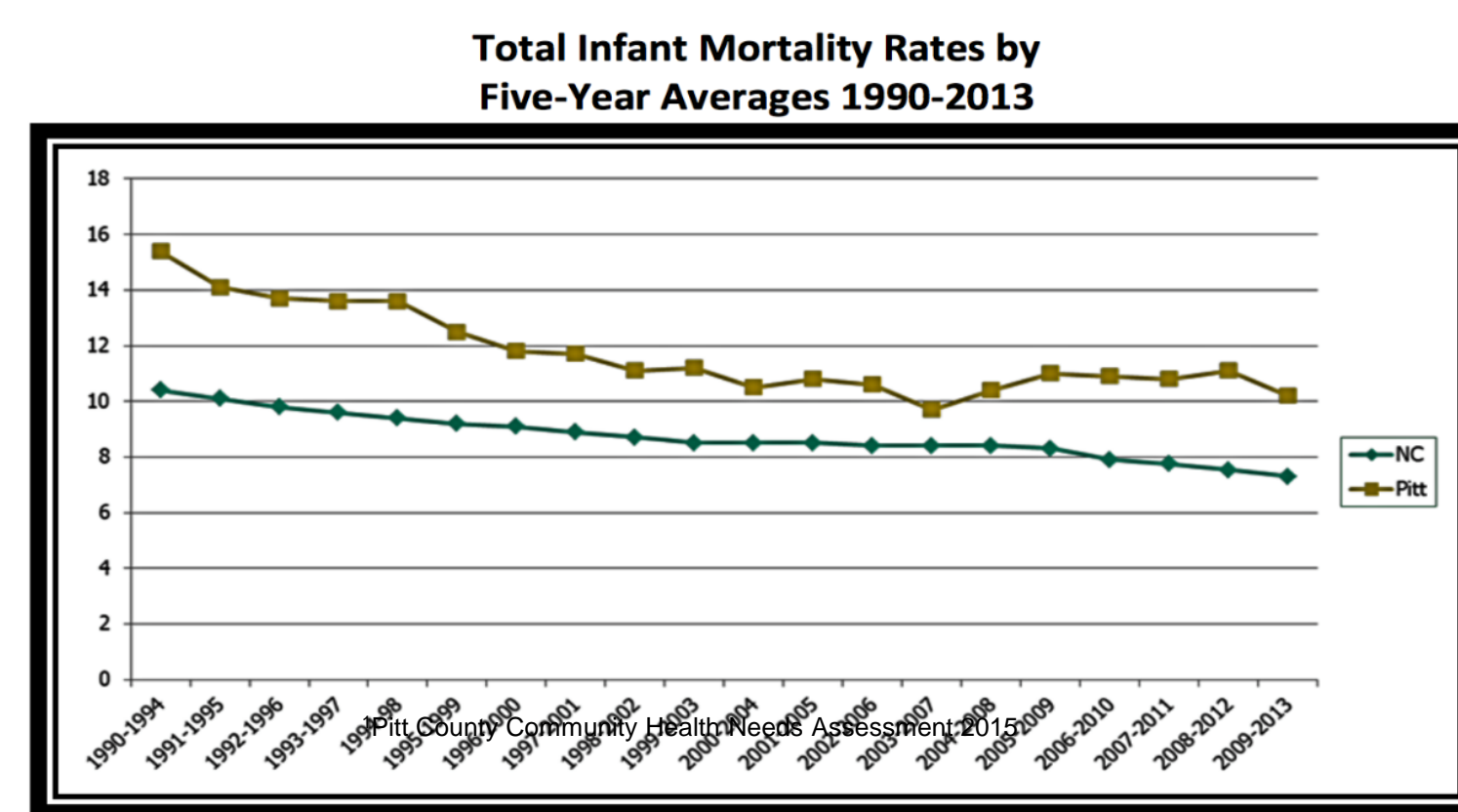
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## PROJECT BACKGROUND

- As Albert Schweitzer Fellows, the aim of our project was to address high infant mortality in Pitt County, NC by designing and implementing a prenatal support and education program.

Pitt County Infant Mortality Statistics



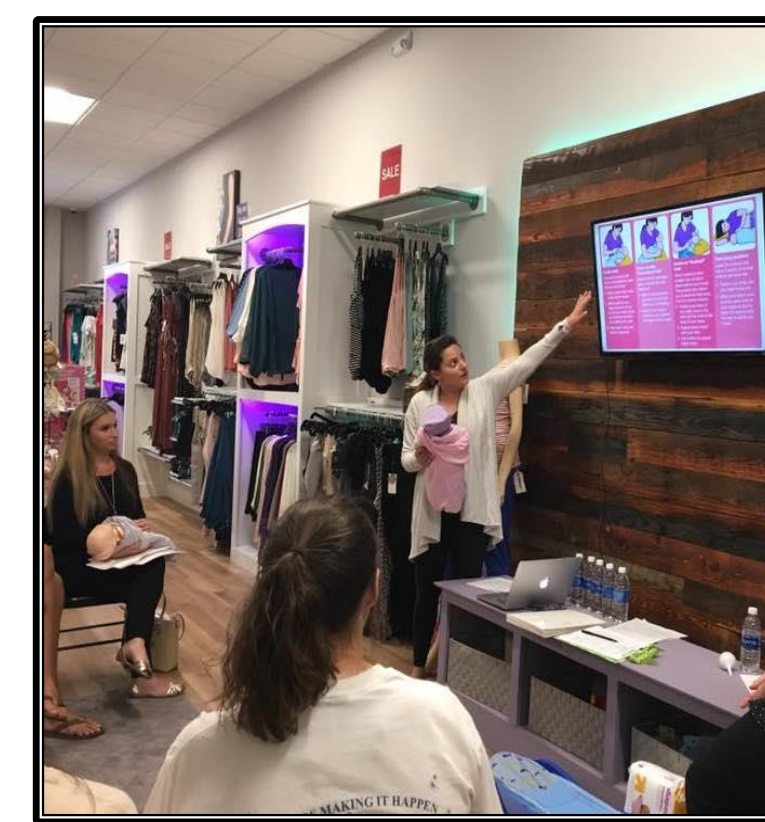
- In Pitt County, NC, infant mortality (the death of an infant before his or her first birthday) remains above state and national averages.<sup>1</sup>
- Low infant birth weight, premature birth, and other maternal/infant health factors, such as smoking and decreased rates of breastfeeding, contribute to the high infant mortality rate in Pitt County.<sup>1,2</sup>
  - The percentage of Pitt County pregnant women who smoke continued to rise from 9.6% to 10.6% from the period of 2005-2009 to 2011-2013.<sup>1</sup>
  - 46.8% of Pitt County mothers who enrolled in WIC initiated breastfeeding from 2011-2013, compared to 57.2% statewide during the same period.<sup>2</sup>
- Maternal health disparities remain between African American, Caucasian, and Hispanic mothers.<sup>1</sup>

## GOALS & OBJECTIVES

- Prenatal support and education can affect mothers and partners by decreasing anxiety, increasing confidence and competence, and contributing to beneficial lifestyle changes.
  - Objective: Determine the effectiveness of a free longitudinal education program provided to Pitt County mothers, in reducing maternal health disparities and high infant mortality.
- Project Goals:
  - Assess maternal anxiety and lifestyle changes both pre- and post-class and longitudinally.
  - Analyze participant confidence with breastfeeding pre- and post-class.
  - Evaluate participant competence and confidence with infant CPR and rescue pre- and post-class.



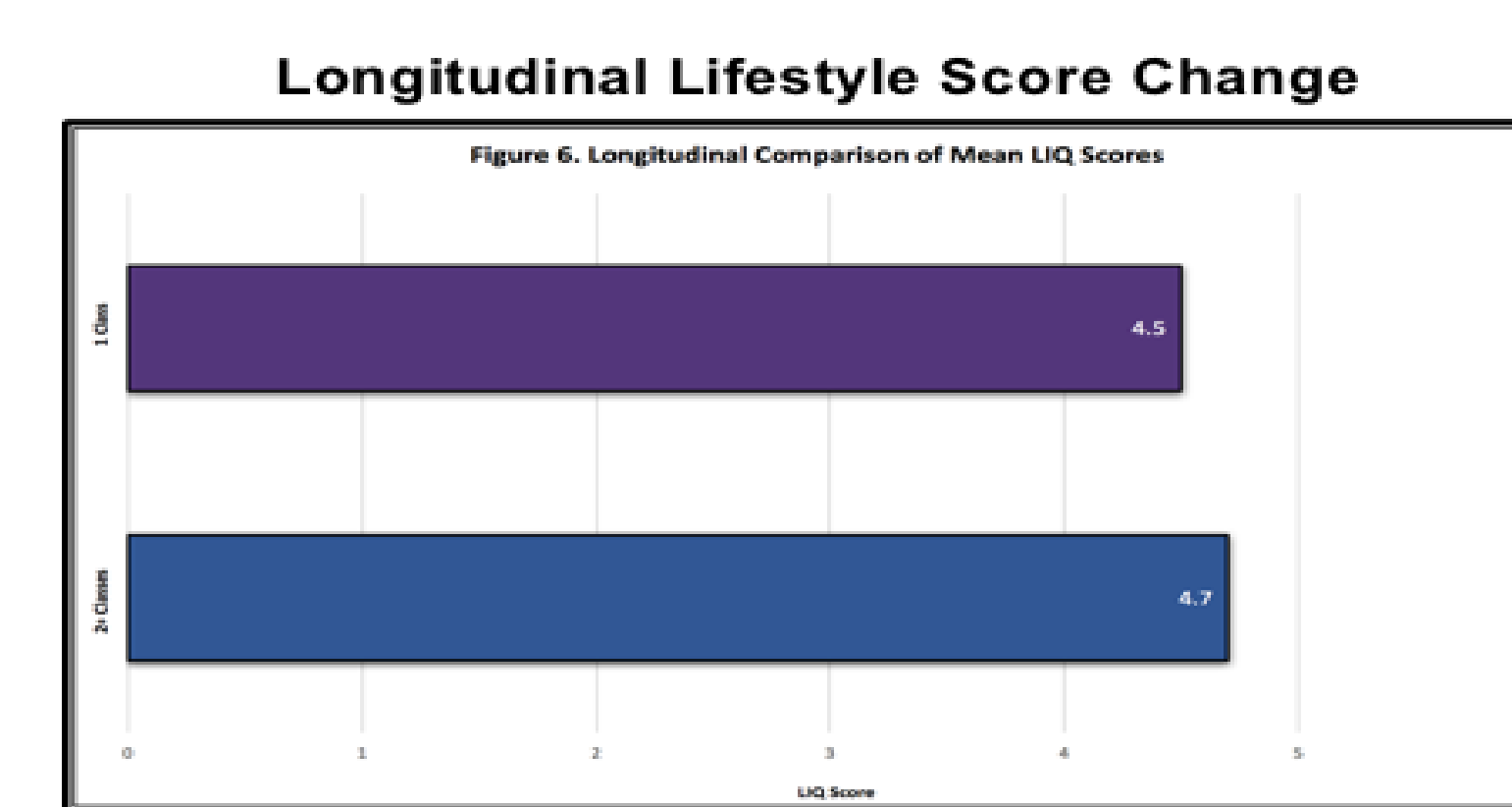
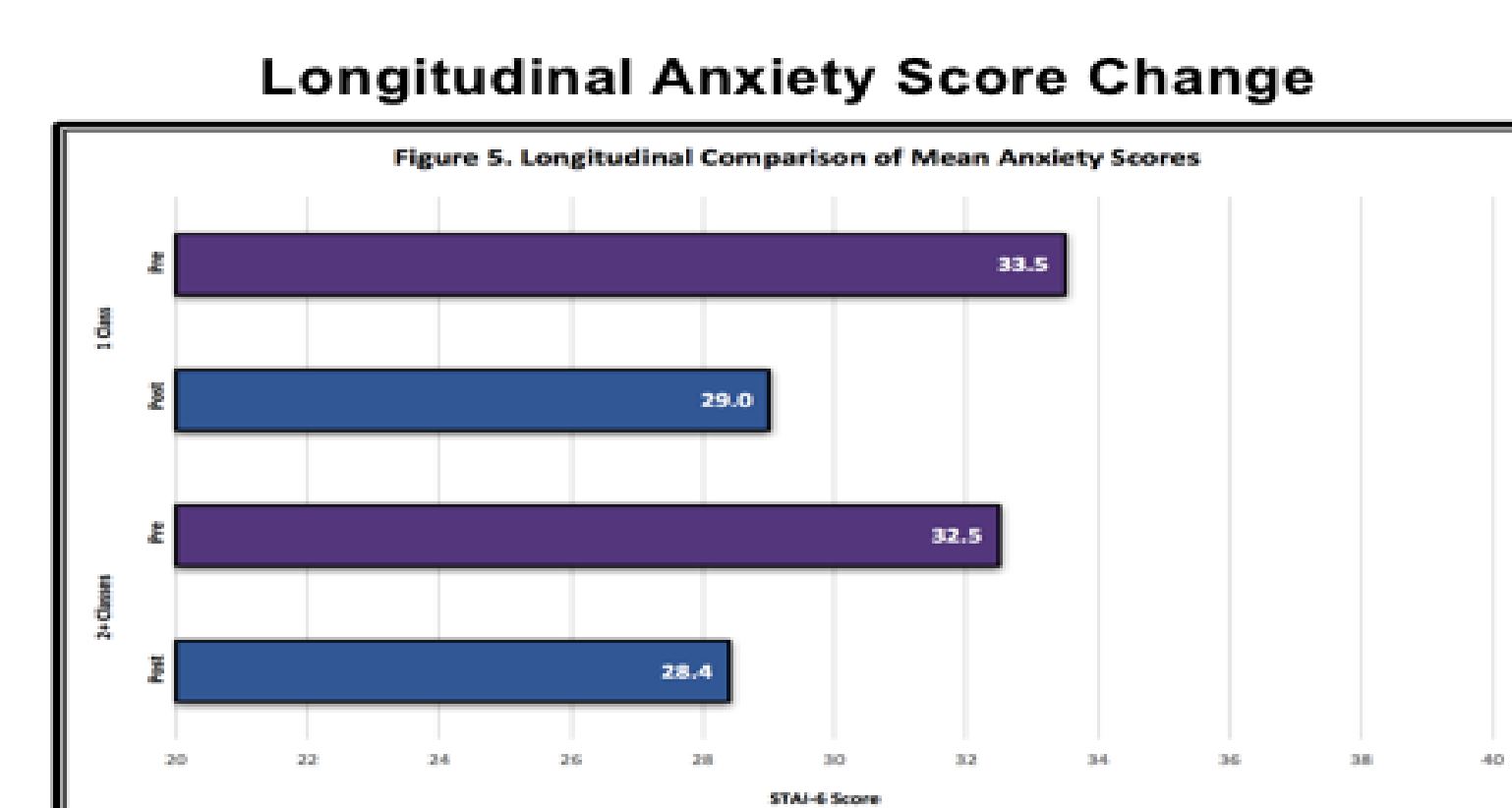
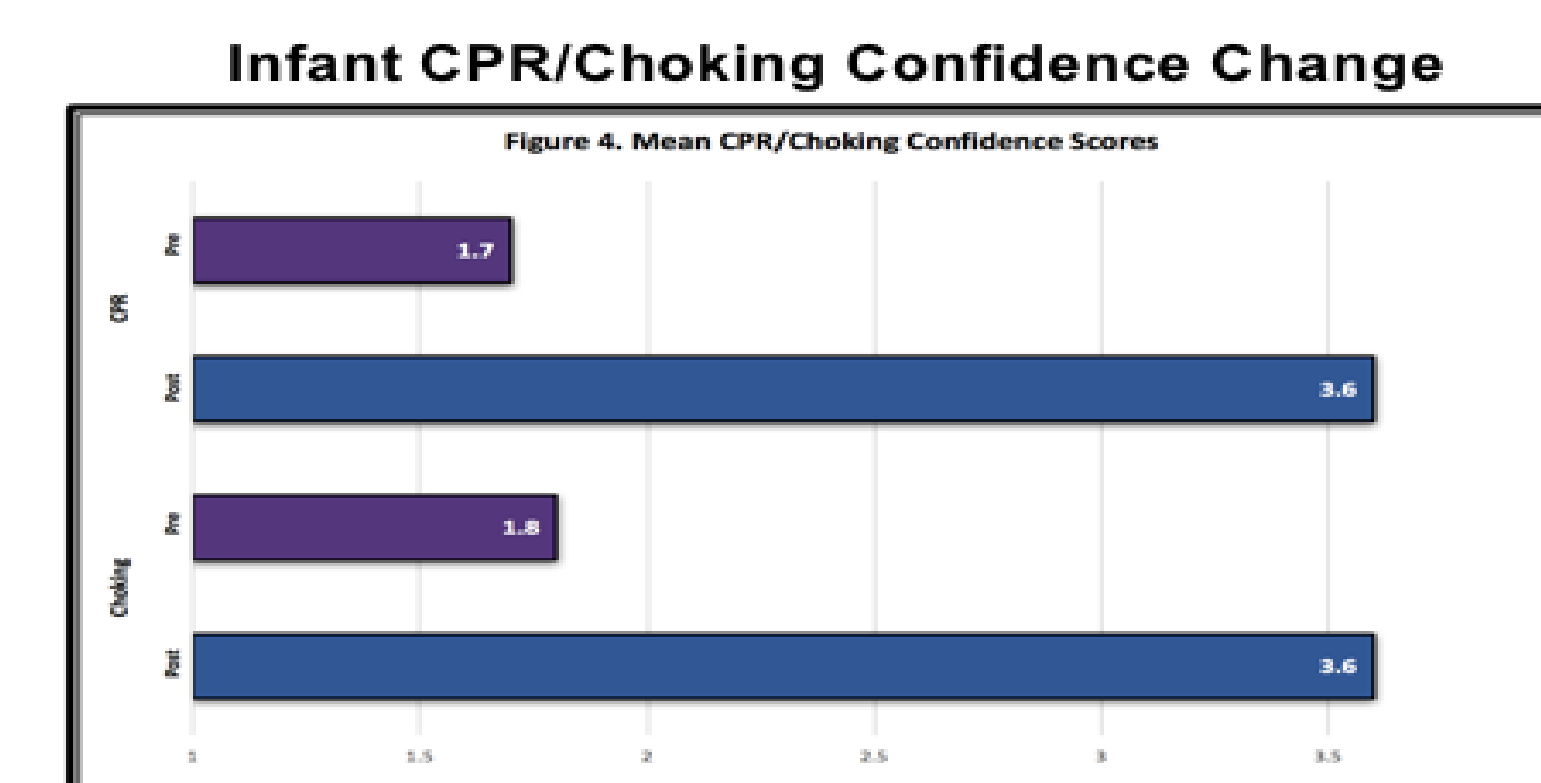
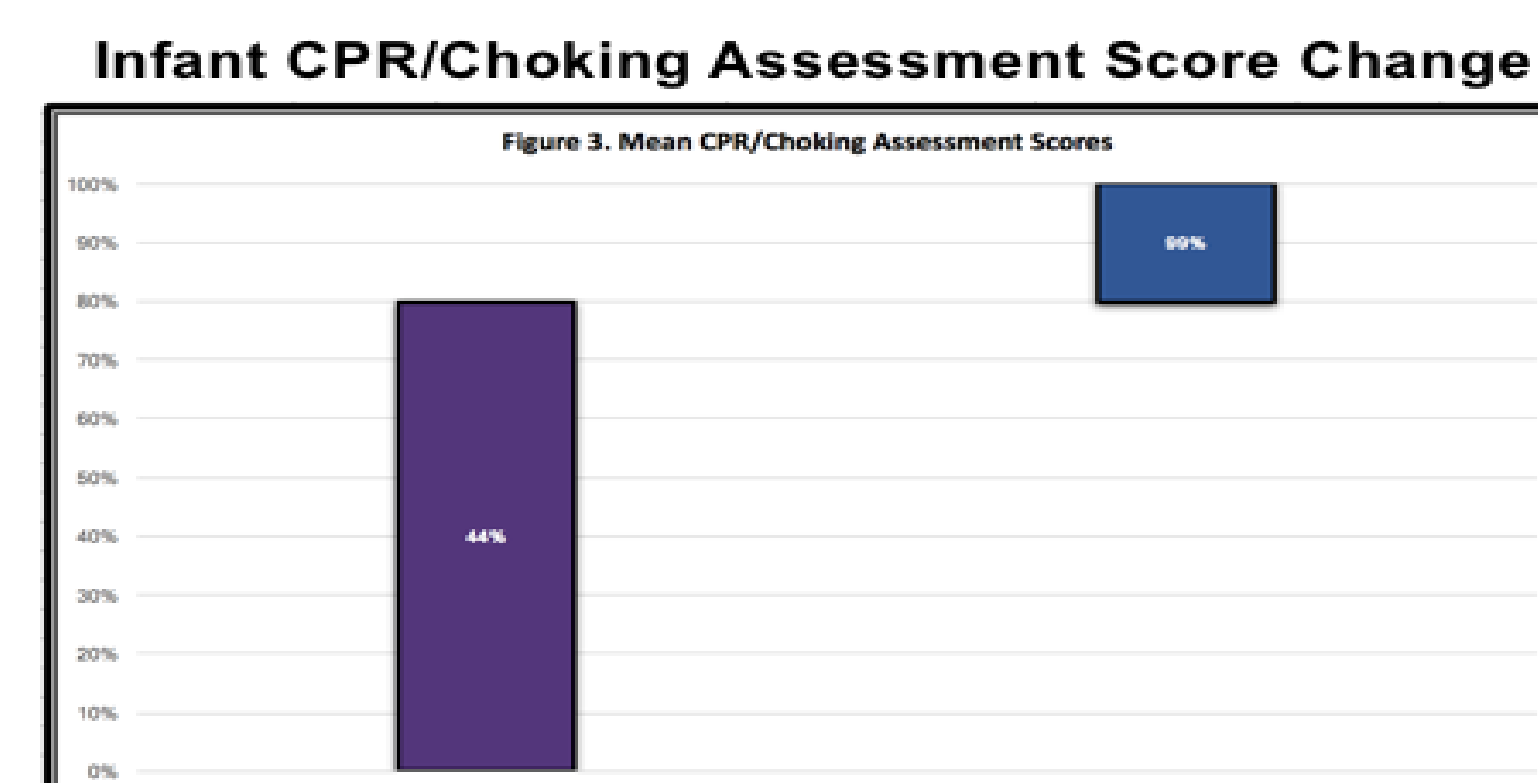
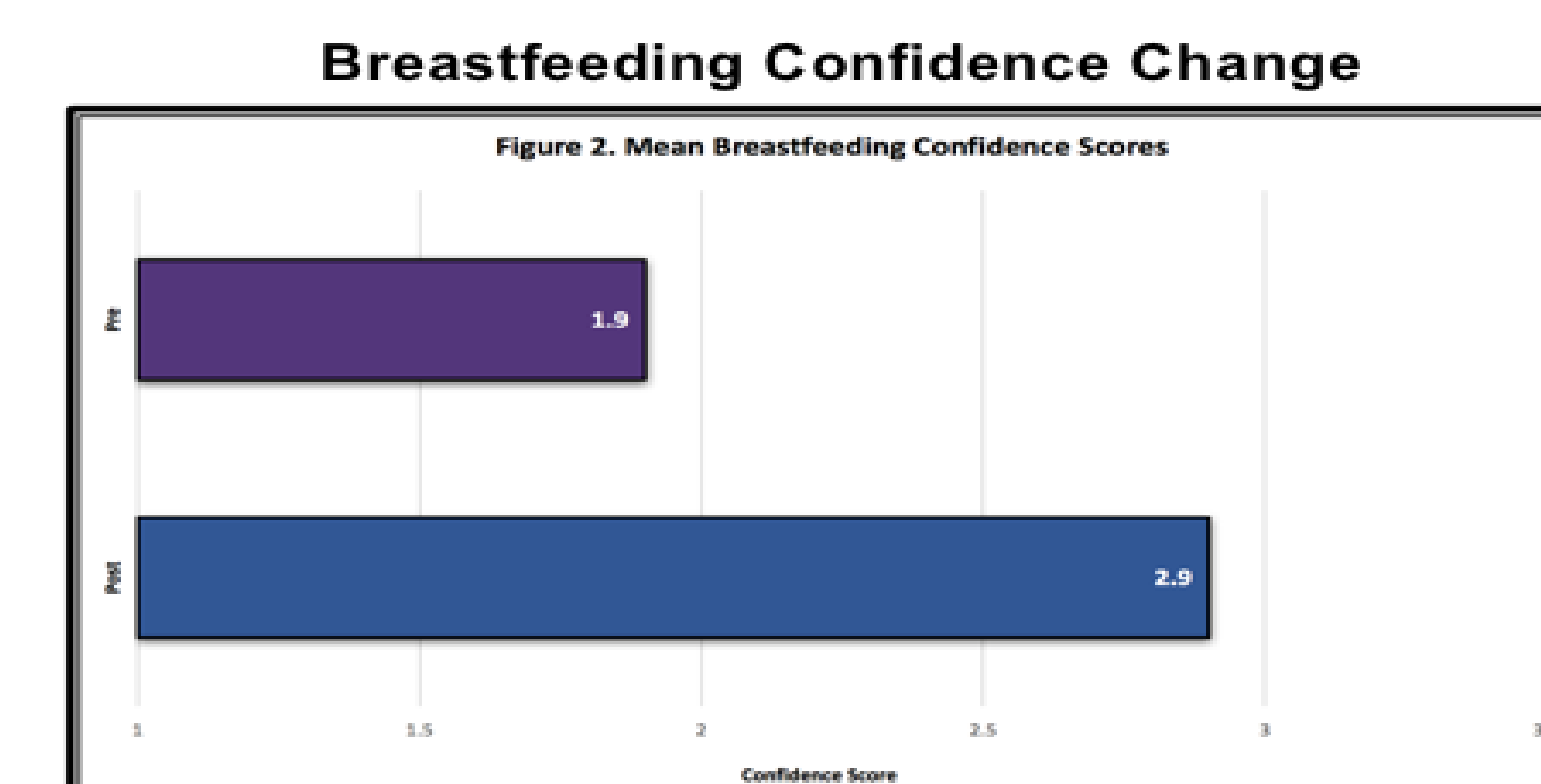
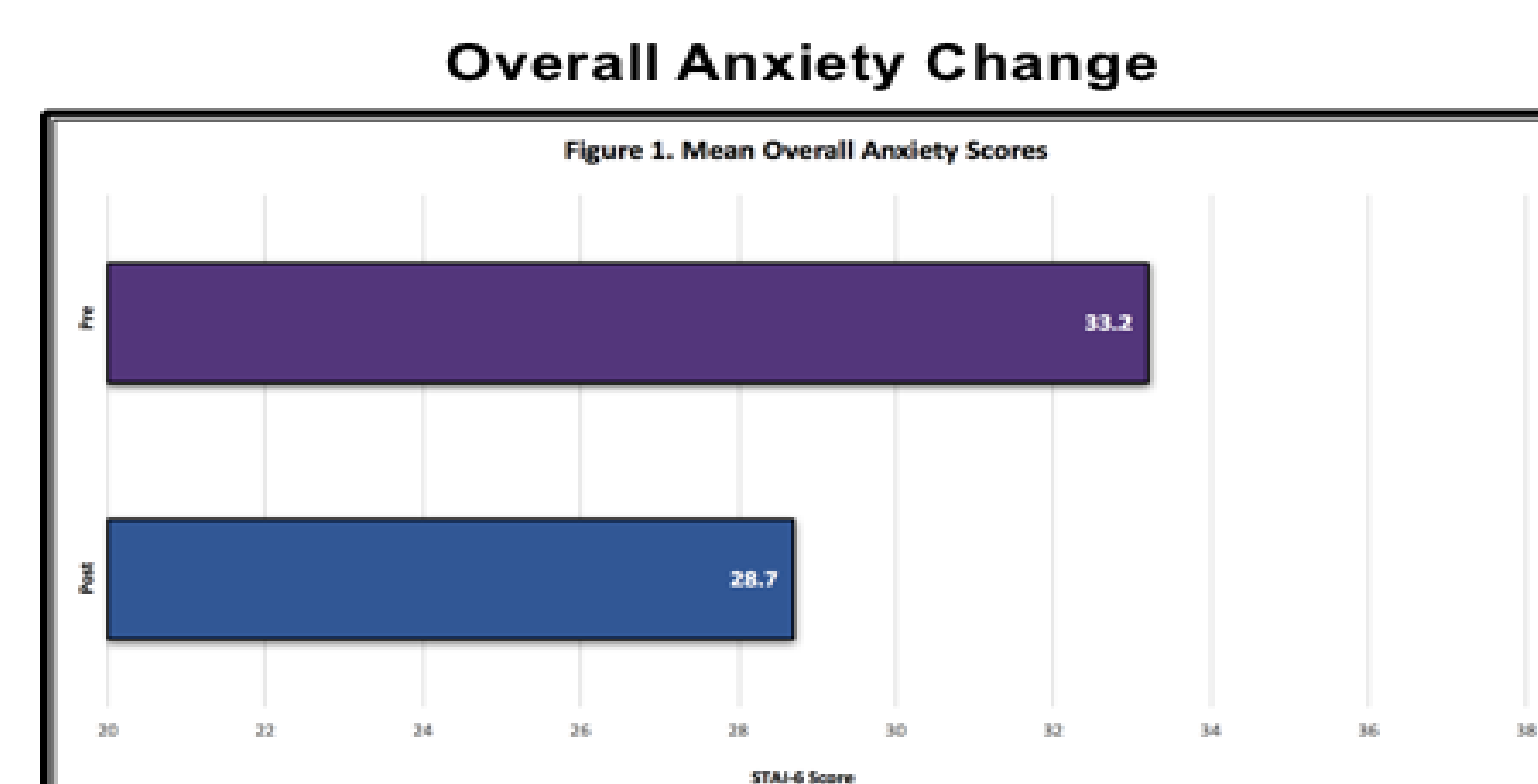
## PROJECT IMPLEMENTATION & RESULTS



- Our longitudinal community classes covered progressing weekly topics aimed at building knowledge over time.
  - Class 1: maternal health during pregnancy. Class 2: breastfeeding basics, infant care and safety. Class 3: AHA Family & Friends Infant CPR and Choking Rescue.
- Project total class attendance:** 212 with 166 completed pre- and post-surveys.
- Class Results:** For individuals who attended 2 or more classes, 29 of 45 reported decreased anxiety and 29 of 45 reported 1 or more beneficial lifestyle change.
- Breastfeeding Results:** For individuals who attended the breastfeeding class only, 28 of 32 reported increased confidence with breastfeeding material.
- CPR Results:** For individuals who attended the CPR class only, 103 of 103 participants demonstrated competence with CPR skills as evidenced by hands-on assessment.
  - 98 of 103 earned a perfect score on the CPR post-assessment exam. No participants earned a perfect score on the pre-test.
  - 95 of 103 participants indicated increased confidence with CPR confidence after the class.
  - 96 of 103 reported increased confidence with choking rescue after the class

## SURVEY INTERPRETATION

- Our program results suggest that prenatal support and education can affect mothers and partners by decreasing anxiety, increasing confidence, and contributing to beneficial lifestyle changes, which can greatly assist in decreasing infant mortality. Additionally, a total of 29 surveys indicated positive lifestyle changes which are not accounted for in quantitative scoring results, including: increased water, fruit, vegetable, and whole grain intake, decreased or eliminated alcohol, soda, caffeine, sugar, carbohydrate, fast food, and high-mercury seafood intake
- Additional benefits of maternal participation appear to be interaction, bonding, and friendships between mothers in the program.



## FUTURE PROJECT AIMS & SUSTAINABILITY

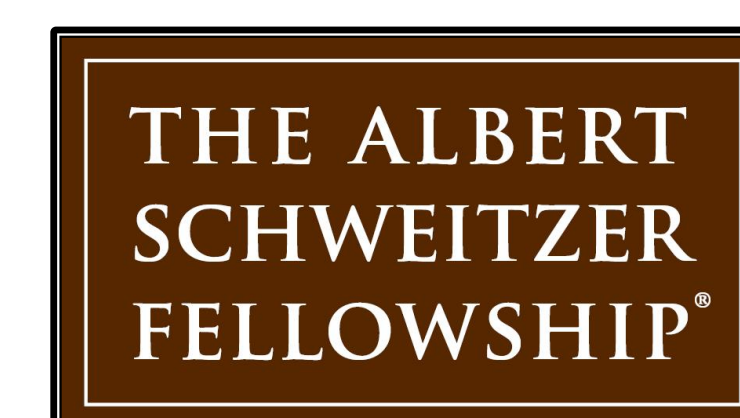
- Our community program will be sustained as a new medical student run AHA Family & Friends Infant CPR and Choking Rescue class at Vidant Medical Center in Greenville, NC.
  - This program is a collaboration between the ECU Brody School of Medicine (BSOM), Vidant Medical Center Perinatal Education, the BSOM Simulation Lab, and the Pregnancy & Infant Research Collaboration (PIRC) Program.
  - With funding from the BSOM dean and the ECU Medical & Health Sciences Foundation, we were able to purchase \$2600.00 in infant CPR materials.
- The course curriculum we created was used to train almost 40 medical students who will serve as class facilitators.
- Four medical students were selected to serve as program coordinators for a one-year term. These coordinators serve as lead instructors for classes and ensure that courses are conducted according to AHA guidelines.
- Participants will continue to be surveyed pre- and post-class to evaluate: participant self-efficacy, confidence and competence with course material pre- and post-class.
- An AHA Family & Friends Infant CPR course for Spanish-speaking individuals is expected at Vidant Medical Center in the coming months.

## ACKNOWLEDGMENTS

- The fellows would like to thank the Albert Schweitzer Foundation, project mentor, Dr. Jill Sutton, as well as site mentors Jamie Hobgood, Dr. Sharon Mangan, Kathryn Mitchell, and Sheri Ebron.
- Dr. Mark Stacy and the ECU Medical & Health Sciences Foundation supported funding for Vidant Medical Center infant CPR class supplies.

## REFERENCES

- <sup>1</sup>Pitt County Infant Mortality Statistics. Pitt County Community Health Needs Assessment 2015: <https://www.pittcountync.gov/ArchiveCenter/ViewFile/Item/140>.
- <sup>2</sup>FY16 Agreement Addenda Section III: WIC Deliverable #5 - Breastfeeding Promotion and Support: <http://www.nutritionnc.com/wic/laResources/aa-1516/15PercentofWomenParticipatingInWICWhoInitiateBreastfeeding.pdf>



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