

Evaluating Nursing Student's Knowledge and Confidence in Teaching Parents Infant Behaviors Associated with Breastfeeding

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Background: Exclusive breastfeeding for the first 6 months of life is linked to health benefits for infants and mothers. Healthy People 2030 focuses on keeping “infants safe and healthy through the first year of life”.¹ Keeping infants healthy starts with good prenatal care and strategies that focus on increasing breastfeeding rates.¹ Healthy People's goal is to increase the proportion of exclusively breastfed infants through age 6 months to 42.4%. In the US, the rate of exclusive breastfeeding through 6 months of age is 25.9%. This is a gap of 16.5%. Healthy People suggests improving strategies like “peer support, education, . . . and breastfeeding support in the hospital, workplace, and community” to help more women breastfeed exclusively.² RNs play a key role in supporting the establishment of successful breastfeeding practices in the prenatal and newborn periods but may lack the knowledge, confidence, and practice to teach these skills to the mother-infant dyad.³ This educational gap is significant because the vast majority of maternal support is provided by nursing.⁴

Purpose: The purpose of this study is to evaluate an innovative method of learning which includes combining the student's clinical rotation in the post-partum unit with the HUG (Help, Understanding, Guidance) Your Baby virtual program. This combination allows accelerated learning with immediate application of knowledge to real-life situations with expert support from nursing faculty.⁵ Benner's Novice to Expert Model of developing skills and understanding of patient care was utilized in the clinical and didactic breastfeeding HUG program for young families.⁶

Audience: The target audience of the educational intervention is fifty-six (N=56) fourth-year undergraduate nursing students in the Nursing Care of Women and Their Families course in the 2023-2024 Academic Year. Participants were enrolled in the Bachelor of Science Nursing Program at a medium-sized university in the southeastern region of the US.



Statement of Question: Will the virtual HUG program combined with the clinical rotation in the post-partum unit, increase student's knowledge and confidence in teaching parents breastfeeding skills?

Planning Process: The educational planning process included identifying a well-established program, demonstrated to improve knowledge and confidence in teaching parents breastfeeding skills to increase breastfeeding rates. The innovative virtual program was built on the science of infant development, learning to read infant body language and behavior, and how these cues can assist in teaching breastfeeding skills to parents. The educational design process consisted of viewing the program (eight short modules, two case studies, and breastfeeding resources), before a clinical rotation in a post-partum unit to reinforce learning with the immediate application of educational information with the mother-infant dyad.

Evaluation: The evaluation of the educational intervention measured changes in student knowledge and confidence with teaching infant development, body language, behaviors, and breastfeeding skills to parents. The overall goal is to accelerate knowledge acquisition, improve student confidence in teaching breastfeeding skills to parents to impact breastfeeding rates.

Measures: During the fourth year of the undergraduate nursing program the students attended the clinical in the post-partum unit and viewed the virtual HUG Your Baby educational program. The pre-test and post-test assessments were used along with the video-based learning modules. The pre and post-tests are online assessments composed of 12 knowledge questions (multiple choice and true/false) and 9 confidence rating questions (scale of 1-5). The knowledge questions are each worth 1 point for a correct answer, and the confidence questions have a point value equivalent to the number on the Likert rating scale (1-5 points) for a total of 12 points in knowledge section, and 45 points in confidence section.

Methods: Students submitted the Qualtrics pretest and the modules before attending clinical in the post-partum unit in the Nursing Care of Women and their Families course, then submitted the post-test assessment to evaluate knowledge and confidence. Deidentified and aggregated answer data were exported to Microsoft Excel. Statistical analysis was performed to obtain the mean, minimum, and maximum scores along with standard deviations, paired t-tests, and confidence intervals for both assessments. The data from each cohort were then combined to elicit the comparisons of scores from pre-test to post-test using SAS JMP version 17.0. The level of significance was set at .05. University IRB was approved before the collection of data.

Exclusion Criteria: Exclusion criteria were participants answering “No” to consent, or did not consent, or did not complete the pre and posttest assessments.

Results:

Knowledge

The undergraduate nursing students showed a statistically significant improvement in preliminary mean knowledge scores from pre to post completion ($t_{56} = 11.53$, $P < .0001$), with a mean improvement of 4.12 points (95% CI, 3.41 – 4.84). (Figure 1)

Confidence

The undergraduate nursing students showed a statistically significant improvement in preliminary mean knowledge scores from pre to post completion ($t_{56} = 15.22$, $P < .0001$), with a mean improvement of 11.36 points (95% CI, 9.86 – 12.85). (Figure 2)

Figure 1

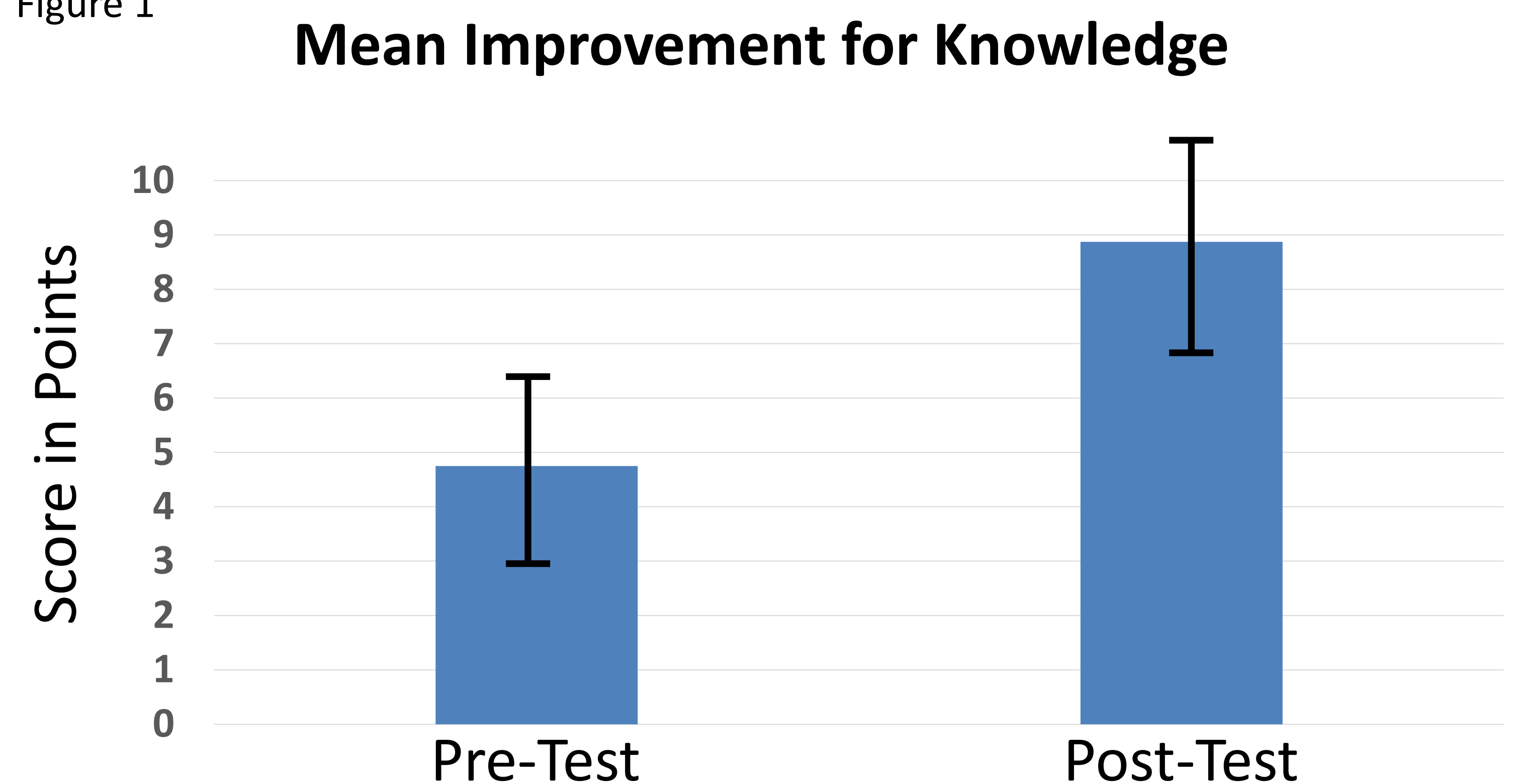
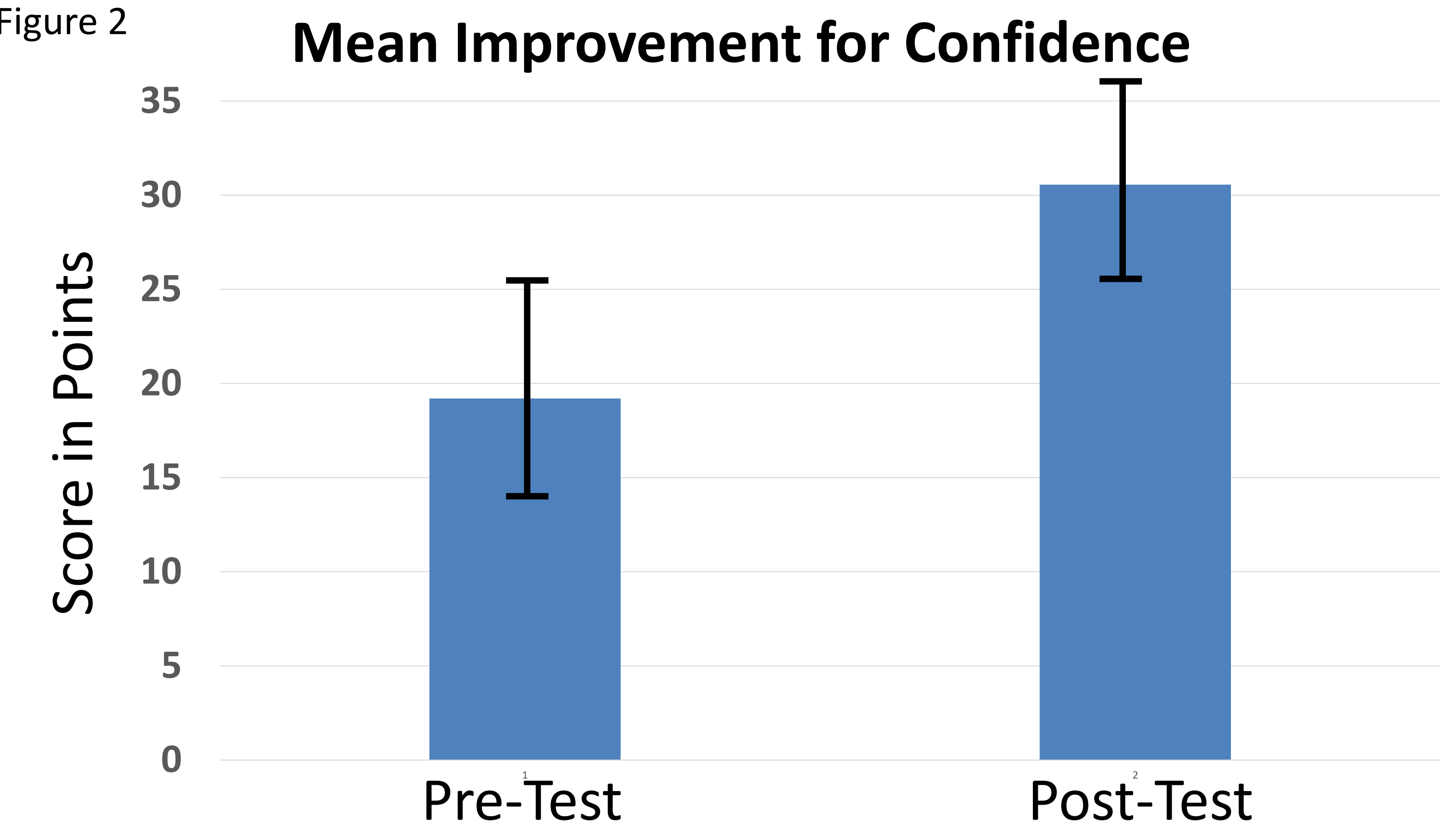


Figure 2



Conclusion: The virtual HUG Your Baby program completed before a post-partum clinical experience provided a statistically significant increase in knowledge and confidence in nursing students relating to breastfeeding support of mother-infant dyads as evidenced by the pretest to posttest comparison.

Relevance for Pediatric Nursing: Breastfeeding support is a foundational educational component of pediatric and maternal-child nursing care. The HUG Your Baby modules can be utilized as valuable clinical hours or didactic modules in the nursing curriculum. Nurses providing care to mothers and infants need the knowledge and confidence to address breastfeeding challenges with their patients and provide peer support to friends and family in the community as specified in the Healthy People 2023 goals.²

References:

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