

# Change in Bladder Diaries after PFMT and Bladder Training with a Mobile App (Abstract #510)



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## Hypothesis / aims of study

For mixed and urgency urinary incontinence recommended treatment is pelvic floor muscle training, bladder training and life style advice but there are few studies that actually describe the effect of this treatment on voiding patterns.(1)

Bladder diaries are often used for evaluation but generally, only change in leakage are described.

**Aim: This is the first study of how first-line treatment via a mobile app changes voiding patterns in women with mixed and urgency urinary incontinence.**

## Study design, materials and methods

Secondary analysis of data collected in a randomised controlled trial (2) that evaluated the effect of a mobile app for treatment of mixed and urgency urinary incontinence (Figure 1.).

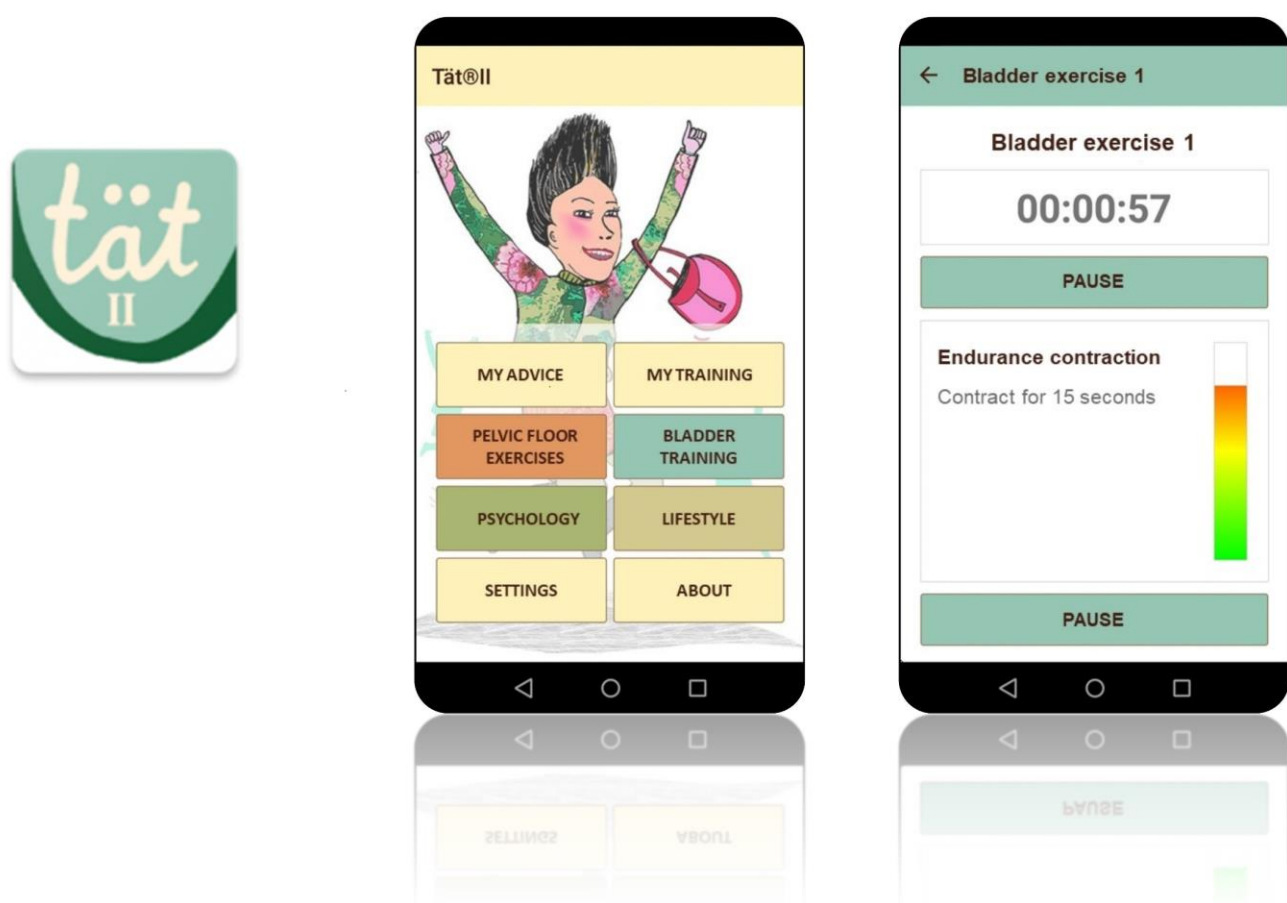


Figure 1. Logo and interface of the treatment app.

Participants were recruited via an online questionnaire. Women who met inclusion criteria (mixed or urgency urinary incontinence at least twice per week) were randomised to either the treatment app or an information app.

The treatment app included a pelvic floor muscle training (PFMT), bladder training, lifestyle advice and a psychoeducation. The information app contained only brief information. Both groups completed 2-day bladder diaries at inclusion and after 15-weeks. Number and volumes of micturition were reported along with leakages. The participants also graded the severity of urges and leakages from 0 to 3.

Statistics:

The treatment effect was analysed with a paired t-test or Wilcoxon signed rank test. Comparison between treatment and control group was made with Mann-Whitney U or t-test.  $p < 0.05$  was considered statistically different.

## Results and interpretation

### Results

After 15 weeks, both groups had significant reductions in number of leakages, severity of leakages and number of urges. In the treatment group, values were significantly lower than in the control group, at follow-up (table 1), and that they peed just in case to a lesser extent.

Table 1. Differences between groups at follow-up

	Treatment Group	Control Group
Leakages*	2.09 (SD 3.10)	4.41 (SD 3.63)
Severity of leakages**	0.63 (SD 0.59)	1.24 (SD 0.61)
Severity of urges**	1.07 (SD 0.55)	1.33 (0.52)
Micturition frequency***	6.82 (SD 1.81)	7.83 (SD 2.05)

\*Number over 2 days. \*\*Average of severity graded 0-3. \*\*\*Number/day.

### Interpretation of results

Micturition patterns changed significantly in several aspects after using a mobile app with PFMT and bladder training programs.

Further analyses are necessary to determine if improvement of leakages, overactive bladder, voiding volumes or a combination is more associated with global impression of improvement or satisfaction with treatment.

## Conclusions

**Using an app for pelvic floor muscle training and bladder training changed the voiding pattern in all aspects.**

## References

1. Cardozo, L, Rovner, E, Wagg, A, Wein, A, Abrams, P (eds) (2023) Incontinence 7th Edition. Bristol UK: ICI-ICS. International Continence Society. (ISBN: 978-0-9569607-4-0)
2. Wadensten T, Nystrom E, Franzen K, Lindam A, Wasteson E, Samuelsson E (2021) A mobile app for self-management of urgency and mixed urinary incontinence in women: randomized controlled trial. J Med Internet Res 23(4):e19439



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