



Mini Evaluation Methods in Medical Pedagogy

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Introduction

- Medical education is based on the alignment between objectives-methods-assessments [1].
- The Mini teaching methods (20-25min) are a well validated concept [1,2].
- It is appropriate to find in front of Mini methods of teaching Mini methods of assessment.
- However, the description of Mini Assessment Methods is sparse in the literature unlike Mini Teaching Methods.
- We define a Mini Assessment Method as one that does not exceed 20-25min and represents a contraction over time of its longer counterpart [3].
- This is not only a reduction in time but also in the number of concepts to be evaluated. This is a form of formative assessment.
- The aim of this work is to study these Mini evaluation methods in medical education through a comprehensive Mini review of the literature.

Material and Methods

A comprehensive literature search was done over a period of 19 years from 2000 to 2019. Databases from Pubmed, Google Scholar, The National Library of Medicine (MEDLINE) and the Cochrane Li-

brary were searched using the following keywords: Medical pedagogy, evaluation, mini method, Mini-Clinical Evaluation Exercise (Mini CEx), mini peer assessment tool (Mini PAT), DOPS (Direct Observation of Procedures), Mini PAT, Mini The objective structured clinical examination (Mini OSCE), Mini viva and the following boolean operators: OR, AND.

Articles related to medical education, pharmaceutical education, nursing and dentistry were included in our search.

- The selected articles are published in English or French language.
- Editorials are excluded.
- All articles are read and discussed by all authors of this article.
- Our study was performed according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA).
- References are organized using the ZOTERO software.

Results

20 articles are selected. This is a quantitative study in 8 articles and a qualitative study in 12 articles. The impact factor of the journals publishing the selected papers varies from 0.3 to 1.5 (SCIMA-

GO) with an index Q (SCIMAGO) varying from Q4 to Q2. This concerns evaluation in medicine, surgery, pharmacy, nursing sciences.

These articles described 5 Mini Assessment Methods (Table 1).

| Mini evaluation method | Description of steps |
|-------------------------------------|---|
| Mini CEx | It is a 10- to 20-minute direct observation assessment or “snapshot” of a trainee-patient interaction. Faculties are encouraged to perform at least one per clinical rotation. To be most useful, faculty should provide timely and specific feedback to the trainee after each assessment of a trainee-patient encounter. |
| DOPS | This method was specifically designed to evaluate practical skills and provide feedback; it requires direct observation of an assistant during a procedure and coincides with evaluation in a written form. This method is particularly useful in evaluating the practical skills of the assistant objectively and systematically. In this method, observation of the assessor is documented in a checklist, and then the trainee is provided with a feedback based on objective findings |
| Mini PAT | Miniature peer assessment tool. An evaluation tool designed to assess how a specialist trainee is viewed by his or her co-workers, providing a so-called “collage view”. The mini-PAT is comprised of a self assessment by a junior doctor/trainee and the collated ratings from a range of the trainee’s co-workers. |
| Mini OSCE / Multiple mini interview | The mini-OSCE consisted of five stations: Station 1 (Procedure): communication skill. Task: recording of a specified component of patient history. (5 minutes) Station 2 (Procedure): patient examination skills. (10 minutes) Station 3 (Response): answering case scenario based questions. (5 minutes) Station 4 (Response): interpretation of a test. (10 minutes) Station 5 (Procedure): technique |
| Mini viva | The Mini-Viva Assessment was conceived as an experimental summative assessment. Its aim was to prepare students for conceiving, designing and planning a mini project, to recognize how different methodological elements needed to be fitted together. |

Table 1

Discussion

Assessment in medical education can be: formative, summative, normative or criterion-referenced [3-5].

All these evaluations must meet quality criteria: validity, reliability, objectivity and convenience. However, each type of evaluation has specificities in form and/or substance and/or objectives.

The main objective of formative assessment is to specify the distance between the educational objective to be achieved and the level of the learner in order to regulate learning [6,7].

There are two strategies for formative assessment: continuous or occasional.

By analogy with the mini teaching methods, the mini formative evaluation methods are reduced in time (20-25 min) and in the number of concepts to be evaluated (on average 3) [7,8].

Our study suggests that these Mini Assessment Methods are a valid form of formative assessment.

These mini methods assess the 3 knowledge domains of Bloom’s taxonomy and affect all levels of Miller’s pyramid. These mini assessment methods also allow learning with the minimum cognitive load (due to the lack of redundancy In addition, among the 5 Mini assessment methods 3 have the advantage of being work place assessment (Mini Cex, DOPS, Mini PAT) [9-11].

The absence of a sanction makes these Mini Formative Assessment Methods non-stressful for the learner.

The Mini assessment methods are also not time consuming and can thus be alternated with the Mini teaching methods on a continuous basis in learning by testing logic [10,11].

Indeed, Performance on weekly formative assessments is predictive of final exam scores.

It is essential in this continuous cycle Mini teaching methods -Mini evaluation methods to create: action-retro action -interaction. We have described elsewhere the interest of using the image tool on hybrid media in order to create this action-retro-action-interaction.

These Mini assessment methods therefore do not exclude other forms of formative assessment.

However, certain self-criticisms exist. The time allocated to the Mini OSCE in some works exceeds 20-25 minutes to reach 35 minutes. The Mini viva may be stressful for the learner; an atmosphere of trust can remedy this. The recommendation level is C-D for Mini Viva and Mini PAT.

This Mini Teaching Methods-Mini Assessment Methods approach is only possible by prioritizing self-learning and self-assessment; in independent learners.

This approach is facilitated by the digital tool, teaching platforms, social media tools.

Conclusion

The Mini assessment methods meet a requirement for consistency with the Mini teaching methods. The aim was to minimize the evaluation time in order to obtain better results.

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None.

Conflict of Interest

None.

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