
Physical Therapy Distance Journal Club
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Aim: To determine the efficacy of a noninvasive pain-free procedure of behavioral modifications and a specialized exercise program to improve pain levels and quality of life.

Introduction: Current Evidence shows that women with LBP often have more PFD than women without LBP. Also, the authors assert that current evidence supports protocols which retrain the deep abdominals and the pelvic floor, in a functional manner. They assert that PFM training is strongly supported as a conservative treatment for SUI. They also assert that lifestyle edu, such as about posture, weight, not smoking, diet and exercise, are important.

Methods: The research evaluated lifestyle modifications and an exercise protocol, for decreasing pain and improving QOL due to sx of pelvic floor dysfunction and mild POP. Symptoms were assessed via Oswestry (low back) and PFDI-20 and PFIQ-7 (PFD). They also did a finger-width DRA exam and an externally palpated PFM exam.

N= 41 females, 28-69 y/o, with sx of PFD or mild POP as defined by the PFDI-20 and PFIQ-7 “Oswestry”).
Exclusion criteria: > 3 finger width DRA.
Design: All participants were assessed 3x: pre-control period, after control period and after intervention. Above QOLs were administered each time.
Physical exam included: “pelvic alignment”, checked at ASIS and graded “yes” or “no”;
DRA finger width assessments, from 0-3 finger widths;
Also PFM palpation, done as sidelying external PFM palpation through clothing, graded from 1-5/5: 0 = no palpable contraction, 1=trace, held for < 1 second, 2 = weak and held for < 5 seconds, 3= moderate and held for < 8 seconds, 4 = strong and held for > 10 seconds.
These physical examination techniques do not have established reliability or reproducibility


Procedure: tests administered as above. Control period was 30 days, with no changes to their usual routines, to assess their baselines. Intervention was the “Lormand Walsh Program-LWP” (author’s names). LWP consisted of 4 weeks consisting of 2-45 minute live group sessions including exercise and 3, 10-15 minute home exercise sessions, per week (using “Pelvicore pro” and associated exercises). List of exercises is included in the article on page 58 and includes abd and adduction in standing, bridge and plank using the Pelvicore.
Live group sessions included EDU on Diaphragmatic breaths, to do 10/day, low back decompression (supine 90/90) for 10-15 minutes per day “as needed for relief of sx”, use of Muscle Trac, gently, rapidly
rolling for 2-3 minutes where needed at low back, hips or thighs, squatty potty with BMs, Proper hydration and fiber and avoiding compression garments high heels or high impact activities.

Analysis: Cronbach and Wilcoxon related items data analyses were used to compare the test-re-test (and control period) data for the questionnaires and the physical assessments.

Results:
The scores indicated no changes during the control period, which showed chronicity of symptoms (acute symptoms could have biased the efficacy of the intervention). Score comparisons showed a “38% improvement in the participants’ lower back pain”, P< .05, Also, a 54.3% improvement in QOL (PFIQ-7, P< .05) and a 53.8% improvement in pelvic floor distress symptoms (PFDI-SF20), P<.05.

Notably, the PFIQ-7 pre-test score was only 40/300 (13% dysfunction) which typically does not reflect significant PFD.
Mean results showed minimal degrees of disability of LBP per Oswestry, They also reported significant statistical improvements in the categorical physical assessment scores of 42.9% in pelvic alignment, 37.9% improvement in DRA and a 48.4% improvement in PFM activation, all P< .05.

Discussion
The authors state that their LWP system significantly improved LBP, pelvic impact symptoms, pelvic QOL, as well as DRA, PFM activation and pelvic alignment. They state that statistical significance doesn’t equate with clinical improvement. They state that both the Outcomes questionnaires as well as physical assessments all indicated statistically significant improvements. Is this really true? Or is it just an inflation of the stats?

Oswestry use:
MDC is used mostly in research and MCID is for patient care and the change in the Oswestry in this study was 6.2 % points. If so, then their MDC (minimally detectable change) – percentage, may be questionably acceptable (see MDC and MCID for ODI at APTA EBP resources on website, which states MDC to be 11.8-12.8% points). Also, they stated 9/41 patients (22%), “improved” their degree of disability as shown with the ODI, which means 78% did not.

Lifestyle recommendations part of the program may have also contributed to positive outcomes in scores (possibly decreased constipation, which could improve outcomes scores of CRAD-8 and POPDI-6 sections of PFDI-20) (a possible strength but also a limitation, in that it’s effect was not controlled or analyzed separately from the exercise portion of the program, so we don’t know what caused the improvement in the QOL scores, if other than placebo).

They state this LWP works because it strengthens the “foundational muscles of the body-the core”. This may assist with reprogramming the deep support muscles of the core and assist the body in moving w/o pain/dysfunction and give relief from PFM dysfunction/LBP, all in a “noninvasive” and pain free way. They state that as motor learning, it reactivates deep support muscles of the core that may be dormant due to pregnancy, childbirth, low back injury or disuse. But none of this can be proven with this study.
Strengths
Uses validated outcomes questionnaires
Protocol focuses on functional movement vs. isometric bracing
Takes 10-15 minutes/day,
Possibly preferable for “many women, especially those with a history of physical or sexual abuse”. Lifestyle recommendations part of the program may have also contributed to positive outcomes in scores (possibly decreased constipation, improving CRAD-8 and POPDI-6 sections of PFDI-20)

Limitations
Not blinded- to account for Placebo effect
Their referenced study of MCID of PFIQ-7 and PFDI-2 SF, does not generalize to MCIDs for other studies “between groups”, (groups here being: before and after treatment)
Physical measurements used are questionable:
Core not defined or measured in repeatable or validated way external palpation of PFM activity, through clothing is not a validated measure and no US imaging of PFM or TrA- commonly referred to as deep core
Small N (41) with minimal PF dysfunction
References don’t always support statements using them.
The conclusion is not supported by the research design

Discussion questions and Notes:

1) How does this agree or disagree with results from Hartigan study?
2) Despite these possible drawbacks, what do you think about using a program like this or another hip program, in your practice?
3) If the above (regarding Oswestry conclusions being questionable), is true, how much validity do you feel this study has- do you think the other changes, such as in the PFIQ-7 and PFDI-20, which were more robust, outweigh that possible limitation (also given a limitation that the PFIQ-7 and PFDI-20 were measuring not only outcomes due to exercise but also due to lifestyle changes, which they didn’t control for differences in effects)?
4) What do you think about the validity of this study regarding blinding and the placebo effect?
5) What do you think about their measurements of PFM activity? (This reviewer is not aware of this method as having inter-rater reliability).

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