Adolescent Idiopathic Scoliosis: An Integrative Literature Review of the Variations in Psychosocial Effects

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ADOLESCENTS WITH SCOLIOSIS: AN INTEGRATIVE LITERATURE REVIEW OF PSYCHOSOCIAL EFFECTS
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ABSTRACT

Background: Adolescent Idiopathic Scoliosis (AIS) is a common orthopedic disorder among adolescents world-wide. Treatment courses vary, but physical and psychological impacts are often indicated. The literature points to both positive and negative psychosocial impacts that AIS and treatment cause.

Objectives: The purpose of this study was to compare positive and negative psychosocial outcomes among patients with AIS, relative to various patient and treatment variables.

Method: This study utilized an integrative literature review.

Results: Trends in the literature’s empirical tools, type of treatment reviewed and nature of psychosocial outcomes were observed.

Conclusion: Special attention by healthcare providers to AIS patients’ body-image perceptions, treatment modality and treatment compliance is warranted.

Keywords: scoliosis, adolescent, psychological

BACKGROUND

- Adolescent Idiopathic Scoliosis: An orthopedic disease manifested by curvature of the spine that can progress over time and compromise physical functioning and vitality. In severe, untreated cases, the condition can be fatal [1]. Treatment courses vary, and include a combination of clinical observation, physical therapy, orthopedic bracing and/or surgical intervention.
- Patient outcomes among AIS individuals:
  - AIS treatment produces significant physical and psychological changes for AIS patients [2]
  - Positive outcomes: improved body image and self-perceptions of physical agility
  - Negative outcomes: depression, social isolation and low self-esteem
- These conflicting outcomes are described between separate studies as well as within results of the same study. Throughout the literature, some patients with AIS exhibit positive psychosocial outcomes while these same and other patients exhibit negative outcomes.
- To compare psychosocial outcomes, two research questions were explored:
  1. What variables are associated with both positive and negative psychosocial outcomes among patients treated AIS?
  2. What evidence exists supporting the existence of studies that could promote positive outcomes and avoid negative outcomes in the treatment of AIS?

RESEARCH METHODS

- Design: integrative literature review of pertinent literature [3]
- Literature Search Strategies: database search using Cumulative Index to Nursing and Health Literature (CINAHL) an ProQuest Nursing and Allied Health Sources. Keywords included psychological, scoliosis, and adolescent. Inclusion criteria included publication within ten years, articles that were written in English, peer-reviewed and derived from academic journals. Relevant article titles and abstracts were selected for further review.
- Data Analysis: Matrix-style display of each selected article. Each article’s author(s), sample, empirical tools utilized, type of AIS intervention(s) and psychosocial outcomes were displayed.

RESULTS

Fifteen studies were selected for further analysis. The studies encompassed the following characteristics:
- Samples that included both male and female AIS patients
- Samples from a wide variety of geographical and cultural backgrounds
- Methodologies that utilized empirical tools such as the Scoliosis Research Society Outcomes Questionnaire (SRS-22) and the Bad Sobernheim Stress Questionnaire (BSSQ)
- Twelve studies discussed adolescents only; three studies discussed adult patients
- Majority of the studies observed the impacts of brace or orthotic treatment (as opposed to surgical intervention or physical therapy)
- Only one study described negative psychosocial outcomes only; the remaining studies had a fairly equal distribution of both positive and negative outcomes


data table

Dialogue 22 Example Questions

13. How satisfied are you with your partner’s care during the difficult times of your back? (SRS-22)
   - Very satisfied
   - Somewhat satisfied
   - Neither satisfied nor dissatisfied
   - Dissatisfied
   - Very dissatisfied

14. Do you feel your back contributes to your being dissatisfied with your life’s events? (SRS-22)
   - Yes
   - No

15. How often do you have pain in your back? (SRS-22)
   - All of the time
   - Most of the time
   - Some of the time
   - Rarely
   - Never

DISCUSSION

- Gender
  - Female subjects were over-represented in the literature on AIS. However, in studies that discussed both female and male patients, gender did not appear to predispose patients to positive versus negative outcomes.
  - Anxiety and depression related to AIS was observed among both sexes.
- Body Image
  - The relationship between patient perceptions of their physical appearance and emotional well being was extensively discussed
  - A positive relationship between perceptions regarding body-image and emotional well being was prevalent across many studies
- Treatment Modality & Compliance
  - Treatment type—bracing, surgery or observation—did not have a clear link to the nature of patients’ psychosocial outcomes because conflicting trends were found in the literature
  - Patients who exhibited brace compliance exhibited positive psychosocial outcomes; the opposite appeared true for those who were non-compliant.

CONCLUSION

Due to the conflicting evidence regarding which variables produce positive versus negative outcomes, an individualized approach to providing care for AIS patients is ideal. As individual treatment plans are created, special attention to patients’ self-perceptions regarding body image, the type of treatment they will receive and their willingness to remain compliant is indicated.

RECOMMENDATIONS FOR FURTHER RESEARCH

- Male study participants
- Effects of surgical intervention
- Improving brace compliance
- Protective factors against disturbed body-image
- The role of peer support groups
- Long-term effects of AIS in adulthood

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