Guided Imagery and Sentinel Lymph Node Biopsy Pain

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"I have neither given or received, nor have I tolerated others' use of unauthorized aid."

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Project Significance

Breast cancer most common cancer among females (American Cancer Society [ACS], 2018.; Centers for Disease Control and Prevention [CDC], 2020; World Cancer Research Fund, 2020)

Current attempts to alleviate pain during SLN injections have been ineffective.

Breast cancer patients at facility site are deeming this procedure to be most uncomfortable.

Adheres to American Nurses Association's position statement regarding pain (ANA, 2018).

Inline with The National NAPBC standards (ACS, 2018).

PICOT Question

Do women diagnosed with breast cancer, undergoing sentinel lymph node radioisotope injection (**P**), report less pain during the procedure (**O**) when using guided imagery (**I**) compared to women who do not use guided imagery (**C**) over a 4-month implementation period (**T**)?

Review of the Literature

Evidence	Database/Source	LOE/Quality
(Álvarez-García & Yaban, 2020)	CINAHL	Level I A
(Charalambous et al., 2019)	CINAHL	Level I A
(Chen et al., 2015)	Cochrane Library	Level II A
(Giacobbi et al., 2015)	CINAHL	Level I B
(Gonzalez et al., 2010)	CINAHL	Level I A
(Noergaard et al., 2019)	Joanna Briggs Institute EBP database	Level II A
(Peerdeman et al., 2016)	CINAHL	Level II A
(Serra et al., 2012)	CINAHL	Level II A
(Stoerkel et al., 2018)	Cochrane Library	Level I B
(Zech et al., 2016)	CINAHL	Level I A

Johns Hopkins Evidence Appraisal Tools (Dang & Dearholt, 2017)

Decision to Change Practice

- GI beneficial for pain management. (Alarez-Garcia, 2020; Charalambous et al., 2019; Chen et al., 2015; Giacobbi et al., 2015; Gonzalez et al., 2010; Peederman et al., 2016; Stoerkel et al., 2018; Zech et al., 2016)
- GI effective in the mitigation of pain, not its elimination. (Giabcobbi et al., 2015; Noergarrd et al., 2019; Serra et al., 2012)
- GI cost effective and feasible to implement.
- GI was found to be a viable intervention for pain mitigation within this procedural setting.

Implementation

Model followed: Johns Hopkins Nursing Evidence-Based Practice (JHNEBP) (Dang & Dearholt, 2017).

Participants: All SLN patients who presented to the NAPBC surgeon's office.

Educational pamphlet on GI provided.

Implementation

Participants contacted by DNP student.

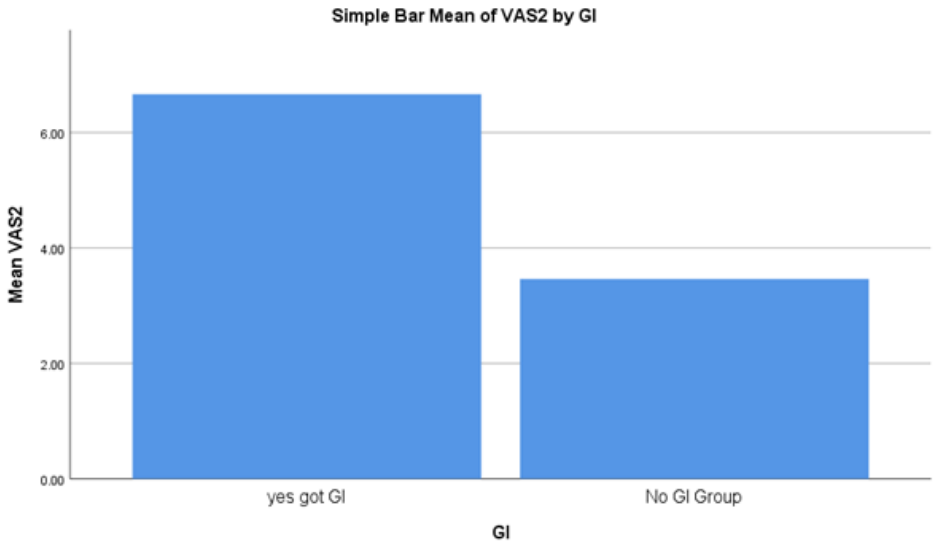
Intervention group received 5-minute session of GI immediately prior to SLN injection.

Procedural pain scores were recorded via VAS for later comparison to pre-project group who did not receive GI.

Data Analysis & Evaluation

- Students *t-test* analysis was used to compare post procedural pain ratings of the GI intervention group (n = 6) to the scores of the non-GI comparison group (n = 13).

- The GI group did not report less perceived pain compared to the non- GI group (t = 2.864, p = 0.012).



Data Analysis & Evaluation

Race	Age	Marital Status	Employment status	Pain Score
AA	70	married	unemployed	7
AA	45	single	unemployed	6
C	59	married	employed	5
C	65	divorced	retired	5
C	62	divorced	unemployed	10
C	76	married	retired	7

AA* African American C* Caucasian

Demographics of Interventional Sample

AGE & PAIN SCORES

No significant correlation noted between age and pain ratings among the two groups. (r (2) = .221, p < 0.05).

Conclusions & Recommendations

The mean pain score for the GI group was 6.67 (SD = 1.86) with a mean score of 3.46 (SD = 2.96) for the comparison group.

This intervention was feasible, cost effective, and posed no delay in daily operations. Patients receptive to GI.

Further research would be useful in exploring how GI could be used within other procedural settings using larger sample sizes.

Guided Imagery and Sentinel Lymph Node Biopsy Pain

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Significance of Problem:

- Current attempts to alleviate pain during SLN injections have been ineffective, despite subcutaneous anesthetization.
- Breast cancer patients at this facility are deeming this procedure to be most uncomfortable.
- Breast cancer is the second most common type of cancer diagnosed in U.S. females and the second most prominent cause of cancer related death after lung cancer (Centers for Disease Control and Prevention [CDC], 2020).

PICOT:

Do women diagnosed with breast cancer undergoing SLN injections report less procedural pain during SLN injections than women who do not use GI over 6 months?

Analysis of Literature via JHNEBP research evidence appraisal tools

(Dang & Darnholt, 2017)

Evidence	Database/Source	LOE/Quality
(Álvarez-García & Yaban, 2020)	CINAHL	Level I A
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(Zech et al., 2016)	CINAHL	Level I A

Best Practices:

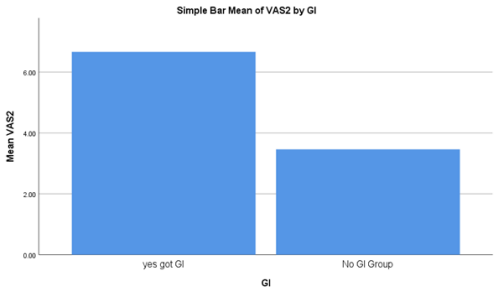
- Moderate level evidence within each of the studies supports GI as being beneficial for managing pain.
- GI effective in the mitigation of pain, not its elimination.
- GI cost-effective, timely and feasible to implement.
- GI was found to be a viable CAM for pain mitigation within this procedural setting.

Implementation:

- Model followed: Johns Hopkins Nursing Evidence-Based Practice (JHNEBP).
- All available SLN patients presenting to the participating NAPBC surgeon's office located at a tertiary care center in Central Illinois were contacted and consented to participate.
- Educational pamphlet on GI provided.
- Participants were provided with a 5-minute session of GI immediately prior to SLN injection.
- Procedural pain scores were recorded via VAS for later comparison to pre-project group who did not receive GI.

Evaluation: Primary Outcome

- Students *t-test* analysis was employed to compare post procedural pain ratings of the GI intervention group (n =6) to the scores of the non-GI comparison group (n=13).
- The statistical outcome between the intervention and comparison group was not significant in determining that the GI group reported less perceived pain (t = 2.864, p = 0.012).



Conclusion & Recommendations:

- Mean pain scores were not lower within the GI group. However, the sample size of the intervention group was less than half of the comparison group.
- The mean pain score for the GI group was 6.67 (SD = 1.86) with a mean score of 3.46 (SD = 2.96) for the comparison (non-GI) group.
- This intervention was feasible, cost effective, and posed no delay in daily operations. Patients receptive to GI.
- Further research would be useful in exploring how GI could be used within other procedural settings using larger sample sizes.

Acknowledgements: Faculty Advisor Jeffrey Coto, DNP, MS-CNS, RN, CCRN, NABPC Facility Surgeon, Breast Navigator and participants

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