

Objective Structured Clinical/Practical Examination (OSC/PE) in Pharmaceutical Sciences Education – a Pilot Study

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ABSTRACT

Introduction: The assessment of practical skills in higher education pharmacy teaching is crucial to prepare students for a comprehensive pharmacy practice¹. This may be achieved through the application of an Objective Structured Clinical Examination (OSCE), extending the Clinical to Practical concept OSC(P)E. Such approach provides students with hands-on practice, offering valuable feedback, and preparing them for their future roles as competent pharmacists². The objective of the present work was to assess the implementation of an OSC(P)E to the 4th year students of the integrated master in Pharmaceutical Sciences of Egas Moniz School of Health & Science.

Methods: Five curricular units (CU) participated (n=34 students), and no minimum pass/fail grade was established. Grades, obtained by borderline regression, weighed 20% in the practical component of the CU. The exam consisted of 12 manned stations, which evaluated 5 clinical (e.g., pharmacotherapy, clinical pharmacy) and 5 non-clinical (e.g., pharmacogenetics, toxicology, drug delivery) skills; 2 rest stations were considered for organization purposes. Pre-OSC(P)E scenarios were developed by the CU leader and validated for scientific content and duration by an expert in the area. Actors (alumni and staff) were trained beforehand and followed a written script to guarantee consistency. A previous meeting was organized to prepare students for the exam. Students were organized in three groups, and no electronic devices or contact between them was allowed. A post-OSC(P)E questionnaire was applied to assess global perception and satisfaction, using a Lickert scale. Analysis was carried out using IBM SPSS statistics (v.29).

Results and Discussion: Students considered that OSC(P)E tested a wide range of skills (76.5%) and knowledge (67.6%); helped in identification of weaknesses in communication with patients (50%); pinpointed knowledge gaps and tested the appropriate skills (47.0%); offered more learning opportunities than other type of exams (35.3%). Time allocated to stations (47.1%) and previous information about the exam (41.2%) was considered insufficient; 82.4% of the students reported feeling worried and stressed. Medium grades obtained for non-clinical and clinical skills were 13.5 ± 1.7 , and 12.4 ± 1.1 , respectively.

Conclusion: Although the exam was considered stressful and intimidating, the students recognized the value of this pioneer approach in Portugal to measure practical skills in Pharmaceutical Sciences.

Keywords: OSCE, practical skills assessment, pharmaceutical sciences.

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Bibliographic References:

1. Branch C. An assessment of students' performance and satisfaction with an OSCE early in an undergraduate pharmacy curriculum. *Currents in Pharmacy Teaching and Learning* [Internet]. 2014 Jan 1;6(1):22–31. Available from: <https://www.sciencedirect.com/science/article/pii/S187712971300155X>.
2. Singh H, Malone D, Lim AS. Shifting to Authentic Assessments? A Systematic Review of Student Perceptions of High-Fidelity Assessments in Pharmacy. *Am J Pharm Educ* [Internet]. 2023 Jul;87(7):100099. Available from: <http://dx.doi.org/10.1016/j.ajpe.2023.100099>.