

Development and Validation of a Performance Rubric for Transanal Endoscopic Rectal Purse-String Suture

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Background

- The placement of a transanal endoscopic rectal purse-string suture (**taEPS**) is the first crucial component of transanal total mesorectal excision (**taTME**).
- There are no structured training and procedure-specific assessments to help improve the skills.
- The objective of this study was to provide preliminary validity evidence for the creation of a performance rubric for **taEPS**.

Method

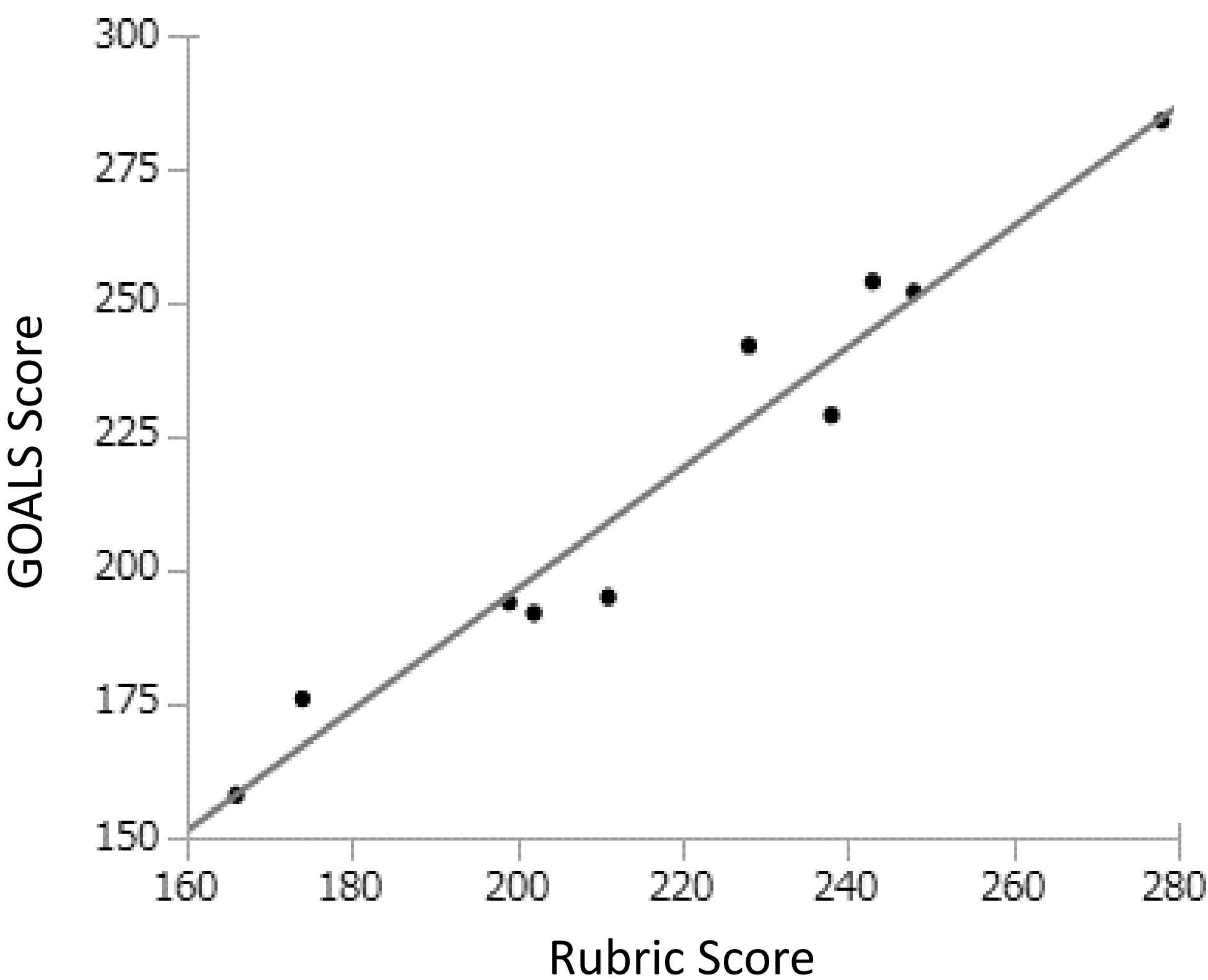
- A performance rubric was created.
- **10 video-taped performances** of taEPS were selected from consecutive taTME cases during Jan 2018 to Mar 2019.
- **10 raters** from various institutions.
- The independent, blinded raters assessed the performance videos using **the rubric developed** and **GOALS**.
- Internal consistency and Inter-rater reliabilities were calculated.
- The rubric scores were compared with GOALS score.

Results

Internal consistency				
Cronbach's alpha		0.713		
Inter-rater reliabilities				
Cohen's kappa	LN	AP	PS	OA
	0.73	0.76	0.71	0.70

The correlation coefficient between the scores of **the rubric** and **GOALS**

$r = 0.96$ $p < 0.001$



Conclusions

- This study provides preliminary validity evidence for the performance rubric measuring the **taEPS** skills.
- The structured training with using the performance rubric may facilitate the acquisitions of the skills by providing trainees with clinically important technical considerations.

Performance Rubric

Loading the Needle: LN

Anticipates what angle is required to penetrate the target tissue and loads the needle at the desired angle with ease

Atraumatic needle passage: AP

Desired depth insertion and needle trajectory without damaging the tissue when passing it through the tissue

Planned suture path: PS

Suture path with planned uniform pitch

Overall suturing performance: OS



3-point Likert-type scale:

does well – **3 points**, needs some improvement – **2 points**, does poorly – **1 point**