

# Examining the Effects of Aromatherapy on Pain and Anxiety During Preop PIV Insertion

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## Problem

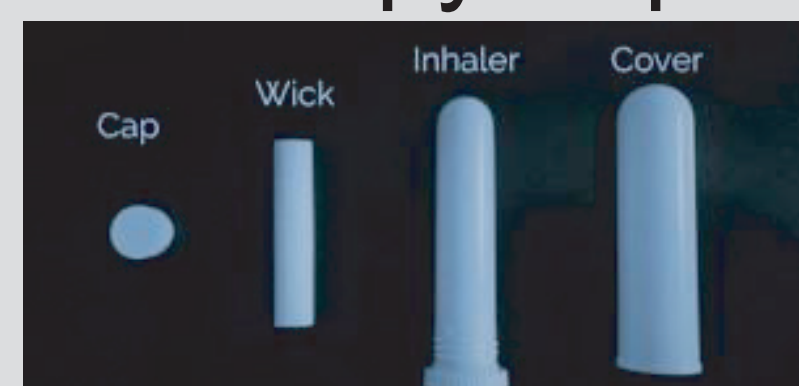
- ❖ Patients undergoing venipuncture for peripheral IV (PIV) insertion commonly experience pain and anxiety.
- ❖ Venipuncture with PIV catheter insertion is the most common procedure performed on perianesthesia patients.
- ❖ Few nursing interventions exist that nurses may use to reduce both pain and anxiety in patients during PIV insertion.

## Purpose

This study was designed to test the hypothesis that inhaling a blend of Sweet Marjoram and Bergamot essential oils can decrease pain and anxiety, and increase patient satisfaction with IV insertion in pre-surgical adults.

## Methods

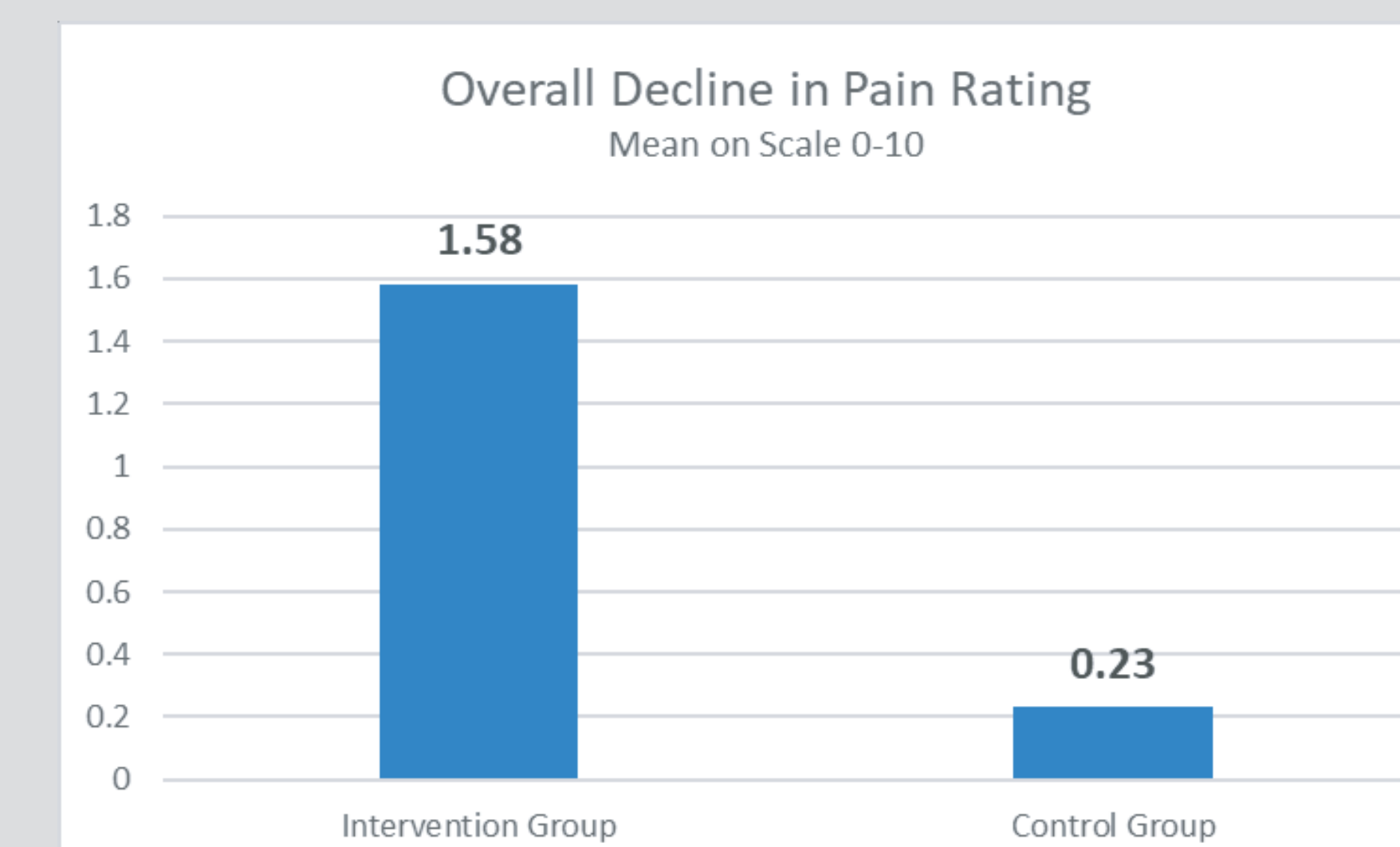
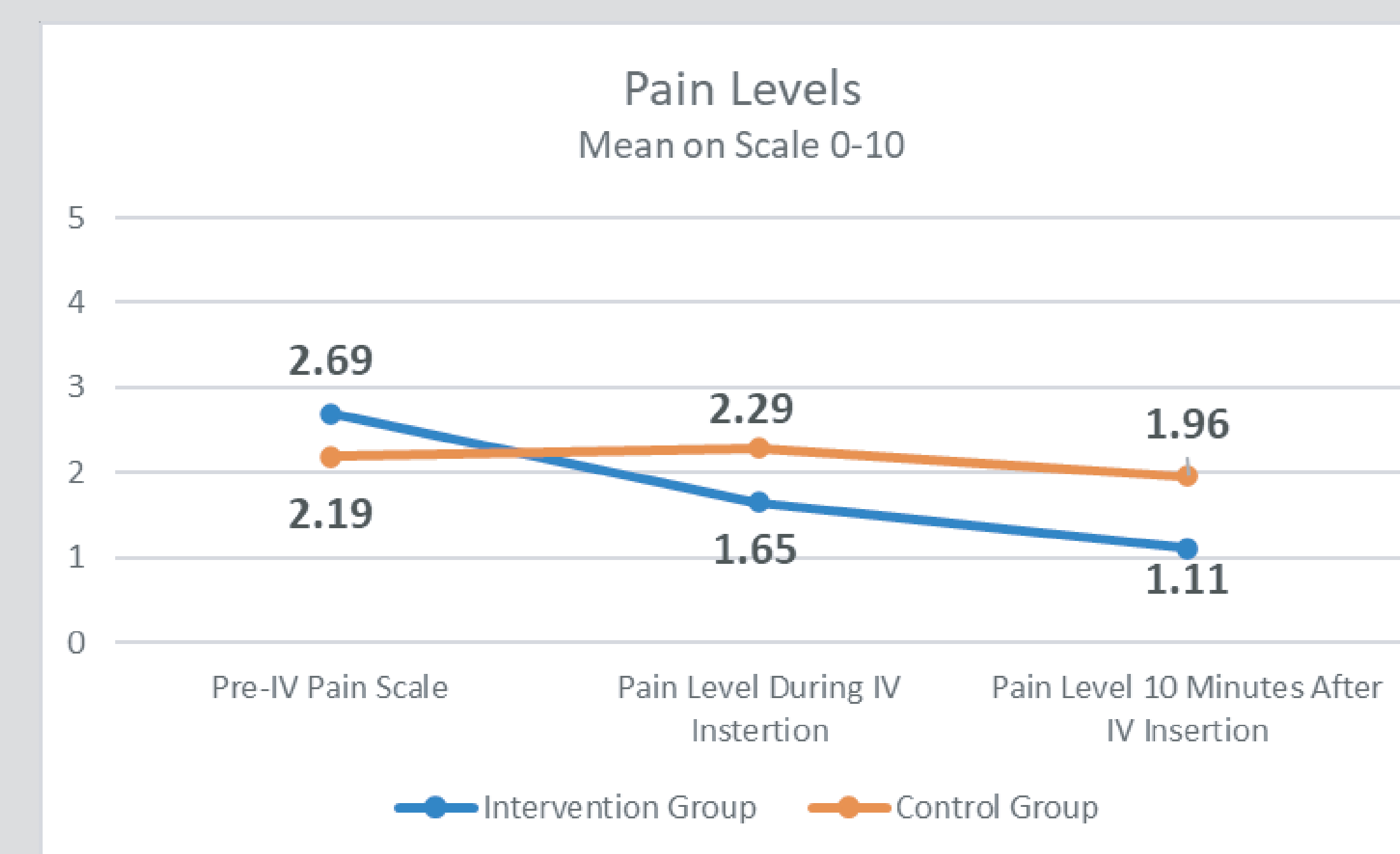
- ❖ 59 adult preoperative patients were randomized to receive inhalation aromatherapy or placebo.



- ❖ Patients were given a personal nasal inhaler (PNI) with aromatherapy (intervention group) or without aromatherapy (control group) and asked to take two deep breaths from each nostril, then breathe with the PNI near their nose for five minutes.
- ❖ Patients' pain and anxiety scores were measured using 0-10 and 0-100 visual analog scales (VAS) respectively pre, during and ten minutes after peripheral IV insertion.
- ❖ Overall satisfaction level with the IV start process was also measured (0-10 VAS).

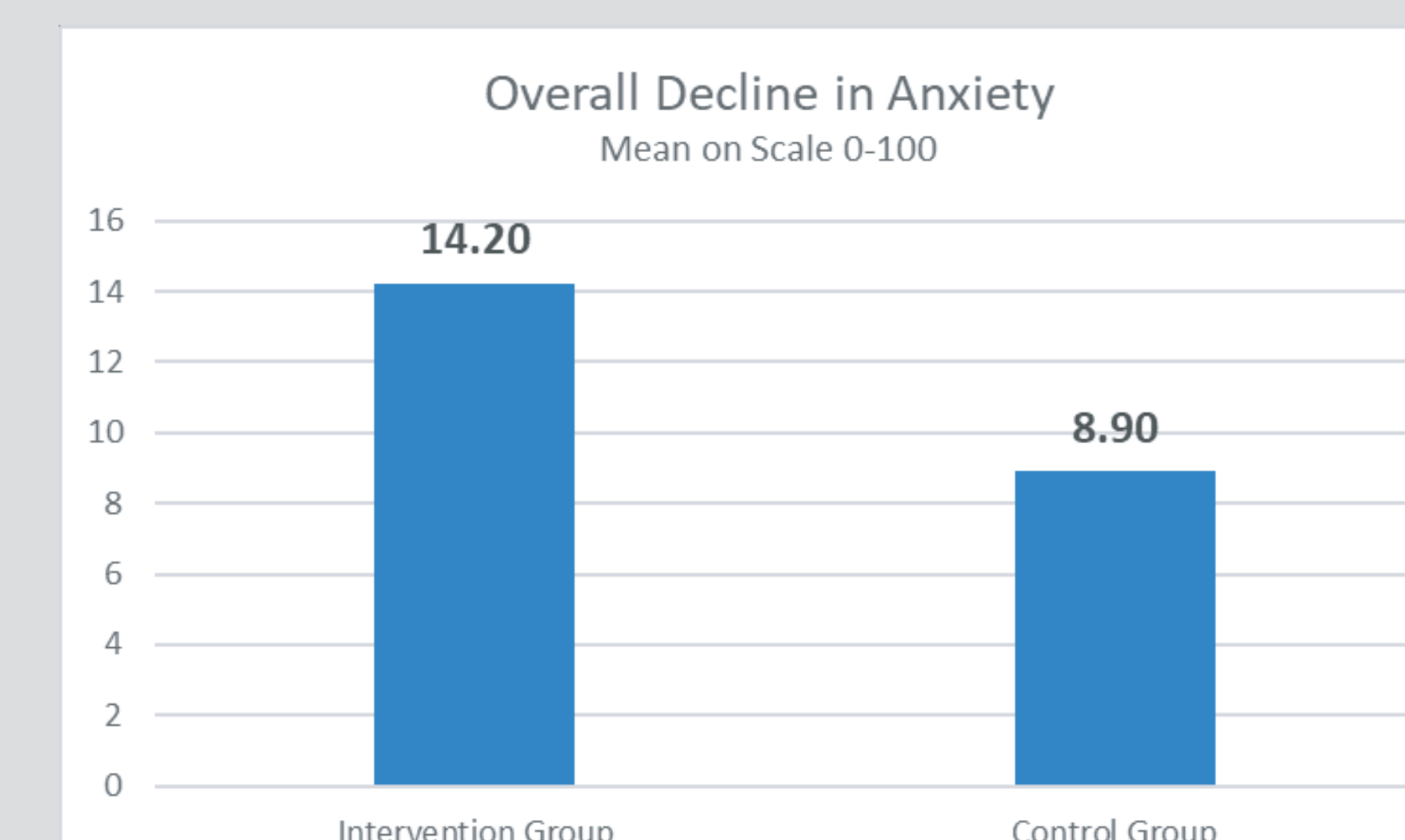
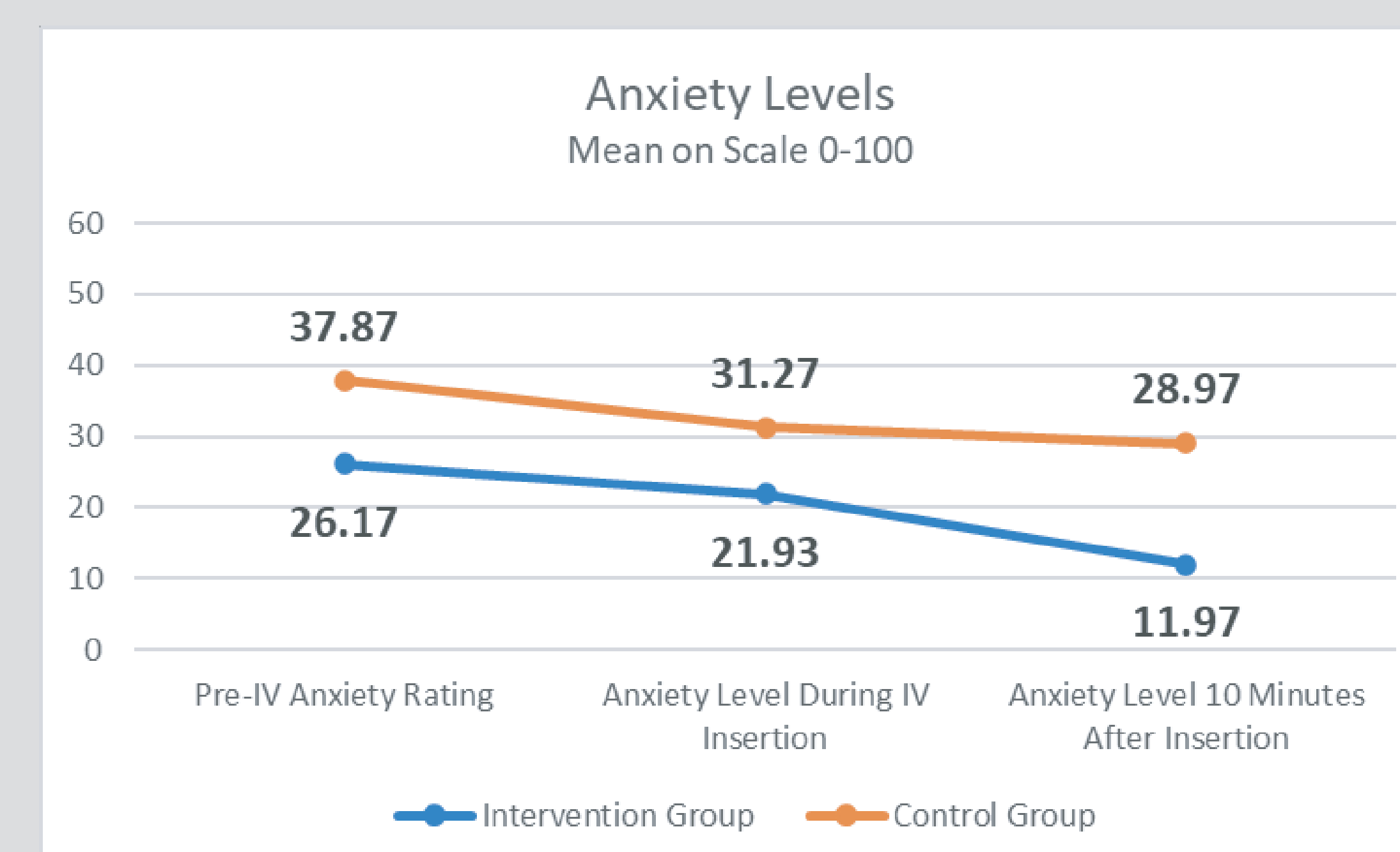
## Results

### Mean Pain Score comparisons at baseline, during IV start, and 10 minutes later for intervention/aromatherapy group (N=29) and control/placebo group (N=30)



The intervention group had a mean pain level reduction of 1.58 (15.8%), and the control group a mean pain reduction of 0.23 (2.3%) using the 0-10 VAS.

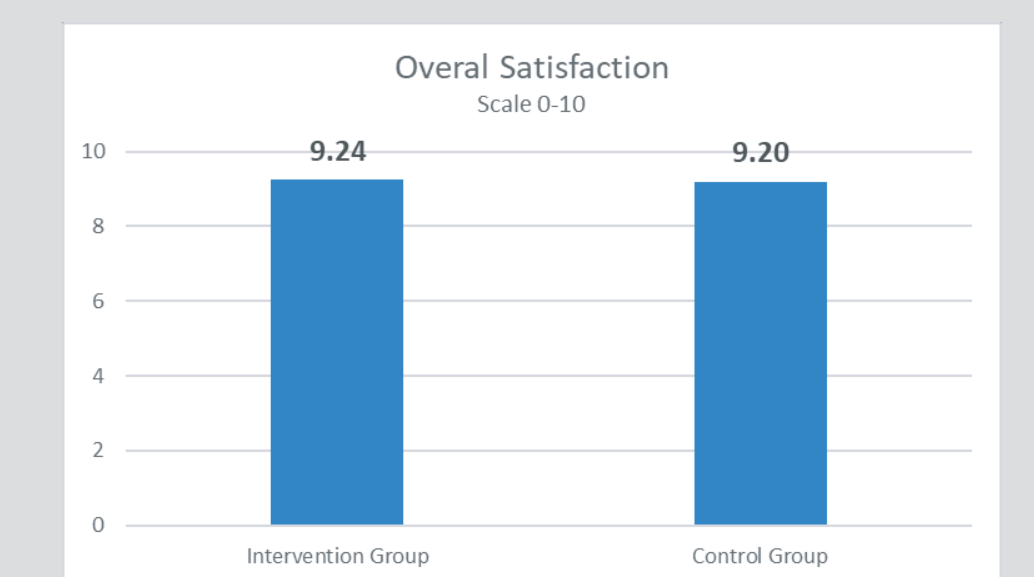
### Mean Anxiety Score comparisons at baseline, during IV start, and 10 minutes later for intervention/aromatherapy group (N=29) and control/placebo group (N=30)



The intervention group had a mean anxiety level reduction of 14.2 (14.2%), and the control group a mean anxiety reduction of 8.9 (8.9%) using the 0-100 VAS.

## Results continued

There was no statistical difference between groups regarding overall satisfaction levels.



## Conclusions

**Aromatherapy using a blend of Sweet Marjoram and Bergamot essential oils may be beneficial in treating both pain and anxiety during preop peripheral IV insertion.**

## Implications for Practice

- ❖ PIVs are inserted in a variety of settings. The use of aromatherapy may be beneficial for patients in many different hospital settings.
- ❖ Aromatherapy is an inexpensive integrative therapy that may be beneficial for many patients and should be offered to optimize patient centered care

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References available upon request.

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