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Effectiveness of scoliosis specific exercises in improving cobb's angle_ a meta-analysis of randomized controlled trials

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Background: Three-dimensional deformity of the spine which is diagnosed by the measurement of major curves of the spine is called scoliosis. The lateral curvature angle of the spine is most commonly measured by Cobb's angle which requires an anteroposterior radiograph of the spine. Scoliosis is most commonly seen in adolescents where it is termed as adolescent idiopathic scoliosis (AIS). No meta-analysis was found in searched databases regarding the role of scoliosis specific exercises (SSE) in improving Cobb's angle. This article provides a review of the role of SSE in reducing Cobb's angle to evaluate the significance of these corrective exercises.

Methods: PRISMA was used by the author for a literature review for 10 years for randomized controlled trials in the English language from PubMed, Google Scholar, and Cochrane library. The interventional group contains SSE with standard care while the control group contains standard care. Change in Cobb's angle was the defined outcome. SMD was calculated to measure the effect size to design a forest plot for comparing the SSE group with the control group. The negative value shall favor the treatment group while the positive value shall favor standalone care.

Results: Five trials were included in the meta-analysis where a standardized mean difference (SMD) of -0.721 ± 0.146 was reported between the SSE and control group.

Conclusion: We concluded that SSE produces a decrease in Cobb's angle compared to the standard care without scoliosis specific exercises (SSE). However, good quality randomized controlled trials with larger sample sizes and longer follow-ups are needed.

Biography

Sheikh Muhammad Ebad Ali has completed his MBBS at the age of 25 years from Dow University of Health Sciences and doing his internship at Dr Ruth KM Pfau Civil Hospital, Karachi. He has served as the Vice President of Drug Bank and Senior Vice President of Patients' Welfare Association. He has published more than 3 papers in reputed journals and currently working on projects related to spine care.

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