

**Spinal Fusion for Adolescent Idiopathic Scoliosis: Does Fusion at above T4 or T4 Affect the Cervical Spine Alignment and the Functional Outcome at the Cervical Spine?**

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**INTRODUCTION:**

Adolescent idiopathic scoliosis (AIS) is one of the most common types of scoliosis[1]. Till date no studies investigate the relationship of UIV in term of radiological changes and SRS- 22 score and Neck Disability Index (NDI) score.

**METHODS:**

A retrospective study conducted in Hospital Canselor Tuanku Muhriz from January 2021 to June 2022. The collected data was analyze using SPSS version 24 and p-value less than 0.05 was considered as significant.

**RESULTS:**

58 patients were included ,44 patients UIV at T4 and 14 patients above T4. No significance difference in radiological parameters and there were significant differences before and after surgery in the mean scores for quality of life.

Table 1 showing Mean scores for quality of life

UIV Level	Pre	Post	p-value
<b>Functions</b>			
Above T4	4.2 ± 0.7	4.9 ± 0.2	0.002*
T4	4.1 ± 0.6	4.9 ± 0.2	0.000*
<b>Pain</b>			
Above T4	4.2 ± 0.7	4.8 ± 0.3	0.004*
T4	4.1 ± 0.6	4.9 ± 0.2	0.000*
<b>Self-image</b>			

Above T4	3.7 ± 0.3	4.6 ± 0.3	0.000*
T4	3.7 ± 0.3	4.7 ± 0.4	0.000*
<b>Mental Health</b>			
Above T4	4.8 ± 0.3	4.9 ± 0.1	0.059
T4	4.6 ± 0.4	5.0 ± 0.1	0.000*
<b>Satisfaction</b>			
Above T4	3.7 ± 0.5	4.2 ± 0.5	0.000*
T4	4.0 ± 0.5	4.5 ± 0.4	0.000*
<b>NDI</b>			
Above T4	0.0 ± 0.0	0.0 ± 0.0	0.0
T4	0.0 ± 0.0	0.0 ± 0.0	0.0

**DISCUSSIONS:**

Significant changes in radiological outcome with T4 selected as UIV were found in thoracic kyphosis and clavicle angle and not statistically significant. The clinical functional outcome showed a significant association with the selection of the UIV level.

**CONCLUSION:**

The selection of UIV level for scoliosis surgery can helped to improve the quality of life for the patients

**REFERENCES:**

1. Konieczny MR et al J Child Orthop 2013;3–9.