

## Inspiring a Spirit of Inquiry in Nursing Undergraduate Students

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### Purpose

- To measure the effectiveness of a self-directed module on nursing student's ability to accurately complete evidence tables
- To foster students' intellectual curiosity through a novel student-developed module for evidence table assignments

### Background/Problem

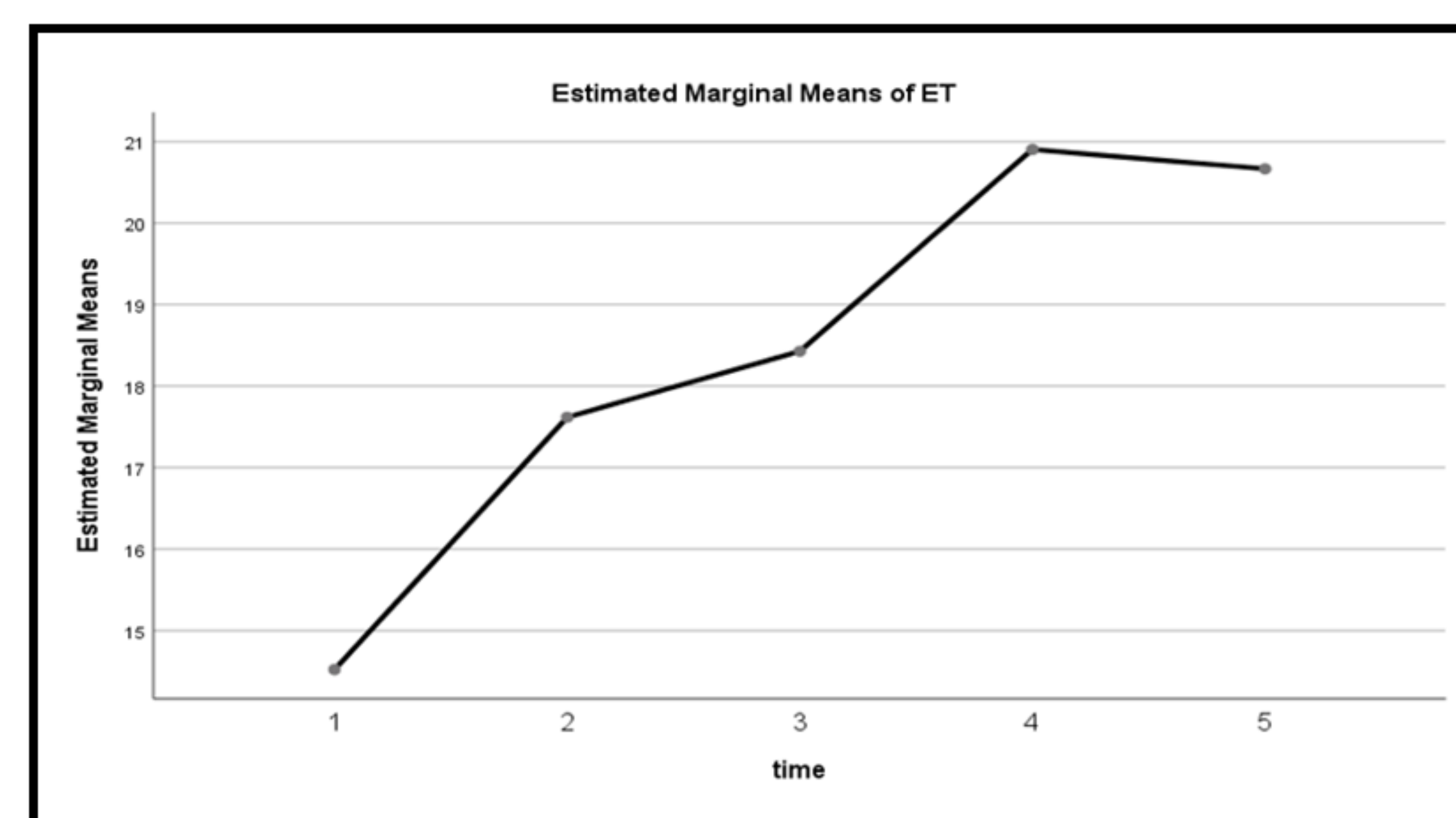
- Nursing students lack confidence in their ability to understand and appraise literature and fail to understand the importance of EBP (Ryan, 2016).
- Innovative teaching strategies are needed to engage students (Sin & Bliquez, 2017).
- There is a gap in literature about research education for nursing undergraduate students and evidence tables being a tool to introduce the subject.

### Methodology

- IRB approval from TWU
- Pre-nursing students enrolled in a nursing honors course in Spring 2019 were surveyed about a faculty-developed evidence table module.
- New module and new rubric were created by a nursing student based on survey feedback.
- Pre-nursing honors students enrolled in the course Fall 2019 and Spring 2020 completed a series of 5 evidence table assignments and received numerical feedback scores (instead of grades) on 12 ET elements. Students used module to improve rubric scores.
- Two faculty used the rubric to grade assignments for interrater reliability.
- RANOVA was used to analyze the data to determine if the students' scores improved over time during the course of the semester.

### Results

A repeated measures ANOVA was conducted to determine the effectiveness of ET over five time points. The test of sphericity was non-significant,  $\chi^2(9) = 12.720$ ,  $p = .177$ , meaning that the assumption of sphericity was not violated. The overall model was statistically significant showing that ET scores differed between time points,  $F(4, 80) = 17.031$ ,  $p < .001$ ,  $\eta^2 = .460$ . The Bonferroni correction revealed that there was no statistically significant difference between Time 1 and Time 2 ( $p = .079$ ,  $d = .72$ ); but, there was a significant difference from Time 1 and Time 3 ( $p = .006$ ,  $d = .85$ ), Time 4 ( $p < .001$ ,  $d = 1.67$ ), and Time 5 ( $p < .001$ ,  $d = 1.54$ ). For Time 2, there were significant differences with Time 4 ( $p .004$ ,  $d = 1.08$ ) and Time 5 ( $p = .002$ ,  $d = .94$ ). For Time 3, Time 4, and Time 5, there were no significant differences between the three time points. There was non-significant growth throughout the intervention as seen in the chart.



Descriptive Statistics			
	Mean	Std. Deviation	N
ET 1 TOTAL	14.52	4.915	21
ET 2 TOTAL	17.62	3.640	21
ET 3 TOTAL	18.43	4.308	21
ET 4 TOTAL	20.90	2.234	21
ET 5 TOTAL	20.67	2.781	21

### Discussion

- Student's mean scores had a significant increase from evidence table one to three, four and five.
- Overall growth in the scores from evidence tables one to four with a slight decrease on fifth table.
- Student experienced growth in their ability to complete the components of an evidence table.
- Course evaluations support continuation of module to facilitate independence and confidence with research skills and completing honors work, resourcefulness in nursing coursework, and leadership in helping peers with research.
- Student-developed model is now integrated into nursing honors courses.

### Recommendations for Future Research

- Using a larger sample incorporating multiple institutions
- Not scoring "level of evidence" section
- Advise students to use only the resources in the module for support in completing the assignments.
- Faculty should select articles to be used for each student.



### References

- Ryan, E. J. (2016). Undergraduate nursing students' attitudes and use of research and evidence-based practice - an integrative literature review. *Journal of Clinical Nursing*, 25, 1548-1556. doi:10.1111/jocn.13229
- Sin, M., & Bliquez, R. (2017). Teaching evidence based practice to undergraduate nursing students. *Journal of Professional Nursing*, 33, 447-451. doi:10.1016/j.profnurs.2017.06.003