

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

Title (Provisional)

Entrustable professional activities in nursing education: a scoping review

Authors

Pietsch, Jonas; Maaz, Asja; Kottner, Jan

VERSION 1 - REVIEW

Reviewer	1
Name	Henderson, Amanda
Affiliation	Princess Alexandra Hospital, Nursing Practice
Development Unit	
Date	06-Nov-2024
COI	None

This is an interesting scoping review exploring the use of Entrustable professional activities that while common in medicine are not referred to as much in Nursing.

The paper obviously identifies the articles for inclusion through establishing that EPAs have been used in the article. The process for this is structured and clear.

While the intent of the paper has been reached, ie EPAs use in nursing is established, I am wondering as to the utility of this. Furthermore, I have concern about whether there is a consistent definition of EPA across all the articles reviewed. I appreciate that the authors define what an EPA is [based on ten Cate's criteria as per the introduction], but then when they list the types of activities eg 'performs manual opening and insertion of temporary airway maintenance devices based', it is difficult to see how this would be different from a competency. There are textbooks of nursing competencies that outline a composite of skill sets to perform a task that would be similar to the EPA described, but not flagged as an EPA. So, I am therefore wondering what is the value of this current manuscript, and how is this information about EPAs meaningfully differentiated from complex competencies.

Also, I am a bit confused about the results being presented in the Table – The skills listed in the Table I presume pertain to EPAs in the article being reviewed?; It seems there many EPAs

in each article and the table itemises the subject area of the EPAs in the article – but should we be provided with

I feel there is more discussion needed about what is being found, and an accompanying explanation. Once this has occurred then something significant about what this means may be more obvious.

Reviewer	2
Name	McKenna, Lisa
Affiliation	La Trobe University School of Nursing and Midwifery, La Trobe University, School of Nursing and Midwifery
Date	13-Nov-2024
COI	None

Thank you for the invitation to review this manuscript. The topic and intent of the review are very good. However, there are a number of issues that require attention. I hope these comments will assist in further strengthening the work.

General comments

- The methodology needs strengthening in places as it does not actually conform to PRISMA processes. In some places, the methodology is unclear.
- There are tense inconsistencies throughout. As the review is complete, reporting should all be in past tense.
- Paragraph structure needs attention in some places.
- The terms 'nursing student' and 'student nurse' are used in different places. These are technically very different. Nursing student refers to a student of the discipline, located in higher education settings, while student nurse refers to an apprenticeship model of education. Need to be consistent and use the correct term throughout.

Specific comments

- P3, lines 37-47 - This is in a strange place, usually it sits at the end of the discussion section
- P4, Introduction - This section is too short. It needs to provide a detailed background to the review. It should also provide some context to the use of EPAs in nursing.
- Line 51 - question mark is missing
- P5 - The actual methodology is missing from here. Whose approach to scoping review was followed? What were the steps used? Was it JBI informed? If so, what was the PCC - Population, Concept, Context? I see this is identified in Table 2 but it needs to be described upfront before you introduce PRISMA-ScR

- Eligibility criteria - These are confusing to me.
- (2) If you included studies in 'all languages' how did you understand them all? Certainly, every language would not be represented in your team so it would not be possible to screen them and extract data.
- (4) Is the bachelor of science in nursing not an undergraduate course? Why is this one specifically called out?
- Information sources - what were your search strategies based on? What specific processes were followed in developing your search strategy? Did a librarian assist?
- The search strings are concerning to me as it seems important terminology has been omitted such as the common term 'nurse education'
- P6 - The selection of sources of evidence section is unclear. What programs were used to assist screening and data extraction? Screening appears to have only been performed by one person. This is not usual practice and reduces the reliability of the findings.
- Data charting process - this does not appear to have been conducted in accordance with PRISMA reporting.
- Table 2 - PCC should be referenced here
- P7, line 8 - it is insufficient to say quality appraisal was not conducted. This is now recommended for scoping reviews so you should justify why you chose not to include it.
- Figure 1 is not consistent with the PRISMA-ScR flow chart by Tricco et al. and needs to be corrected. Reasons for study exclusion need to be clear and the terminology used is not consistent with Tricco et al.
- P8 - Characteristics - there is insufficient analysis of the included studies, such as country of origin, year, language of publication etc. It is not appropriate to send the reader to the supplementary information to find it. The paper should stand on its own.
- Synthesis of results - This table needs some description. I wasn't sure exactly what I was looking at and what the key findings were.
- P10 - generally the discussion is good, but there is a standalone sentence that does not constitute a paragraph that needs fixing.
- P11, line 6 - you say here all included studies were in English but your search criteria stated all languages were included. This is contradictory.
- P15 - Why was information about individual study limitations not extracted? This is important, particularly as quality appraisal was not conducted.
- P18 - I don't understand this table. Why are they only 'proposed' EPAs? It would have been helpful if these were synthesised not listed study by study.

VERSION 1 - AUTHOR RESPONSE

Comments Reviewer 1: Prof. Amanda Henderson

	Reviewer comments	Replies by authors	changes within the manuscript
	This is an interesting scoping review exploring the use of Entrustable professional activities that while common in medicine are not referred to as much in Nursing. The paper obviously identifies the articles for inclusion through establishing that EPAs have been used in the article. The process for this is structured and clear.	Thank you very much for this encouraging feedback.	
	Furthermore, I have concern about whether there is a consistent definition of EPA across all the articles reviewed. I appreciate that the authors define what an EPA is [based on ten Cate's criteria as per the introduction], but then when they list the types of activities eg 'performs manual opening and insertion of temporary airway maintenance devices based', it is difficult to see how this would be different from a competency. There are textbooks of nursing competencies that outline a composite of skill sets to perform a task that would be similar to the EPA described, but not flagged as an EPA. So, I am therefore wondering what is the value of this current manuscript, and how is this information about EPAs meaningfully differentiated from complex competencies.	Thank you very much for your comment. We fully agree with your concerns. The findings of this scoping review indicate indeed that there might be overlaps between EPA definitions and descriptions. We added this aspect to the discussion section.	"However, when looking closely at the extracted EPA characteristics and competency domains there seems to be overlaps between less and more complex competencies defining the EPAs. In addition..." (page 13)

	Also, I am a bit confused about the results being presented in the Table – The skills listed in the Table I presume pertain to EPAs in the article being reviewed?; It seems there many EPAs in each article and the table itemises the subject area of the EPAs in the article – but should we be provided with	We tried our best to present the extracted data as clear as possible. In the supplementary table we are presenting all EPAs by author and in Table 4 we present a synthesis across all authors and studies.	
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Comments Reviewer 2: Dr. Lisa McKenna

Text section in question	Reviewer comments	Replies by authors	changes within the manuscript
	Thank you for the invitation to review this manuscript. The topic and intent of the review are very good. However, there are a number of issues that require attention. I hope these comments will assist in further strengthening the work.	Thank you very much for this encouraging feedback.	
	The methodology needs strengthening in places as it does not actually conform to PRISMA processes. In some places, the methodology is unclear.	We went through the PRISMA-ScR checklist checked every point.	The methodology in the manuscript now corresponds exactly to the PRISMA-ScR checklist which is attached to this submission
	There are tense inconsistencies throughout. As the review is complete, reporting should all be in past tense.	The tenses were corrected.	We carefully reviewed all tenses in all sections and corrected them all.

	The terms 'nursing student' and 'student nurse' are used in different places. These are technically very different. Nursing student refers to a student of the discipline, located in higher education settings, while student nurse refers to an apprenticeship model of education. Need to be consistent and use the correct term throughout.	We apologize for this mistake. We refer to nursing students in the entire manuscript.	We have changed the relevant places so that “nursing students” is now used consistently.
P2, lines 37-47	This is in a strange place, usually it sits at the end of the discussion section	This is a formal requirement of BMJ Open.	
P3, Introduction	This section is too short. It needs to provide a detailed background to the review. It should also provide some context to the use of EPAs in nursing.	We now present more information on EPAs in the introduction.	“Because of the ability of EPAs to frame competences in the context of clinical workplace activities, they set an appropriate standard for entry into undergraduate clinical placements (11). This ultimately leads to better assessability and the transitions between different training stages can be better mapped. This creates a more accurate picture of the progress of the training stages.” (page 3)

P3, line 39	Question mark is missing	This was corrected.	New question mark in P3, line 39
P4	The actual methodology is missing from here. Whose approach to scoping review was followed? What were the steps used? Was it JBI informed? If so, what was the PCC - Population, Concept, Context? I see this is identified in Table 2 but it needs to be described upfront before you introduce PRISMA-ScR	PCC has been used according to JBI and the manuscript follows the Prisma-ScR.	“The PCC framework (population, context, concept) was used to develop the three review questions mentioned above. The PCC framework makes it possible to formulate precise review questions in a methodologically clear way (13)” (page 4)
Eligibility criteria (2)	If you included studies in 'all languages' how did you understand them all? Certainly, every language would not be represented in your team so it would not be possible to screen them and extract data.	Over 130 nations are represented in our large medical faculty, and it is possible to translate almost all common languages. Therefore, we had planned the search strategy in this way. In the end, only publications in English were found.	
Eligibility criteria (4)	Is the bachelor of science in nursing not an undergraduate course? Why is this one specifically called out?	We absolutely agree but wanted to be as inclusive as possible.	

Information sources (page 4)	Information sources - what were your search strategies based on? What specific processes were followed in developing your search strategy? Did a librarian assist?	When developing the search strategy, we tried to cover the PCC framework with all acronyms and synonyms.	"The search strategies were designed to cover the PCC framework with all acronyms and synonyms."
Search (page 4)	The search strings are concerning to me as it seems important terminology has been omitted such as the common term 'nurse education'	In our search string the truncated word 'nurs*' was used with the operator OR, which also covers 'nurse education'.	
P5	The selection of sources of evidence section is unclear. What programs were used to assist screening and data extraction? Screening appears to have only been performed by one person. This is not usual practice and reduces the reliability of the findings.	We performed a hand search in End Note. No special programme was used. Two people worked independently of each other.	"After this, all results were imported into EndNote and manually screened." (page 5)
Data charting process – Page 5	This does not appear to have been conducted in accordance with PRISMA reporting.	PRISMA-Item 10 says: Describe the methods of charting data from the included sources of evidence and any processes for obtaining and confirming data from investigators.	

		We feel that this has been addressed.	
Table 2	PCC should be referenced here	Many thanks. We have adjusted the table heading of Table 2.	"Data charting variables/domains, according to the PCC Framework and best practice guidance and reporting items for the development of scoping review protocols (13)"
P14, line 3-6	It is insufficient to say quality appraisal was not conducted. This is now recommended for scoping reviews so you should justify why you chose not to include it.	The aim of scoping reviews is to systematically identify and map available evidence on a particular topic (e.g. Campbell et al. 2023, https://doi.org/10.1186/s13643-023-02178-5). Although risk of bias assessments might be conducted it is not mandatory and it depends on the review question. Our overall objective was to systemically describe EPAs in the context of nursing education. Questions regarding internal or external validity are less important so far. We have included this aspect in the limitations section.	"Furthermore, no risk of bias assessment was conducted and no information about individual study limitations was extracted because scoping reviews systematically identify and map the breath of evidence available on a particular topic (31). Evaluation of the quality of evidence requires a systematic review approach." (page 14)
Figure 1	Is not consistent with the PRISMA-ScR flow chart by Tricco et al. and needs to be corrected. Reasons for study exclusion need to	We updated the flow chart accordingly.	New flow chart (Figure 1) on page 7.

	be clear and the terminology used is not consistent with Tricco et al.		
P7-11	Characteristics - there is insufficient analysis of the included studies, such as country of origin, year, language of publication etc. It is not appropriate to send the reader to the supplementary information to find it. The paper should stand on its own.	We have added a new table (Table 3) with a description of the included articles.	
Synthesis of results	This table needs some description. I wasn't sure exactly what I was looking at and what the key findings were.	Thank you for the feedback and we are sorry for the confusion. We added a description above the table.	"Matrix of synthesis of results (The articles were divided into general nursing and special nursing and mapped to the 16 areas of nursing education on the left. Number 1 means that EPAs have been developed in the respective area of nursing education, number 0 that none have been developed)." (page 11)
P10	Generally the discussion is good, but there is a standalone sentence that does not constitute	We agree.	We have integrated the sentence into the first paragraph.

	a paragraph that needs fixing.		
P11, line 6	you say here all included studies were in English but your search criteria stated all languages were included. This is contradictory	Both is true. Language was not an exclusion criterion but at the end all articles were in English.	
P14	Why was information about individual study limitations not extracted? This is important, particularly as quality appraisal was not conducted.	We did not provide information about individual study limitations because this was not the scope of our review.	“Furthermore, no risk of bias assessment was conducted and no information about individual study limitations was extracted because scoping reviews systematically identify and map the breadth of evidence available on a particular topic (31). Evaluation of the quality of evidence requires a systematic review approach.” (page 14)
Supplement P1	I don't understand this table. Why are they only 'proposed' EPAs? It would have been helpful if these were synthesised not listed study by study.	In the appendix we present now the detailed data extraction per included article. In Table 4 we present a synthesis of EPAs across studies.	We have changed the heading of the appendix to “Details of described EPAs”