

Educational Intervention to Increase Confidence and Knowledge of Pediatric Nurses Caring for Pediatric Mental Health Patients

Alexa M. Wroblewski

Dr. Allyson Neal

The University of Tennessee Knoxville

INTRODUCTION

BACKGROUND

- ▶ Mental health is vital to the wellness, development, and success of the pediatric population.
- ▶ Most mental health disorders begin in early childhood.
 - ▶ 50% occur before the age of 14
 - ▶ 75% by the age of 24
- ▶ The mental health crisis is growing.
 - ▶ Patient encounters
 - ▶ Hospital admissions

SIGNIFICANCE

- ▶ Significant impacts on childhood development
- ▶ Increasing prevalence
- ▶ Pediatric mental health is a public health issue
- ▶ Significant impacts on pediatric providers in non-psychiatric settings

SIGNIFICANCE CONT.

- ▶ 35% of admissions were related to mental health
- ▶ Identified area of burnout, need, and frustration
- ▶ No specific education or training

PURPOSE, AIMS AND GOALS

- To establish and distribute education to pediatric nurses that provides foundational knowledge in pediatric mental health diagnoses, therapeutic communication, and suggested care practices for pediatric mental health patients.

Purpose

- Increase the confidence and knowledge of pediatric nurses caring for mental health patients in non-psychiatric units in order to provide more therapeutic and knowledge-based care.

Aims

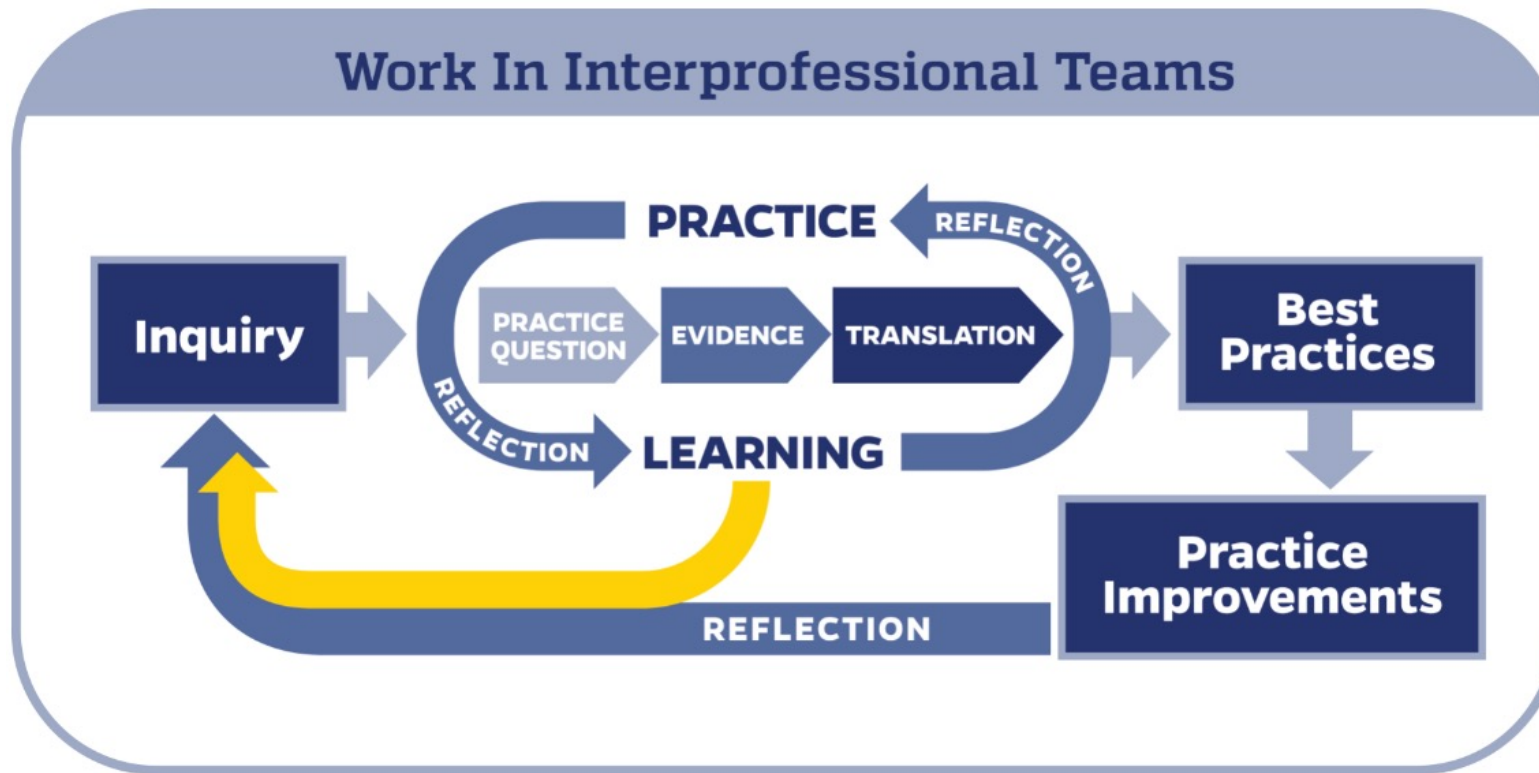
- The nurses will participate in an educational intervention based on care of the mental health patient.
- The nurses will report increased confidence and knowledge pertaining to the care of mental health patients after participation in the intervention and one month after the intervention is completed.

Goals

PICO QUESTION

In nurses caring for mental health patients awaiting transfer, how does standardized education for providing care compared to no education affect confidence and knowledge?

THE JOHNS HOPKINS NURSING EVIDENCE-BASED PRACTICE MODEL





EVIDENCE

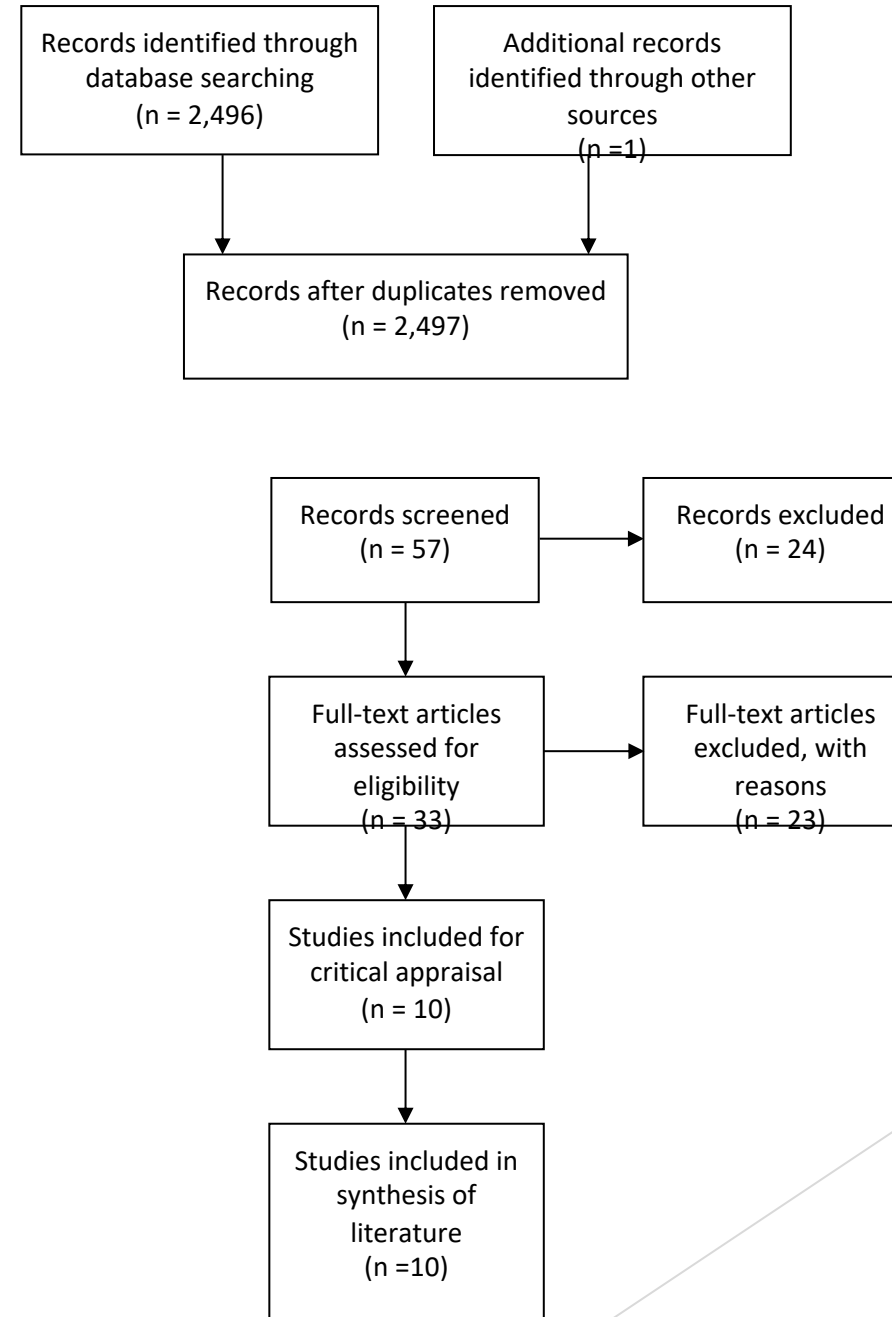
LITERATURE SEARCH STRATEGY

Identification

Screening

Eligibility

Included



CRITICAL APPRAISAL OF THE LITERATURE

- ▶ The Research Evidence Appraisal Tool and the Non-Research Evidence Appraisal Tool were used.
- ▶ 5-Level scale
 - ▶ Ranges from I-V with I being the highest
- ▶ Grade of Quality
 - ▶ A = high
 - ▶ B = good
 - ▶ C = low/major flaws
- ▶ Eight articles were included for synthesis and recommendations.

Outcome	Casey et al. 2019	Wong et al. 2018	Mitchell et al. 2020	Parant et al. 2014	Moxham et al. 2010	Bredimus 2020	Nakagami et al. 2018	Winkour et al. 2017
Confidence	↑	∅	↑ ^s	↑	↑ ^c	∅	↑ ^s	∅
Knowledge	∅	↑ ^s	↑ ^s	↑	↑ ^c	↑ ^s	↑ ^s	↑ ^s
Attitudes	≠	↑ ^s	∅	↑	∅	∅	∅	∅
Any other outcomes of interest	↓ negative effects from WPV & burnout	↑ ^{s c} interprofessional collaboration	↑ ^s retention of knowledge at follow-up	↑ in RNs embracing the principles of psychiatric nursing care	↑ ^c in RNs expressing wanting to do right by the patient & wanting to improve their understanding of MH issues to provide better care	↑ ^c RNs ability to maintain a safe environment, effectively manage conflicts, and interact with patients	↑ ^c in self-perceived skills	---
Sample Size	23 RNs/LPNs	57 Medical personnel (11 RNs)	146 professionals in a healthcare setting (55 graduate RNs, 51 RNs, 7 mental health RNs)	31 RNs	9 RNs	53 RNs (23 ER RNs, 30 nonemergency RNs)	74 participants (42 RNs)	102 (pre-test)/ 97 (post-test) RNs and allied health professionals
Level of Evidence	III	III	II	II	III	III	III	III
Quality of Evidence	A	B	A	B	A	B	B	A
Any other information important to the PICOT question	Non-psychiatric setting (medical-surgical unit)	Non-psychiatric setting (ED)	---	Non-psychiatric pediatric medical ward with “boarder” patients	Setting was in a pediatric unit, education was similar to proposed project	Non-psychiatric setting, multiple aspects of knowledge in mental health addressed	---	---

RECOMMENDATIONS FOR PRACTICE CHANGE SUPPORTED BY THE LITERATURE

- ▶ Implementation of standardized mental health education to improve nurses' confidence in caring for patients with mental health disorders or behavior.
- ▶ Implementation of standardized mental health education can improve knowledge in caring for and managing patients with mental health disorders or behavior.
- ▶ Implementation of standardized mental health education can shift attitudes of medical professionals in caring for patients with mental health disorders or behavior.

CLINICAL EXPERTISE AND PATIENT/FAMILY PREFERENCES AND VALUES

Build	Build quality, patient-centered care through a solid educational foundation in behavioral and mental health.
Establish	Establish trust between the patient and nurse in order to nurture active participation with patients and families throughout their care.
Develop	Develop an educational intervention that includes effective care and management of pediatric mental health patients.

- ▶ It is *strongly recommended* that a standardized form of mental health education be implemented to improve nurses' confidence, knowledge, and attitudes in the care and management of pediatric patients with mental health disorders or behaviors.
- ▶ It is *recommended* that a specific, concentrated form of education that is feasible, applicable, and based on area and facility needs be implemented to aid in improving nurses' confidence and knowledge of mental health care.

STRENGTH OF RECOMMENDATION

IMPLEMENTATION

Setting & Participants

- ▶ Large comprehensive medical center in the Southeastern United States
- ▶ 10 bed Pediatric Intensive Care Unit was the area of focus
 - ▶ Average of 477 admissions per year
 - ▶ 35% of admissions in 2020 were related to mental/behavioral health
- ▶ PICU & Pediatric Float Pool Nurses

Barriers

Knowledge and Skills

- Lack of knowledge and training
- Lack of available resources and policies pertaining to best practices.

Attitudes

- High levels of burnout and frustration
- Resistance to change

Resources

- Fluctuating unit census and acuity
- Perceived lack of time
- Project participation will be additional work

Facilitators

Attitudes

- Leadership team includes highly motivated and dedicated individuals.
- PICU staff and leadership have voiced the need for training and education.

Resources

- Team members and stakeholders have extensive knowledge

Environment

- Project site is a small unit with a significant percentage of patient population related to mental health.
- Staff and leadership have close professional relationships that can aid in collaboration.

SCOT Analysis

Internal Factors

Strengths

- Staff is enthusiastic to change practice pertaining to pediatric mental health.
- Manager is supportive and passionate about the population and changing practices to better support nurses.
- Project would be low cost.
- Time commitment would be minimal for nurses participating and could even be incorporated into regular shifts or could be done outside of work.
- Collaboration and teamwork are consistently listed as a positive aspect of working in the proposed project site.
- There are several potential liaisons and resources available to utilize in the development of the educational intervention.
- Interprofessional communication is excellent throughout the proposed project site due to size of the unit and staff employed.

Challenges

- Staff frustration is already high in relation to the pediatric mental health population.
- Clear and identifiable knowledge gap in nurses and providers in relation to mental health care.
- Lack of resources
- Lack of facility policies and protocols relating to pediatric mental health

External Factors

Opportunities

- Implementing mental health education to keep nurses up-to-date on current best practice.
- Further collaboration with inpatient pediatric and adult psychiatric units that are within the hospital system.
- Creating more policies for pediatric mental health.
- Education of nursing staff on current available mental health resources.
- Establishing standards of care for pediatric mental health patients at the project site.
- Offering staff opportunities outside of the project site that could aid in confidence building and self-efficacy relating to the care of mental health patients.

Threats

- Stigma associated with pediatric mental health.
- Lack of research pertaining to mental health in non-psychiatric settings.
- Lack of regulated data pertaining to pediatric mental health.
- Lack of pediatric-specific inpatient psychiatric treatment centers.
- Perceived lack of time to participate in optional educational opportunities.
- Fluctuations in patient census and acuity.
- Nurse burnout

Considerations



Ethical

IRB from project site and The University of Tennessee Knoxville determined project was exempt and was not categorized as human subjects research.

Proper disposal of data after collection and analysis.



Economic

Economic necessities deemed nonexistent due to utilizing materials already in place.

Cost-benefit analysis and return-on-investment were not deemed appropriate.

- ▶ HealthStream platform
- ▶ Modules assigned:
 - ▶ *Behavioral health communication*
 - ▶ *Behavioral health crisis management and de-escalation skills*
 - ▶ *Behavioral health therapeutic communication*
 - ▶ *Behavioral health nursing assessment skills - understanding mental illness and psychiatric disorders*
 - ▶ *Behavioral health psychotropic medications*

Educational Intervention

Modified Behavioral Health Care Competency Tool

- ▶ 19 items
- ▶ Assessed perceived confidence and knowledge amongst nurses
- ▶ High total internal reliability and good construct validity

Pre-test

Reliability Statistics

Cronbach's Alpha	N of Items
0.859	19

Mid-test

Reliability Statistics

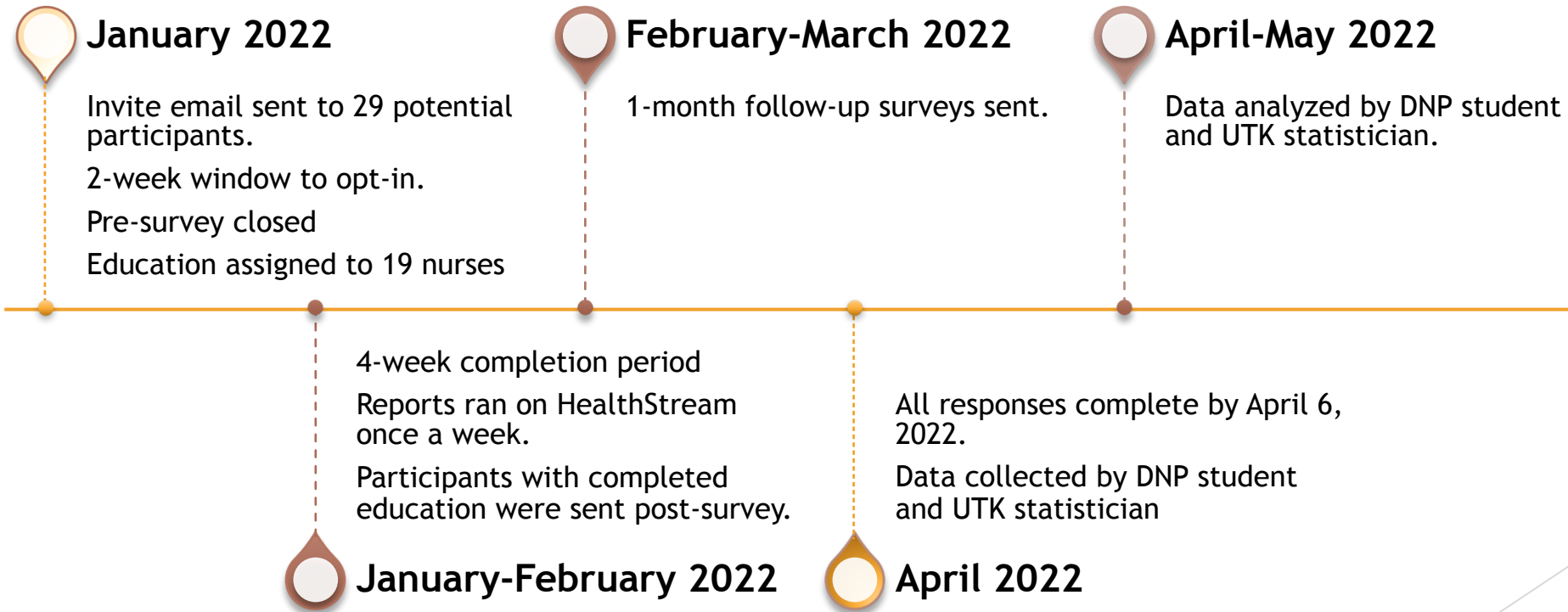
Cronbach's Alpha	N of Items
0.906	19

Post-Test

Reliability Statistics

Cronbach's Alpha	N of Items
0.934	19

Timeline



EVALUATION AND FINDINGS

Demographics - Age & Experience

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Age	18	25.00	49.00	30.0000	5.79046
Nursing experience	18	1.50	22.00	6.9506	4.78987
Valid N (listwise)	18				

Demographics - Degree

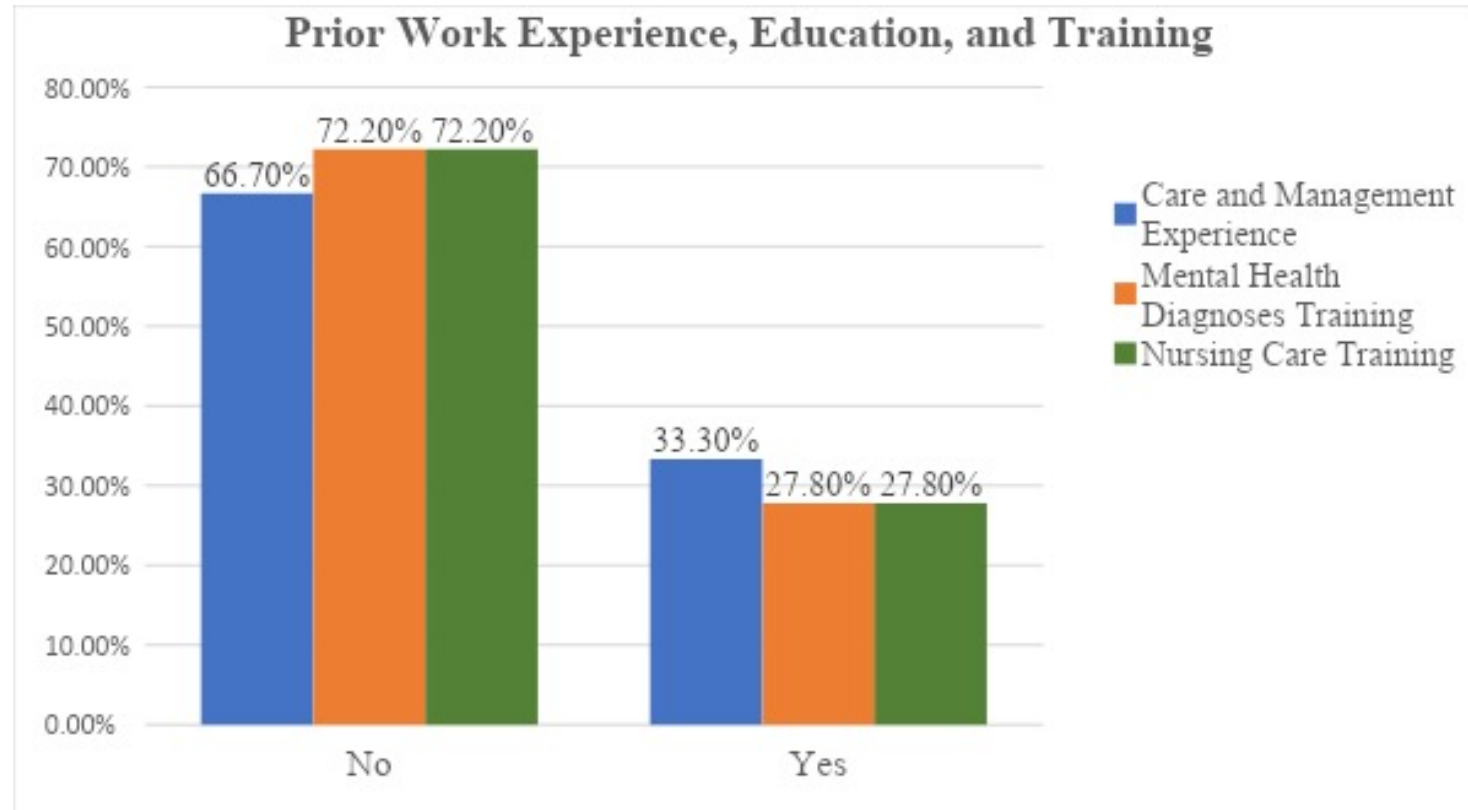
Highest level of nursing degree obtained

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Associate degree	1	5.6	5.6	5.6
	Bachelor degree	13	72.2	72.2	77.8
	Master degree	4	22.2	22.2	100.0
	Total	18	100.0	100.0	

+

row below

Prior Work Experience, Education, and Training



Statistical Analysis

- ▶ One-way repeated measures ANOVA
 - ▶ Dependent variable - Confidence/Knowledge score
 - ▶ Independent variable - Time (within subjects factor)
 - ▶ Pre-test, post-test, 1-month follow-up
- ▶ Assumptions of the test
 - ▶ No significant outliers
 - ▶ Distribution of the DV in the levels of the within-subjects factor should be approximately normally distributed.
 - ▶ Shapiro-Wilk test
 - ▶ The variances of the differences between all combinations of levels of the within-subjects factor must be equal
 - ▶ Mauchly's Test of Sphericity

Confidence and Knowledge

Pairwise Comparisons

Measure: ConfKnow

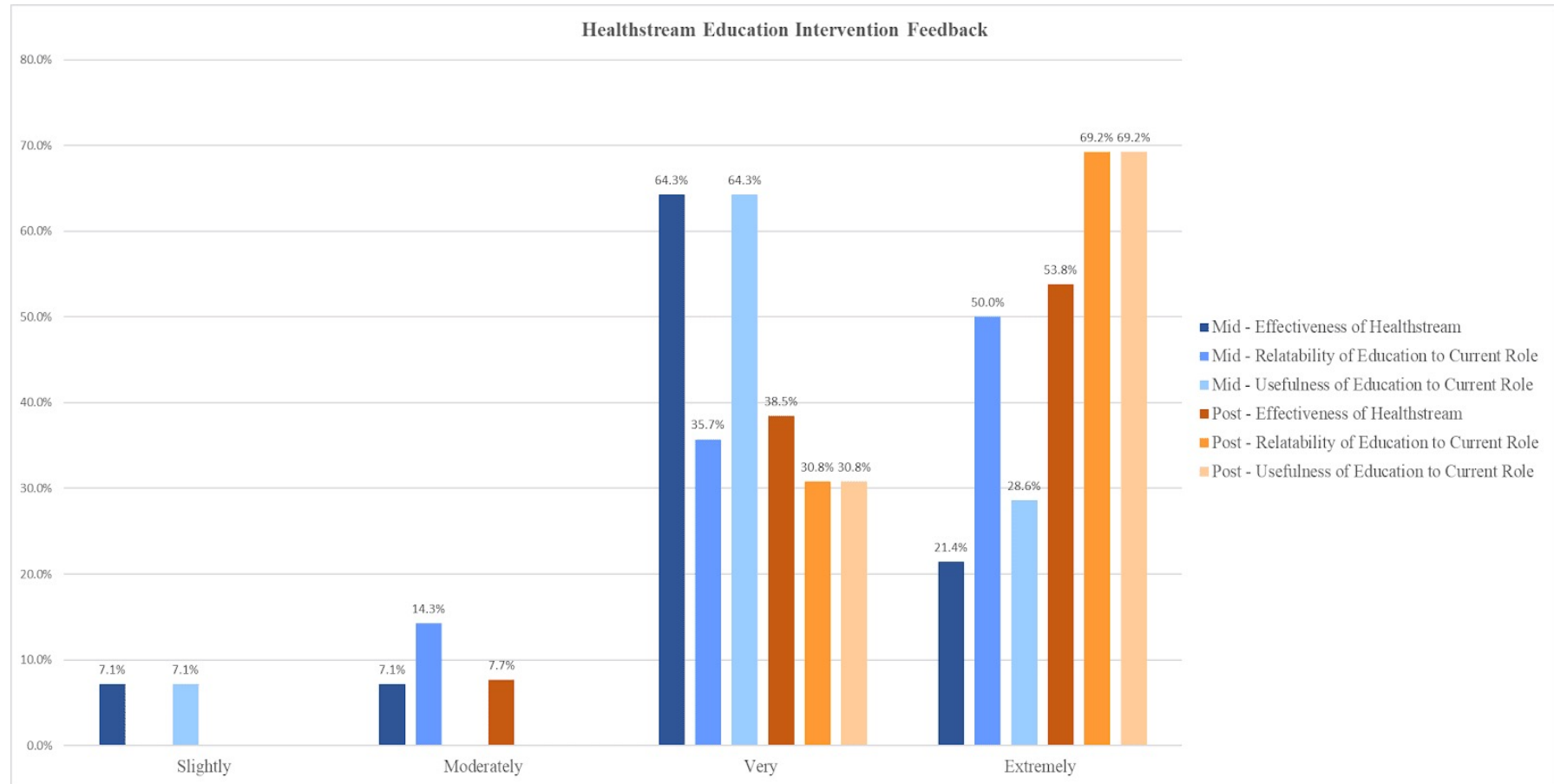
(I) time	(J) time	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
1	2	-0.866*	0.106	<0.001	-1.160	-0.573
	3	-1.109*	0.143	<0.001	-1.508	-0.711
2	1	0.866*	0.106	<0.001	0.573	1.160
	3	-0.243	0.099	0.092	-0.518	0.033
3	1	1.109*	0.143	<0.001	0.711	1.508
	2	0.243	0.099	0.092	-0.033	0.518

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Feedback on Intervention



- ▶ Information was informative and relatable but sometimes more adult-based.
- ▶ Education will be helpful for patient management.
- ▶ Education was a manageable length.
- ▶ Pediatric-focus needed.
- ▶ In-person classes or simulation

Themed Feedback - Positive or Negative

- ▶ Pediatric-specific material.
- ▶ Psychotropic medication education and resources.
- ▶ Ongoing education
- ▶ Requirements for facility-wide competency.
- ▶ Hands-on practice in a controlled environment.
- ▶ Unit-based resources

Themed Feedback - Improvements

IMPLICATIONS

Practice Implications

- ▶ An educational intervention significantly increased pediatric nurses' confidence and knowledge in caring for the pediatric mental health population.
- ▶ Providing education to nurses in non-psychiatric settings can help increase their confidence and knowledge in providing more therapeutic and knowledge-based care.
- ▶ There is still a lack of pediatric-based education pertaining to mental health care and management for nurses in non-psychiatric settings.
- ▶ There are still identifiable needs for standardization and continuing education for pediatric nurses caring for mental health patients in non-psychiatric settings.

Strengths & Limitations

Strengths

- Zero-cost intervention that aided in a positive outcome.
- Intervention is sustainable.
- Intervention can be applicable to a variety of settings.
- Educational format can be built upon for future implications.

Limitations

- Education was known to be nonspecific and not pediatric based.
- Small sample size of participants.
- Intervention was completed during normal shifts.

DISSEMINATION

Dissemination Plan

- 
- Presentation to Stakeholders

- 
- Presentation to Behavioral/Mental Health, PICU, and Pediatric Education Leadership Teams.

- 
- Manuscript Submission
 - The Journal of Nursing Care Quality



QUESTIONS?

References available upon
request

THANK YOU

The background features a series of overlapping, semi-transparent triangles in various shades of brown, tan, and orange. These triangles are arranged in a way that creates a sense of depth and movement, primarily concentrated on the right side of the frame, while the left side remains mostly white.