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Differences in LBP in adults with and without scoliosis: Results of a systematic review

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Introduction: There is a paucity of evidence to differentiate the features of low back pain (LBP) in adults with scoliosis compared to those without scoliosis. Therefore, there is a need to better identify the features of LBP in adults living with scoliosis to distinguish whether scoliosis is the underlying cause of LBP. Understanding the features of LBP in this group would have clinically relevant outcomes related to treatment and prevention of pain. The aim of this study was to check if signs, symptoms, and features of LBP differ between adults with and without scoliosis through a systematic review of the literature.

Methods: We searched CINAHL, EMBASE, PubMed and SCOPUS from database inception to the 30th of September 2022. We included studies that described the features of LBP in adults with scoliosis compared to adults without scoliosis. We also included studies of adults treated during adulthood if they did not receive any treatment in the last six months, and then we only considered baseline information. We also included studies where the authors had excluded participants who had been surgically managed for their scoliosis or LBP during growth. We excluded studies if the scoliosis was not likely related to idiopathic or degenerative scoliosis. We included original peer-reviewed primary research articles with a population of adults with scoliosis, with no limitations for study design.

Results: From 7473 titles we selected 88 abstract and finally included 12 papers. Four papers (4092 patients) were controlled: two were prospective controlled studies, one was a retrospective cohort study, and one was a cross-sectional study. The other eight (1072 patients) papers were not controlled. The overall quality was good, with respect to the type of design. We included the percentage of signs, symptoms, and associated features of LBP in adults with and without scoliosis. Cruralgia was more prevalent in adults with scoliosis, compared to adults without scoliosis, and ranged from 14% to 26% compared to 6.3% to 12% respectively. Inguinal pain was reported in 30% of adults with scoliosis compared to 6% of adults without scoliosis. There is some evidence that adults with LBP with scoliosis can be distinguished from adults with LBP without scoliosis by more advanced age and a greater proportion of women.

Conclusions: There are differences in the reported signs, symptoms, and associated features of LBP in adults with and without scoliosis. Adults with LBP and scoliosis are more likely to be older females, and report pain radiating beyond the LBP, compared to adults without scoliosis. More and better-quality research with coherent outcomes is needed.