Providence

Impact of a research basics course on hospital-based nursing research confidence levels: A program evaluation

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Background & Problem

- Patient outcomes improve when RNs engage in research activities (Melnyk et al., 2017; Wu et al., 2018)

- Pre-licensure undergraduate programs recognize the importance of research; however, programs are not designed to engage students in research activities to foster competency in this skill (American Association of Colleges of Nursing [AACN], 2018).

- American Nurse Credentialing Center's (ANCC) Magnet® recognition is an internationally recognized program.
  - New knowledge, innovations, and improvements (NK)
    - 1 Ongoing study
    - 2 Closed studies

How do we prepare nurses to do this Research?

History of Research Basic 101

- 2010-2020 Select SoCal ministries offered a Research Basics 101
  - 8-hour in-person class
  - Instructor went to each ministry
- 2020-2021 – SoCal Ministry
- Changed to Hybrid
  - Built out modules
  - Transitioned to pre-modules & Virtual Teams
- In January 2022, the Research Basics 101 curriculum was opened to all nurses within Providence and a program evaluation was planned

Received IRB, clinical Inquiry Review for non-research

Research Basics 101 Program

Step 1: HealthStream Modules (25-45 minutes each)

- ✓ Clinical Scholarship
- ✓ Finding and Evaluating the Evidence
- ✓ The Research Question
- ✓ Research Methods
- ✓ Data Collection and Analysis

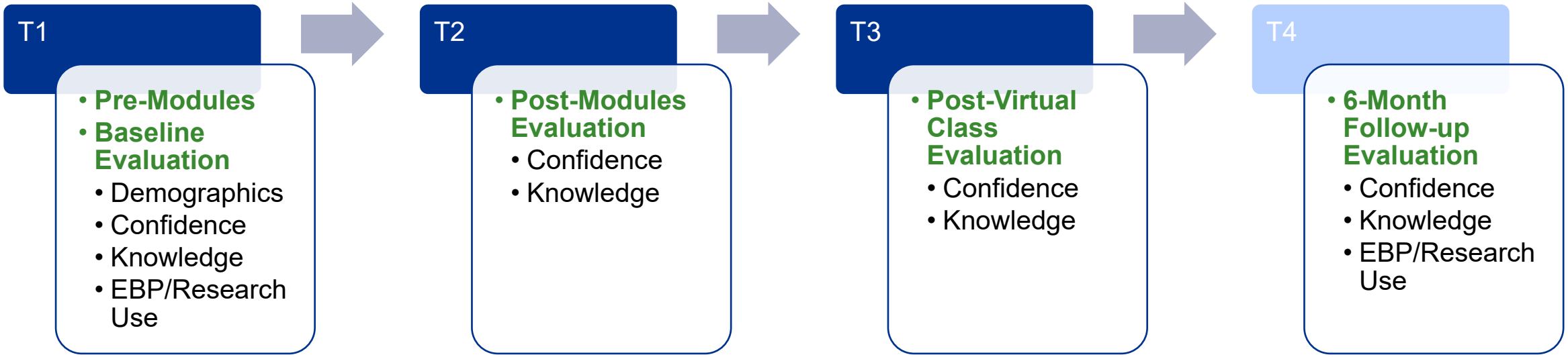
Step 2: A Virtual 4-Hour Class (Offered Monthly)

- ✓ Applying research principles from start to finish
- ✓ Librarian & Library Resources
- ✓ IRB
- ✓ 7 CEUs

Purpose

This program evaluation aimed to measure the impact of an online research basics course on self-reported nurse confidence and knowledge of research principles.

Evaluation Plan Approach



Evaluation Forms

Demographics (5)

- Years of Experience
- Region Location
- Why are you taking the course
- Nurse Role
- Race/Ethnicity

Confidence (13)

- **Likert Scale**
- "***Not at all – completely confident***"
- Steps in research process:
  - Clinical Inquiry
  - PICOT
  - Literature Review/Synthesis
  - Implementing
  - Data Analysis
  - Dissemination

Knowledge (18)

- **True/False**
- **Multiple Choice**
  - QI/EBP/Research
  - PICOT
  - Study Design
  - Level of Evidence

EBP/Research Use (9)

- **Multiple Choice/All that apply**
  - Shared Gov.
  - Implementation of QI/EBP/Research
  - Journal Articles
  - Conference attendance

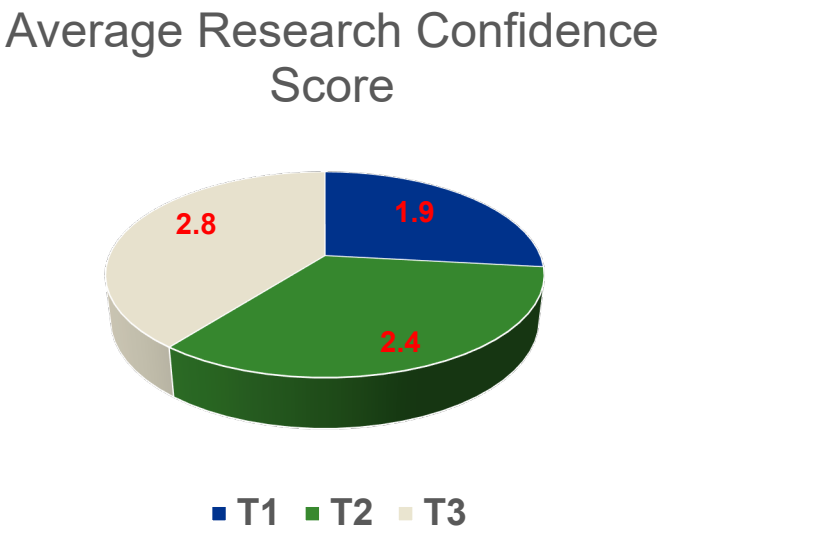
Results: Participants

Demographics (n=37)	
Years of Experience	Average = 14.1 years
Regions Represented	Total = 7 regions (26/37 from CA)
Role Type	Clinical Nurse (25/36)
	Nurse leader (3/36)
	Educator/PDP (5/36)
	Other (3/36)

Results: Confidence Scores

• A total of 40 nurses completed confidence measures at all three time points

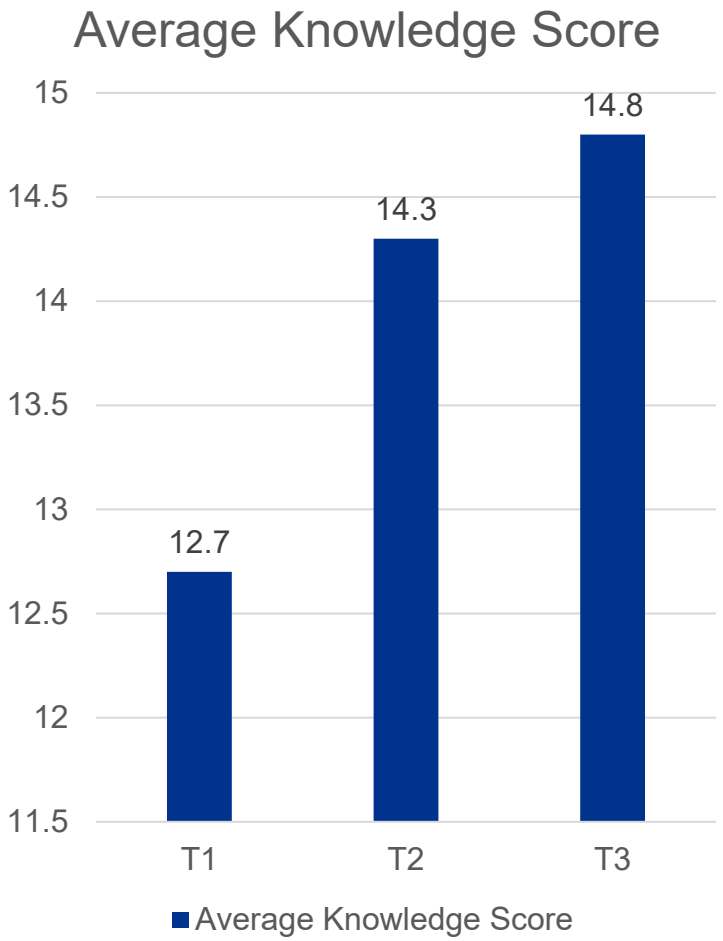
- Of these, 2 nurses reported an average confidence of 4/4
- Confidence significantly increased from T1 to T2 and to T3
- Nurses reported the highest improvement on the items:
  - Interpreting statistical results from a research study (T1, m=1.4; T3, m=2.3)
  - Identifying an appropriate venue for disseminating study results (T1, m=1.6; T3, m=2.8)



ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between subjects	76.73274	39	1.96751	6.413978	1.94E-12	1.55324
Within subjects	13.84448	2	6.92224	22.56617	1.85E-08	3.11379
Error	23.92673	78	0.30675			
Total	114.5039	119				

Results: Confidence Scores

- At the time of data analysis, 34 nurses completed all three measures for the knowledge scores
- A total of 9 nurses received at least one (maximum two) perfect scores
- Nursing scores increased significantly between each time point
- Items with the biggest improvement included:
  - Correctly identified a qualitative methodology (T1, % correct=29%; T3, % correct=76%)
  - Correctly identified a quantitative methodology (T1, % correct=32%; T3, % correct=73%)



ANOVA

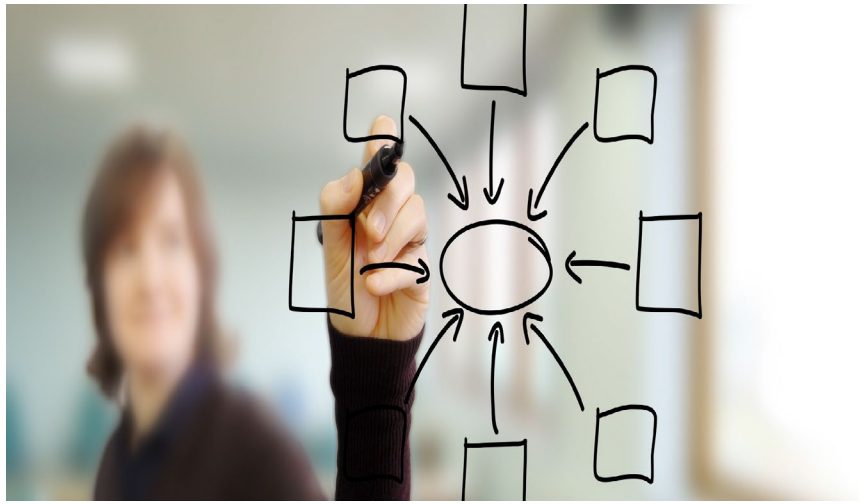
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Rows	764.5196	33	23.16726	14.03798	3.806E-19	1.612216
Columns	85.07843	2	42.53922	25.77624	5.337E-09	3.135918
Error	108.9216	66	1.650327			
Total	958.5196	101				

Conclusion

- Nurses do not inherently possess basic research knowledge or confidence
- Our research basics program supports significant increases in hospital-based RN confidence and knowledge in the research process
- Nurses offer a unique, whole-person perspective to the healthcare team and can contribute high-quality, person-centered research evidence to inform care

Implications for practice

- Educating nurses on the research process and boosting confidence may increase research outputs and support Magnet initiatives
  - More peer-reviewed publications
  - Increased number of nurse-led research studies
  - More conference presentations
- Each well-designed, clinically relevant study could help improve patient outcomes
- Future work will be completed by the team to investigate longer-term research outputs among participants in this program



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Questions?

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