A Program Development Initiative in Nutritional Pain Management

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Introduction

- Specific nutrients, foods, and supplements can be anti-nociceptive and anti-inflammatory, and they can provide and promote pain relief.
- In 2016, The United States Department of Health and Human Services released a National Pain Strategy (NPS) which made recommendations for improving overall pain care in several areas to include professional education and training programs.

Purpose

- The Primary Objective for this **Program Development Initiative in Nutritional Pain Management** was to assess the overall knowledge of nutrition on inflammation and pain in a group of Pain Fellowship Trained Certified Registered Nurse Anesthetists both before and after a comprehensive nutritional education intervention.

IRB Approval (#Pr00040267)

Background and Significance

- Project themes included: (1) Diet Promoting Inflammation and Pain; (2) Diet and Supplements Reducing Inflammation and Pain; and (3) Clinical Application of Nutritional Pain Management in Practice.
- It was anticipated that a formal educational program describing the impact of nutrition on inflammation and pain would have a positive effect for health care providers and ultimately their patients.

Background and Significance

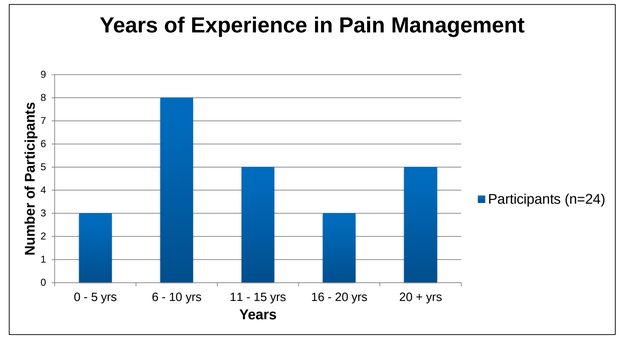
- Pain is complex and multidimensional in nature.
- Personalized multimodal approaches to pain management are more effective than unimodal approaches.
- Diet is well-recognized in managing disease states such as heart disease and diabetes.
- Nutritional interventions are generally not considered a first-line strategy for pain management.
- Pain is associated with inflammatory processes.
- Whole-body inflammatory states are caused by consumption of the Standard American Diet (SAD)
- Anti-inflammatory diets are accessible to most patients, often require minimal intervention by medical professionals, have virtually no side-effect profile, and are beneficial for patients experiencing pain.
- The public assumes that medical professionals are reasonably knowledgeable in nutrition, inflammation and disease.
- A review of literature disputes this assumption, revealing that significant nutritional knowledge gaps exist among *all* healthcare practitioners.

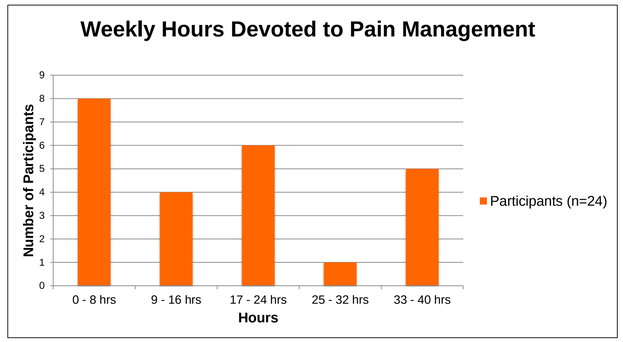
Methodology

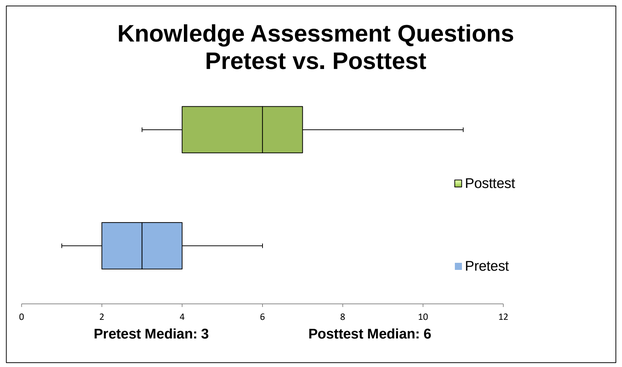
1. **Critical Appraisal of the Literature**
2. **Study Population Determined:** CRNAs who were graduate fellows of the USF Advanced Pain Management Post-Graduate Fellowship program
3. **Educational Intervention Instrument Created:** A PowerPoint presentation on Nutritional Pain Management major themes
4. **Survey Assessment Tools Created:** Demographic questions, Knowledge Assessment questions, Clinical Application in Practice questions
5. **IRB Approval Obtained**
6. **Project Deployed on SurveyMonkey:** The project remained live and open to participants on the online platform for 7 weeks

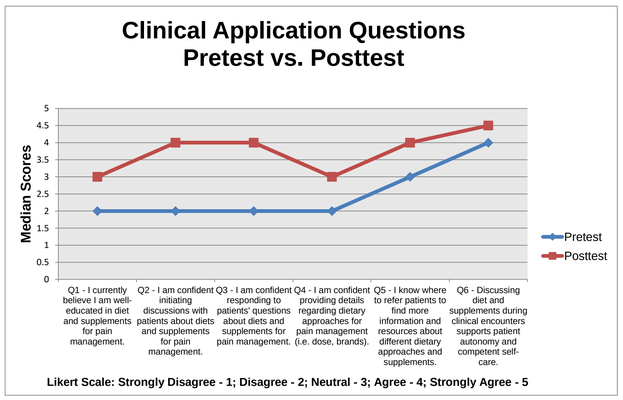
Results

- **24** participants completed the pretest and posttest questionnaires as well as the educational PowerPoint intervention.









Results

- A **Wilcoxon Signed Rank Test** was used to compare pretest median scores versus posttest median scores.
- **Knowledge Assessment Questions:** The median composite pretest raw score was 3, and the median composite posttest raw score was 6 ($p < .00001$).
- Scores on the posttest *were* improved by the educational program and *were not* due to random chance.
- **Clinical Application Questions**: 5 of the 6 clinical application questions demonstrated *significant improvement* after the educational intervention.
- Question 6 (“Discussing diet and supplements during clinical encounters supports patient autonomy and competent self-care”) was *not significantly different*.
- **Internal reliability and consistency** of the 6 **Clinical Application in Practice** questions was evaluated with a Cronbach’s Alpha. Pretest score was 0.833, and the posttest score was 0.923.
- These coefficients identify internal consistency for the test items and are considered to be excellent.

Discussion

- Knowledge deficits are clearly recognized among healthcare professionals.
- The **Stetler Model of Research Utilization** was the framework used to assist with the application of these clinical findings into practice.
- Organizational elements as described by the Stetler Model are needed to support and inform evidence-based practice initiatives at the organizational level.
- Creation of a formal change within an organization and implementation of findings into educational platforms was a significant part of this program development initiative.
- USF CON has incorporated this educational instrument into courses for both undergraduate and graduate-level nurses.

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References

References are available upon request.

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