

Incorporating Music Therapy in the Management of Cancer Pain at an Acupuncture Practice

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PROBLEM STATEMENT

- Pain affects more than 70% of cancer patients
- Cancer related pain can be challenging to treat
- Complementary alternative medicine (CAM) is a non-opioid approach to pain management and includes acupuncture and music therapy
- Will incorporating music therapy to acupuncture result in decreased pain scores when compared to acupuncture only in adult cancer patients?

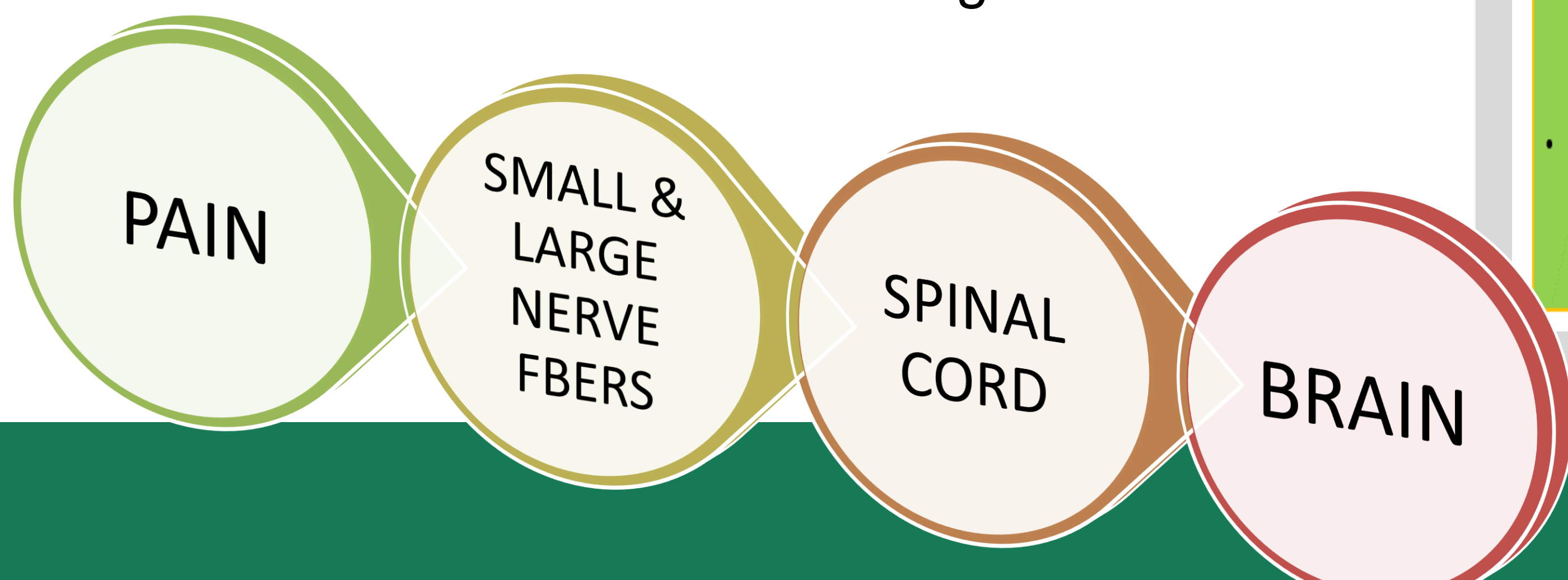
PROJECT PURPOSE

To implement and evaluate the impact of dual therapy (combining music therapy with acupuncture) on pain intensity scores at an acupuncture practice

THEORETICAL FRAMEWORK

The Gate Control Theory

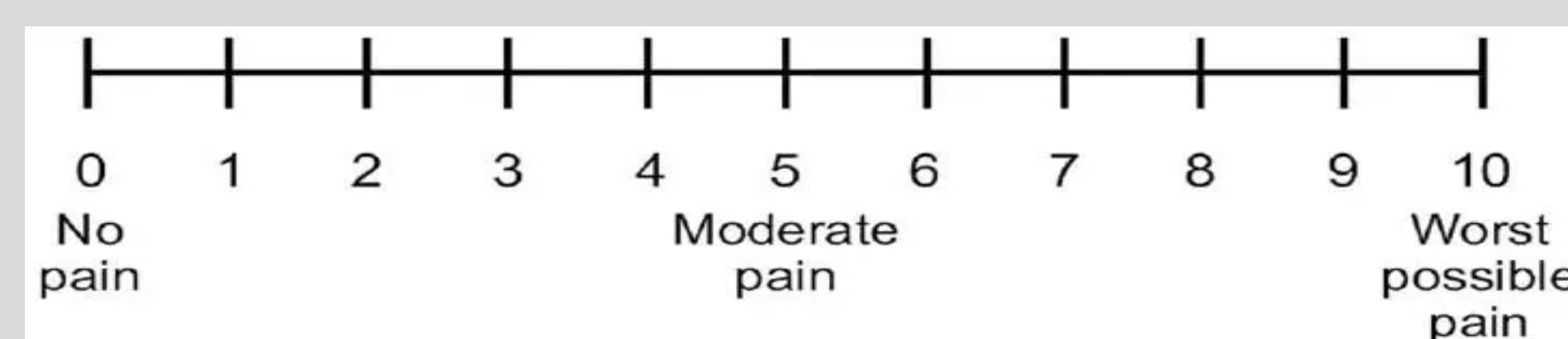
- Afferent nerve fibers transmit pain signals from the injury to the dorsal horn in the spinal cord
- The small fibers are pain fibers
- Pain increases as small fibers widens
- Psychological factors impact perception of pain
- Pain signals encounter gates
- Stress, tension, anxiety, inactivity and fear opens the gates
- Pain medications, acupuncture, music therapy, and other CAMs work to close gates



METHODS

- **Participants:** Adult cancer patients 18 years and older with cancer pain and using acupuncture
- **Setting:** Private office of a Doctor of Oriental Medicine using Acupuncture
- **Measures:** Pre and post pain scores using the NRS pain scale
- **Intervention & Data Collection:**
 - Demographics and pain scores were collected pre and post acupuncture sessions for 12 weeks.
 - Six weeks for implementation of pain score assessment
 - Six weeks for implementation of dual therapy with music and acupuncture session

NUMERIC RATING SCALE



PROJECT TIMELINE



RESULTS

Table 1. Demographics and Clinical Characteristics of Participants by Treatment Groups

Covariate	Level	Group		Parametric P-value*
		Acupuncture N=50	Dual Therapy (Music) N=52	
Age Group	35-44	14 (28)	7 (13.46)	0.276
	45-54	9 (18)	10 (19.23)	
	55-64	10 (20)	10 (19.23)	
	above 65	17 (34)	25 (48.08)	
Gender	Male	15 (30)	20 (38.46)	0.383
	Female	35 (70)	31 (59.62)	
Race/Ethnicity	NH- Asian	4 (8)	4 (7.69)	0.283
	NH- Black	4 (8)	5 (9.62)	
	NH- Caucasian	29 (58)	37 (71.15)	
	Hispanic	10 (20)	6 (11.54)	
Cancer Diagnosis	Hematologic Malignancies	4 (8)	8 (15.38)	0.786
	Solid Tumor Cancers	46 (92)	44 (84.62)	
Cancer Pain	Yes	40 (43.48)	52 (56.52)	<.001
Opioids	Yes	12 (42.86)	16 (57.14)	0.444
Pain score pre-treatment	Mean (SD)	7.68 (1.58)	7.37 (1.68)	0.333
Pain score post-treatment	Mean (SD)	2.78 (1.96)	2.9 (1.9)	0.747

Table 2. Types of Treatment and Comparison between Groups

	Pretreatment Score (SD)	Post Treatment Score (SD)	Difference (SD)	P-Value
Acupuncture	7.7 (1.6)	2.8 (2.0)	4.9 (1.8)	<.0001
Dual Therapy	7.4 (1.7)	2.9 (1.9)	4.5 (1.2)	<.0001
Acupuncture vs Dual Therapy	0.3	-0.1	0.4	0.25

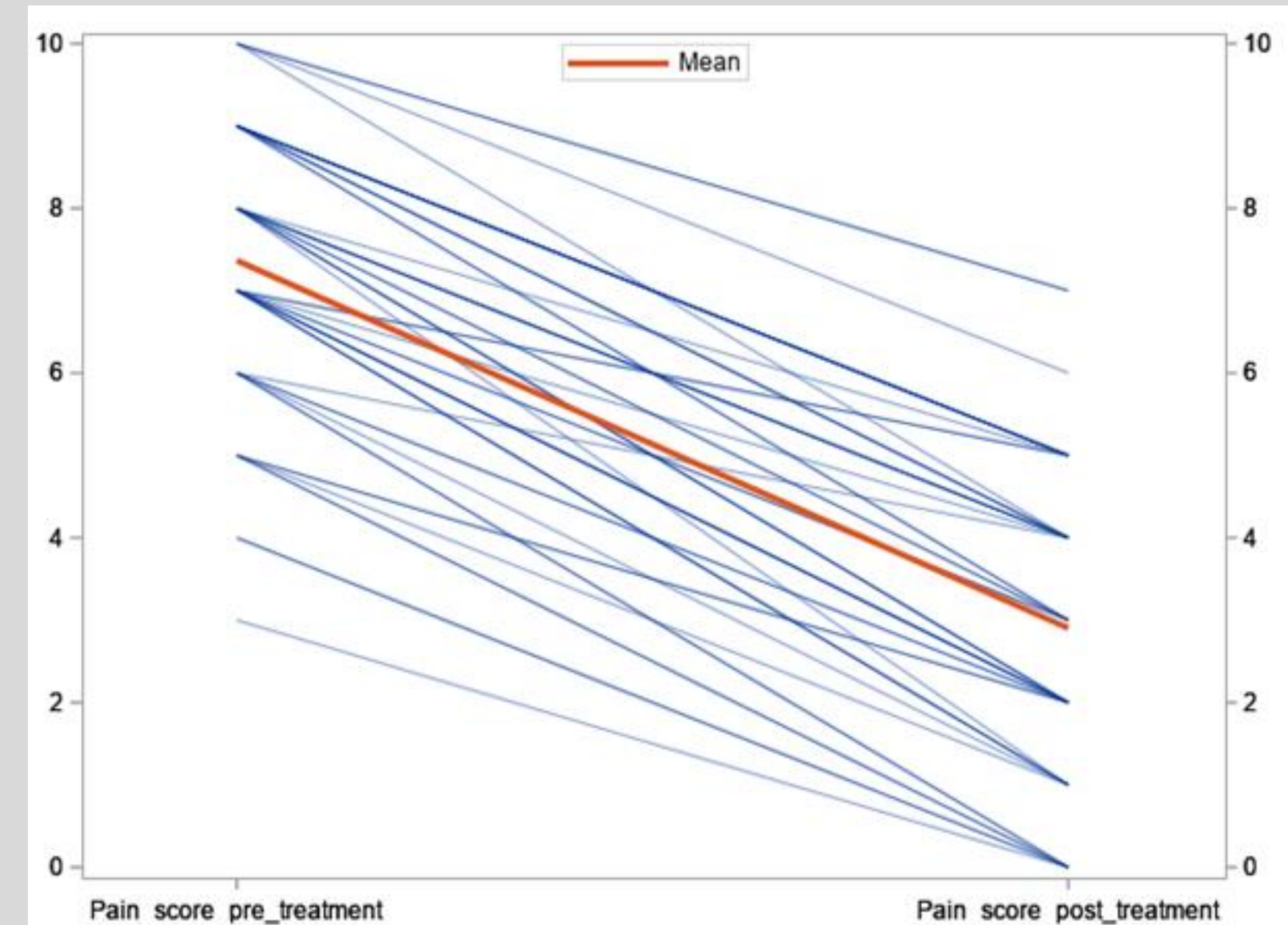


Figure 1. Pre and Post Treatment Pain Scores for the Dual Therapy Group

DISCUSSION

- Mean pain score for the acupuncture only group was slightly higher than the dual therapy
- Post treatment scores for both groups were lower than pre-treatment scores
- Comparison of the difference in pain scores between groups were not statistically significant.

LIMITATIONS

- Small sample size and short duration
- Lacked generalizability
- Financial limitations (fee for service)
- Social bias (acupuncturist collected data)
- This project only focused on pain intensity

IMPLICATIONS FOR PRACTICE

- Treating cancer related pain is challenging
- CAMs are effective in treating pain
- Future studies should investigate the effects of Dual Therapy on other outcomes

SUSTAINABILITY

- This project will be sustained as it will be integrated into the daily workflow process of the acupuncture clinic
- The student can also present the findings of this project as a form of continuing education during grand rounds at a cancer center

REFERENCES



ACUPUNCTURE AND MUSIC CAN IMPROVE CANCER PAIN