



University of Michigan Health System

# Is Biofeedback Therapy Superior to Standard Treatment for Patients with Dyssnergic Defecation: Results from A Meta-Analysis

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## BACKGROUND

- 30-40% of chronic constipation (CC) patients (pts) have Dyssynergic Defecation (DD) by detailed physiological testing.
- Standard treatments (ST) including exercise, avoidance of constipating drugs, and increasing fluid & fiber intake often fail to improve symptoms.
- In patients with DD, laxatives provide inconsistent relief of CC related symptoms.
- Recent studies suggest that biofeedback (BF) therapy provides an effective treatment for DD.

## AIM

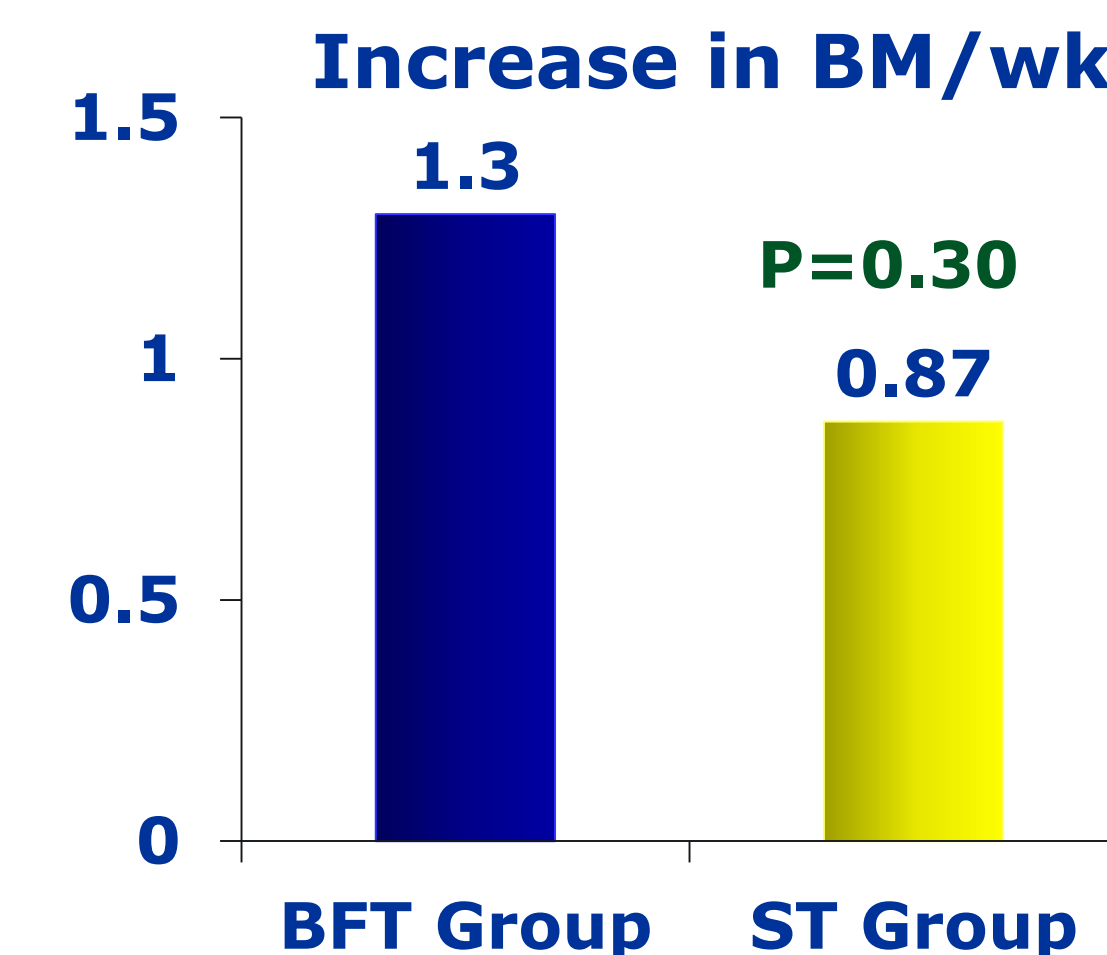
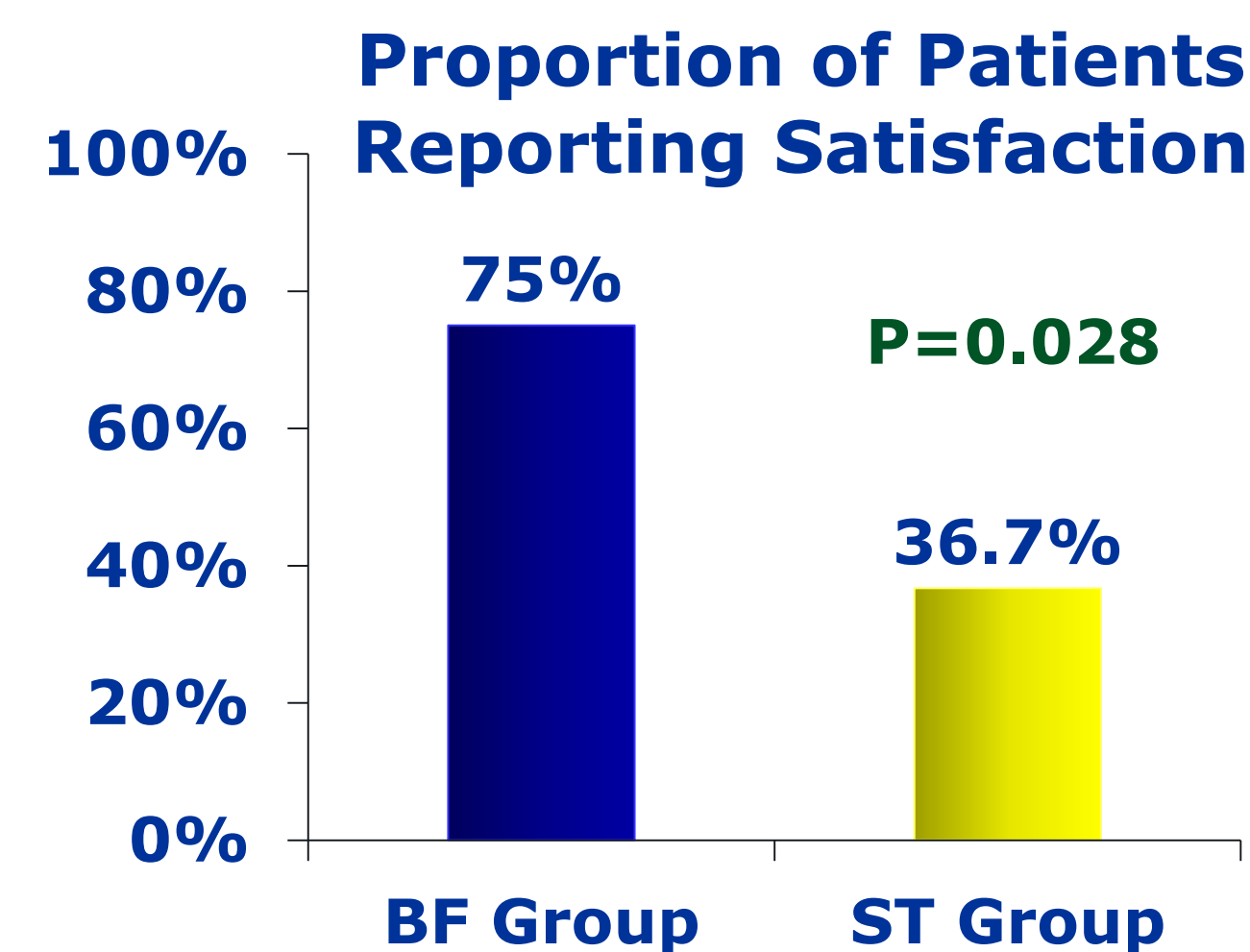
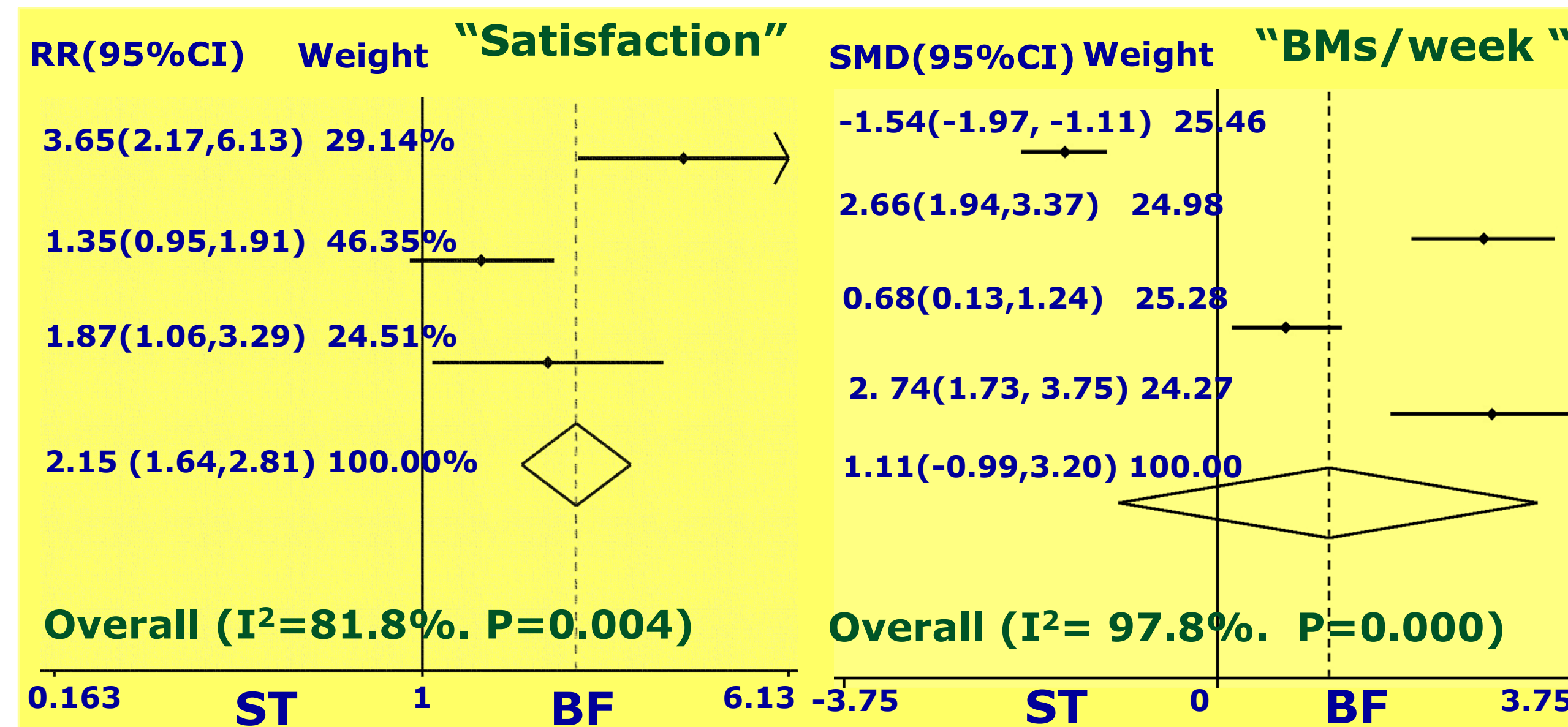
- To conduct a systematic review and meta-analysis of randomized -controlled trials (RCTs) comparing biofeedback to standard therapy in DD pts for selected outcomes including global satisfaction and stool frequency.

## METHODS

- A search of MEDLINE, EMBASE, CINAHL, EMB Reviews/ Cochrane , and abstracts from major GI meetings was performed.
- RCTs comparing the efficacy of BF vs. ST for weekly bowel movement (BM) frequency or global satisfaction in patients with DD were selected.
- Meta-analysis was performed using Strata 10.1. A funnel plot was created to assess for publication bias. The heterogeneity of the pooled estimate was tested with the inconsistency index (I<sup>2</sup>) statistic.
- Types of BF, duration of follow-up, study location, primary & secondary study outcomes, concurrent laxative use were performed to account for any observed heterogeneity.

## RESULTS

- Upon detailed review, 7 treatment trials were identified of which 4 studies which randomized 241 pts with DD fulfilled our inclusion criteria and were included in the meta-analysis.



## SUMMARY

- Our analysis yielded different results for global satisfaction and stool frequency in DD pts.
- Aside from global satisfaction and stool frequency, few endpoints were consistently studied amongst the included trials
- Significant heterogeneity amongst trials weakens the conclusions that can be drawn from this data.

## CONCLUSION

- The results suggest that BF therapy offers benefits for global satisfaction in patients with DD.
- However, there remains a need for further large clinical trials.
- The development of a common set of outcome measures which can be applied to randomized trials evaluating the efficacy of BF training for DD should be pursued.
- Though stool frequency is commonly employed as the primary outcome measure in constipation trials, our results raise questions about whether this endpoint is the most appropriate primary outcome for trials evaluating BF for DD.