

## PSYCHOLOGICAL PREDICTORS OF PHYSIOTHERAPY TREATMENT FOR PELVIC FLOOR DYSFUNCTION:

### Hypothesis / aims of study

The purpose of the study is to identify the psychological predictors of outcome for physiotherapy treatment for pelvic floor dysfunction in women. This knowledge should enable better-targeted services, and form the foundation for the development of novel psychological adjuncts to physiotherapy treatment that will help to allocate treatment resources more effectively and efficiently.

Pelvic floor disorders (PFD) are estimated to effect 1 in every 3 females. Physiotherapy is recommended as the first line treatment in the management of these disorders and can be an effective and conservative alternative to surgery. However, the outcomes of physiotherapy can be variable, and identifying the predictors of success is a key research question.

### Study design, materials and methods

The study was a prospective observational study including 124 consecutive women referred to the Uro-gynaecological Physiotherapy Service at Singleton Hospital. The department runs a 6-monthly intensive physiotherapy programme including 4 class sessions and 2 individualized sessions.

On admittance to the 6-month physiotherapy programme (one session per month), patients: (1) underwent an assessment of their pelvic floor strength (Oxford grading) and prolapse grading. (2) Provided subjective assessments of their condition (Queensland pelvic floor questionnaire), and data regarding other demographic characteristics (e.g., age, BMI, past medical history); and (3) completed a questionnaire to assess their psychological health i.e Hospital Anxiety and depression scale (HADS), these parameters were repeated after completing all six sessions. Comparison was made between the patients' state of anxiety and depression and the severity of their symptoms

### Results

124 women were recruited to participate in the study. 109/124 completed the questionnaires at initial assessment. (HAD and Queensland questionnaire). There was a positive correlation with the severity of depression and the severity of pelvic floor dysfunction. The correlation was strongest with bladder dysfunction followed by bowel, sexual and least with prolapse scores.

### **Pearson Correlation(r) between Depression scores and pelvic floor disorders:**

	Total (/112) physical score	Bladder Function (/42)	Bowel Function (/36)	Prolapse Symptoms (/15)	Sexual Function (/19)
<b>Number of XY Pairs</b>	94	93	94	87	86
<b>Pearson r</b>	0.4429	0.3396	0.329	0.04233	0.2528
<b>95% confidence interval</b>	0.2639 to 0.5924	0.1459 to 0.5082	0.1354 to 0.4984	-0.1699 to 0.2508	0.04320 to 0.4411
<b>P value (two- tailed)</b>	< 0.0001	0.0009	0.0012	0.697	0.0188
<b>P value summary</b>	****	***	**	Ns	*
<b>Is the correlation significant? (alpha=0.05)</b>	Yes	Yes	Yes	No	Yes
<b>R square</b>	0.1961	0.1153	0.1082	0.001792	0.06392

Comparative data was available for 50 patients who completed the 6 months of study. Among these patients, there was a significant improvement in all domains of pelvic floor dysfunction after physiotherapy intervention.

When the patients were divided into HAD categories, it was found that the benefit was greatest for patients who were not depressed. (Significant improvement in overall scores, bladder and bowel dysfunction but no improvement in prolapse and sexual dysfunction)

Mildly depressed patients benefited in terms of overall scores and prolapse symptoms whereas the severely depressed patients did not benefit in any of the parameters of PFD.

Patients with no underlying depression but high scores of PFD did benefit from physiotherapy. (p<0.002).

Analysis of the objective data on oxford grading of pelvic floor muscle strength showed that patients who did not suffer from anxiety/ depression showed some degree of improvement in all cases(100%) whereas the improvement was 75% in moderately and severely depressed patients.

**Paired T-Test analysis of groups of patients before and after 6 months of physiotherapy:**

	<b>Bladder Function (/42)</b>	<b>Bowel Function (/36)</b>	<b>Prolapse Symptom's (/15)</b>	<b>Sexual Function (/19)</b>	<b>Total (/112) physical score</b>
<b>All patients</b>	0.00 ***	0.0224 *	0.0117 *	0.0266 *	< 0.0001 ****
<b>Normal</b>	0.0028 **	0.0083 **	0.1596 ns	0.0574 ns	0.0018 **
<b>Mild depression</b>	0.0599 ns	0.6208 ns	0.0239 *	0.3345 ns	0.0136 *
<b>Moderate/severe depression</b>	0.1527 ns	0.2488 ns	0.7971 ns	0.4793 ns	0.1945 ns

Interpretation of results

This study shows that there is a direct correlation between the severity of depression and the severity of pelvic floor dysfunction. The patients who are not depressed are the most likely to benefit from physiotherapy intervention whereas the severely depressed patients do not show any symptomatic improvement even after 6 months of treatment.

Concluding message

This study raises the question whether a targeted approach should be undertaken for patients referred for pelvic floor physiotherapy and other adjunct therapies should be considered in moderately and severely depressed and anxious patients.

Disclosures

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**Informed Consent:** Yes