A Retrospective Study Challenges the Construct Validity of GI Virtual Trainers

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BACKGROUND
- The virtual gastrointestinal endoscopy trainer (GI mentor) is an important tool for surgical resident's simulation training.
- GI mentor has proved to have construct and face validity in many prospective cohort study.
- Whether PGY1 and PGY2 with prior exposure in these trainers, challenging the validity is not addressed.

BACKGROUND

AIM

- Could virtual colonoscopy training of fellows, faculty and residents have influence on the construct validity?
- Validity could be challenged in a retrospective study where prior exposure could play a role in certain areas of the performance?

METHODS & MATERIALS

- This is a retrospective study involving junior faculties, fellows and residents
- Virtual endoscopy trainer used was GI mentor
- Only basic procedures were included for analysis
- PGY1 as group I, PGY2 as group II and faculty-fellows as group III.
- Group I, II, III did 72, 56, 56 colonoscopies respectively
- Analysis- Chi square test was done to analysis the data
- P value of <0.05 was considered significant.

RESULTS - AREA WHERE NOVICE PERFORMED BETTER

- Time to reach caecum - within seven minutes
- Excessive pressure (mild pressure)
- Efficiency of screening (91-95%)

RESULTS - AREA WHERE EXPERTS PERFORMED BETTER

- Mucosal surface examined (>90%)%
- Percentage of clear view (>90%)

CONCLUSIONS
- Experts had significant performance in having higher percentage of clear view and higher percentage of mucosal surface examined.
- Time to complete the colonoscopy, percentage of mild pressure and efficiency of screening were significant in the resident group.
- Thus in a retrospective study, the construct validity of the GI mentor could be challenged.
- This observation could reflect the prior exposure to these trainers and may not reflect the real life situation where the fellows and faculty could perform better.