Surgeon Techniques in Non-Femtosecond Laser-Assisted Cataract Surgery (TechNoFLACS) Questionnaire: Face and Content Validation

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Introduction

BACKGROUND

- A qualified measuring tool is defined by the reliability and validity of its measures.
- Validation process is crucial to minimise measurement error of a tool.[1]
- Surgically induced astigmatism (SIA) in post non-femtosecond laser-assisted cataract surgery (NoFLACS) is influenced by surgeon techniques. [2]
- Surgeon technique information related to SIA is not properly documented in surgical notes.

OBJECTIVE

- To validate the Surgeon Techniques in Non-Femtosecond Laser-Assisted Cataract Surgery questionnaire (TechNoFLACS).

Results & Discussion

Surgeon's Techniques in Non-Femtosecond Laser Assisted Cataract Surgery (TechNoFLACS)

Surgeon's Name:
Institution/ Centre :

Kindly please tick/ state your phacoemulsification surgical techniques related to SIA accordingly. You may choose MORE than one (1) option for each question item.

Item No.	Item Description	Option	*VS
1	What nucleus disassembly technique(s) do you use for phacoemulsification?	☐Phaco-chop ☐Stop-chop ☐Divide & conquer ☐Others (Please state):_____	
2	Which hand(s) do you use to perform the main incision?	☐Right ☐Left	
3	What microkeratome design(s) do you use to perform the main incision?	☐Single-bevel ☐Double-bevel ☐Bevel-up ☐Others (Please state):_____	
What characteristics of the main incision do you perform?			
4	the architecture(s)	☐Single plane ☐Biplanar ☐Triplanar ☐Others (Please state):_____	
5	the type(s)	☐Clear corneal ☐Scleral ☐Limbus ☐Near clear corneal (___ mm from limbus) ☐Others (Please state):_____	
6	the size(s)	☐1.8mm ☐2.2mm ☐2.4mm ☐2.75mm ☐3.2mm ☐Others (Please state):_____	
7	the location(s)	☐70° ☐90° ☐110° ☐0/180° ☐Others (Please state):_____	
What characteristics of the sideport incision do you perform?			
8	the number (s)	☐One ☐Two ☐Others (Please state):_____	
9	the location(s) *~in relation to the main incision~*	☐< 90° ☐90 – 110° ☐>110°	
		*TVS	

*Leave blank, for investigator use only.
VS - variation score. TVS - total variation score

Finalised TechNoFLACS

Item no. 3 and 5 were modified based on face validation outcomes.

- Initial TechNoFLACS consisted of 15 items with CVI 0.61.
- 6 items (CVR < 1) were removed.
- Hence, finalised TechNoFLACS comprised of 9 items with (CVI=1)

Face validation: enables SMEs to provide their expert opinion for the questionnaire improvement.

After modification, the **content validity** proved that all the SMEs achieved consensus in their assessment.

Methodology

TOOL DEVELOPMENT

- Initial tool developed based on peer-reviewed literatures on several domains: i) incision, ii) sideport, iii) NoFLACS techniques, iv) surgeon position, and v) surgeon experience.

FACE AND CONTENT VALIDATION

- Subject matter experts (SMEs): 10 refractive surgeons (5 SMEs for face validation and the other 5 SMEs for content validation) from Ministry of Health, Malaysia.

Face Validation

A self-administered survey was conducted among 5 SMEs. They were required to:

- Rate each item based on style and format consistency, language clarity, readability, sentence syntax and practicality, and suitability of terminology used.
- To provide feedbacks on difficulty and ambiguity of each item in the 'comment/suggestion' section.

Content Validation

It was conducted using Lawshe's method.[3]

- SMEs rated each item as '*Essential*', '*Essential but not necessary*' or '*Not necessary*'.
- Each rated item was given CVR value.

$$CVR = \frac{n_e - N/2}{N/2}$$

n_e = number of SMEs rating a measurement item as "essential".
N = the total number of SMEs who were involved in the content validity process.

- Items with CVR value less than 1 were excluded. [4]
- Content validity index (CVI) was determined as mean of CVR values of all items.
- CVI value > 0.80 indicates good content validity of overall questionnaire.[5]

Conclusion

- The TechNoFLACS has gone through proper face and content validation
- Therefore, the TechNoFLACS is a valid tool to be used for research related to surgeon techniques.

References

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