Effects of topical essential oil on exercise volume after a 12-week exercise program for women with fibromyalgia: A pilot study

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Background

- Fibromyalgia (FM) chronic painful condition, predominately diagnosed in women
- Associated with multiple symptoms fatigue, nonrestorative sleep, stiffness
- The use of topical analgesics during exercise in people with FM has been understudied.

Objective

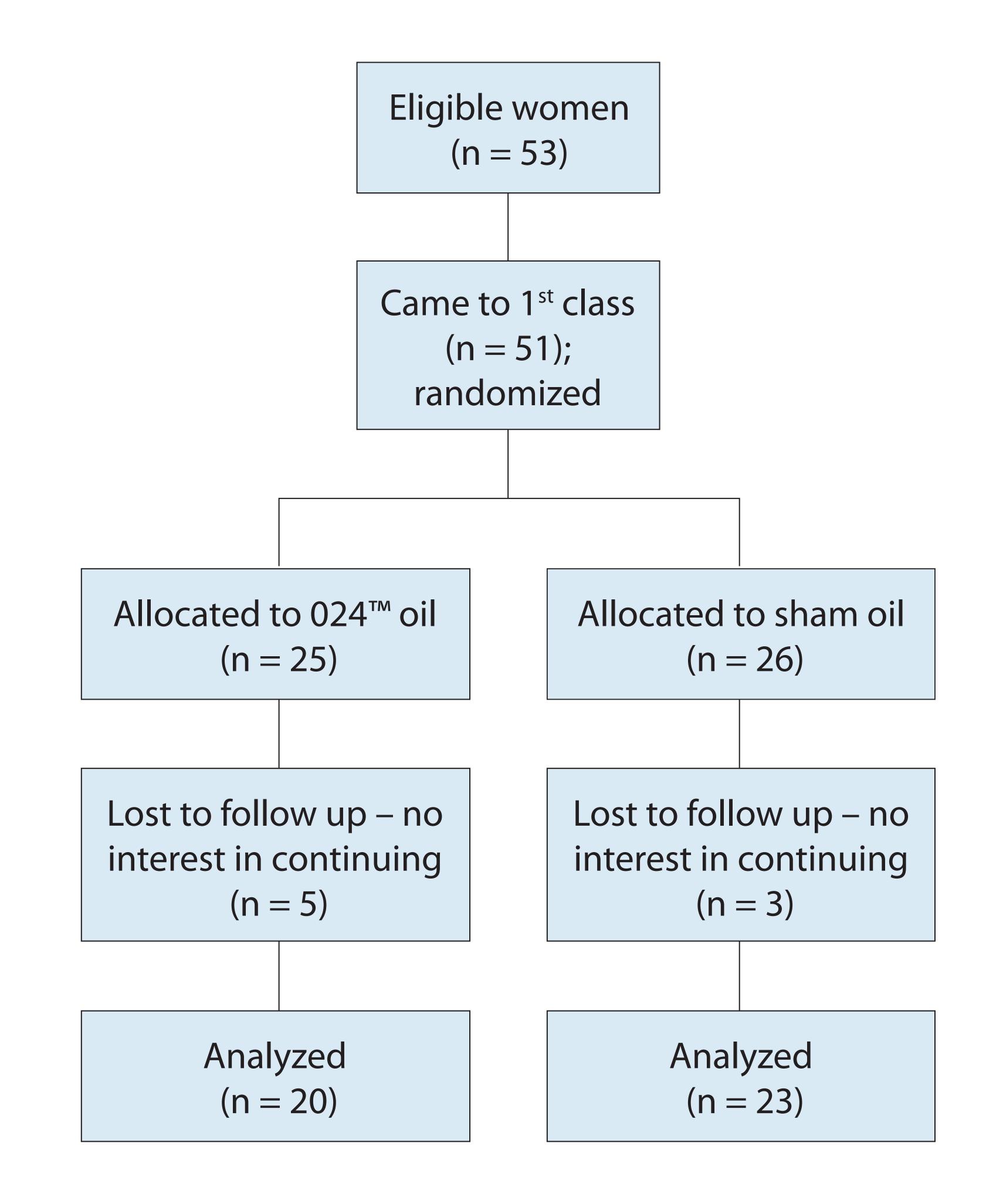
• We determined—in women with fibromyalgia (FM)—effects of essential oils used with a 12-week exercise program on exercise volume, pain, physical performance, and physical function.

Methods

- Randomized clinical trial comparing 024™ essential oil with sham oil combined with exercise.
- Sample: 20 women randomized to 024 oil™, 23 to sham oil.
- Intervention: Women were trained in oil application (before exercise, at bedtime on exercise days); 12-week exercise program with weekly group sessions, plus 2 days of home exercise with a recorded regimen.

Measures

- Primary:
- Exercise volume: # of days exercised (max: 36) multiplied by exercise level (easy/more difficult/most difficult)
- Obtained from participant Treatment Diary
- Secondary:
- Pain (Brief Pain Inventory),
- Measures of physical performance (30-second chair stands, 6-minute walk, multidimensional balance),
- Self-reported physical function (Composite Physical Function scale).



Results

- Average participant 54 years old, with some college education, married, Caucasian, minimally/mildly depressed.
- No significant difference in exercise volume between women using 024[™] as compared with those using sham oil after 12 weeks (depression as covariate).

Exercise Volume after 12 Weeks of Exercise Training

	Sham (n = 23) M (SD)	024 (n = 20) M (SD)
Exercise Volume Possible scores: 0 - 108	61.72 (18.21) Range: 32-97	61.60 (20.25) Range: 28-93

Self Reported Physical Function, Lower Body Strength, Endurance, and Balance Scores Before/after Exercise

Variables	Sham M (SD)	024 M (SD)
RM ANCOVA		
CPF (self report):		
Pre	16.96 (4.76)	17.75 (3.16)
Post (Possible scores: 0 - 24)	17.09 (4.63)	17.55 (3.82)
RM MANOVA		
Lower body strength (# chair stands)*:		
Pre	10.23 (4.21)	9.42 (2.59)
Post	11.18 (5.00)	11.95 (3.10)
Endurance (meters walked in 6 minutes)*:		
Pre	468 (87)	459 (126)
Post	511 (100)	521 (72)
Balance (Fullerton Balance Scale)**:		
Pre	31.05 (7.58)	30.21 (7.71)
Post	32.09 (7.10)	32.31 (5.94)

NOTE: CPF = Composite Physical Function.

* Time effect; p < .0001; ** Time effect; p = .021

- No significant group nor pre- to postexercise changes in pain intensity or interference.
- Greater positive changes in 30-second chair stands, 6-minute walk distance, and multidimensional balance scores in 024™ group than in sham group (NS).

Conclusions

- The counterirritant 024™ oil not different from sham oil in its effect on exercise volume (frequency, exercise level—intensity and duration) for women with FM.
- Unknown whether 024™ decreases local pain when used with exercise.
- NS increases in physical function may be attributable to exercise regimen or to interaction of oils and exercise.

Rutledge, D.N., & Jones, C.J. (2007). Effects of topical essential oil on exercise volume during a 12-week exercise program for women with fibromyalgia: A feasibility study. *Journal of Alternative and Complementary Medicine*, 13, 1099-1106.

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