

# Reducing Preoperative Anxiety: Evidence-Based Non-Pharmacological Interventions

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## Background

Preoperative anxiety affects about 60-80% of adults that have a scheduled surgical procedure (Shelb et al., 2025). Patients are in the preoperative department for hours sometimes waiting to go back to surgery. Anxiety builds while waiting if not treated. Decreased healing time, higher opioid use during the postoperative phase, and longer hospital stays are adverse effects associated with high levels of anxiety (White and Elvir-Lazo, 2025). The most common management of preoperative anxiety is anxiolytic medications, often given minutes before going back to surgery. However, these medications have a wide range of side effects including drowsiness, cognitive impairment, motor incoordination, and respiratory depression. (UpToDate, n.d.), which limits patients' ability to answer questions or sign consents.

When preoperative anxiety is not addressed in a timely manner for patients, their anxiety builds which can manifest in higher blood pressures and higher heart rates among other distressing symptoms (Duff & Asiri, 2024). These symptoms can lead to issues that require more monitoring, more medication, and longer length of stay in the post operative recovery area. Thus, routine assessment of preoperative anxiety should be conducted to help ensure the best possible outcomes for patients (Shelb et al., 2025). Furthermore, nurses can provide non-pharmacological interventions to patients prior to anesthesia that will have low to no side effects and create a better patient experience.

## Literature Review

- A search was conducted through the CINAHL and PubMed databases using the key terms preop\*, anxiety, surger\*, periop\*, and nonpharmacologic\*.
- Through these searches, several articles were reviewed and eight were chosen.
- The eight articles that were selected focused on nurse-driven, non-pharmacological treatments for patients in the preoperative area departments.
- These articles were published from the years 2020 to 2025 and were all written in English.
- The eight articles include randomized control trials, meta-analysis/systematic reviews, a quasi-experimental study, and an editorial.
- Articles focused mainly on communication, aromatherapy, and virtual reality

## Non-Pharmacological Interventions from Literature

Non-Pharmacological Interventions		
Communication	Cognitive Behavioral Therapy	Music Therapy
Guided Imagery	Hypnosis	Massage
Spiritual Intervention	Virtual Reality	Aromatherapy

## Lessons Learned

- There are several valid and reliable tools used to assess preoperative anxiety
  - State-Trait Anxiety Inventory scale (STAI) and the Visual Analogue Scale for Anxiety (VAS-A) seem to be used to most in the literature to measure anxiety
- Communication and interview are the most common strategies used by anesthesia and surgeons to address preoperative anxiety, however there were no significant differences in preoperative anxiety scores according to Cengal & Adsoy (2022).
- Aromatherapy is a very common non-pharmacological intervention used in the hospital. Lavender is used most frequently to address stress and anxiety with little to no risk (Koehler, 2021).
  - Cost of aromatherapy is relatively low and often used in conjunction with other interventions
- Virtual reality is an emerging non-pharmacological intervention for treating preoperative anxiety (Rousseaux, et al. 2020).
  - Patient who have motion sickness and dizziness are not good candidates for virtual reality (Asiri et al., 2022).

## Recommendation and Next Steps

- Preoperative anxiety levels should be reviewed with patients through a valid and reliable tool.
- Non-pharmacological interventions should be considered in tandem with pharmacological interventions
- Due to the wide range of non-pharmacological patient preferences must be considered prior to providing nursing interventions.
- Virtual reality is a newer form of non-pharmacological intervention that is showing promise but needs to be researched more to create more evidence for its use.
- There may be more interventions to review that can be beneficial to patients.



## Summary of Literature

Intervention	Author /Year	Intervention Timing	Change of Anxiety Level
Communication	White & Elvir-Lazo (2025)	Preoperative Department	No changes
	Cengal & Adsoy (2022)	Inpatient, night before scheduled procedure	No statistically significant changes
Aromatherapy	Koehler (2021)	Preoperative Department	Decrease, but not statistically significant
	Honing et al. (2023)	Preoperative Department	Decrease
Virtual Reality	Asiri, Guilhermino & Duff (2022)	Preoperative department	Trial incomplete
	Mbewe & Smith (2023)	Preoperative Department	Decrease
	Rousseaux et al (2020)	Inpatient: day before surgery and day after surgery	Trial incomplete
	Subramaniam et al (2024)	Inpatient and Preoperative Department	Decrease

## References

