

Comparison of EOSQ-24 and SRS-22 Scores in Congenital Scoliosis

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Disclosures

- None

Background

- EOSQ-24 and SRS-22 measure health-related quality of life in patients with scoliosis
- EOSQ-24 recently validated in early onset scoliosis (EOS), including congenital scoliosis (CS)
- SRS-22 validated in idiopathic scoliosis
- EOSQ-24 completed by the caregiver
 - Patients <10 years
- SRS-22 completed by the patient
 - Patients ≥ 10 years



Hypothesis

- SRS-22 is appropriate for cognitively normal children with EOS from CS
- EOSQ-24 is more appropriate than SRS-22 for developmentally delayed patients of any age with CS



Purpose

- Compare EOSQ-24 and SRS-22 scores in patients with CS
- Compare scores by age and in developmentally delayed patients



Methods

- Queried prospective institutional CS database to identify patients who completed EOSQ-24 and SRS-22 at same time point
- Cognitively normal children completed both questionnaires if they understood the questions, regardless of age
- Caregivers completed both questionnaires in all other cases

Methods

- Similar questions matched so EOSQ-24 questions fit into SRS-22 domains of Function, Pain, Mental Health, and Satisfaction
- Parental Impact (EOSQ-24) and Self-Image (SRS-22) questions excluded
- Pearson correlation coefficients (r) used to compare domain scores

EOSQ-24	SRS-22
General Health	Function
Pulmonary Function	Function
Transfer	Function
Physical Function	Function
Daily Living	Function
Fatigue/Energy Level	Function
Financial Impact	Function
Pain	Pain
Emotion	Mental Health
Satisfaction	Satisfaction



Results

- 98 patients with CS completed both questionnaires
- Average age at completion: 9.5 years (0-18 years)



Results

- Strong correlation found for all domain scores except Satisfaction when patient or caregiver completed both questionnaires

EOSQ-24 and SRS-22 domain	Comparison based on individual completing the questionnaire	
	Patient (n = 48)	Caregiver (n = 50)
Function	0.70	0.78
Pain	0.80	0.83
Mental Health	0.82	0.74
Satisfaction	0.49	0.39

Values are shown as correlation coefficients (r), with $r \geq 0.70$ indicating a strong relationship

Results

- Sub-analysis demonstrated strongest relationship between domain scores in 0-5 year age group

EOSQ-24 and SRS-22 domain	Comparison based on age		
	0-5 years (n = 26)	6-9 years (n = 28)	10-18 years (n = 44)
Function	0.87	0.78	0.67
Pain	0.76	0.78	0.86
Mental Health	0.83	0.67	0.59
Satisfaction	0.34	0.27	0.57

Values are shown as correlation coefficients (r), with $r \geq 0.70$ indicating a strong relationship

Results

- Weak correlation noted for all domain scores except Pain in developmentally delayed patients (n = 28)

EOSQ-24 and SRS-22 domain	Developmentally delayed patients (caregiver completed questionnaire)
Function	0.68
Pain	0.81
Mental Health	0.63
Satisfaction	0.29

Values are shown as correlation coefficients (r), with $r \geq 0.70$ indicating a strong relationship

Results

- Strong correlation for Pain and weak correlation for Satisfaction domain scores found across all subgroups

EOSQ-24 and SRS-22 domain	Comparison based on individual completing the questionnaire		Comparison based on age			Developmentally delayed patients (caregiver completed questionnaire)
	Patient	Caregiver	0-5 years	6-9 years	10-18 years	
Pain	0.80	0.83	0.76	0.78	0.86	0.81
Satisfaction	0.49	0.39	0.34	0.27	0.57	0.29

Values are shown as correlation coefficients (r), with $r \geq 0.70$ indicating a strong relationship



Discussion

- SRS-22 may be appropriate for cognitively normal children with EOS due to CS
- Correlation between previous studies that collected SRS-22 and future studies that collect EOSQ-24 in these patients?
 - Function, Pain, \pm Mental Health domains
- Long-standing databases that collected SRS-22 in this patient population may not need to transition to EOSQ-24
- Unclear which questionnaire is more suitable for developmentally delayed patients



Limitations

- Small number of patients
- Only had results of both questionnaires from a single time point for each patient
- EOSQ-24 and SRS-22 Satisfaction questions do not match

Conclusion

- SRS-22 may be appropriate for cognitively normal children with EOS due to CS
- Unclear which questionnaire is more suitable for developmentally delayed patients