



# A Non-Pharmaceutical Approach to Preoperative Anxiety

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## Purpose

The purpose of this project was to evaluate the impact of lavender aromatherapy and music therapy (MT) on preoperative anxiety in adult surgical patients

## Research Question

- In adults, 19 to 100 years of age, how do music and lavender aromatherapy affect preoperative anxiety levels within 15 minutes?

## Literature Review

- Preoperative anxiety can cause adverse effects (Jiwanmall et al., 2020)(Mulugeta et al., 2018)
- Anxiolytics are a widely accepted treatment that can cause adverse effects (Bucex et al., 2016) (Ing et al., 2019)
- Lavender- minimal sedative effect, safe, non-toxic oil, & has been used in numerous healthcare settings, including surgery (Wotman et al., 2017)
- Music Therapy (MT)- safe, cost-effective & improved PT outcomes. MT has been used for anxiety, to reduce pain.& use of opioids (Bojorquez et al., 2020)

## Conceptual Framework

- Kolcaba's comfort theory
- Alters environment to promote comfort & reduce anxiety

## Methodology

### Setting

- 1000-bed rural hospital

### Sample

- 19- 100 years old

### Inclusion Criteria

- Outpatient surgical patients
- Able to verbally & coherently express anxiety
- Fluent English

### Exclusion Criteria

- Inpatient surgical patients
- Auditory impairment
- Sensitivity or allergy to lavender

### Intervention

- Recruitment occurred on day of surgery
- BP & HR collected in PT's preop room; Pulse pressure calculated
- PT shown a poster of the 6-point VFAS & asked to rate anxiety level
- 15-minute session of lavender aromatherapy & MT at bedside table in preop room. 2 drops of lavender/ 150mL of water & the song "Weightless" played on a Bluetooth speaker
- BP, HR, pulse pressure & VFAS recollected at the end of the 15-minute intervention.

## Data Analysis

- SPSS version 27
- N = 32
- 37.5% males; 62.5% females
- A significant number of patients reported preoperative anxiety
- Moderate & mild-moderate anxiety in the VFAS were eliminated in the post-intervention
- A paired samples t-test showed a significance difference between pre-intervention & post-intervention vital signs

## Results

- Music & lavender aromatherapy can impact patients' anxiety levels
- Reduction in pre-intervention & post-intervention VFAS
- Significant difference in pre-intervention & post-intervention HR, BP & pulse pressure
- The mean systolic BP decreased from 134.75 to 123.50
- The mean pulse pressure decreased from 60.90 to 54.18
- The mean HR decreased from 78.56 to 73.56

Anxiety Level	None	Mild	Mild-Moderate	Moderate	Moderate-High	Highest
Faces	😊	😐	😬	😓	😞	😡

Fig 4. The proposed Visual Facial Anxiety Scale (VFAS)

## Conclusion

- A decrease in the dependent variables shows these non-pharmaceutical interventions can result in decreased anxiety
- Non-pharmaceuticals have a positive impact on patient care

## Nursing Implications

- Personalized approach for patients
- Cost-effective
- Easy to introduce
- Limited training needed
- Not limited to a surgical setting
- Decrease anxiolytic use, adverse reactions, medication error

Pre and Post Frequencies of VFAS

	Pre-intervention (N = 32)		Post-intervention (N = 32)	
	n	%	n	%
No Anxiety	7	21.9	19	51.4
Mild Anxiety	10	27.0	13	35.1
Mild-Moderate Anxiety	10	27.0	0	0
Moderate Anxiety	5	13.5	0	0

