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OBJECTIVES

To evaluate the efficacy of a Pilates programme with regard to function, pain and flexibility outcomes.

INTRODUCTION

Low back pain (LBP) is one of the leading causes of disability worldwide<sup>(1)</sup>, with lifetime prevalence estimates surpassing 50%<sup>(2)</sup>. Current treatment guidelines vary, with NICE listing a range of potential options; non-invasive non-pharmacological such as self-management, exercise, manual therapy etc. or pharmacological prescriptions. Non-surgical and surgical interventions are also listed, providing an immense variety of treatment options to physicians<sup>(3)</sup>.

This study observed the efficacy of a clinical Pilates based programme for LBP. Primary outcome evaluating pain reduction and secondary outcomes including; improvement in flexibility, function, and some qualitative data regarding patient feedback in relation to the programme.

METHODS

Study Design

Patients with LBP were carefully selected and referred by a Consultant Spinal Surgeon to the physiotherapy department at Vale Hospital, where a Chartered Physiotherapist specialising in muscle imbalance and spinal rehabilitation led the programme. The programme was based upon established stability techniques, building on research carried out by the Australian Physiotherapy & Pilates Institute (APPI).

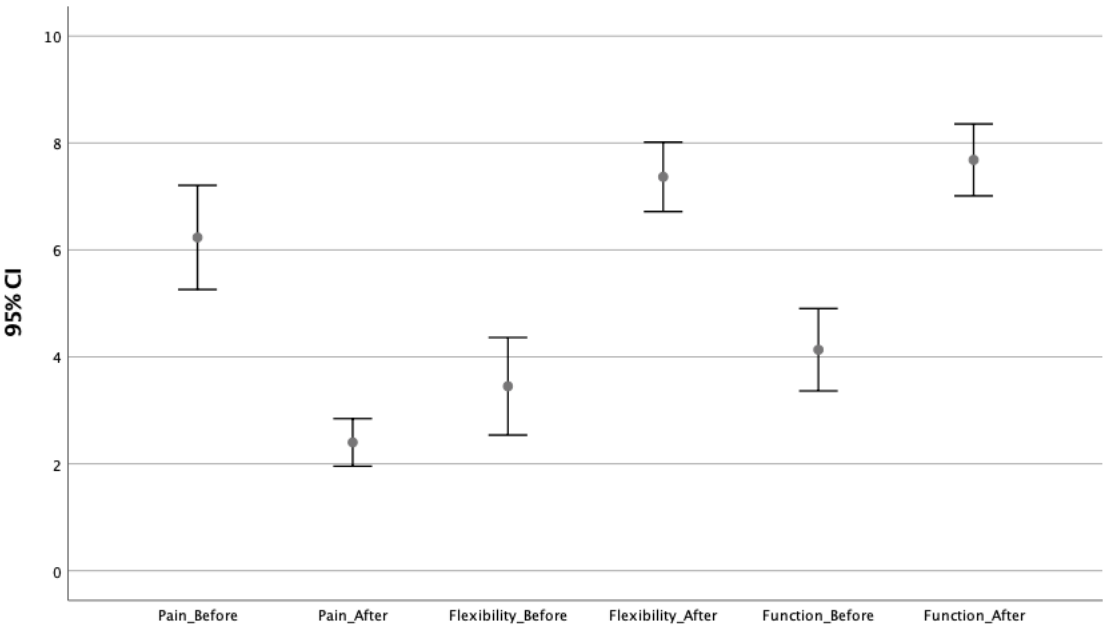
Outcome Assessment

Participants filled out a ‘Pilates Class Evaluation Form’, prior to participation in the programme, forming a basis for measuring outcomes. Outcomes were assessed at 6-week follow up, on completion of the programme. The primary outcome was the numeric pain rating of LBP severity (range, 0-10). Secondary outcomes included: range of flexibility (range, 0-10), change in function (range, 0-10) and qualitative data regarding patient’s views on the programme.

RESULTS

Pain Outcomes

28 out of 30 patients reported an improvement in pain post the Pilates programme. Average pain before the programme was recorded as mean M= 6.23 (95% CI 5.26 to 7.21), whilst pain post 6-week programme was M=2.4 (95% CI 1.95 to 2.85). This gave a 61.5% average reduction in pain.



Programme Feedback

Patient sentiment regarding the programme was overwhelmingly positive, with many highlighting that the improvements to their pain and function were life-changing.

Flexibility Outcomes

28 out of 30 patients reported an improvement in flexibility. Average flexibility before the programme was rated as M= 3.45 (95% CI 2.54 to 4.36), with the rating improving to M=7.37 (95% CI 6.72 to 8.02). There was a 113.5% average increase in flexibility.

Function Outcomes

27 out of 30 patients reported improved function. Average function was scored as M=4.13 (95% CI 3.36 to 4.90) prior to the programme. Post 6-week programme the average function was reported as M=7.68 (95% CI 7.01 to 8.36). Hence there was an 85.89% average increase in reported function.

CONCLUSION

Amongst patients with chronic LBP, a patient specific Pilates programme resulted in statistically significant improvement in pain, alongside improved function and flexibility. Prospective analysis of future studies, with higher quality evidence, will provide more conclusive answers regarding the role of clinical Pilates as a mainstay treatment for cLBP.

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