

Enhanced Nursing Competency through Evidenced-Based Practice (EBP) Initiatives

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Introduction

Healthcare is dynamic and ever changing. It is critical to remain relevant when preparing materials for annual nursing competencies. Competencies reveal patterns of skills, knowledge, abilities, and behaviors. Within the perianesthesia nursing specialty, there are annually reoccurring topics. Two such topics include the effects of herbal supplements (HS) on patients receiving anesthesia and the care and screening for Malignant Hyperthermia (MH).

Identification of Problem

During preparation for annual competencies for a busy Perianesthesia Division, more relevant information regarding HS and MH was discovered. Furthermore, there was a knowledge gap amongst the nurses regarding both important subjects. Two experienced nurses were willing to participate in a project to update the competencies. This provided an opportunity to increase knowledge regarding the evidence-based project (EBP) process.

Purpose

The purpose of the EBP project was to assess perianesthesia nurses knowledge on the topics of HS and MH and to revise competency modules based on current evidence. After application of the new competency modules, an increase in nurses knowledge on each subject was expected.

Question

Does using an evidenced-based process to revise annual competency modules increase nursing skills, knowledge, and abilities regarding HS and MH?

Methods

The following databases were utilized:

- PubMed
- CINAHL (Cumulative Index of Nursing and Allied Health from EBCSO)
- Joanna Briggs EBP Database
- The Cochrane Database of Systematic Reviews

The evidence was assessed for relevance, strength, and quality. Each peer reviewed article was subsequently appraised and synthesized.

55 articles concerning HS & 90 regarding MH were retrieved. 10 HS and 7 MH were deemed relevant for inclusion and utilized to create the revised competency modules.

Pre and post test intervention questionnaires were administered anonymously. Participants included perianesthesia nurses. Independent sample t-tests were used to determine if there was a significant change in mean scores between pre and post intervention.

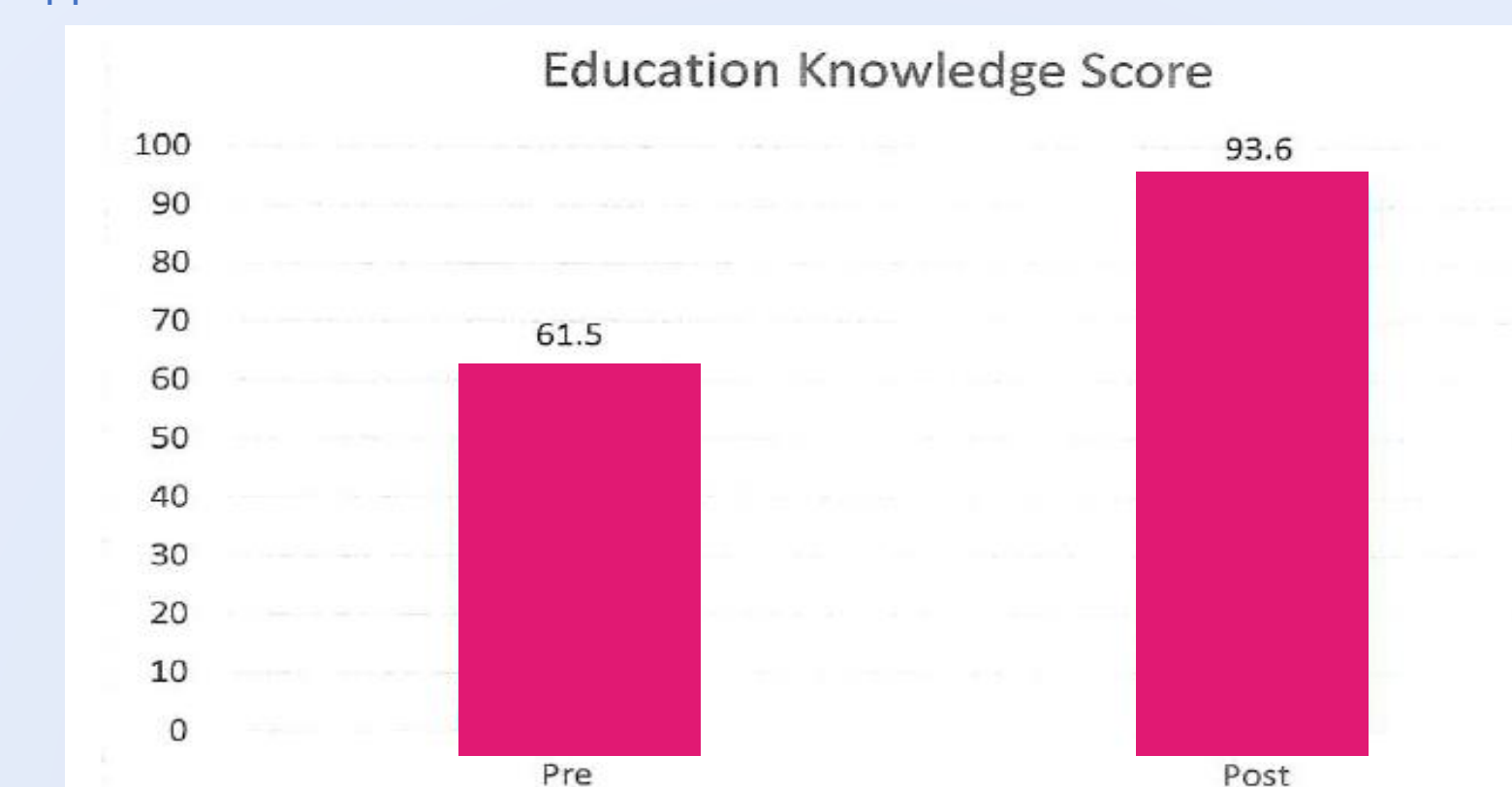
All statistics were performed with Statistical Package for Social Sciences (SPSS) 23.0 and significance is considered at $p \leq 0.05$.

Implementation

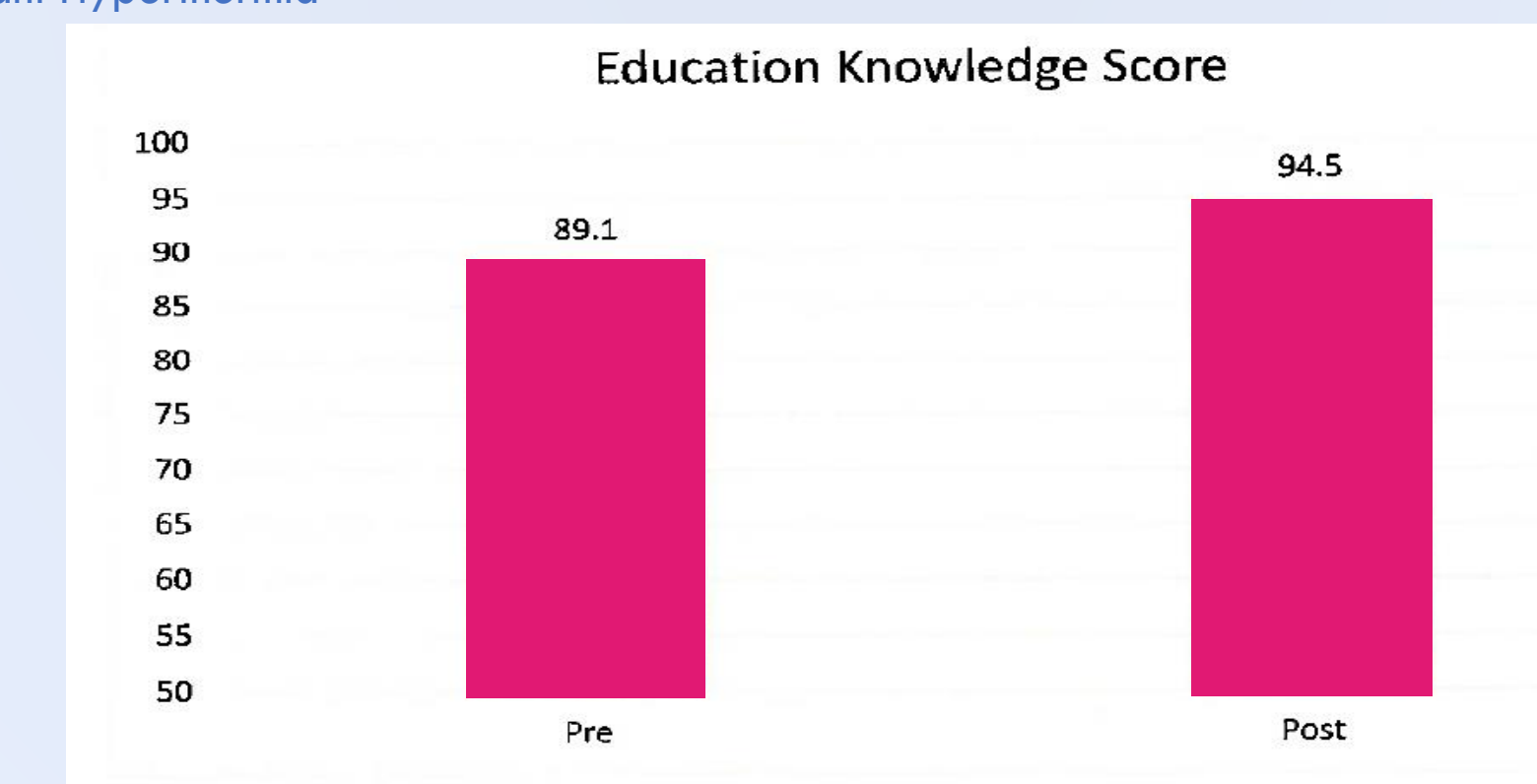
- Pre-test administered to Perianesthesia Nurses regarding HS and MH knowledge
- Literature search performed
- Evidence appraised
- Competency modules revised
- Posters, scenarios, and hands-on modalities were used during annual competencies
- Post test administered
- Data interpreted by Biostatistician
- Modules were converted to electronic platform

Results Data

Herbal Supplement



Malignant Hyperthermia



Outcomes/Results

The implementation of the evidence-based initiatives demonstrated enhanced nursing competency and statistically significant improvements in knowledge for both HS and MH. The p values of 0.001% and 0.042% indicates statistical significance. The results support using an evidenced-based process to revise competency modules thus, increasing nursing knowledge and validating competency.

Discussion

The Perianesthesia Leadership team provided support and guidance throughout the EBP process. Current literature was appraised and synthesized using a validated tool. Two modules were developed and tested during annual competency assessment. Pre and post test data were collected. The data was evaluated and interpreted by the Biostatistician. Once confirmed as an effective tool for competency validation, the modules were transferred to the in-house electronic platform. Anecdotally, the nurses verbalized increased satisfaction with the new modules and platform.

Implications for the Future

- Based on the data, utilizing an evidenced-based process to improve nursing competency increases nursing skill, knowledge, and abilities
- The project was limited to one perianesthesia nursing division in one community hospital
- Further projects and research studies to include additional hospitals or multi-sites are recommended to validate findings

Conclusion

Nursing units utilize competencies annually to validate skills, knowledge, and abilities but are often not updated with current evidence. This project proved to offer an approach by which competency modules are ensured to include the latest evidence. The learning modules proved to be successful tools for validating nursing competency. These modules met the needs of the staff and closed the identified gap in knowledge. The modules were converted to the electronic platform and are used for annual competency assessment and for newly hired staff.

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References

