Effects of Essential Oils on Symptoms of Exercising Women with Fibromyalgia

Sample: Average participant - 54 years old with some college education, married, Caucasian, minimally/mildly college educated, married, Caucasian, minimally/mildly

Proposed Intervention

Phase 3

Phase 4

Clinical Implication

• An unexpected effect of 024 essential oil on 3 symptom trajectories (pain, stiffness, stress) over the 12 weeks of exercising in women with FM was found, with symptoms increasing rather than decreasing.

• Use of 024 oil is not recommended as an adjunct to exercise in women with FM.

Conclusions

Study Design

Randomized clinical trial comparing 024 essential oil with sham oil in combination with exercise.

Results

Symptom trajectories:

• Average pre-exercise/post oil application scores for the 024 oil and sham group on pain, stiffness, fatigue, and stress across 36 sessions showed small increases in pain and fatigue with no change in average stiffness and fatigue over time.

• Four linear growth models were run, one for each symptom as DV. Interaction terms to determine whether groups differed in change over time.

• Significant treatment effects for pain, stiffness, and stress; the 024 oil group seemed to have an increase in these symptoms over time compared to sham. Visual inspection of the graphs of average scores on symptoms show “bumps” at weeks 6 and 9 in the essential oil group, which are not explained by any factor related to history or maturation.

Reduction in symptoms:

• Repeated measures ANOVA: administration of 024 oil between pre-exercise and post-exercise measures (weekly averages) did not lead to further reductions in symptoms compared to the control group.

• No significant differences were found between groups in symptom trajectories (pain, stiffness, stress) during a 12 week exercise program differed for women and stress) during a 12 week exercise program differed for women.

• Sample: 20 women randomized to 024 oil, 23 to sham oil.

• Intervention

• 12-week exercise program - weekly group sessions with trained leaders guided by a pre-registered regimen plus 2 days of home exercise with regimen.

• Measures

• Independent variable: 024 vs. sham oil.

• Dependent variables: self-reported symptom intensity on exercise days for pain, fatigue, stiffness, and stress (numeric rating scales) obtained from diaries, (12 weeks).

• Demographics: age, race, education, marital status, depression (Beck Inventory), Composite Physical Function (self-report).

Purpose

• To determine whether symptom trajectories (pain, fatigue, stiffness, stress) during a 12 week exercise program differed for women with FM who used essential oil vs. those who used sham oil.

• To determine whether administration of essential oil was associated with immediate reductions in symptoms relative to sham oil.

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Background

• Fibromyalgia (FM) is a chronic disorder underpinned by abnormalities in pain processing, disorders.

• Persons with FM have burdensome symptoms & high rates of functional, occupational disability.

• Overlap with regional pain syndrome, chronic fatigue syndrome, somatoform disorders (Clauw, 1997)

• Pain Processing Abnormalities

• Normal sensory stimuli “detection threshold,” with decreased “noxious threshold” (Graceley et al., 2003).

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