

Decreasing Pain Intensity in Patients with Cancer Through Music Listening Therapy: A Complementary Non-Pharmacological Approach

Leighann B. Montoya DNP, APRN, AGPCNP-BC
DNP Project Advisor: Dorothe Durosier Mertilus Ph.D., DNP, APRN, AGNP-C

PROBLEM STATEMENT

- 1 in 3 patients with cancer continues to report moderate to severe pain¹**
- Pain has a negative impact on the quality of life of patients with cancer
- National Comprehensive Cancer Network guidelines support complementary health interventions, such as music-listening therapy.^{2,3}
- Music listening therapy is a passive, receptive therapeutic intervention that can positively impact pain, anxiety, depression, shortness of breath, and mood.⁴

PROJECT PURPOSE

- Project Purpose:** To decrease pain intensity perceived in adult patients with cancer whose pain is not currently controlled using pharmacological interventions alone
- Overarching aim:** To provide a method for decreasing pain intensity in patients with cancer by using music listening therapy as a self-guided complementary intervention
- Clinical Question:** In adult patients with cancer experiencing moderate-to-severe pain, does the addition of music listening therapy decrease pain intensity when compared to pharmacotherapy alone within a three-month period?

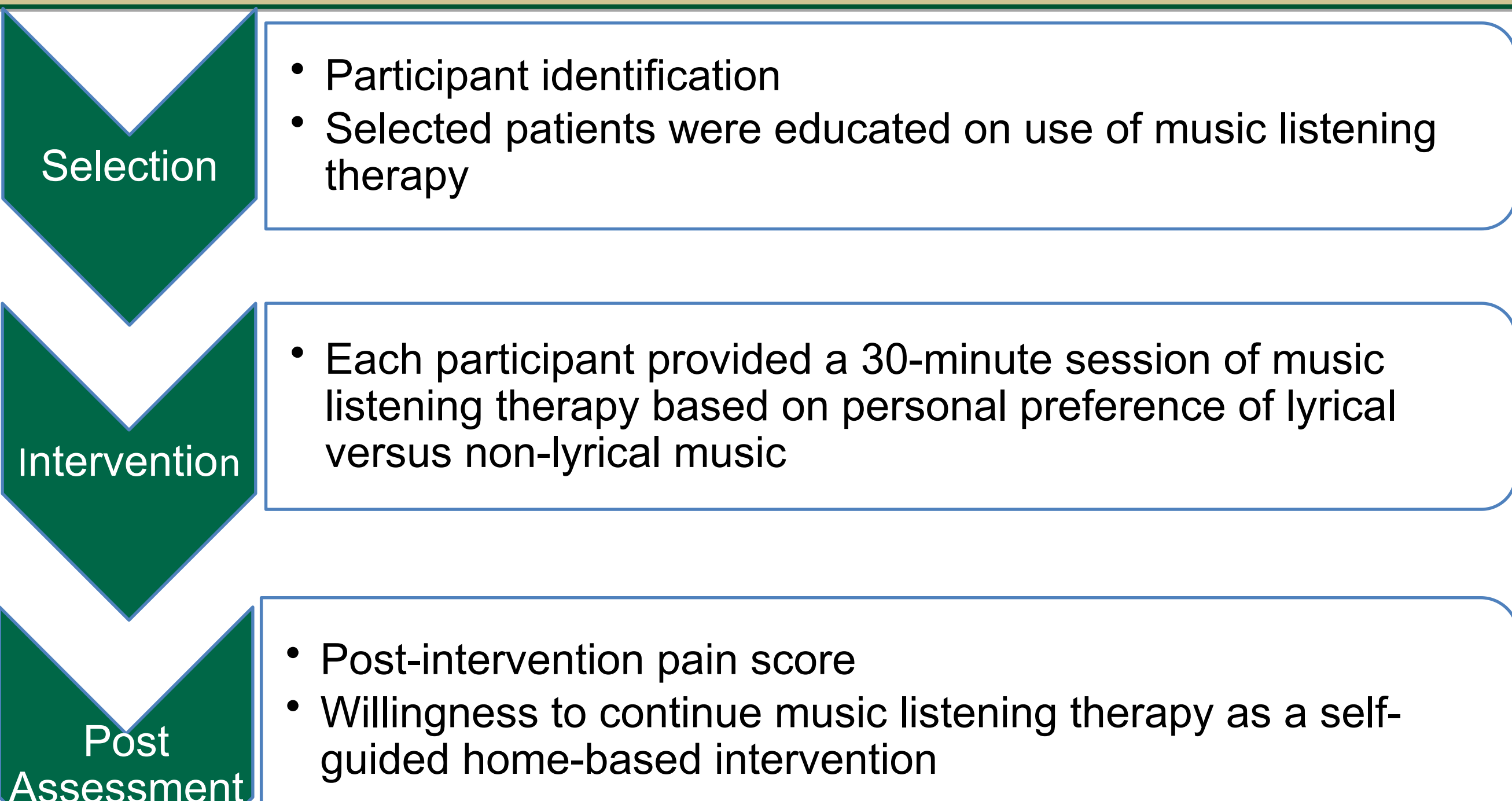
MODEL/NURSING THEORY

- Kolcaba Comfort Theory:** This middle-range theory supports using complementary measures to improve patients' physical condition.⁵
 - **Relief:** Music listening therapy is utilized to decrease pain perception.
 - **Ease:** Improved pain decreases accompanying anxiety
 - **Transcendence:** Ability to move past the pain⁶

METHODS

- Participants:** 12 adult patients with cancer experiencing moderate to severe pain at the intervention time
- Setting:** Single outpatient rural hematology oncology clinic
- Instruments/Tools:**
 - Numeric Rating Scale (NRS) to assess pain intensity
 - ❖ NRS = 11-point scale, 0 = no pain, and 10 = worst pain⁷
 - Additional information: Age, gender, cancer diagnosis, current/past pharmacological methods, and type of music selected

INTERVENTION AND DATA COLLECTION



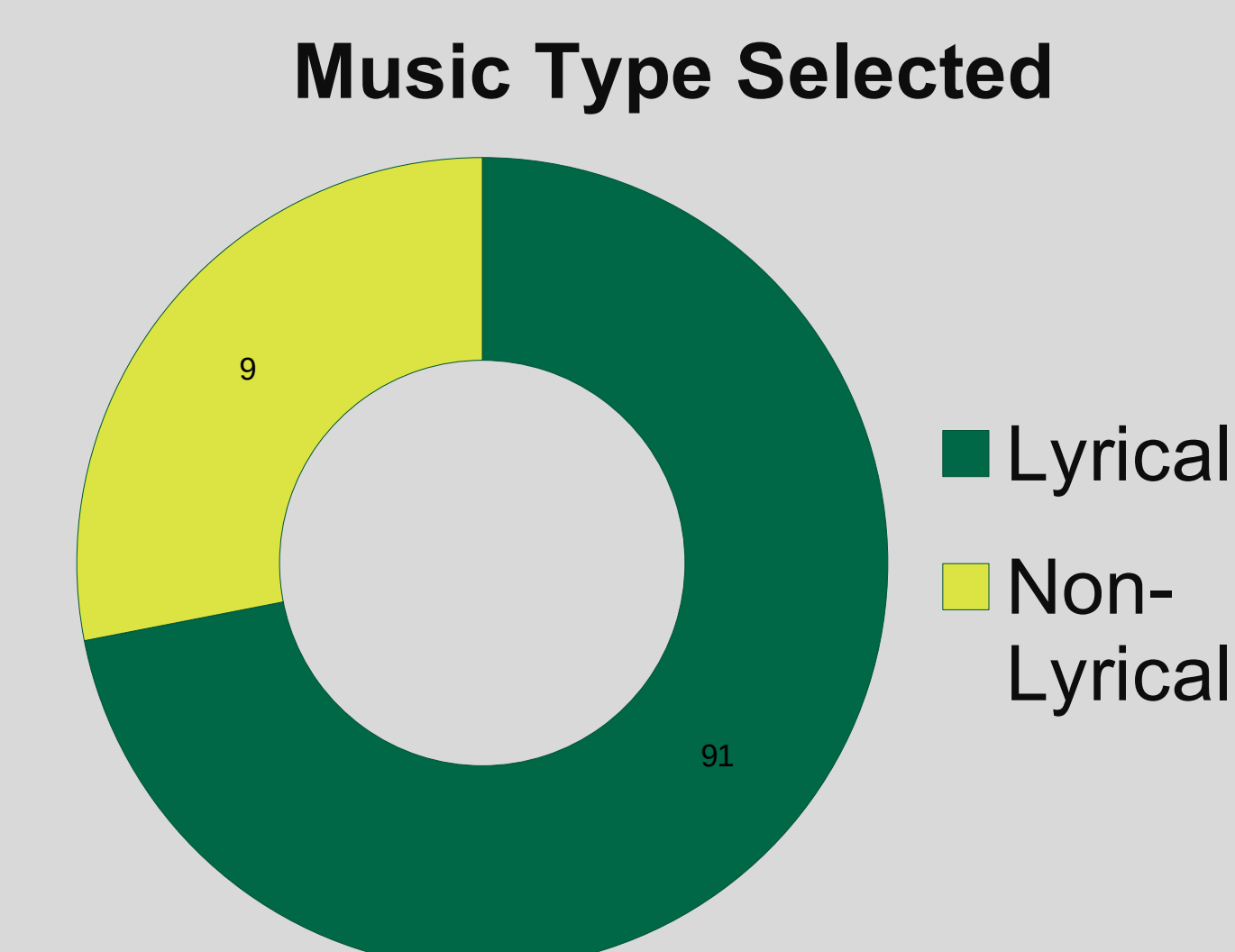
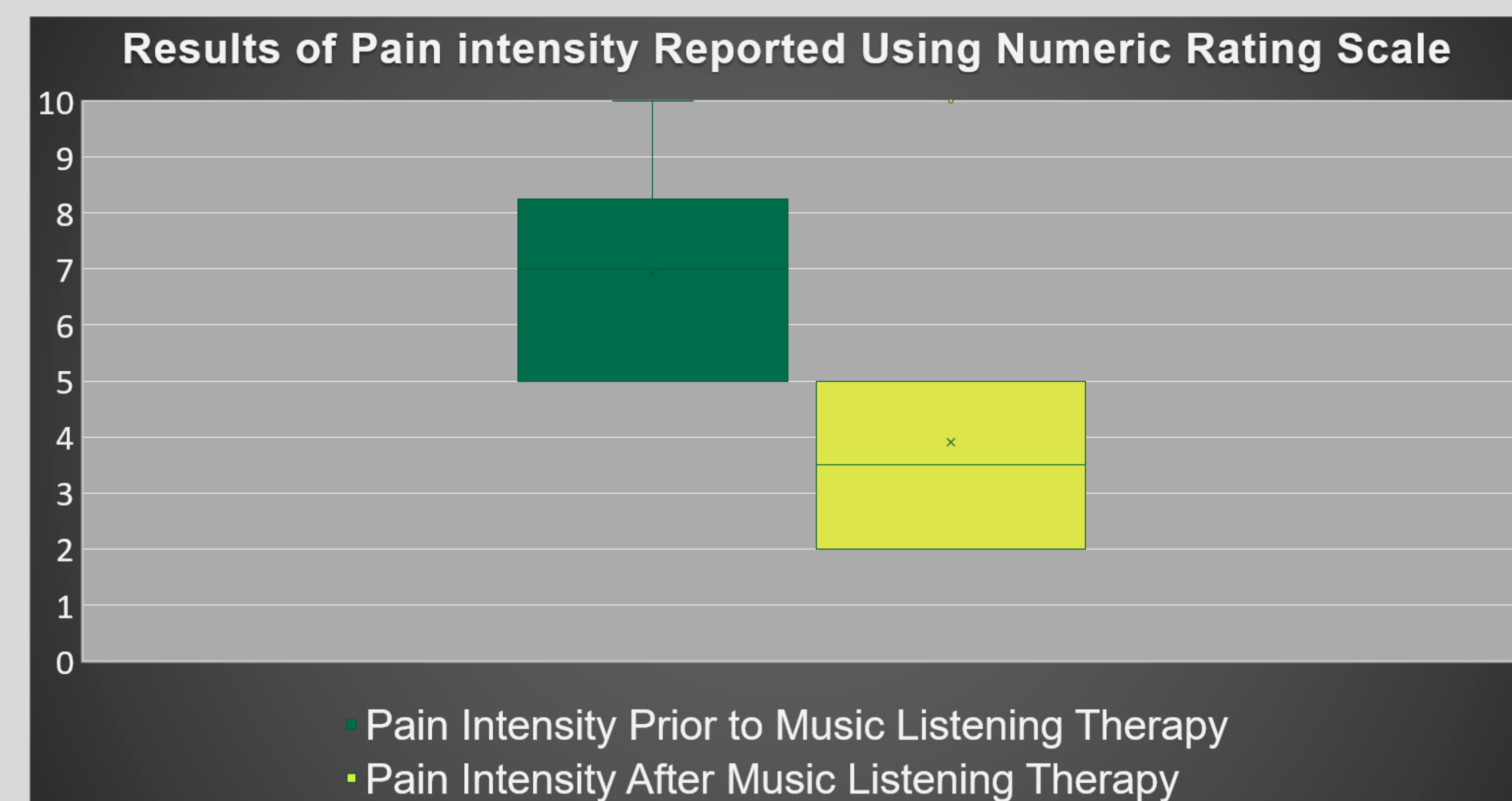
Overall response of participants by Numeric Rating Scale (NRS)

Overall Pain	<i>n</i>	Improvement by ≥ 1 Pain Level	Improvement by ≥ 2 Pain Levels	% Meeting Pain Goal	Willing to Continue at Home
Moderate (4-6)	5	4	0	80%	100%
Severe (7-9)	5	5	0	100%	100%
High (10)	2	1	1	50%	100%

RESULTS

83% of participants reported a reduction in pain intensity by at least one pain level after using music listening therapy.
100% of participants expressed a willingness to continue the intervention at home as a self-guided technique to reduce pain severity.

- There was a statistically significant difference in pain levels before and after the intervention ($p < .01$).
- These findings are clinically significant as there was considerable improvement in pain for patients without altering their existing treatment plan.



DISCUSSION

- Sample size is impacted by several barriers:
 - Patients' willingness to try complementary interventions for pain
 - Patients' ability to stay for intervention
 - Historical event: Natural disaster (i.e., Hurricane Ian and Hurricane Nicole)
- Complementary interventions may be combined with any treatment plan to assist with improved pain management. A reduction in pain intensity is strongly correlated with improved quality of life (QOL).^{6,8}
- Current standards for inpatient and outpatient care consider pain and QOL to be a marker in recovery and treatment tolerance.⁹
- This evidence-based practice project implemented the use of music listening therapy intervention in an outpatient environment. Music listening therapy may be effective in both inpatient and outpatient oncology settings.⁴
- Advanced practice registered nurses should incorporate all aspects of care affecting outcomes in treating patients with cancer.^{9,10}

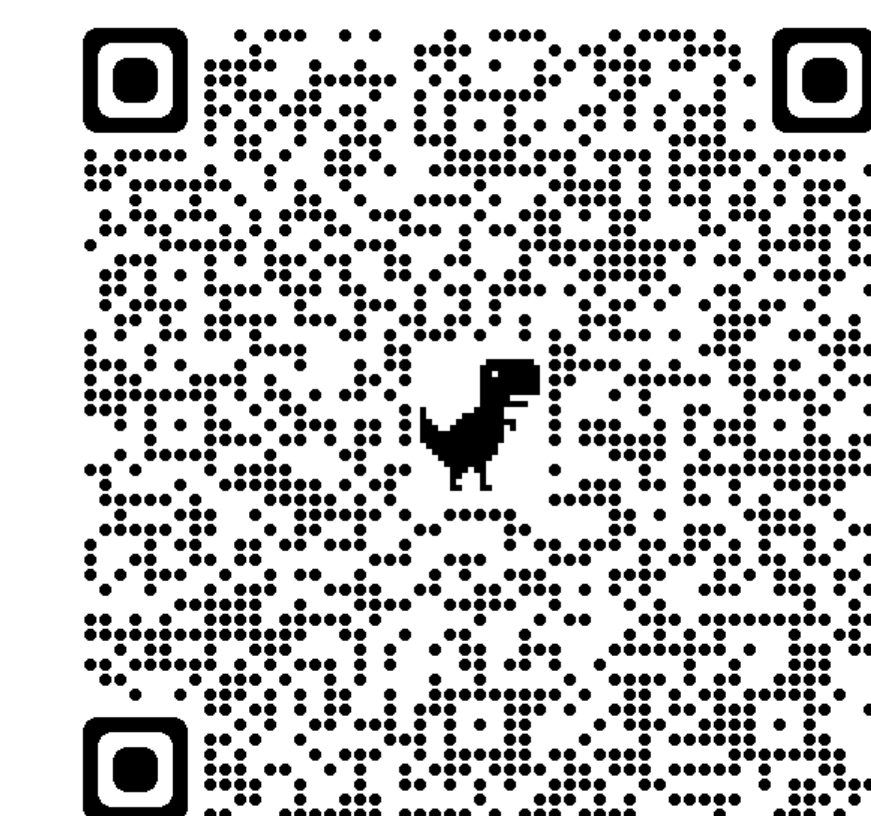
IMPLICATIONS FOR ADVANCED PRACTICE NURSING

- Music listening therapy represents a cost-effective, low-risk intervention with few barriers that can substantially improve the severity of pain.¹¹
- Using complementary interventions for decreasing pain severity is significant to scholarly and professional nursing due to the direct effects of nursing-specific interventions.¹²
- Results of this project show how using Music Listening therapy can decrease the severity of pain perceived by adult patients with cancer.
- Music listening therapy should be supported as a complementary intervention that can impact QOL through improved pain management and other pharmacological management methods.^{6,13,14}

SUSTAINABILITY

- This intervention may be sustained by incorporating the DNP project materials about music listening therapy into the current patient education program.

REFERENCES



Music listening therapy is a viable option that should be offered as part of patient education throughout the plan of care for managing pain in adult patients with cancer.