Title: Curriculum management/monitoring in undergraduate medical education: A systematized review

Authors:
Tahereh Changiz (tahereh.changiz@gmail.com)
Nikoo Yamani (yamani@edc.mui.ac.ir)
Shahram Tofighi (shr_tofighi@yahoo.com)
Fatemeh Zoubin (zoubin_fsn@yahoo.com)
Batool Eghbali (b73.eghbali@gmail.com)

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Author’s response to reviews:

Note: the file 'cover letter- answer to reviewers' comments' is attached as a supplementary material in 'attach files' section.

Dear editor,

Many thanks to you and the reviewers for your valuable comments. We tried to do our best to answer all of them point by point. Here we respond the comments using red font. Changes to the article text are indicated by track change and grammatical corrections are highlighted.

Regards

Batool Eghbali, corresponding author

Technical Comments:

1. PRISMA Guidelines

In accordance with BioMed Central editorial policies (http://www.biomedcentral.com/submissions/editorial-policies#standards+of+reporting), could you please ensure your manuscript reporting adheres to PRISMA guidelines (http://www.prisma-
statement.org/) for reporting systematic reviews. This is so your methodology can be fully evaluated and utilized. Can you please include a completed PRISMA checklist as an additional file when submitting your revised manuscript.

A PRISMA checklist is added.

2. Please state the role of funding body in your manuscript.

Financial support of the main project which this manuscript is a product of that project.

Editor Comments:

Thank you very much submitting this manuscript. The manuscript has gone through peer reviewers by two reviewers along with an editorial review. Please find below the editorial review and the review by the two peer reviewers.

We are happy to reconsider this manuscript for publication if all the points raised by all reviews are addressed point-by-point, while indicating where exactly in the manuscript that each point has been addressed.

1. While the topic refers to ‘curriculum management’, the ‘background’ section of the abstract refers to ‘curriculum monitoring and management’. Please note that these, though linked to each other, are terms with specific and different meanings. So, please align the topic with the rest of the manuscript, once you have decided and defined accurately the term(s) that you want to use in this literature review. To accomplish this, you may even have to do the literature review (or a part of it) a fresh.

The title is revised: 'Curriculum management/monitoring in undergraduate medical education: A systematized review'

2. Please justify the selection of keywords for the review.

It is done.

3. It would be good to define ‘curriculum monitoring’ and ‘curriculum management’ more concretely. The definition that the review provides [i.e. curriculum management or monitoring denotes every activity to address concerns about the whole or part of UME curriculum implementation (what is taught and how it is taught)], is on the one hand, too broad and vague. If
this definition is used to select relevant literature, then almost every article related to a curriculum can be included in this review. On the other hand, by considering only “what is taught and how it is taught” the definition ignores a very important aspect of the curriculum – the assessment (i.e. examination) processes. So, while being more precise and accurate on defining ‘monitoring and management’, authors need to take a much broader view of the curriculum, to include all key aspects of the curriculum, including assessment. It would be ideal to define the two terms (‘monitoring’ and ‘management’) separately.

The recommended points are done.

4. It is essential to state, within the background section, how ‘curriculum evaluation’ is different to ‘curriculum monitoring and management’. This has also been raised by Reviewer 1.

It is done.

5. Please include ‘exclusion’ criteria for article selection of the literature review. I believe there would have been decisions taken to exclude articles that purely described ‘evaluation of curricula’. I say so as otherwise, the number of articles selected would have been much more. So, it would be good to know the criteria used to separate articles on ‘management and monitoring’ from those on ‘curriculum evaluation’.

It is done.

6. Much of the articles described in this review are on ‘curriculum evaluation’ rather than ‘curriculum monitoring and management’. Although there is overlap between the two concepts, managing a curriculum is more about regulating who makes changes to the curriculum (or a part of it), what processes should be followed when making changes, who and how are changes to the curriculum evaluated, who approves the curriculum changes, how results of curriculum evaluations are reported and to whom, the management structures and laid down procedures on all of the above, etc. I see that the review has failed to separate ‘curriculum monitoring and management’ from ‘curriculum evaluation’. So, can you please explain through a clear definition of ‘curriculum monitoring and management’, how this is different to ‘curriculum evaluation’. Then, based on this definition and the resultant exclusion criteria report only the articles that specifically described curriculum monitoring and evaluation. If other curriculum-related articles are used (such as the one mentioned by Reviewer 2), please explain how such articles are related to the main topic; i.e. curriculum management.

The purpose of curriculum management or monitoring in this study is all efforts that would done to ensure alignment of formal curriculum with thought and tested curriculum. In other words monitoring process of curriculum implementation and how to gather the necessary information to manage the curriculum are minded. As you mentioned, indeed some selected articles have done
curriculum evaluation but in the text of article, curriculum management have been claimed. According your recommendation, we omit these articles.

7. Please try to stick to one tense as much as possible and check on sentence construction flaws; e.g. page 9, line 10: One was (instead of ‘is’) performed on a (rather than ‘the’) national scale. Also, as language issues have been also raised by Reviewer 2, it would be advisable to get the revised version of the manuscript proofread by a person familiar with academic publication in English language.

It is done.

BMC Medical Education operates a policy of open peer review, which means that you will be able to see the names of the reviewers who provided the reports via the online peer review system. We encourage you to also view the reports there, via the action links on the left-hand side of the page, to see the names of the reviewers.

Reviewer reports:

Rebecca D Blanchard, PhD (Reviewer 1): This article reviews literature for different approaches to curriculum management and monitoring. While this is not a structured literature review, the authors present a transparent review of their literature search and present results of a concise question. I think this work has relevance and interest to curriculum committees and curriculum leaders in health professions education, however I do have some questions.

Background:

The authors explore curriculum management/monitoring and, while they do define these concepts, they do not necessarily situate these terms in the context of curriculum evaluation or program evaluation which, to me, is the same as curriculum monitoring? Either way, I encourage the authors to expand.

This is explained in the revised text.

Methods:

I'm curious why the authors chose not to put a time period limitation in their search. Surely the development of online databases and resources and updates to accreditation standards have
changed the landscape and I'm wondering if there is cause to believe that some methods are now preferable to others?

That’s a point. The technology progress and accreditation bodies raising activity have had an impact on curriculum management and monitoring styles. We tended to find influence of such events on UME curriculum management during the time. So time limitation seems to us nonsense. We admit that we have had an implicit look at the subject in manuscript. Your opinion proved that an explicit view is needed. So we tried to revise manuscript in this regard.

Results:

The authors do a good job of organizing their results into categories, but I wonder if there can be a more expansive synthesis of these findings in a Discussion? I'm curious about the comparative value of these different processes for curriculum management/monitoring?

The aim of this study was to find different undergraduate medical curriculum management/monitoring ways that were used in all over medical schools without any judgment about their quality and value. We believe that, there is no single best method to manage/monitor curriculum. Every educational institution has its preferable method according to their conditions. So we did not make any comparison.

Daniel Malone (Reviewer 2): Please include all comments for the authors in this box rather than uploading your report as an attachment. Please only upload as attachments annotated versions of manuscripts, graphs, supporting materials or other aspects of your report which cannot be included in a text format.

Please overwrite this text when adding your comments to the authors.

Major comments

1. This paper addresses a current gap in the literature in terms of reviewing approaches of medical education curriculum monitoring and management

2. There is a lack of a narrative in the discussion, which should be included in a systematized review. The discussion focusses on the different categories of papers and references papers in each category, but there is a lack of evaluation of the research articles, apart from some practical points at the end of the discussion.
Because of such shortcomings, we did not dare to claim this is a systematic review. Our aim was the description of UME curriculum management process during the time with no judgment about the methods. According your comment, some changes were made in the discussion in hope to get more practical.

The articles with weak methodology did not included in this systematized review.

3. Table 2: It is confusing to have "descriptive" and "description" after some citations in this table. Do these terms refer to only the citation preceding it, or to more? Should the same terms be used?

These 2 words were typed mistakenly and are deleted.

4. The authors should include the work of Al-Eyd et al. BMC Medical Education (2018) 18:185.

This article is included to our study too. Thanks for your suggestion.

Minor comments:

1. The authors should consider adding a PRISMA flowchart to show the process of sorting papers for the systematized review.


2. At the end of the discussion, consider numbering the practical points.

It is done in the revised text.

3. Many errors in grammar mainly pertaining to tense, which significantly impedes the readability of the manuscript.

Grammatical errors are corrected according to the reviewer's recommendations.

Page 2, Line 2: "Manages" should read "management"

Line 13 "in" should read "at"

Page 3, Line 2: "…and quality of…” should read "…and the quality of…”
"clerkship" should read "clerkships"

"following key words..." should read "the following keywords..."

"details" should read "detail"

"curriculum" should read "Curriculum"

"Totally" should read "In total"

"Categories of papers' foci". Change this to be consistent with the headings for Table 3 etc. For example, "Classification of articles" would be more a more appropriate and consistent heading. Heading in table "Paper's focus" should also be changed accordingly.

"is" should read "was"

"all over" should read "in"

"the" should read "a"

"is" should read "was"

"the" should read "an", and "Other studies are national ones" should read "A number of other studies were performed on a national scale"

"the" should be deleted

"is" should read "was" and "the" should read "a"

Delete ","

"are" should read "were"

"are" should read "were"

"describes" should read "describe" "described"
Line 4: "the" should read "a"

Line 11: "and" should read "as well as"

Line 18: "is" should read "was"

Line 19: "the UME curriculum" should read "UME curricula"

Line 19 and 20: "21 from" should read "21 were identified from"

Page 11, Line 2: "in" should read "at"

Line 3: "are" should read "were"

Line 5: "is" should read "were"

Line 7: "are" should read "were"

Line 13: "is" should read "was"

Line 14: "is" should read "was"

Line 15: "the" should read "a"

Line 16: "In the national level, CurrMIT is designed" should read "At the national level, CurrMIT was designed"

Page 12, Line 3: "named" should read "termed"

Line 12: "in" should read "at"

Lines 14 and 15: "The 2nd and 3rd categories comprise of papers in which curriculum stakeholders were surveyed…” should read "The 2nd and 3rd categories comprise of papers in which it was reported that curriculum stakeholders were surveyed…". Other papers may have also surveyed stakeholders but not reported it in their papers.

Line 19: "sources" should read "processes"

Page 13, Line 2: "is" should read "was"

Line 11: "are" should read "were"

Line 14: "dean" should read "Dean"
Line 15: "Hedricson" should read "Hendricson"

Line 18: "include" should read "included"

Page 14, Lines 12 and 13: "highlighted the importance of a medical education program institutional responsibility regarding curriculum management" should read "highlighted the importance of institutional responsibility of a medical education program regarding curriculum management"

Line 14: "Curriculum committee is a useful structure for monitoring the UME curriculum." should read "Having curriculum committees is a useful structure for monitoring UME curricula."

Line 15: "…no best organization for…” should read "…no best way to organize a…”

Page 15, Line 1: "levels" should read "ways"

Line 5: "besides" should read "and"

Page 17, line 19: remove capitalization of whole words

Page 20, line 6: remove capitalization of author surnames