

Pediatric Spine Surgeons Report High Mental Health Burden and Limited Support for Scoliosis Patients

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INTRODUCTION: Adolescents seeking treatment for scoliosis often present with comorbid mental health concerns. However, we lack standardized screening, evaluation and treatment protocols to address mental health issues during treatment. This study investigates mental health screening practices among experienced pediatric orthopedic providers treating spine deformity patients.

METHODS: 54 pediatric spine surgeons who are part of a multi-center AIS registry were anonymously surveyed. The survey consisted primarily of closed-ended questions with additional open-ended responses where greater variety was expected. The first section of the survey focused on determining each provider's level of experience with scoliosis patients. These questions included the respondent's years in practice, practice setting (private or academic) and volume of scoliosis patients. The second section focused on screening practices: asking the respondent about which mental health screening practices they employed and how they are used. The third section assessed each provider's perception of mental health burden in their patient population and whether or not they are adequately addressing the need. The last section of the survey focused on follow-up practices, focusing on when and how patients are referred to mental health providers.

Responses to closed-ended questions were tallied and a distribution of answer choices was determined. For open-ended responses, a thematic analysis approach was taken, in which similarities between responses were identified.

RESULTS:

28 of 54 surgeons (52%) responded, with the majority having over ten years of experience in high-volume pediatric spine deformity practices (1000+ patients, 76-100 cases per year). Notably, most estimated that up to half of their patients face mental health challenges and reported a slight increase in mental health burden.

Despite the perceived burden, only 12 (42%) perform structured mental health screenings and 6 (21%) use informal methods. Among the 16 (57%) who reported screening practices, PROMIS and depression/suicide screens were most common. Only 2 (7%) reported that their teams "probably" follow up on low scores, while 11 (39%) indicated follow-up as unlikely. Most (64%) felt they were not adequately addressing mental health concerns.

Referrals are typically prompted by positive screenings or clinical observations, but barriers such as limited provider availability, access issues, and insurance concerns hinder referrals. When made, referrals are usually directed to in-house providers.

DISCUSSION AND CONCLUSION: This study reveals significant gaps in mental health care for pediatric scoliosis patients. Although providers overwhelmingly recognize the mental health burdens associated with scoliosis, most do not conduct routine screenings. Referrals, typically made to internal providers, are often hindered by barriers such as limited provider availability, access issues, and insurance constraints. These findings underscore the need for standardized mental health screening protocols and improved access to mental health resources within scoliosis care.

Table 1. Demographics of Survey Respondents

Years in practice	<5	0
	5-10	4
	11-25	15
	26+	9
What is your individual approximate annual clinical volume of spine deformity patients? (# of patients)	0-250	2
	251-500	2
	501-750	4
	751-1000	5
	1000+	12
What is your individual approximate annual surgical volume of spine deformity patients? (# of cases)	0-50	0
	51-75	5
	76-100	11
	100+	7
What percentage of your practice are spinal deformity patients?	0-25%	0
	25-49%	4
	50-74%	8
	75%-100%	16

Table 2. Responses to Screening Practice Related Questions.

Does your practice utilize any structured mental health screening practices?	Yes	12
	No	16
Types of Structured Screening Used	PROMIS	4
	SRS	3
	Depression/Suicide Screen	4
	PHQ	2
Does your practice utilize any informal mental health screening practices?	Yes	6
	No	22
Types of informal screening practices	PHQ	1
	PROMIS	1
	Patient History	1
	Pre-op RN visit	1
	SRS	23
	PROMIS	12
	EOSQ	7
	PHQ	2
	CP Child	2
	ODI	1
	SAQ	1
What type of Patient Reported Outcomes (PRO's), if any, does your practice employ?	SF-12	1
	Oswestry	1
	Definitely not	5
	Probably not	11
Does your clinical team follow-up on low mental health scores (including mental health domain scores for general questionnaires)?	Might or might not	10
	Probably yes	2
	Definitely yes	0

Table 3. Responses Relating to Mental Health Burden and Follow-Up

Have you noticed any recent trends in the mental health care burden on your patients?	No	5
	Slightly increasing	12
	Significantly increasing	0
	Slightly decreasing	1
	Significantly decreasing	0
What percentage of your patients do you feel experience mental health burden in relation to their diagnosis/treatment?	0-24%	8
	25-49%	17
	50-74%	2
	75-100%	1
Do you perceive that mental health is being adequately responded to in the patients with scoliosis that you treat?	Definitely not	2
	Probably not	16
	Might or might not	6
	Probably yes	3
	Definitely yes	1
Do you feel as though the family dynamic contributes significantly to your patients' mental health?	Definitely no	0
	Probably no	0
	Might or might not	2
	Probably yes	13
	Definitely yes	13
In what proportion of at-risk patients do you recommend mental health follow-up?	<5%	11
	5-24%	8
	25-49%	1
	50%+	8
In what proportion of at-risk patients do you refer for mental health follow-up?	<5%	14
	5-24%	4
	25-49%	5
	50%+	5
If you do recommend mental health follow-up, how often do you refer to providers internal to your own institution vs. outside providers?	Equally Internal/External	17
	Mostly External	3