The Effect of Psychosocial Well-Being on Compliance in Adolescent Idiopathic Scoliosis: A Semi-Structured Literature Review

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Introduction

The purpose of this semi-structured literature review is to provide a comprehensive assessment of the potential contributing factors in low AIS treatment compliance in order to determine if psychosocial intervention could drive improvement.

Methods

Research Objective

The research objective is to identify potential contributing factors to compliance in adolescent idiopathic scoliosis (AIS) in regards to psychosocial well-being.

Inclusion Criteria

- 10-18 years of age
- AIS diagnosis
- TLSO not secondary to trauma
- Non-adolescent patient population
- Other scoliosis/kyphosis
- Limiters: English, full-text online, original research

Exclusion Criteria

- AIS, scoliosis
- Psychosocial, emotional well-being
- Compliance to Treatment Regimen
- Compliance, adherence, treatment regimen

Search Terms

- Population of Interest
- AIS, scoliosis
- Psychosocial Well-Being
- Psychological, emotional well-being
- Compliance to Treatment Regimen
- Compliance, adherence, treatment regimen

Table 1. Outcome Measure Distribution

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>Number of Instances (Overlapping)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trunk Appearance Perception Scale</td>
<td>1</td>
</tr>
<tr>
<td>Personal and Role Skills Scale</td>
<td>1</td>
</tr>
<tr>
<td>Wechsler Intelligence Scale for Children</td>
<td>1</td>
</tr>
<tr>
<td>Peabody Individual Achievement Test</td>
<td>1</td>
</tr>
<tr>
<td>PedQLA.0</td>
<td>1</td>
</tr>
<tr>
<td>Rosenberg's Self-Esteem Scale</td>
<td>1</td>
</tr>
<tr>
<td>Appearance Self-Esteem Scale</td>
<td>1</td>
</tr>
<tr>
<td>Maudsley Personality Inventory</td>
<td>1</td>
</tr>
<tr>
<td>Spinal Appearance Questionnaire</td>
<td>2</td>
</tr>
<tr>
<td>Scoliosis Research Society 22-item Scale</td>
<td>2</td>
</tr>
<tr>
<td>Piers Harris Self-Concept Scale</td>
<td>2</td>
</tr>
<tr>
<td>Interview Only</td>
<td>2</td>
</tr>
<tr>
<td>Brace Questionnaire</td>
<td>3</td>
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</tbody>
</table>

Figure 1. Compliance Measure Distribution

Results

- Only 33-75% wear-time compliance
- 11 Articles
- Primarily Female Patient Population
- 13 Outcome Measures
- 81.8% using subjective compliance measure!

Discussion, Limitations & Future Research

- Factors likely to affect treatment compliance can be divided into two distinct categories – extrinsic or intrinsic

Extrinsic Factors

- e.g., peer sleepovers, friends with AIS, visual aesthetics of TLSO and clothing
- Future research: clinical trial to correlate objective compliance data and self-report PWB survey measures throughout the treatment cycle to predict likelihood of compliance

Intrinsic Factors

- e.g., achievement success expectation, seeking social support, self esteem, IQ, depression
- Additional research is necessary to understand ability to use extrinsic and intrinsic factors in predicting likelihood of compliance
- Future studies should reduce number of outcome measures and include more rigorous statistical analysis for an improved level of evidence

Conclusions

- Effect of psychosocial well-being on likelihood of compliance is not well understood, remains widely controversial, and often conflicting

References