International Platform of Registered Systematic Review and Meta-analysis Protocols

INPLASY

INPLASY2023100001 doi: 10.37766/inplasy2023.10.0001 Received: 01 October 2023

Published: 01 October 2023

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Safety and efficacy of Schroth Gymnastics in adolescent idiopathic scoliosis : a systematic review and Meta-analysis

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ADMINISTRATIVE INFORMATION

Support - Key Programs of Humanities and Social Sciences of Bengbu Medical College 2020byzd218sk.

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY2023100001

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 01 October 2023 and was last updated on 01 October 2023.

INTRODUCTION

eview question / Objective The incidence of adolescent idiopathic scoliosis is increasing year by year, seriously affecting adolescent growth and development. Therefore, the efficacy of Schroth Gymnastics on adolescent idiopathic scoliosis has received increasing attention. The purpose of this systematic evaluation is to accurately assess the efficacy of Schroth Gymnastics. The PICOS principle was applied to set the inclusion criteria, described as P(population): Adolescents with idiopathic scoliosis; I(intervention): Schroth Gymnastics; C(comparison): Compared to no treatment, wearing of appliances, traditional therapies or any other non-Schloss gymnastic Gymnastics; O(outcome): Cobb's Corner, ATR (angle of trunk rotation) from performing the Adam test, body posture, and lateral flexion mobility of the spine; S(Study design):RCT.

Condition being studied Adolescent idiopathic scoliosis (AIS) is by far the most common type of scoliosis, with an overall prevalence of about 3%, and is mainly defined as scoliosis that occurs in children between the ages of 5-18 years old, especially in the 2 stages of 3-5 years old and 11-14 years old. Because adolescents are at the peak of their growth and development, scoliosis progresses most rapidly. Currently, it is conservatively estimated that there are millions of children with AIS, and about 80% of them need to wear a brace to control the progression of scoliosis, and about 1/4 of them have to undergo surgery eventually. This brings many inconveniences to the children's school life and a heavy burden to the children and their families. Therefore, it is important to study the safety and efficacy of Schroth Gymnastics in improving adolescent idiopathic scoliosis.

METHODS

Participant or population Adolescent idiopathic scoliosis.

Intervention Schroth Gymnastics.

Comparator No treatment, wearing of appliances, traditional therapies or any other non-Schloss gymnastic Gymnastics.

Study designs to be included RCT.

Eligibility criteria Inclusion criteria:1. the type of literature collected must all be based on RCT trials2. the study subjects were eligible for cobb angle greater than 10 degrees and excluded nonspecific scoliosis such as congenital, neuromuscular, combined neurofibromatosis, combined laminectomy, degenerative, etc., and were limited to the age between 5-18 years.3. The intervention for the treatment group was Schroth's gymnastics.4. The intervention consisted of Schloss Gymnastics versus no treatment, Schloss Gymnastics versus bracing, and Schloss Gymnastics versus conventional therapy.5. Selection of outcome indicators that include cobb angle, ATR (Angle of Trunk Rotation) from performing the Adam test as the main evaluation and research indicators in the literatureExclusion criteria:1. type of study not clearly explained2. Duplicate publications3. Very small sample size4. Full text not available5. Studies did not meet the inclusion criteria6. No clear outcome indicators and efficacy evaluation criteria.

Information sources Pubmed, cochrane library, web of science, scopus, embase, ovid, proquest.

Main outcome(s) cobb angle, ATR (Angle of Trunk Rotation) from performing the Adam test.

Additional outcome(s) body posture, lateral flexion mobility of the spine.

Quality assessment / Risk of bias analysis Cochrane TOOL.

Strategy of data synthesis N/A.This study is a systematic review without meta-analysis.

Subgroup analysis N/A.This study is a systematic review without meta-analysis.

Sensitivity analysis N/A. This study is a systematic review without meta-analysis.

Country(ies) involved China.

Keywords adolescent idiopathic scoliosis, Schroth Gymnastics.

Contributions of each author

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