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The vanguard study

Human performance evaluation of UK National Organ Retrieval Service (NORS) teams utilising a single scrub nurse in thoraco-abdominal organ retrieval

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The Vanguard Study: Human Performance Evaluation of NORS teams utilising a single scrub practitioner



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Background

- Rapid increase in organ donations
- Proposed team reconfiguration
- Vanguard project to test single Scrub Practitioner role in real life settings

Aim

Understand the impact of changes to organ retrieval team structure, on individual and team performance

Sample

- Multi organ retrievals attended by NORS teams
- 3 Abdominal & 2 Cardiothoracic Teams
- 7 months
- 95 retrievals (51% of all attended by participating teams)

Psychometric Scales

BEFORE Retrieval

- Perceived Resource & Demands (via Cognitive Appraisal ratio; Tomaka et al., 1993)
- Confidence, Cognitive and Somatic Anxiety (via Mental Readiness Form; Krane, 1994)

AFTER Retrieval

- Perceived Workload (via Surgery Task Load Index; Wilson et al., 2011)
- Team Performance (via Team Emergency Assessment Measure; Cooper et al., 2010)

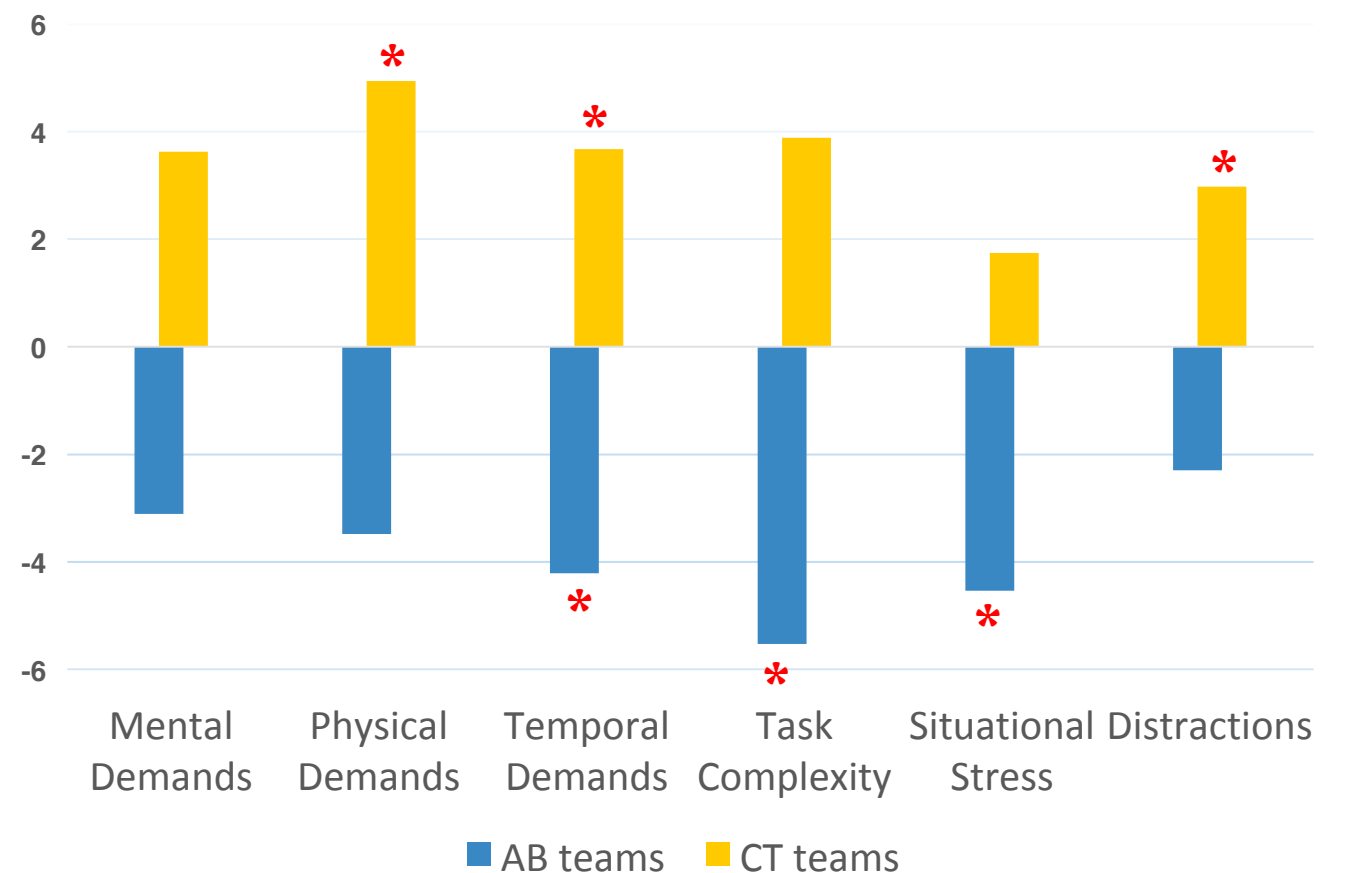
Study Design

Vanguard group (Dual Scrub Practitioners) compared to **Standard group** (Single Scrub Practitioner)

Data collection co-designed with NHSBT to support Vanguard project comprising:

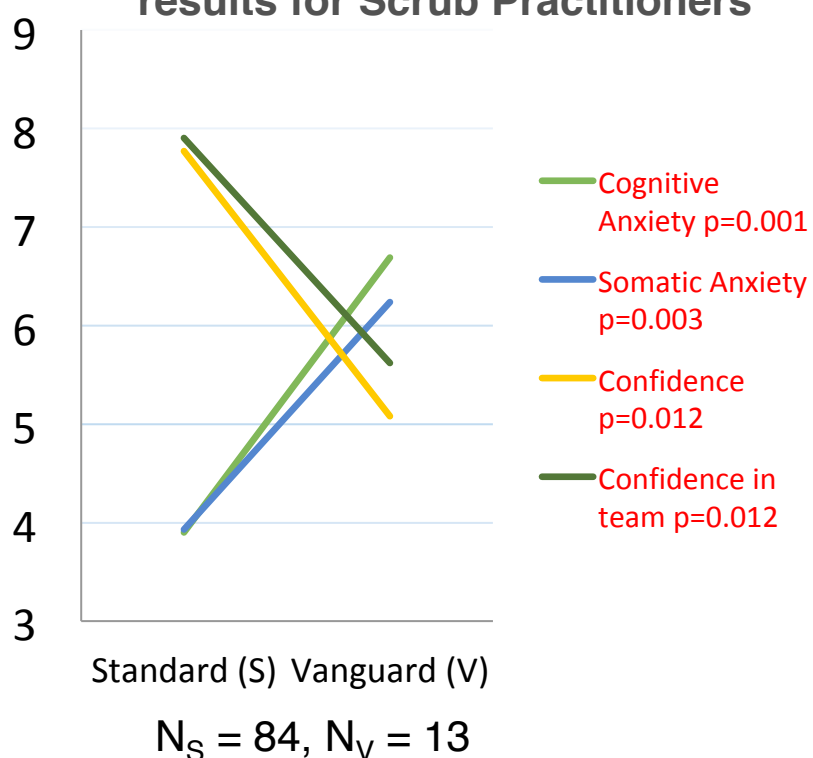
- Self report ratings on psychometric scales at time of retrieval,
- free text comments
- routine data (e.g. time, outcome)

Figure 1. Workload
(Change Score from Standard to Vanguard)



* Significant difference $p < 0.03$

Figure 2. Mental Readiness results for Scrub Practitioners



Key Findings & Conclusions

1. Abdominal and Cardiothoracic teams reported different responses to Vanguard configuration:
 - Perceived workload increased for abdominal teams during Vanguard but decreased for cardiothoracic teams (Figure 1)
 - Scrub practitioners reported elevated anxiety and decreased confidence in retrievals using Vanguard configuration (Figure 2)
 - Vanguard configuration associated with significantly higher anxiety for abdominal, but not cardiothoracic teams.
2. First large scale study of human performance in organ retrieval in the UK.
3. Demonstrates important contribution in assessing impact of development, to support successful organ retrieval practice.

For references, further details, questions and comments, please email Gala.Morozova@ed.ac.uk

