Individual personality of the colorectal surgeon influences the decision to anastomose in rectal cancer surgery

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Introduction

A colorectal surgeon has 3 choices in surgery for rectal cancer:

1. primary anastomosis
2. primary anastomosis with defunctioning stoma
3. permanent end-colostomy

Heuristics is an evolving area that is striving to identify biases, including personality traits, that influence decision-making.

The **Edinburgh** Delphi (wh**E**n to avoid or **D**efunct**I**o**N** a rectal anastomosis: what **B**ehaviours and situational factors **U**nde**R**lie the decision-makin**G** pat**H**way) was developed with the support of the ACPGBI and performed at their annual meeting (4th July 2016 in Edinburgh, Scotland) [1].

This study aimed to define the personality traits of colorectal surgeons and analyse any influence on the anastomotic decision.

Methods

- A modified Delphi approach was adopted
- 50 attendees who regularly perform anastomoses who attended the ACPGBI 2016 conference underwent personality testing then answered questions on anastomotic scenarios
- Alexithymia scores [2] (the inability to understand emotions); intuitive vs rational thinking questions [3] and 5 personality domains (extraversion; agreeableness; openness; emotional stability; conscientiousness – "Gosling Five") were recorded [4]
- Results explored to reveal any influence of the surgeon's personality on the decision to anastomose or defunction

Results

Participants were:

- Male (86%)
- Consultants (84%)
- England based (68%)
- 4% had alexithymia (norm 10-13%)
- 81% displayed intuitive thinking (reflex, fast)

Participants scored high in emotional stability (ability to remain calm) and conscientiousness (organised, methodical). Personality traits influenced next anastomotic decision if: recent Morbidity and Mortality meeting criticism (if low in conscientiousness); working with an untrusted anaesthetist (if high in alexithymia or low in openness) and no leaks for >1 year (if high in openness).

Table 1: Comparison of Participant Surgeons' Personality traits versus norms.

	Gosling et al norms	Surgeons	One sample t-test
Extraversion	4.4	4.6	$t_{(49)}$ 1.13, p = .262
Agreeableness	5.2	4.9	$t_{(49)}$ -1.43, p = .159
Conscientiousness	5.4	6.1	$t_{(49)}$ 5.55, p = .000
Emotional Stability	4.8	5.4	$t_{(49)}$ 3.48, p = .001
Openness	5.4	5.4	$t_{(49)}$ -0.18, p = .852

Conclusion

Consensus in when to anastomose, defunction or form an end-colostomy in rectal cancer surgery can be difficult to achieve, especially in complex cases. Colorectal surgeons have speciality relevant personalities that influence the decision to anastomose. This could explain variation in surgical practice across the U.K. and allow future psychological interventions to optimise patient outcomes.

References

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