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Knowing what we know now:

Risk identification in a learning needs analysis



Outline

- Why did we start?
- What did we want to know?
- How did we find out?
- What did we find?
- What does it mean?



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Background

- VMA GPR pre basic term complete 3 part LNA
 - Questionnaire – demographics, experience, learning styles and preference
 - Knowledge – 120 SBA MCQ paper
 - Communication / consultation / insight – videos
- Started 2005
- We want to know if there are predictors on this of future problems

The question

Aim = to identify if information obtained in a multifaceted learning needs analysis (LNA) may indicate significant educational risk during the training program

Significant educational risk was defined as failing the RACGP fellowship examination and / or requiring formal remediation during the training program

Hypotheses

Registrars who subsequently have difficulty (referred to as cases) in the training program have common features, that may be identified via a LNA

From the questionnaire cases will be more likely to have:

- graduated more than 10 years ago;
- self-rated higher preparedness for GP

From the MCQ paper cases will be more likely to have scored:

- lower overall;
- lower on the non clinical section.

From the video vignette ratings cases are more likely to have scored:

- more 'outlier' ratings in total;
- more 'outlier' ratings of global;
- more 'outlier' ratings in communication;
- more 'outlier' video ratings in rapport and empathy.

Method

- Case control methodology
- Eligibility: Registrars who had completed the LNA and returned a signed consent form were eligible for inclusion in the study.
- Approved by the University of Melbourne and Monash University Human Research Ethics Committees.

Cases

Cases were defined as registrars who had failed the RACGP Fellowship examination or had significant problems in the training program.

• ‘Significant problems’ was defined as all of:

- Registrar being notified as being at risk
- That being substantiated by the Educational Enhancement Officer (an experienced medical educator) and
- The development of a formal plan to assist requiring extra resources and approval of such (for example extra teaching sessions or ECTVs).

• An unsubstantiated report, a decision that monitoring was all that was required or directions about content in routine teaching activities did not constitute enough for the registrar to be considered a case for the purposes of this research.

Controls

Controls were matched by country of medical degree (Australia or International Medical Graduate (IMG))

The controls were then selected based on Basic GP term being the same as the case, then the closest available start date.

- If more controls were available at a stage, then there was random selection of the controls based on a computer generated random number list.

Data management and analysis

An Access database was developed and the following information entered for cases and controls:

- Demographic information - Year of graduation, type of course, other qualifications, GP experience
- Self rating (1-5) on 15 perceived GP readiness skills
- MCQ marks - % per section (paediatrics, OG, non clinical issues, etc) and total
- Videos – by each of the 9 domains (eg. Communication skills, rapport and empathy, etc), the number of times outlier from consensus mark (ie. if consensus 3, then 2-4 ok, 1, 5, 6 outliers)

Results

- Eligibility – 9 GPR eligible to be a case between 2005 and 2008.1 → 1 excluded → 8 cases
- Controls – 2 sourced for each case [limited by IMG consenting controls], each matched to only one case
- Limited numbers, led to large confidence intervals and none of the results are considered statistically significant.

Results – demographic information

No difference:

- 25% cases and controls graduated > 10 yrs ago
- males and females
- Prior GP experience (1 case, 2 controls)

Possible differences:

- Primary medical qualification
- Holding another degree or fellowship



Results – demographic information - 2

Primary medical
qualification:

Fisher's exact test, $p=0.53$

	Case	Control
Postgrad.	0	3
Undergrad.	8	13

Other degrees / fellowships:

Fisher's exact test, $p=0.62$

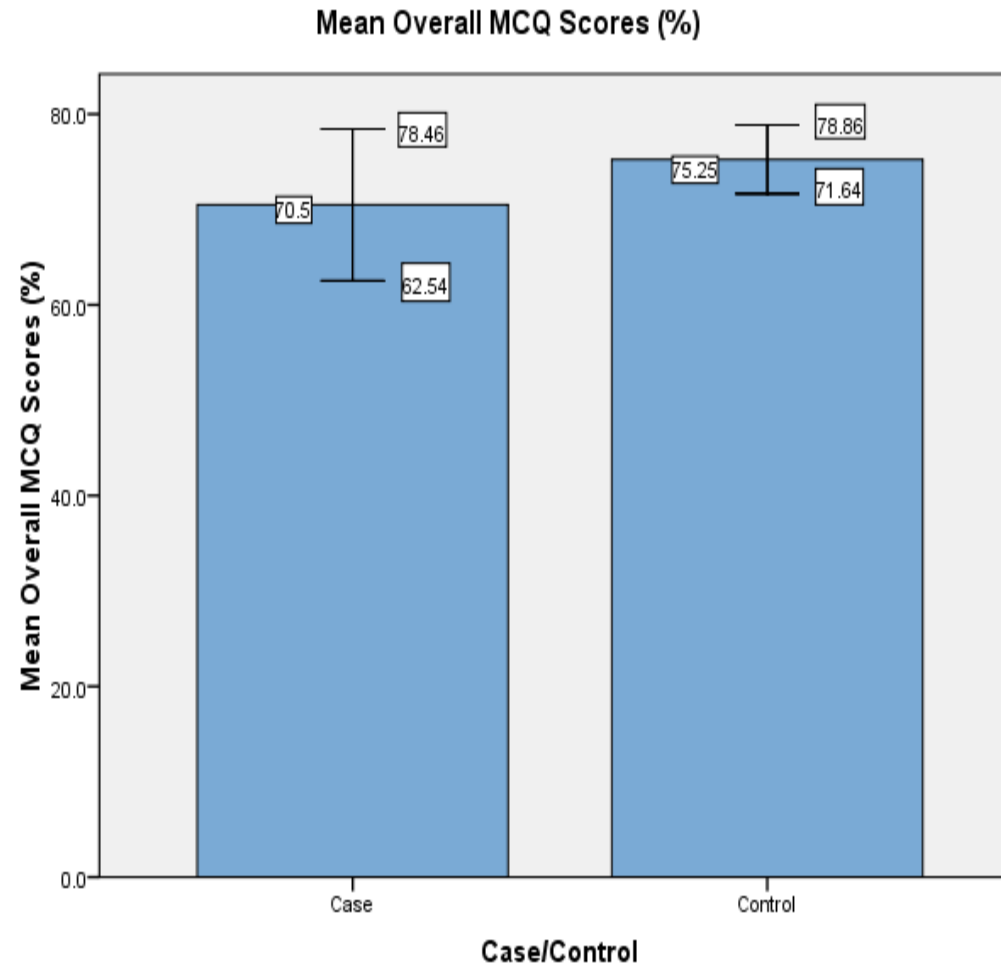
	Case	Control
Fellowship	0	1
Postgrad.	0	2
Undergrad.	1	0
None	7	13

Results – self rated preparedness

15 questions considering self rated preparedness for general practice (out of 5), cases self rated as being more prepared for general practice

- Cases average 3.375 (95% CI 2.845, 3.905)
- Control self rating 3.262 (95% CI 2.995, 3.530)

Results – MCQ paper

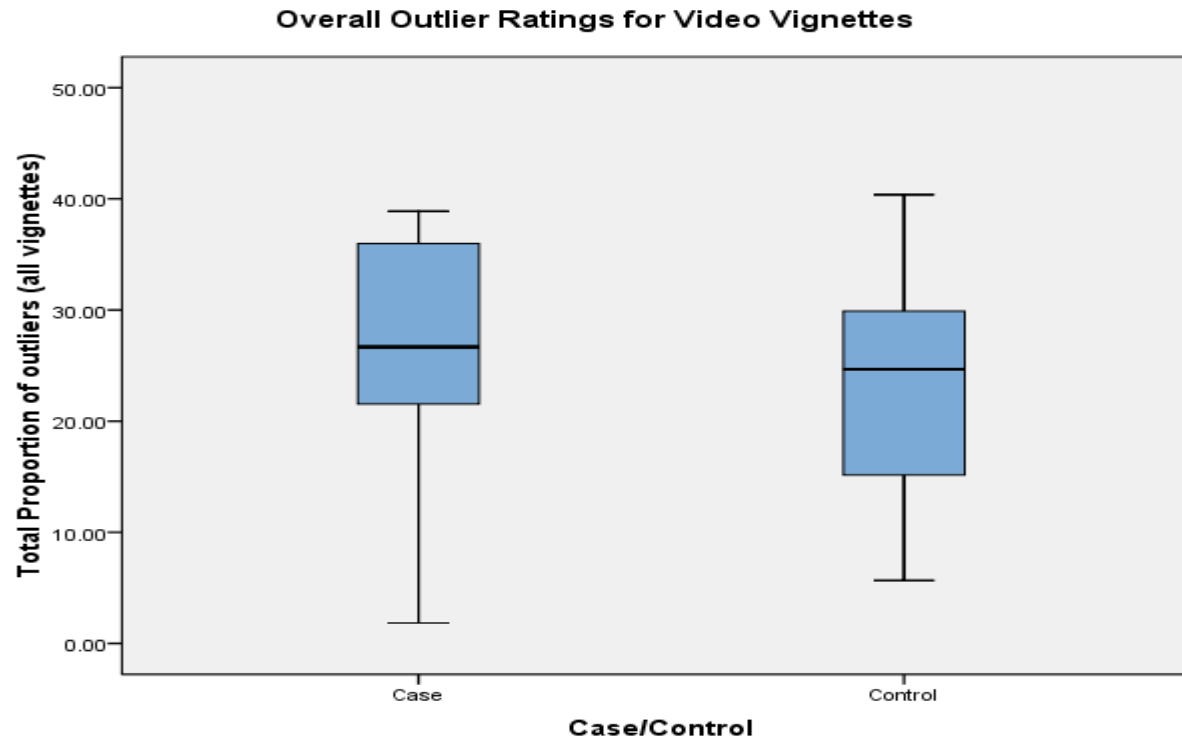


Error bars: 95% CI

Results – video vignette ratings

Mean outliers – 26.14% for cases, 23.42% controls

However large amount of overlap



Results – specific domains

- Global
 - Cases outliers 33.32% (95% CI 14.5, 52.1%)
 - Controls outliers 24.18% (95% CI 13.3, 35.0%)
- Communication
 - Cases outliers 19.5%; Controls outliers 21.0%
- Rapport and empathy
 - Cases outliers 21.7%; Controls outliers 21.8%

NB over 6 cases



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Summary of key results

- A higher index of concern for registrars who score lower in the MCQ paper and provide more outlier ratings of the video vignettes, particularly if they self rate themselves as being as prepared for general practice as their cohort.
- Hypotheses not supported:
 - longer time since graduating from medical school
 - Possibly due to controlling in the analysis for IMG status
 - an increased number of outlier ratings in the vignettes of the communication and rapport and empathy domains in the video consultation vignettes
 - From comments provided by GPR as well as ratings, there are a group of registrars who identify deficiencies in these domains in the cases, as indicated by their comments and rate more harshly these lapses than the consensus of more experienced GPs which may explain the lack of difference observed in the number of ratings.

Limitations

- Small numbers
- Definition of a case
 - Where to put the line in the sand
 - Option of a less rigid / extreme but probably less standardised
- LNA tool not tested for external validity and reliability

Implications

- At this stage rules about a 'score' or constellation of 'scores' that means that a registrar is more likely to have problems in the training program can not be identified
- Reasonable to have an increased concern about a registrar who scores low on the MCQ paper and provide more outlier ratings of the video vignettes, particularly if they self rate themselves as being as prepared for general practice as their cohort.

Acknowledgements

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