

GROUP TEACHING OF PELVIC FLOOR AND BLADDER TRAINING: FUNCTION AND KNOWLEDGE OUTCOMES

Aims of Study

Conservative treatment of women with urinary incontinence, specifically pelvic floor training (PFT) and bladder training (BT) are recognized effective therapies(1). The conventional approach in teaching these behavioral therapies is individualized instruction followed by several visits to reinforce knowledge and technique. Only three published reports of a single session group education were identified, but none assessed improvement of pelvic floor contraction strength, an expected outcome of PFT, or lengthening of inter-void interval, an expected outcome of BT(2,3,4). This randomized controlled trial aimed to compare changes in pelvic floor contraction strength and inter-void interval at twelve months post intervention between women who attended a single group teaching session followed up with a single brief individual visit and those who did not. We further examined the treatment group's knowledge of PFT and BT as well as adherence.

Methods

Volunteers who qualified from telephone screening were randomly assigned to a control no treatment group or to a treatment group that received the Behavioral Modification Program (BMP). Both groups underwent clinical baseline screening and evaluation of pelvic floor contraction strength (measured by palpation of pressure and displacement), and documentation of inter-void interval (measured by three-day voiding diary). The treatment group received a two-hour classroom presentation of the anatomy and physiology of continence, and rationale and verbal instruction in PFT and BT. This was followed in two to four weeks with an individualized evaluation to test knowledge (measured by response to eight multiple-choice items), technique (measured by palpation) and adherence (measured by report of practice). Brief additional instruction in PFT and BT was provided as needed. Follow-up was by phone and mail every three months except at the 12th month when all participants underwent a final clinical examination. Treatment versus control group changes in pelvic floor strength and inter-void interval were assessed by Chi Square, paired-t, and with multiple regression to control for age, race, education, and baseline status.

Results

A total of 195 control and 164 treated participants completed the study. Group equivalence at baseline was evident in the lack of statistical difference for age (mean age 65.8 years), race (82% White), education (80% greater than high school), or medical history and for pelvic floor contraction pressure, displacement, and inter-void interval. In the treatment group at two to four weeks post instruction mean knowledge was 87% for PFT and 89% for BT. Palpation of PFT technique revealed 68% needing no further instruction, 32% requiring brief individual instruction (approximately 5 minutes), and 3% unable to demonstrate effective pelvic floor contraction techniques after individual instruction and excluded from the study. With respect to adherence participants in the BMP were encouraged to practice PFT every day throughout the 12-month post instruction period. At the 3-month data point 82% reported practicing PFT two to three or more times per week. By the 12-month exit point 68% continued to practice PFT two to three or more times per week. At the 12-month exit the treatment group as compared to control counterparts demonstrated significant increases in pelvic floor contraction pressure and displacement ($p=.0008$ and $p<.0001$, respectively). Inter-void interval also demonstrated significant lengthening at the 12-month exit point for those in the BMP group as compared to the control group ($p<.0001$). A regression model that adjusted for UI level at baseline and other covariates including race, age, and education, revealed a treatment group effect that was significant at $p<.0001$ for each of the three outcomes: pelvic floor contraction pressure, displacement, and inter-void interval.

Conclusions

This RCT of the effectiveness of group teaching of behavioral therapies followed by brief individual instruction as needed demonstrated positive effects on knowledge, technique, and adherence. The significant 12-month outcome differences between treatment and control groups provide evidence that group instruction in PFT and BT with brief training as needed is an effective method to teach these behavioral therapies. Clearly, the necessary knowledge and skills were imparted to enable women to perform PFT and BT at levels that resulted in significant differences in pelvic floor contraction strength and lengthened inter-void interval. The greater efficiency of instruction when provided to groups rather than individually warrants further study to document cost-effectiveness outcomes.

References

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