Evaluation of a 7-year return-to-work cognitive-behavioural based physiotherapy back rehabilitation programme

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Background and purpose: Studies found that psychological factors predicted extent of chronic disability and hinder the process of return to work. Thus, this study aimed to determine whether a programme of conventional therapy and education using cognitive behavioural therapy approach reduced pain, disability, fear-avoidance belief and also anxiety and depression among patients with low back pain.

Methods: This was a pre- and post-test study. Patients who had injured their back at work of less than 8 weeks and high fear avoidance beliefs were recruited. Outcome measures were Numerical Global Rating of Change Scale, Numeric Pain Rating Scale (NPRS), Roland Morris Disability Questionnaire (RMDQ), Hospital Anxiety and Depression Scale (HADS-Anxiety and HADS-Depression) and Fear-Avoidance Beliefs Questionnaire (FABQ)-Physical activity and FABQ-Work.

Results: From August 2007 to December 2014, a total of 712 patients were recruited. The mean value of NGRCS was 5.6±2.2. The post-programme evaluation of NPRS (from mean value of 5.9±2.4 to 4.8±2.7 with p<0.001), RMDQ (from mean value of 16.2±3.8 to 13.1±4.6 with p<0.001), HADS-Anxiety (from mean value of 12.1±4.6 to 7.8±4.7 with p<0.001), HADS-Depression (from mean value of 12.5±4.6 to 9.4±4.8 with p<0.001), FABQ-Physical activity (from mean value of 18.3±3.4 to 16.6±4.3 with p<0.001) and FABQ-Work (from mean value of 36.8±4.1 to 30.6±7.3 with p<0.001) were found to be significantly improved.

Conclusion: Our study showed that cognitive behavioural-based physiotherapy programme was found to be effective in decreasing back pain, the fear-avoidance behaviours, the anxiety and depressive mood in patients with work-related back injury. However, randomized controlled trials are recommended to determine its effectiveness.

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A 6-year evaluation of a preoperatory and postoperatory empowering physiotherapy programme for patients with lumbar pathologies

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Background and purpose: A comprehensive physiotherapy management programme was launched in Tuen Mun Hospital for patients with lumbar spine pathologies in order to enhance their function after lumbar spine surgery. The objective was to evaluate the effectiveness of the programme in reducing back pain, restoring functional activities and alleviating the psychological factors for those patients.

Methods: The programme consisted of a preoperative education session, postoperative physiotherapy training and follow-up clinic. Outcome measures included: (1) Numerical Global Rating of Change Scale (NGRCS); (2) Numeric Pain Rating Scale (NPRS); (3) Roland Morris Disability Questionnaire (RMDQ); (4) Fear-Avoidance Beliefs Questionnaire (FABQ); and (5) Hospital Anxiety and Depression Scale (HADS). Data were collected preoperatively, at the first postoperative session and final physiotherapy session.

Results: From July 2008 to December 2014, 353 patients completed the programme. NPRS (6.5±2.5 to 3.1±1.9), RMDQ (12.6±2.9 to 8.4±2.4), FABQ-Physical Activity (20.8±4.9 to 13.1±4.2), FABQ-Work (27.2±8.6 to 17.4±9) and HADS-Anxiety (12.5±3.4 to 8.1±2.9) were significantly improved (p<0.05) from the preoperative physiotherapy session to the final physiotherapy session. NPRS (4.1±1.8 to 2.7±1.5), RMDQ (11.6±2.4 to 8.3±3.4), FABQ-Physical Activity (16.2±6.6 to 12.8±4.8) and FABQ-Work (24.7±4.8 to 20.2±6.5) were also significantly improved (p<0.05) from the first postoperative physiotherapy session to the final physiotherapy session. Subjective improvement as measured by NGRCS was significantly increased (p<0.05) from 4.2±2.7 to 7.6±1.8 from the first post-operative to the final physiotherapy session.

Conclusion: The programme was found to be effective in reducing back pain, restoring functional activities, alleviating the psychological factors for those patients who received lumbar spine surgery.

New impact of physiotherapy management on children with congenital talipes equinovarus (CTEV): Preliminary results

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Background and purpose: Congenital talipes equinovarus (CTEV), also named clubfoot, is a common deformity of the foot in newborns. Conservative treatment with physiotherapy and orthopaedic management can always achieve a good result. However, with the traditional French method (gradual manipulation and stretching followed by strapping of foot) that we applied, patients have to attend daily physiotherapy in order to achieve good correction of the deformity. In contrast, the Ponseti method involves weekly gentle stretching and manipulation of the misaligned bones followed by application of a well-molded long-leg plaster cast; patients only need to attend physiotherapy treatment twice a week. Therefore, the Ponseti method, together with massage therapy in-between each cast, was adopted as the new management programme of CTEV.

Methods: Newborn babies were referred to paediatric orthopaedic clinic for clubfoot diagnosis. Immediate treatment was given by physiotherapist with Ponseti method. Pre-treatment assessment was done with Pirani Score, passive range of movement of the foot and photos recording. Treatment included stretching, manipulation and application of a long-leg plaster cast. Casting was changed on a weekly basis for 5 weeks. In between each casting application, an additional session of massage therapy was given. Weekly re-assessment was performed and biweekly reviews by an orthopaedic surgeon was given in the clinic to refine the direction of the casting. Clubfoot deformity was further reviewed in the clinic to decide on the need for surgery by the orthopaedic surgeon after 5 weeks of treatment.

Results: Improvement was noted on each separate component in the foot deformity after 5 weeks of treatment. The Pirani score improved in both hindfoot (2.5 to 1) and forefoot (2.5 to 2). Corrective effect was seen in the series of photos taken on a weekly basis. In addition, no surgical intervention was needed after review by the surgeon at the end of the casting period. Treatment frequency decreased by 60% as compared with the French method. Both parents were very satisfied with the results.

Conclusion: According to this preliminary data, the Ponseti method with massage therapy appears to be effective in correcting deformities of clubfoot. Moreover, the significant reduction in treatment frequency not only minimizes the stress of parents in caring for a newborn baby but also saves hospital resources.

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Public impression of an innovative stair-climbing power wheelchair: A pilot survey

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Background and purpose: Accessibility has always been challenging to the policy maker and the disabled alike, in both developing and developed countries, especially with the global problem of an aging population. Wheelchairs are only for smooth terrains. The Hong Kong Science & Technology Parks,