Develop a Validated Anaesthesia Quality Assessment to Evaluate Patients Postoperatively

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Background:

Siriraj Hospital is a tertiary, university hospital with more than 2,200 beds. The Department of Anaesthesiology employs 68 board-certified anaesthesiologists, 81 nurse anaesthetists and 126 trainees (79 residents, 11 fellows and 36 nurse anaesthetist students) with the responsibilities to take care of more than 50,000 patients annually. Currently, patient satisfaction becomes a crucial factor to determine the quality of care particularly in anaesthesia procedures. Therefore, the well-validated tool is essential to evaluate patients postoperatively.

Method:

After securing Siriraj IRB approval, the study was registered via ClinicalTrials.gov (NCT 0307996). The Siriraj Anaesthesia Quality Assessment Questionnaire was developed and validated under the conceptual/theoretical framework of Maslow’s hierarchy of needs, Hospital Consumer Assessment of Healthcare Providers and System, Patient Satisfaction Questionnaire, Service Quality Questionnaire and Quality of Recover after Anaesthesia. A total of 476 qualified responses with obtained consent were included in the study to verify the appropriateness of the tool.

Results:

The study involved 397 qualified patients (83.4%), aged 47.6 ± 16.6 , representing all anaesthesia services and procedures, who completed the questionnaires. Significantly, a binary logistic regression revealed the predicted dependent variables as Process of Care (4.39 ± 0.51) and Physical Support (4.35 ± 0.66) in comparison with a sequence of Accessibility and Convenience (4.33 ± 0.56), Communication and Information (4.00 ± 0.70), Technical Quality (4.46 ± 0.45) Psychological Support (4.57 ± 0.65) and Loyalty (4.52 ± 0.68) in anaesthesia quality assessment (Table 1&2)

Conceptual framework

HCAHPS (11)	PSQ-18 (7)	SERVQUAL (7)	QoR40 (7)	Si-2-AQ (7)
Communication with Nurses	Communication	Empathy	Emotional state	Accessibility & Convenience Communication & information
Communication with Doctors				
Responsiveness of Hospital Staff	Interpersonal Manner	Assurance	Physical support	Process of care
Pain management				
Communication about Medicines	Technical Quality	Responsiveness	Physical support	Psychological support
Cleanliness of Hospital environment				
Quietness of Hospital Environment	General Satisfaction	Tangible	Physical comfort	Physical support
Discharge Information				
Overall Rating of This Hospital	Financial Aspects	Responsiveness		
Willingness to Recommend This Hospital				
Care transition	Accessibility and Convenience	Reliability	Physical support	Loyalty
		Responsiveness	Physical independence	

Research work flow

Table 1 The 95% Confidence interval of completely responsive scores to Si-2AQ in 7 dimensions.

Dimensions	Responsive score	95% Confidence Interval	
	(mean $\pm$ SD)	Lower	Upper
Accessibility	4.33 ± 0.56	4.28	4.38
Communication	4.00 ± 0.70	3.95	4.07
Process of care	4.39 ± 0.51	4.33	4.43
Technical quality	4.46 ± 0.45	4.42	4.51
Psychological support	4.57 ± 0.65	4.51	4.62
Physical support	4.35 ± 0.66	4.29	4.41
Loyalty	4.52 ± 0.68	4.47	4.59

Table 2 Significantly, a stepwise binary logistic regression revealed the predicted variables were process of care (PC) and physical support (PHY).

	Sig.	OR	95% CI for CRS	
			Lower	Upper
Step 2 ^b	PC_mean	0.006	3.139	1.393 7.074
	PHY_mean	0.017	2.457	1.176 5.136

p < .05 statistical significance

Conclusion:

The appropriateness of a developed, well-validated 40-item Si-2-AQ was applied to determine 397 patients’ perspectives on anaesthesia care service. Process of Care and Physical Support appeared to be significantly valued features, whereas Communication and Information, Accessibility and Convenience, Technical Quality and Psychological Support were found to be weak points in anaesthesia quality assessment