MADISON J STEVENSKI, GREG E POPOVICH, School of Exercise Science & Athletic Training, West Virginia Wesleyan College, Buckhannon, WV, 26201, and KRISTY HENSON, Department of Biology & Environmental Science, West Virginia Wesleyan College, Buckhannon, WV, 26201. Trainability of functional deficits in adults with scoliosis.

Scoliosis is an understudied diagnosis of a lateral spinal curvature, and is classified with a diagnostic feature of a curve exceeding 10 degrees. Most commonly, there is no known cause and the onset occurs in adolescence. Our laboratory has previously reported on baseline functional data in adults with Adolescent Idiopathic Scoliosis (AIS). The purpose of this followup study is to determine the change over time in patients who were treated for scoliosis in an outpatient orthopedic physical therapy clinic. Fourteen patients were treated for an average of 6.75 weeks, resulting in 12 treatments. Patients were assessed for improvements in lumbar strength, rotational strength/symmetry, pain, and functional index (Oswestry questionnaire). Strength and range of motion (ROM) of the trunk were measured and treated on MedX spinal dynamometers. During initial evaluation, 70.4% of the patients expressed spinal pain. Typical pain improved in 72.7% of patients; peak pain was improved in 50% of patients. The perceived functional index demonstrated that 58.3% of patients reported improved function. Initially, patients' trunk rotation strength was reported at 28.3% below average. Following therapy, patients' rotation strength improved on the left by 26.7% and 36.4% on the right, bringing strength closer to established norms while improving bilateral strength balance (i.e., reducing strength asymmetry). We conclude that adults with AIS may benefit from specific trunk strengthening interventions that improve strength, strength symmetry, pain, and self-perceived disability.