

**ORAL PRESENTATION**

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# Determination of quality of life in adolescents with idiopathic scoliosis subjected to conservative treatment

Angelo Gabriele Aulisa<sup>\*</sup>, V Guzzanti, C Perisano, A Specchia, M Giordano, L Aulisa

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## Introduction

Physical deformities caused by adolescent idiopathic scoliosis (AIS) as well as conservative treatment of AIS with orthosis unavoidably impact on patients' quality of life (QOL). The present study aimed at evaluating the QOL in patients affected by AIS treated with brace. Furthermore, the study sought to determine the ability of different QOL questionnaires to monitor QOL over the course of treatment.

## Materials and methods

Data were collected in 108 consecutive patients (96 females, 16 males) affected by AIS admitted to the outpatient orthopaedic clinic of the Catholic University of the Sacred Heart in Rome (Italy) and of the Children's Hospital Bambino Gesù in Rome (Italy). Patients were subjected to full-time (i.e., 22 hrs per day) conservative treatment with the progressive action short brace (PASB), the Lyon brace or a combination of PASB + Lyon brace. Three instruments were used for QOL determination: the Scoliosis Research Society 22 (SRS-22), Bad Sobernheim Stress Questionnaire (BSSQ) and the Brace Questionnaire (BrQ).

## Results

A significant correlation was detected among the 3 scores ( $p < 0.001$ ). The BrQ possesses a higher capacity to detect changes in QOL in relation to the patient gender, type of brace, curve severity at baseline and at the completion of treatment, and type of curve. Overall, boys displayed a higher QOL than girls. In all 3 questionnaires, higher QOL scores were determined in

patients treated with the PASB compared with those using the Lyon brace. QOL scores were significantly correlated with the curve severity. Higher QOL scores were obtained by participants with thoraco-lumbar curves compared with those with other curves.

## Discussion and conclusion

The 3 questionnaires are equally effective in capturing changes in QOL in AIS patients subjected to conservative treatment. However, the BrQ possesses a higher discriminatory capacity compared with the other questionnaires tested. PASB-based treatment is associated with better QOL than the Lyon bracing.

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<sup>\*</sup>A. Gemelli Hospital, Università Cattolica del Sacro Cuore, Rome, Italy  
Full list of author information is available at the end of the article