

# Reliability and validity of adapted Turkish Version of Early Onset Scoliosis-24 item questionnaire

H.Gökhan Demirkiran  
Gizem İrem Güvendik  
Yasemin Genç  
Saygın Kamaci  
Muharrem Yazici

# Early onset scoliosis

- Affects vital, especially pulmonary functions
- Alterations caused in the spinal column
- Patients
  - Various health problems
  - Recurrent hospitalization and surgeries

- Radiographic parameters
  - Insufficient to evaluate the severity and efficacy of treatment in EOS
- EOSQ-24 questionnaire is a new instrument developed for this specific age group

# Aim

- To evaluate the validity and reliability of culturally adapted Turkish Version of EOSQ-24

# Method

- Forward translation to Turkish
- Synthesis of translations
- Back translation of the English version of the EOSQ-24
- All steps for cross-cultural adaptation process were performed properly by an expert committee

# Method

- Turkish version of EOSQ-24 was applied to 47 (22 male, 25 female) patients
  - Previously treated (average age 9.2 y, range: 3.8-14.2)
  - Untreated (average age 8.8 y, range: 4.5-10)

# Method

- Data quality was assessed by
  - mean,
  - median,
  - percentage of missing data,
  - skewness index
  - extent of ceiling
  - floor effects.
- Reliability was assessed by internal consistency using Cronbach's  $\alpha$  and Item-Total correlations.

# Results

- Responses of twenty items was evenly distributed over the five categories
- Items
  - 5 (pulmonary function) and 24 (satisfaction) right skewed
  - 6 (pulmonary function) highly right skewed
- item response was high with a missing answer rate of 0% - 4.3%.



# Results

- Floor effect was 0%-23.4%
- Ceiling effect was 2.1% - 71.7%
- Cronbach's  $\alpha$  was 0.911 for the 24 item scale and the range was 0.53 - 0.86 for 9 subscales
- All Item-Total correlations were over 0.20 except item 2

# Conclusion

- Turkish version of EOSQ-24 is validated in early onset scoliosis patients.
- Good reliability for evaluation of EOS patients
- Further evaluation should be performed to assess pulmonary function subscale.