

The educational impact of mini-clinical evaluation exercise (Mini-CEX) and direct observation of performance (DOPS) and its association with implementation: a systematic review and meta-analysis

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Abstract

This protocol describes the literature search for a systematic review on the educational impact of Mini-CEX and DOPS.

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Protocol

First search

Step 1.

FIRST SEARCH

1. Search

Date of search	22.06.2015
Databases	scopus, web of science, ovid (All Ovid Journals - Full Text & Abstracts, Embase 1974 to 2015 June 05, ERIC 1965 to March 2015, Ovid MEDLINE(R) 1946 to May Week 5 2015, PsycINFO1806 to June Week 1 2015)

1a) Search on Scopus

Search terms	'mini-CEX' OR 'mini clinical evaluation exercise' OR 'direct observation of procedural skills' OR 'work based assessment' OR 'workplace based assessment'
Timeframe	2010-today (22.06.2015)
Number of hits revealed	290 hits

1b) Search on Web of science

Databases	all databases (NOTICE: Your organization does not receive data updates to the following database(s): Conference Proceedings Citation Index- Social Science & Humanities (CPCI-SSH); Conference Proceedings Citation Index- Science (CPCI-S).)
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Search terms	'mini-CEX' OR 'mini clinical evaluation exercise' OR 'direct observation of procedural skills' OR 'work based assessment' OR 'workplace based assessment'
Timeframe	2010-today (22.06.2015)
Number of hits revealed	270 hits

1c) Search on Ovid

Databases	All Ovid Journals - Full Text & Abstracts, Embase 1974 to 2015 June 05, ERIC 1965 to March 2015, Ovid MEDLINE(R) 1946 to May Week 5 2015, PsycINFO1806 to June Week 1 2015)
Search terms	'mini-CEX' OR 'mini clinical evaluation exercise' OR 'direct observation of procedural skills' OR 'work based assessment' OR 'workplace based assessment'
Timeframe	2010-today (22.06.2015)
Number of hits revealed	981 hits
Number of hits after deletion of duplicates	697 hits

2. Article selection

hits of all data bases exportet to endnote library	1257 articles
duplicates deleted	803 remaining
deletion of articles without author or title	785 remaining
hits exportet into excel file	Excel sheet 'First search'

2a) First scanning round

scanning by AL and FL independently	Excel sheets 'Scanning Andrea' and 'Scanning Felicitas' and 'Comparison Scanning'
Selection criteria: Exclude publication, if	0 = formal criteria are not met (Title, Author) à already excluded
	1 = Publication type is other than original research article (e.g. review article, commentary, letter, editorial, or abstract)
	2 = Sample population is other than medical trainees (e.g. nurses, osteopaths, chiropractors)
	3 = Topic is other than evaluating the educational impact of mini-CEX or DOPS (e.g. other aim of the study, other tools such as 360 degree feedback, Multi Source Feedback, feedback in general, team-CEX, peer-assessment are used)
	4 = Setting is other than real life clinical encounter (e.g. using simulated patients or models, takes place in skills lab or OSCE...)
	5 = Language is other than english or german
consensus Nr of articles excluded	729

2b) Article selection on full texts

74 articles remain for full text analysis	Excel sheets 'Full Text Andrea', 'Full Text Felicitas' and 'Comparison Full Text'
Selection criteria: Exclude publication, if	0 = formal criteria are not met (Title, Author) à already excluded
	1 = Publication type is other than original research article (e.g. review article, commentary, letter, editorial, or abstract)
	2 = Sample population is other than medical trainees (e.g. nurses, osteopaths, chiropractors)
	3a = Intervention was other than mini-CEX or DOPS provided by medical experts in real life clinical encounters (e.g. mini-CEX or DOPS with feedback given by peer trainees or nurses, other tools such as 360 degree feedback),
	3b = Outcome reported was other than educational impact of Mini-CEX or DOPS
	4 / 5 = Language is other than english or german
65 articles excluded due to	1 article type = 42
	2 sample population = 1
	3a intervention = 5
	3b outcome = 15
	5 language = 2
9 articles included	

Additional search

Step 2.

ADDITIONAL SEARCH

Date of search	24.11.2015
Search terms	'supervised learning event' OR 'supervised learning events'

a) Search on Scopus

10 hits

5 hits not yet included in endnote database

b) Search on Web of science

6 hits

3 hits not yet included in endnote database

c) Search on Ovid

33 hits

12 hits until June 2015 are not yet included in our endnote database

Deletion of duplicates leads to the addition of 12 hits	marked lilac in Excel sheets 'First search', 'Scanning Andrea', 'Scanning Felicitas'
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Update

Step 3.

UPDATE

Date of search	02.12.2016
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a) Search on Scopus

Search terms	TITLE-ABS-KEY('mini-CEX' OR 'mini clinical evaluation exercise' OR 'direct observation of procedural skills' OR 'work based assessment' OR 'workplace based assessment' OR 'supervised learning event' OR 'supervised learning events')
Timeframe	LIMIT-TO (PUBYEAR , 2016) OR LIMIT-TO (PUBYEAR , 2015)
Number of hits revealed	128 hits

b) Search on Web of Science

Search terms	TOPIC: ('mini-CEX' OR 'mini clinical evaluation exercise' OR 'direct observation of procedural skills' OR 'work based assessment' OR 'workplace based assessment' OR 'supervised learning event' OR 'supervised learning events')
Timeframe	Timespan: 2015-2016. Indexes: SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, ESCI.
Number of hits revealed	106 hits

c) Search on Ovid

Databases	All Ovid Journals - Full Text & Abstracts, Database Info Icon Embase 1974 to 2016 December 01, Database Info Icon ERIC 1965 to October 2016, Database Info Icon Ovid MEDLINE Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R), Database Info Icon PsycINFO 1806 to November Week 3 2016
Search terms	Sichwort: 'mini-CEX' OR 'mini clinical evaluation exercise' OR 'direct observation of procedural skills' OR 'work based assessment' OR 'workplace based assessment' OR 'supervised learning event' OR 'supervised learning events'
Timeframe	2015-current (02.12.2016)
Number of hits revealed	394 hits
Number of hits after deletion of duplicates	296 hits

Export to endnote library

all hits	530
after deletion of duplicates	326
after deletion of references without author or title	321

after deletion of articles already included in systematic review (jan-july 2015)	249
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Export of References from EndNote to Excel

scanning by AL and FL independently	excel sheets 'Update02.12.2016', 'Update Scanning Andrea', 'Update Scanning Felicitas', 'Update Comparison Scanning'
consensus Nr of articles excluded	242
7 articles remain for full text analysis	Excel sheet 'Update Comparison Full Text'
3 articles excluded; 4 articles included from update	

Re-searching from 1995-2010

Step 4.

RE-SEARCHING FROM 1995-2010

Date of search	13.06.2017
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a) Search on Web of Science

Search terms	TOPIC: ('mini-CEX' OR 'mini clinical evaluation exercise' OR 'direct observation of procedural skills' OR 'work based assessment' OR 'workplace based assessment' OR 'supervised learning event' OR 'supervised learning events')
Timeframe	1995-2010
Number of hits revealed	89 hits

b) Search on Scopus

Search terms	TITLE-ABS-KEY ('mini-CEX' OR 'mini clinical evaluation exercise' OR 'direct observation of procedural skills' OR 'work based assessment' OR 'workplace based assessment' OR 'supervised learning event' OR 'supervised learning events')
Timeframe	1995-2010
Number of hits revealed	117 hits

c) Search on Ovid

Search terms	'mini-CEX' or 'mini clinical evaluation exercise' or 'direct observation of procedural skills' or 'work based assessment' or 'workplace based assessment' or 'supervised learning event' or 'supervised learning events'
Timeframe	limit to: 1995 - 2010
Number of hits revealed	533
Number of hits after deletion of duplicates	384

Export to endnote library

number of hits in endnote library	766 articles
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deduplicate in EndNote (after endnote algorithm find duplicates)	565 articles
deduplicate in EndNote (after hand searching)	517 articles left
Export of References from EndNote to Excel	
Transfer of 517 articles to excel	excel sheets 're-search_scanning_FL', re-search_scanning_AL' and 're-search_comparison_AL_FL'
inclusion of 2 more articles (and the five articles which were already included in Miller and Archer, 2010)	

Change of Selection Criteria (Population)

Step 5.

CHANGE OF SELECTION CRITERIA (POPULATION)

Original Definition	Sample population: Studies on medical trainees are included. Studies on other health professions such as e.g. nurses, osteopaths, chiropractors are excluded.
New definition	Sample population: All health professions (HP) are included.
Excel sheets	'HP-search', 'HP_update', 'HP_re-search', 'HP_summary'
Inclusion of 7 articles	