

Introduction :

Urinary incontinence (UI), a common complication of radical prostatectomy, can decrease the quality of life of prostate cancer patients

Objective :

To evaluate the additional effect of pelvic floor biofeedback training (PFBT) in prostate cancer patients with UI.

Method :

•Criteria:

- ✓ Patient: Prostate cancer patients, who had received prostatectomy.
- ✓ Intervention: PFBT with or without electrical stimulation on UI
- ✓ Comparison: Pelvic floor muscle training (PFMT) with or without electrical stimulation
- ✓ Outcome: Self-reported UI immediate post-training, at the 3rd month (intermediate-term) after training, and at the 6th month (long-term) after training.
- ✓ Study design: Randomized controlled trials (RCTs)

•Search strategy:

- ✓ A systematic search of CINAHL, Cochrane Library, BioMed, Pubmed/Medline, and Web of science.

•Methodological quality assessment:

- ✓ The Cochrane Collaboration's tool.

•Data extraction and management:

- ✓ According to recommendations from the Cochrane Handbook for Systematic Review of Intervention 5.1.0.

•Statistical analysis:

- ✓ The Comprehensive Meta Analysis software 2.0.

Result :

•Descriptive analysis:

- ✓ 6 RCTs involving 411 prostate cancer patients with UI (Fig.1).

•The Effects of PFBT:

- ✓ Overall, the post-treatment, intermediate-term (3rd month), and long-term (6th month) effects of PFBT on self-reported UI were not statistically significant ($P = 0.475$, $P = 0.231$ and 0.193 , respectively) compared with PFMT. (Fig. 2a, Fig 3a, Fig 4a)
- ✓ High quality studies had larger and significant long-term effect (mean effect size, -0.76 ; 95% CI, -1.27 to -0.25) on self-reported UI in comparison with those of poor quality studies. (Fig. 2b, Fig.3b, Fig. 4b)
- ✓ The treatment dosage (total exercise minutes) was significantly associated with the long-term effect size ($P = 0.026$), but not the immediate ($p = 0.079$) or intermediate-term effect ($p = 0.065$)
- ✓ No heterogeneity or publication.

Conclusion:

- ✓ PFBT did not yield a significant additional effect on improving UI in prostate cancer patients in comparison with PFMT.
- ✓ Additional high quality studies for further investigating the efficacy of PFBT on decreasing the severity of UI are needed.

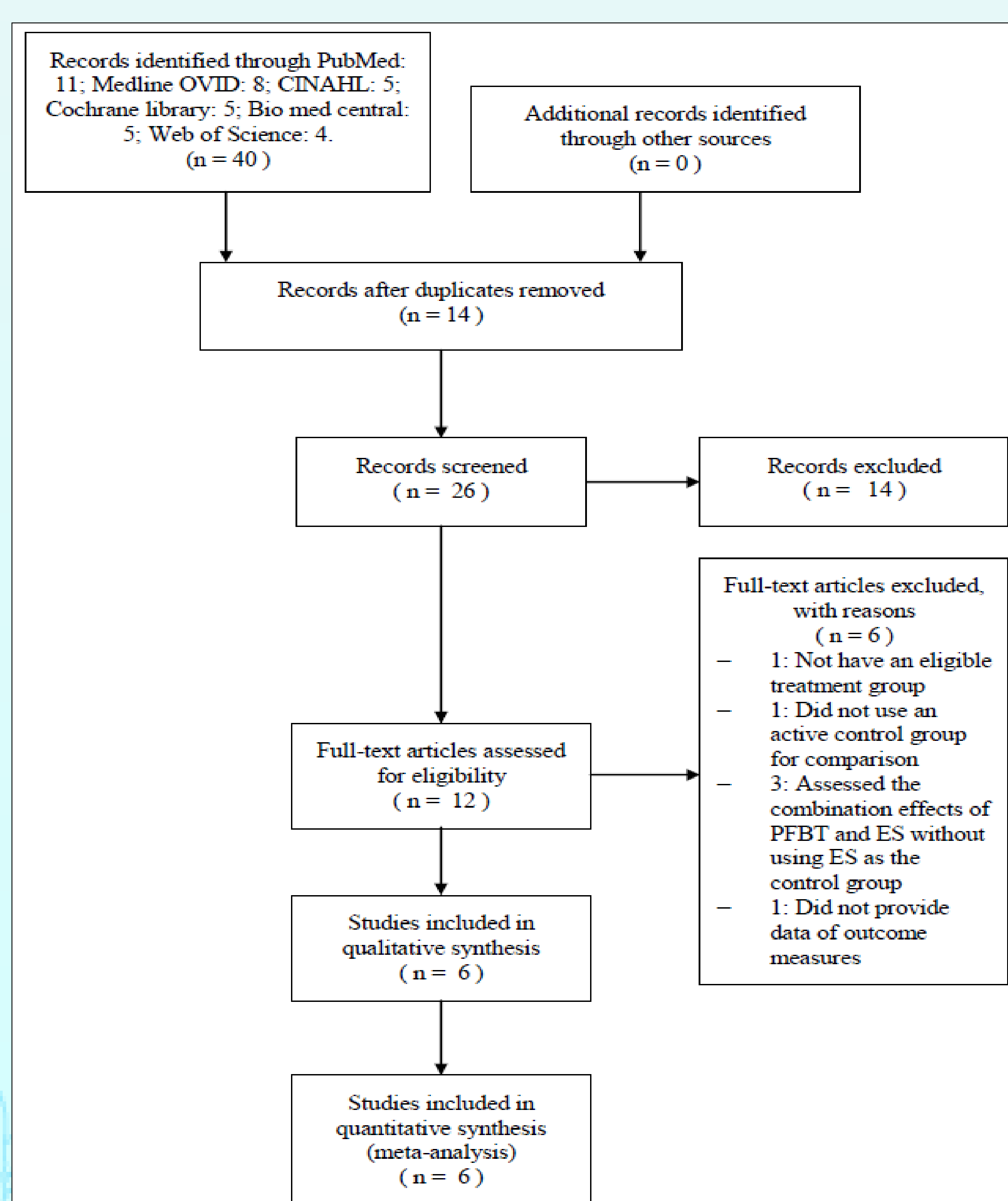


Fig. 1 PRISMA study flow diagram.

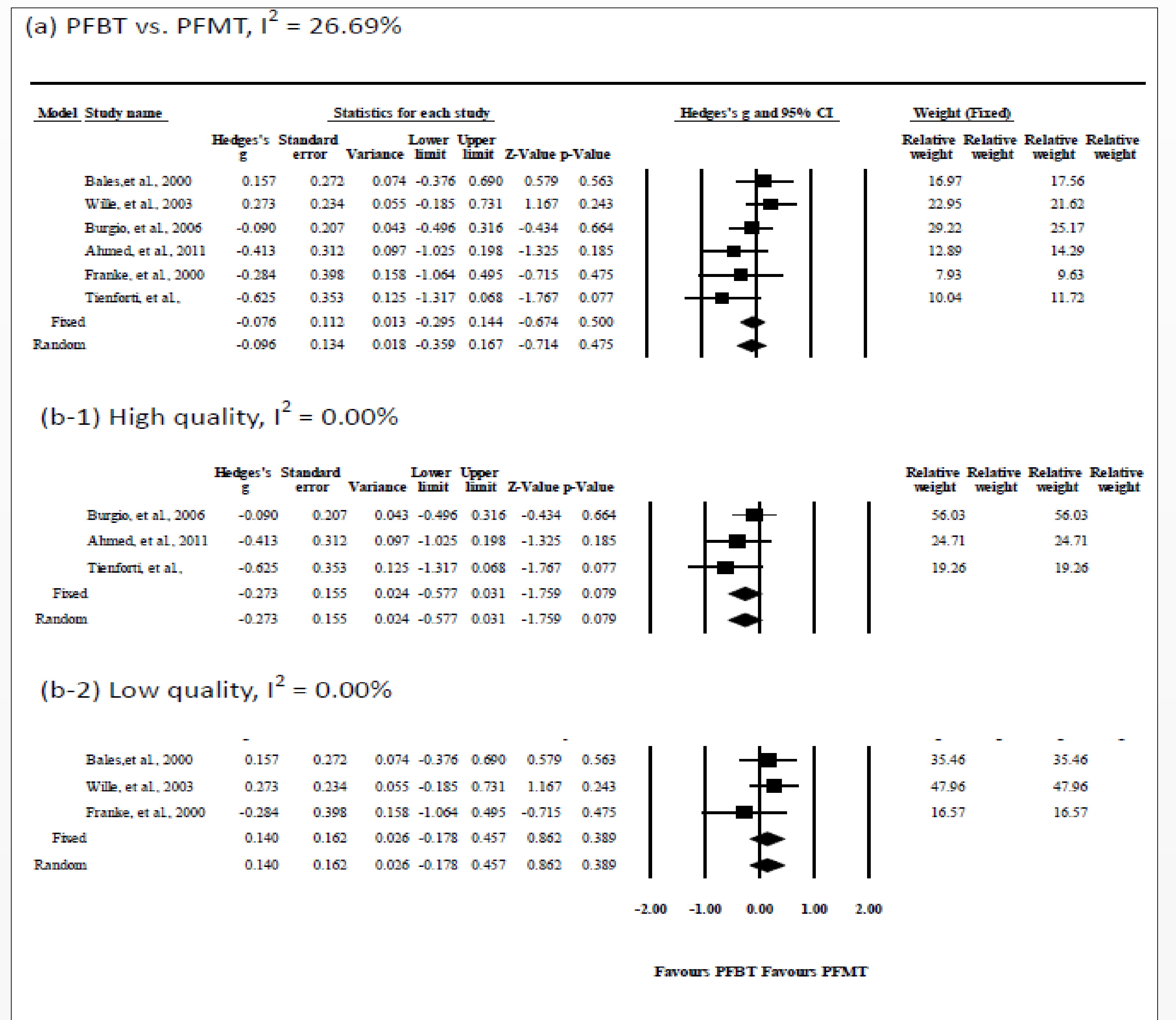


Fig. 2 Forest plots of immediate post-training effects of pelvic floor biofeedback training (PFBT) on self-reported urinary incontinence following radical prostatectomy compared with pelvic floor muscle training (PFMT).

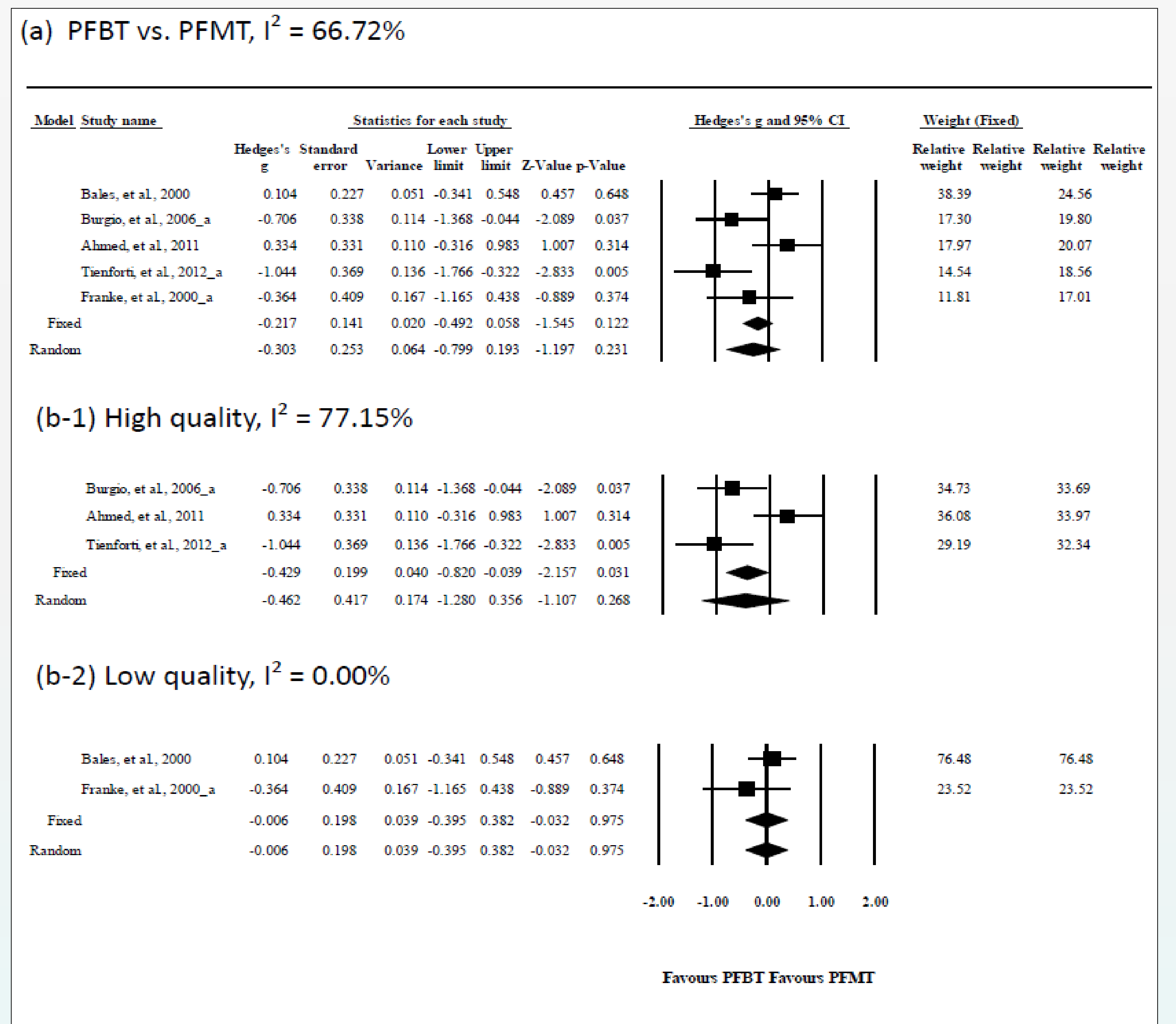


Figure. 3 Forest plots of the intermediate-term (3rd month) effects of pelvic floor biofeedback training (PFBT) on self-reported urinary incontinence following radical prostatectomy compared with pelvic floor muscle training (PFMT).

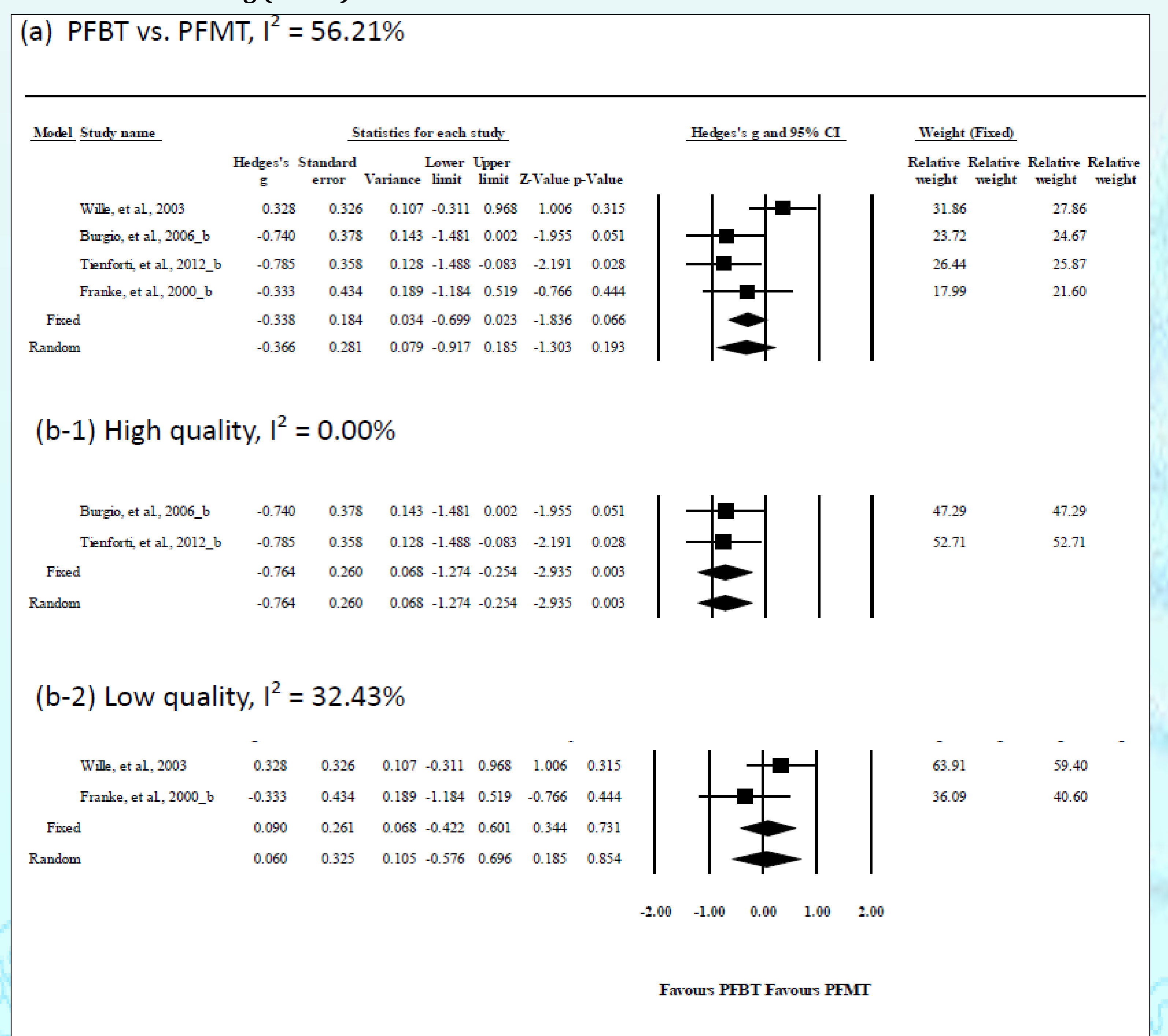


Fig. 4 Forest plots of the long-term effects of pelvic floor biofeedback training (PFBT) on self-reported urinary incontinence following radical prostatectomy compared with pelvic floor muscle training (PFMT).