



KEY ANXIogenic FACTORS IN TAKING OBJECTIVELY STRUCTURED CLINICAL EXAMINATIONS AMONG HEALTHCARE STUDENTS: A SYSTEMATIC REVIEW

Danielle Higgins, SPT, Meghan Kimball, SPT, Devanshi Shah, SPT, Raven Thomas, SPT, and Anthony F. Carusotto, PT, DPT, EdD, CLT, WCC

OBJECTIVES

- By the end of this presentation...
 1. Attendees will understand the anxiogenic factors associated with healthcare student completion of an objectively structured clinical examination (OSCE).
 2. Attendees will understand the effect of OSCEs on healthcare students.

BACKGROUND

- An OSCE is an Objectively Structured Clinical Examination where students perform a series of clinical skills and an assessor, usually a professor, scores their performance.¹⁻⁴
- OSCEs assess competence in preparation of clinical practice procedures of healthcare students by examiners, usually professors.¹⁻²
- OSCEs are typically associated with a high level of student anxiety, which may present as a barrier to performance.²
 - Example: emotional reactions resulting from verbal feedback during the OSCE may impact student performance.³

BACKGROUND

- Students often experience a loss of control during OSCEs, frequently leading to increased anxiety.⁴
- OSCEs require an increased amount of preparation compared to other forms of evaluation, such as traditional written examinations.⁵
- Students' perceptions of fairness are an important aspect of OSCEs.⁶

BACKGROUND

- OSCEs may be anxiogenic, for healthcare students, thus causing decreased academic performance, self-confidence, and overall well-being.¹⁻⁹
- Currently, there is a lack of synthesized qualitative evidence on the key anxiogenic factors that may affect healthcare student performance on OSCEs.

PURPOSE

- The purpose of this systematic review is to explore the most commonly reported anxiogenic factors associated with completing OSCEs, through the perceived lived experiences of healthcare students.

WHAT IS QUALITATIVE RESEARCH?

- Qualitative research seeks a deeper understanding of the studies being examined. It usually focuses on the “why” instead of the “what” in research.¹⁰
- It is used to gain a more in-depth understanding of human behavior, motivations, and intentions, on a basis of both observation and interpretation in order to analyze the way individuals think and feel.¹⁰

METHODS

- Databases: PubMed, CINAHL, NCBI, and ProQuest Central
- Search terms: (Anxiety **OR** stress **OR** motivation **OR** psychological distress) **AND** (OSCEs **OR** Objective Structured Clinical Examinations **OR** practical examinations) **AND** (health students **OR** graduate **OR** students **OR** medical students)
- Search Limits: human subjects, adults, peer-reviewed, English language, and years 2011 - 2021

SELECTION CRITERIA

- Included:
 - Healthcare students (18+ years) taking OSCEs
 - Undergraduate studies or graduate studies
 - College or university setting
 - Primary measure of self-reported anxiogenic factors

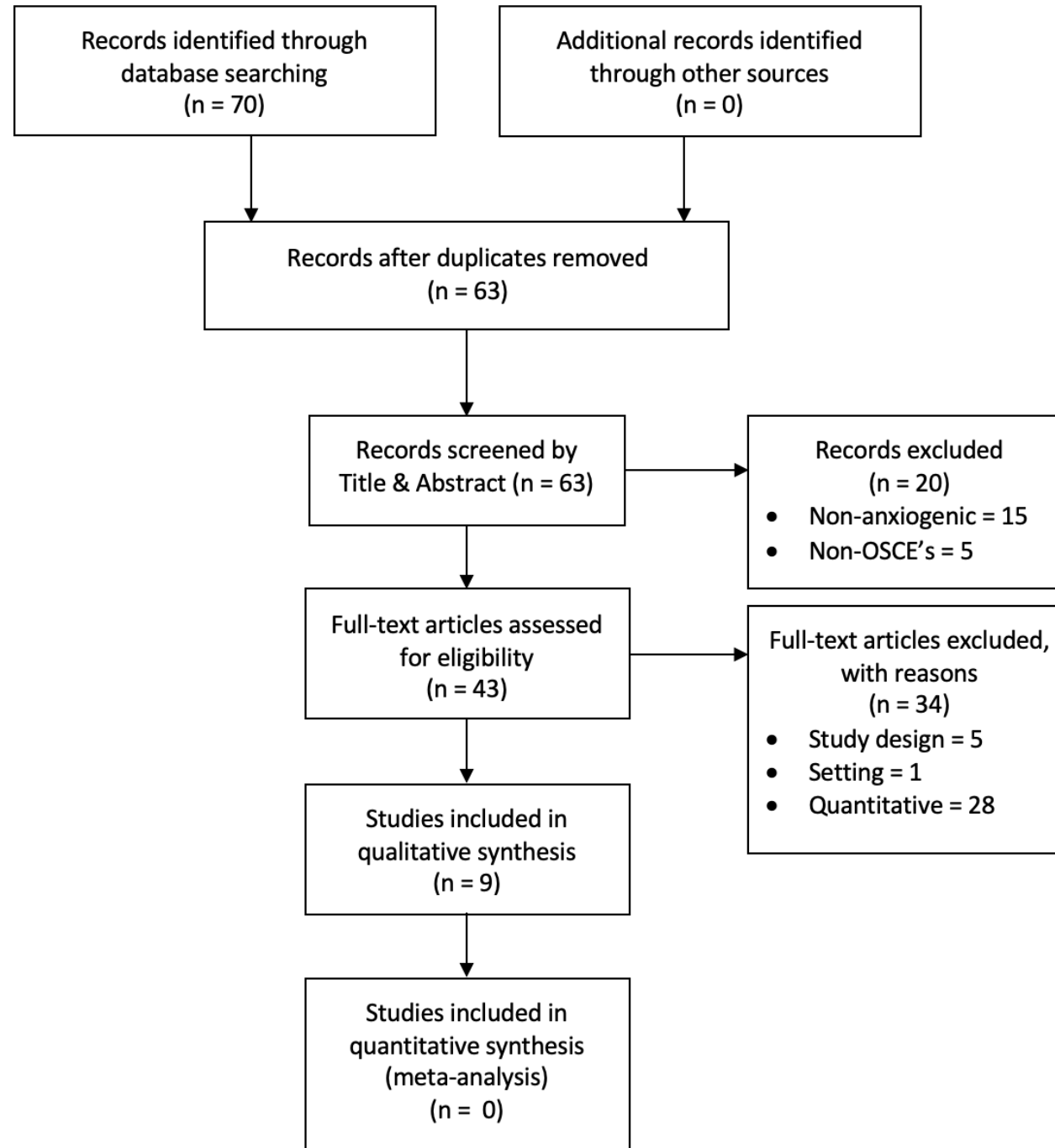
PRISMA

Identification

Screening

Eligibility

Included



RESULTS

- Sample sizes ranged from 20 to 730 participants (1,873 total) aged 20-46 years.
- Academic programs included:
 - Physical Therapy (n=105)
 - General Medical (n=413)
 - Undergraduate Nursing (n=696)
 - Medical Imaging (n=47)

RESULTS

- Qualitative methods utilized to evaluate anxiogenic factors included interview questions and surveys using open-ended questions.
- Anxiogenic themes extracted from the articles consisted of the following:
 - Environment of assessment (7/9 articles)
 - Lack of preparedness (6/9 articles)
 - Proctor interaction (4/9 articles)
 - Pressure to succeed and not fail the assessment (2/9 articles)
 - Low self-esteem (2/9 articles)

CONCLUSION

- As a result from the extraction of themes, based on saturation within qualitative data, the key anxiogenic factors identified to taking OSCEs in healthcare students included:
 - Environment of assessment
 - Lack of preparedness

LIMITATIONS

- Limitations included a lack of generalizability to one specific sector of healthcare academia, and a lack of standardized method of assessment.

FUTURE RESEARCH CONSIDERATIONS

- Future research should focus on the use of standardized interview protocols or questionnaires to assist with mitigation of the negative effects of anxiety on students' mental health and overall wellbeing.
- Future research should also aim to evaluate the effects of video exemplars and collaborative testing and studying on student anxiety during OSCEs.

CLINICAL RELEVANCE

- The results from this study provide helpful feedback on key anxiogenic factors for healthcare students undergoing OSCE assessments.
- The information provided may assist healthcare programs in modifying or adapting to student needs with emphasis on the OSCE testing environment, as this was the most commonly identified anxiogenic theme.

CLINICAL RELEVANCE

- Suggestions to decrease anxiogenic factors in OSCE format include:
 - Uploaded videos for students to study
 - Collaborative study and test design

ACKNOWLEDGEMENTS

- Dr. Anthony F. Carusotto
- Dr. Renee M. Hakim
- Ian O'Hara, MS
- Physical Therapy Department at the University of Scranton

REFERENCES

- 1. Majumder M, Kumar A, Krishnamurthy K, et al. An evaluative study of objective structured clinical examination (OSCE): students and examiners perspectives. *Adv Med Educ Pract.* 2019;10:387-397. doi:10.2147/AMEPS197275.
- 2. Massey D, Byrne J, Higgins N, et al. Enhancing OSCE preparedness with video exemplars in undergraduate nursing students. A mixed method study. *Nurse Educ.* 2017;54:56-61. doi:10.1016/j.nedt.2017.02.024.
- 3. Karol D, Pugh D. Potential of feedback during objective structured clinical examination to evoke an emotional response in medical students in Canada. *J Educ Eval Health Prof.* 2020;17:1-5. doi:10.3352/jeehp.2020.17.5.
- 4. Cazzell M, Rodriguez A. Qualitative analysis of student beliefs and attitudes after an objective structured clinical evaluation: implications for affective domain learning in undergraduate nursing education. *J Nurse Educ.* 2011;50(12):711-714. doi:10.3928/01484834-20111017-04.
- 5. Zhang N, Walton DM. Why So Stressed? A descriptive thematic analysis of physical therapy students' descriptions of causes of anxiety during objective structured clinical exams. *Physiother Can.* 2018;70(4):356-362. doi:10.3138/ptc.2016-102.e.

REFERENCES

- 6. Duncumb M, Cleland J. Student perceptions of a sequential objective structured clinical examination. *J R Coll Phys Edinb.* 2019;49(3):245-249. doi:10.4997/JRCPE.2019.315.
- 7. Taylor D, Quick S. Students' perceptions of a near-peer objective structured clinical examination (OSCE) in medical imaging. *Radiography.* 2020;26(1):42-48. doi:10.1016/j.radi.2019.06.00.
- 8. Saunders A, Say R, Visentin D, et al. Evaluation of a collaborative testing approach to objective structured clinical examination (OSCE) in undergraduate nurse education: A survey study. *Nurse Educ Pract.* 2019;35:111-116. doi:10.1016/j.nepr.2019.01.009.
- 9. Brighton R, Mackay M, Brown RA, et al. Introduction of undergraduate nursing students to an objective structured clinical examination. *J Nurs Educ.* 2017;56(4):231-234. doi:10.3928/01484834-20170323-08.
- 10. Ahmad S, Wasim S, Irfan S, et al. Qualitative v/s. Quantitative Research - A Summarized Review. *J Evid Based Med Healthc.* 2019;6(43):2828-2832. doi:10.18410/jebmh/2019/587.



QUESTIONS?