

Introduction

Objective structured clinical evaluations (OSCEs) are summative assessments which students must complete prior to registration as a veterinary nurse. Such high-stake assessments may be associated with increased levels of test anxiety amongst students (Gwynne and Morgan, 2014; Lowe, 2014; Turner and Dankoski, 2008). Von der Embse and Witmer (2014) found high test anxiety to be negatively correlated with performance. Some test anxiety is necessary to motivate students to prepare for examinations but failure to perform competently on the day due to anxiety-induced cognitive dysfunction reduces the validity of the assessment and is wasteful of resources.

Objective

This poster reports some initial results on the effectiveness of a tailored coaching intervention designed to reduce the level of test anxiety experienced by third year veterinary nursing students at Dundalk Institute of Technology (DkIT).

Implementation

All 23 stage three (final year) students in the B.Sc. in Veterinary Nursing at DkIT agreed to participate in the study (21 females, 2 males). They completed a Brief-FRIEDBEN test anxiety scale (B-FTAS) and a mini-IPIP personality inventory two weeks prior to a two hour coaching work on managing test anxiety. The results of the B-FTAS and mini-IPIP questionnaires were used to tailor the workshop content to match the training needs of the participants. The workshop consisted of an introduction to test anxiety followed by the opportunity to practise coping skills strategies e.g. goal setting, self-regulatory planning, breathing for relaxation, and cognitive reframing.

The coaching workshop was followed by a four-station "mock OSCE" one week later. Measures designed to reduce student anxiety were introduced into the waiting area: these consisted of an informal seating arrangement, positive affirmation posters and relaxing background music. Students were invited to participate in a focus group after the mock OSCE to appraise the effectiveness of the interventions and make recommendations for further improvement of the student experience during high stakes assessment.

Results

B-FTAS results:

The B-FTAS test anxiety scale measures test anxiety using 12 items across three factors: social derogation, cognitive disruption and physiological tenseness to give a total test anxiety score in the range of 12-72 (Von der Embse et al., 2013). The results obtained are summarised in Table 1.

Table 1. B-FTAS results

B-FTAS	Mean	S.D.	Maximum	Minimum
Social derogation (SD), range 5-30	18.52	5.52	28.00	5.00
Cognitive disruption (CD), range 4-24	17.17	3.60	23.00	10.00
Physiological tenseness (PT), range 3-18	15.87	2.96	18.00	5.00
Total B-FTAS score, range 12-72	51.57	9.46	65.00	20.00

These results are higher than those previously reported by undergraduates sitting written examinations (Von der Embse et al., 2015). Increasing CD scores were also associated with reduced grades in work by von der Embse and Witmer (2014). In addition, the high PT scores in particular could limit performance in an OSCE, by reducing candidates' abilities to perform fine motor tasks such as drawing up medication or dressing a simulated wound etc.

Mini-IPIP results:

The mini-IPIP personality test evaluates five traits: openness, conscientiousness, extraversion, agreeableness and neuroticism (range 4-20 per trait). See Table 2 for the results obtained.

Table 2. Mini-IPIP results

Mini-IPIP	Mean	S.D.	Maximum	Minimum
Extraversion	10.35	3.77	17	4
Conscientiousness	13.87	2.93	19	9
Openness	14.61	3.46	20	7
Agreeableness	17.57	2.52	20	12
Neuroticism	13.13	3.15	19	7

Data from the tests were used to inform the workshop design. For example, links have been drawn between neuroticism and issues with learner self-regulation and emotional stability in the educational literature (Busato et al., 1999; Zhang, 2002); thus learning activities that centred on these aspects were incorporated.

Focus group results:

Five students (one male, four females) volunteered for the focus group discussion. The session was audio recorded and then transcribed in NVivo for Mac version 11.4.0. Thematic analysis was conducted using Microsoft Excel for Mac, as described by Bree and Gallagher (2016). Data analysis was not complete at the time of writing so what follows are preliminary findings only.

Problematic features of the OSCE:

- Peers highlight the OSCE as very stressful, right from day one of college.
- Nerves, both before the start and between tasks. "They stop you thinking clearly". "I start second guessing myself"
- Embarrassment, especially in front of lecturers. "Letting them down if you can't do it"
- Shaking/sweaty hands makes performance difficult e.g. using a pipette, drawing up medication.

Features of the workshop which were reported as helpful:

- Group discussion, awareness that others find it stressful too. "I'm not the only one"
- Recognition that nerves will always be present but can be managed.
- It reinforced the need to put a bad experience behind you and move on to the next task.
- Breathing exercises were useful, both while waiting and during tasks.
- Cognitive reframing exercise clarified that the capacity exists for change/improvement.

Student recommendations:

- Continue the workshop, as it was helpful.
- Flexible waiting area that let students either chat amongst themselves or wait quietly, depending on individual preferences.
- Minimise wait time (where possible).
- Further practise opportunities, especially with specific equipment that will be used in the exam and lecturers available for feedback ("drop in sessions").

Conclusions

Summative practical assessment will always induce some trepidation amongst students. Indeed a degree of nervous anticipation is necessary to motivate students to adequately prepare for examinations. However test anxiety becomes problematic when present to such a degree that it reduces or limits performance. This is costly for both students (delayed graduation/employment, loss of confidence) and educators (additional repeat examinations are expensive and time-consuming).

The B-FTAS scores obtained here indicate significant levels of test anxiety in this student cohort. Further work is needed to ascertain if this level of test anxiety is typical for veterinary nursing students in general. However these results indicate that the decision to introduce test anxiety coaching is justified and the potential to improve student OSCE performance exists.

This study did not set out to try and remove test anxiety, but rather to assist students in recognising it as an aspect of assessment that they have the capacity to manage (Dweck, 2006).

The interventions made in this study were neither expensive nor difficult to implement, thereby ensuring that they could be used on an ongoing basis should evaluation show them to be useful. The preliminary results reported here are encouraging, but further work e.g. with a larger population of students, is needed to demonstrate efficacy.

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