

Early Recognition of Pediatric Sepsis

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Introduction

- Pediatric sepsis is a life-threatening condition and one of the leading causes of morbidity and mortality for the pediatric population in the world.
- Outcomes of sepsis are highly dependent upon time and therefore early recognition is essential for the effectiveness of treatment and achievement of positive outcomes.
- Only 60% of the signs and symptoms of pediatric sepsis were recognized by RNs in a study published in the Journal for Continuing Nursing Education.

PICO QUESTION:

Does the implementation of education on early recognition of pediatric sepsis for undergraduate nursing students improve their knowledge on early recognition for pediatric patients?

Literature Research

Data Bases: CINAHL and PubMed

Search Parameters:

- Published within the last 5-7 years
- In English

Keywords:

- Pediatric, Early recognition, Outcomes, Sepsis, Sepsis rates, Sepsis presentation, Sepsis signs and symptoms

Current Evidence

- Continuous Screening of patients can help decrease negative outcomes of sepsis. When all patients are screened and monitored for sepsis from the beginning of admission there were a lower amount of sepsis cases overall and less cases were missed.
- Early recognition prompts treatment thus improving overall patient care and supports a better outcome of the patient.
- “Sepsis is estimated to account for .4% of all pediatric hospitalizations and 8% of all PICU admissions, with mortality estimates ranging from 4% to 50% across different populations” (Schub, 2018).

Educational Plan and Implementation

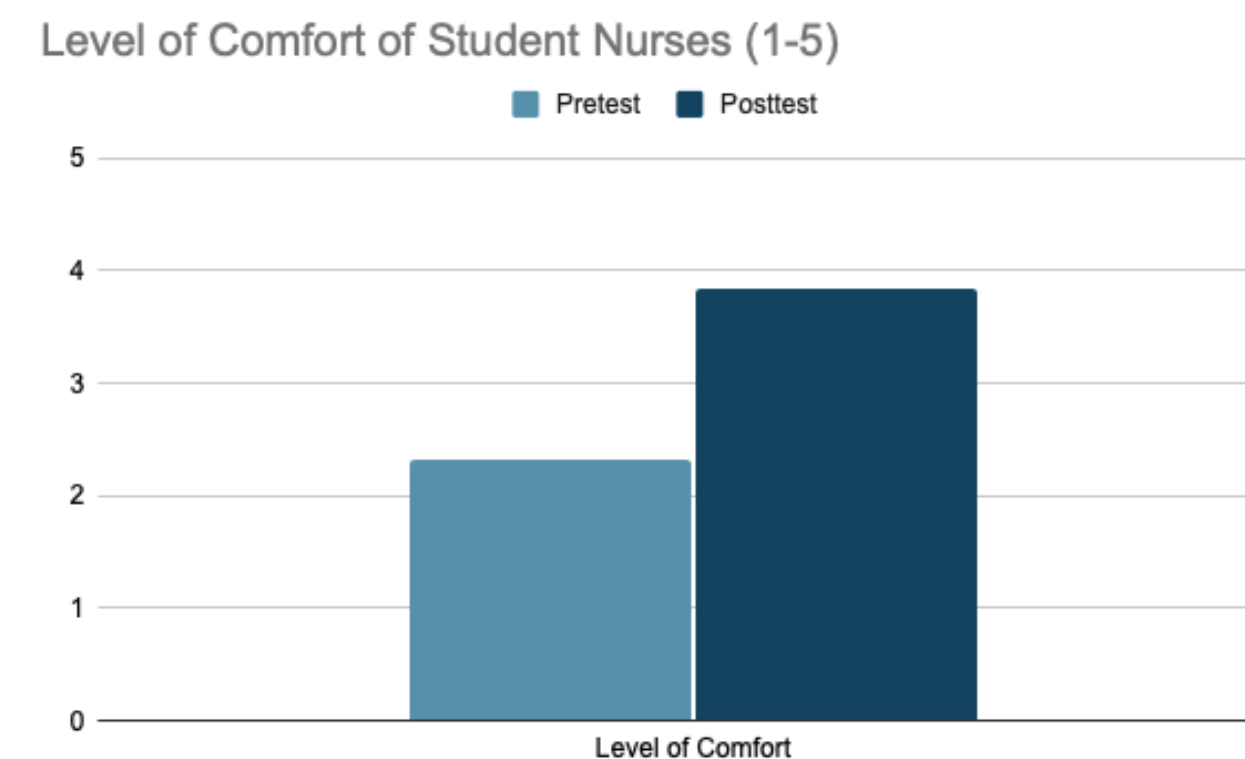
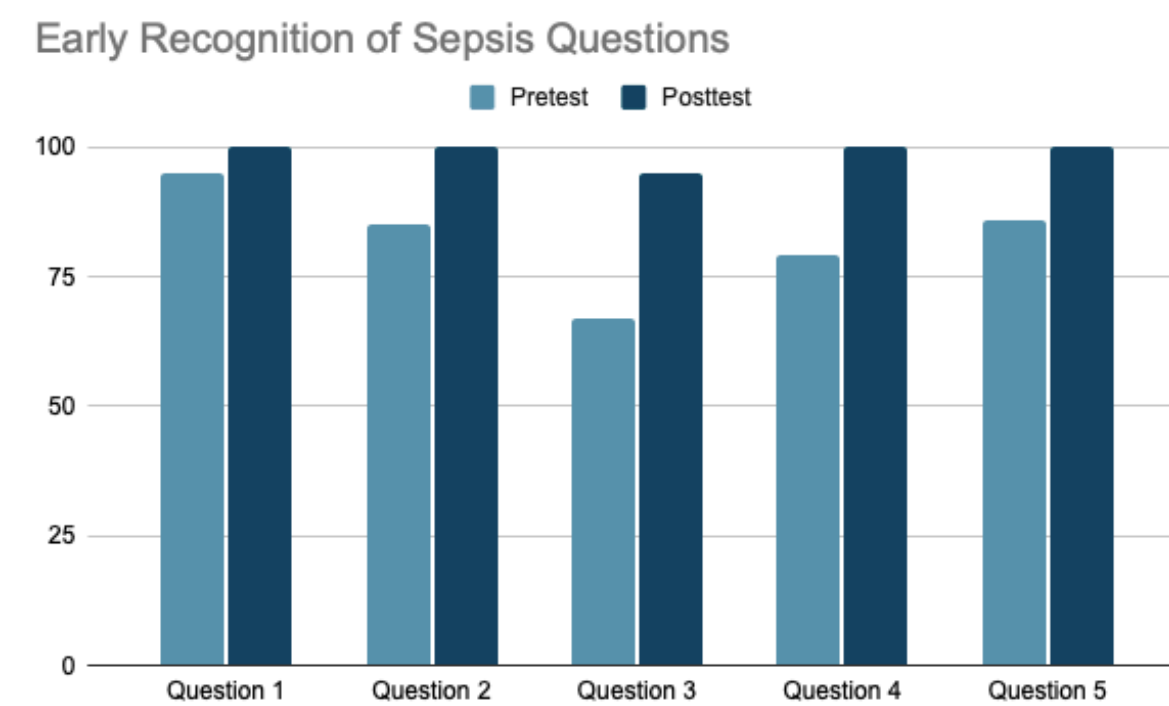
Place: University of Cincinnati College of Nursing

Presented To: Undergraduate Student Pediatric Class

Overall Purpose: To increase the knowledge and confidence of undergraduate nursing students in recognizing the signs and symptoms of pediatric sepsis in order to implement early interventions and treatments to create the highest outcomes for patients.

Objectives: Our objective is to increase the knowledge of the early recognition of pediatric sepsis at the University of Cincinnati College of Nursing. We had the students take pre- and post-tests regarding the information in our educational presentation to obtain and baseline knowledge and confidence level compared to after education was implemented.

Educational Session: We provided asynchronous educational session that was posted on CANVAS for students in their Pediatric Nursing Class to participate in. We used a narrated PowerPoint that incorporated informative slides such as the signs and symptoms of pediatric sepsis, relatable YouTube documentaries and videos, examples of recognition tools utilized by two nationally recognized pediatric hospitals, and practice questions for students to assess their own learning. Our goal was to use different teaching techniques in order to adapt to the different learning styles of students.



Results, Lessons Learned, & Feedback

Outcomes: Overall were able to conclude the nursing students has an increase in knowledge after the educational tool was implemented, demonstrated by a 20% increase in scores on the post test. We also could conclude that the students felt more comfortable being able to recognize the early signs of sepsis after our educational intervention was completed, demonstrated by a 31% increase in confidence rating. We hope that this will help increase recognition as nursing students complete their clinical rotations and enter the workforce.

Lessons Learned:

- A larger sample size would have provided more of an accurate representation of the effectiveness of our educational intervention.
- An in-person presentation, or live presentation, would have allowed for more interaction, sepsis protocols to be passed out to the students, and the students reactions to the information being taught could have been gauged.

Feedback: The presentation was available to 22 nursing students, with 21 responses at the end of the 5 days. This shows we had a 95% response rate.

Pretest and Posttest

Our Pretest and Posttest Questions:

- 1) What is sepsis?
 - a. A localized infection
 - b. An infection in the bloodstream (correct)
 - c. A bloodborne pathogen
 - d. A contagious disease
- 2) What are some symptoms of sepsis? (select all that apply)
 - a. Temperature greater than 38.5 C (correct)
 - b. WBC count >12,000 (correct)
 - c. HR < 60
 - d. RR >30 (correct)
 - e. BP 135/80
- 3) What are some cause (s) of sepsis? (select all that apply)
 - a. Urinary Tract Infection (correct)
 - b. Pneumonia (correct)
 - c. RSV (correct)
 - d. Being around someone who has sepsis
 - e. Ear Infections (correct)
- 4) Why is early recognition so important? (select all that apply)
 - a. Help start early intervention (correct)
 - b. Helps to decrease risk of mortality (correct)
 - c. Gives patients better medical care
 - d. Decrease risk of organ dysfunction (correct)
- 5) What type of patients can get sepsis?
 - a. Acutely ill child
 - b. Healthy child
 - c. Chronically ill child
 - d. All of the above (correct)
- 6) On a scale from 1-5 how comfortable do you feel you recognizing sepsis in clinical environment? (1 being not comfortable – 5 being 100% comfortable)

References

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