***TABLE S4:*** *Summary of Reliability and Validity Findings for Postural Assessment Measurement Tools*

| Study | Tool / Instrument | Type of Measurement | Population Evaluated | Reliability Type | Reliability Results | Validity Type | Validity Results |
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| Azadinia et al. (70) | J Tech Dualer IQ Digital Inclinometer and Flexicurve | Angle of thoracic kyphosis. The adolescents were evaluated in a standing position. | A total of 105 subjects were evaluated: 81 adolescents/ young adults (aged 10 to 30 years), 3 adults (aged 30 to 50 years) and 21 older adults (aged 50 to 80 years). | Reliability (intra- and inter-rater) was assessed using ICC. | Digital inclinometer: high intra- and inter-rater reliability (ICC > 0.90) in both age groups.<br><br>Flexicurve: ICC = 0.68 (interrater, 10–30 years), 0.85 (interrater, 50–80 years), 0.86–0.87 (intrarater). | Each instrument was compared with the radiographic Cobb angle using ICC. Agreement between measurement methods was assessed using Bland–Altman analysis (identity plot + difference plot) | Digital inclinometer: acceptable concurrent validity with Cobb angle (ICC > 0.80) in both age groups.<br><br>Flexicurve: poor validity for thoracic kyphosis in both age groups. (ICC < 0.60). |
| Schmidt et al. (71) | Manual inclinometer (Tozz magnetic base). | Angle of thoracic kyphosis and lumbar lordosis. The adolescents were evaluated in a standing position. | 39 adolescents diagnosed with idiopathic scoliosis with a Cobb angle between 20 and 40° (aged 10 to 18 years). The adolescents were divided into two groups according to the Risser sign. | To assess the intra- and inter-examiner reliability, the intraclass correlation coefficient (ICC) was used. | Excellent intra- and inter-examiner reliability was observed for thoracic kyphosis across both growth phases (ICC > 0.75) whereas lumbar lordosis showed moderate reliability (ICC = 0.47–0.66) with significant inter-examiner | To analyze concurrent validity with radiography, Spearman's correlation coefficient was used, while the Wilcoxon test was employed to analyze differences between instruments. | The concurrent validity of the inclinometer was high for thoracic kyphosis in the early (r = 0.84) and late growth phases (r = 0.75). In contrast, concurrent validity for lumbar |

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| | | | | | differences ($p < 0.05$). | | lordosis was low to moderate ($r = 0.38–0.49$), with significant differences compared with radiographic measurements ($p < 0.001$). |
| Tabard-Fougere et al. (74) | DIERS Formetric 4D | Spinal parameters derived from surface anatomical landmarks in the frontal and sagittal planes. | 35 patients with idiopathic scoliosis (aged 10 to 18 years). | Intraclass correlation coefficients (ICCs) were used to assess both intra-rater and inter-rater agreement, along with standard error of measurement (SEM) and smallest detectable change (SDC) calculations. | Acceptable to excellent reliability was observed, with intra-rater ICCs ranging from 0.70 to 0.97 and inter-rater ICCs from 0.84 to 0.97, except for pelvic obliquity, which showed lower reliability (ICC = 0.27–0.50). | Concurrent validity for the scoliotic angle was assessed by comparison with the radiographic Cobb angle. The study used paired Student's t-tests, Pearson correlation coefficients, and Bland–Altman analysis. | Good concurrent validity was found ($r = 0.70$, $p < 0.01$; mean difference = 5.4° ± 4.5°). |

(intra) intrarater reliability; (inter) interrater reliability; (ICC) intraclass correlation coefficients; (SEM) Standard Error of Measurement; (SDC) Smallest Detectable Change Calculations.