

Subjects: 24 healthy pregnant subjects with gestation between 11 and 37 weeks without previous back or sacroiliac surgery/trauma. Mean gestation was 26.6 weeks. The ages of subjects were between 20 and 38 years old. Twenty of the 24 subjects had been pregnant previously. Only 4 subjects were pregnant for the first time. Of the 20 that had prior pregnancies 5 had pain with a prior pregnancy.

Methods/Materials: Subjects were referred by physicians for physical therapy treatment. Subjects completed a visual analog scale to measure pain, work, ADLs (activities of daily living), sports and recreation, and numbness at each visit. Patients also recorded an average of how many hours they slept each night. In addition subjects were assessed using the Hesch Method of treating sacroiliac joint dysfunction. This assessment was performed by 1 of 2 trained physical therapists of the Hesch Method of treating sacroiliac joint dysfunction at each visit. Each type of pelvic dysfunction was noted at each visit. The intervention included correction of any hypomobility based on the assessment utilizing gentle joint mobilization and passive stretching techniques according to the Hesch Method of treating sacroiliac joint dysfunction. Patients were given self-correction exercises to be performed on a daily basis to help maintain pelvic alignment. Patients were given the option to cancel their next appointment if they were not having any symptoms because cost of treatment was a concern for some patients.

Results: One-tailed t tests were calculated utilizing Microsoft Excel. Significant differences were found ($p < 0.05$) for change in pain, ADL's, work, and sports and recreation. The p values were all ≤ 0.000256 . There were not significant differences found with numbness or hours of sleep a night. The average initial pain levels were a 7.3 on a 0-10 scale (see figure 1). The average discharge pain was 1.9 on a 0-10 scale, which was a change of 5.4 from initial to discharge. The average change in ADL's was 22.5%, for work was 21.7% and for sports and recreation was 26.9% (see figures 2-4).

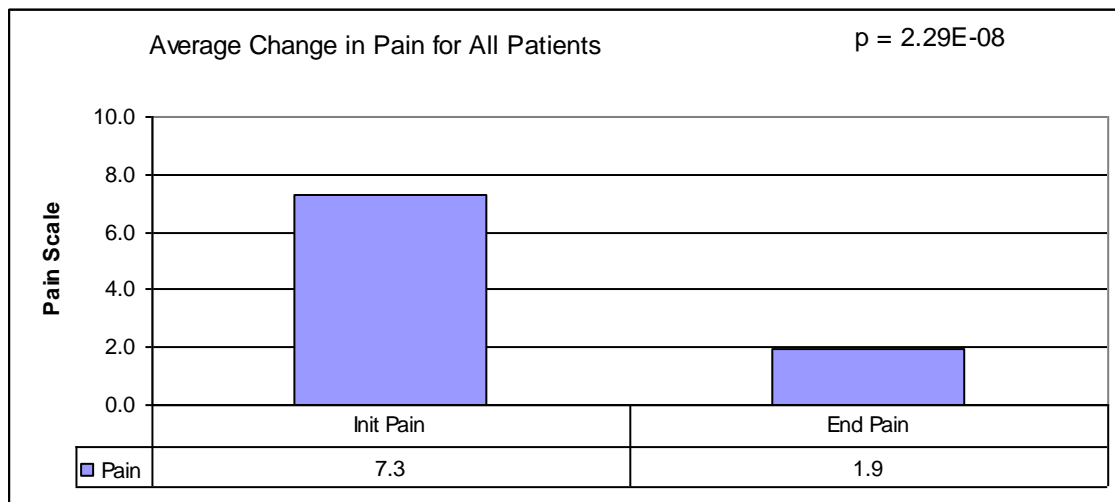


Figure 1: Average initial pain 7.3 on a 0-10 scale and average discharge pain 1.9 on a 0-10 scale.

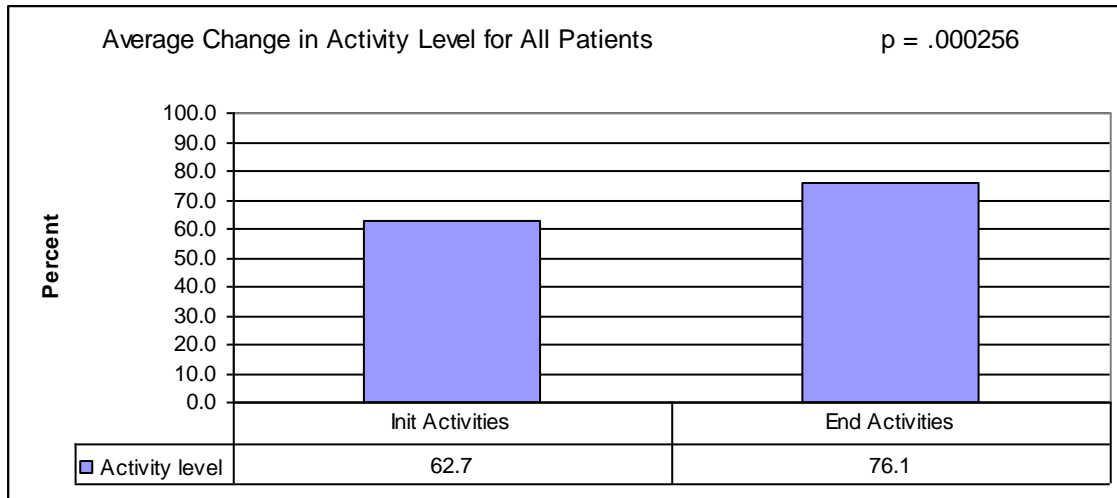


Figure 2: Average initial function for ADL's 62.7% and average discharge function for ADL's 76.1%.

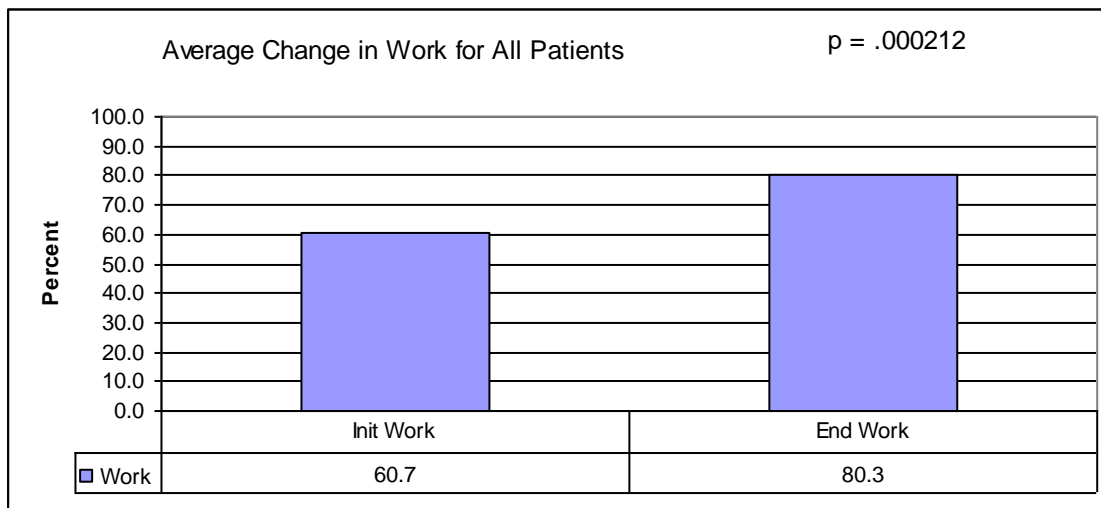


Figure 3: Average initial function for work 60.7%. Average discharge function for work 80.3%.

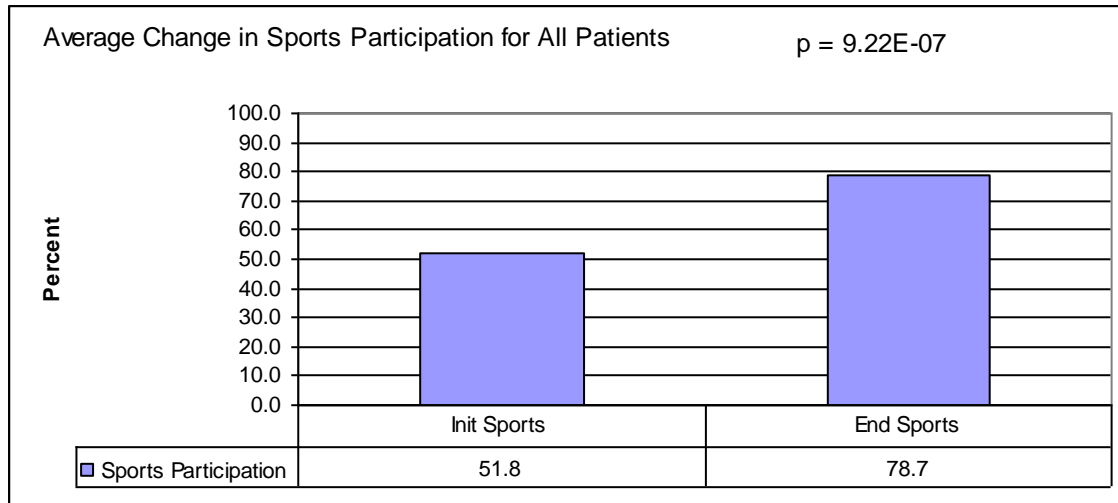


Figure 4: Average initial function for sports and recreation 51.8%. Average discharge function for sports and recreations 78.7%.

The average number of visits was 2.8 with a range from 2 to 4 visits. A cost analysis revealed that the average cost of treatment was \$323.83 with a range from \$168.00 to \$615.00.

Analysis of the type of sacroiliac dysfunction revealed that 18 subjects had at least 1 component of the most common pattern according to the Hesch Method of treating sacroiliac dysfunction. The most common pattern of sacroiliac dysfunction according to the Hesch Method of treating sacroiliac dysfunction includes a left posterior pubic shift, left sacral rotation, left sacral sidebend, right anterior ilium, left posterior ilium, type I right inflare, type I left outflare, and a type II left lumbar flexion dysfunction. There was no significant difference in the amount of numbness or hours of sleep from initial to discharge.

Eighty-eight percent of the patients seen 2 visits cancelled their last appointment and 27% of the patients seen 3 visits cancelled their last appointment. None of the patients who were seen 4 visits cancelled their last appointment.

Discussion:

Spring testing:

In a platform presentation in Barcelona Spain Teresa Krammer presented a thesis by Luanne Olson that demonstrated the spring test developed by Jerry Hesch had greater than 70 % agreement in seven of ten spring tests between two different clinicians. The three spring tests that fell below 70% agreement included the posterior rotation of ilium with subjects in the supine position (64%), inferior stress of the ilium with subjects in the supine position (64%), and the lateral ilium stress with subjects in the prone position (67%). Potter and Rothstein used 70% agreement as criteria for acceptance of clinical tests to evaluate pelvic dysfunction. Research has shown that most tests to determine reliability in the pelvic region are not useful.

Spring tests were also analyzed by subject. No investigator learning curve was noted within the groupings of these subjects. Olsen theorized that a potential explanation might be that patients had discomfort with initial spring testing and on subsequent testing produced a muscular contraction to guard against pain. This would result in variability so spring test results