

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Exploring the factors that affect new graduates' transition from students to health professionals: A systematic integrative review protocol.
AUTHORS	Opoku, Eric; Van Niekerk, Lana; Khuabi, Lee-Ann

VERSION 1 - REVIEW

REVIEWER	Pauline Calleja Griffith University, Australia
REVIEW RETURNED	01-Oct-2019

GENERAL COMMENTS	<p>Thank you for your protocol. In essence the aim to describe factors that impact transition is valuable, but I have a few questions about how you will go about this.</p> <p>I am concerned about the clarity of the cohort of this study. From your research questions and aims it appears that you are looking at factors for ALL health students transition?</p> <p>I can see that you have included some nursing papers in your background and the rest are allied health (specifically OT). Is it your intention to describe these factors for ALL allied health, nursing, medicine? If so I think you need to be clear about that, as it reads very specific to OTs in the background. This will also mean the review is likely to be very very large. The nursing papers alone on this topic are extensive. The other things that concern me is that I am not sure how useful it would be to include nursing, medicine and allied health together. This is because their expectations of how they work, the transition support related to that are very, very different and even context can be a factor (e.g. nurses in rural and remote locations vs nurses in metropolitan locations are mostly not expected to work at the same level of autonomy in their career as medicine graduates or allied health graduates are - plus there are levels of nurses this is especially true for - e.g. LPNs or Enrolled Nurses in the USA and Australia) - this concerns me for transferability of your findings.</p> <p>Also when I searched your string I came up with thousands more results, so is the search string results you present for each database after you screen and include/exclude? that was not clear to me. Once I started including and excluding I was still left with many more results as well.</p> <p>I wonder if it would be more reasonable to group together those disciplines who work similarly as the focus of this study... e.g. nurses</p>
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	<p>in their transition year usually do not work in independent practice, usually have structured transition programs in place, and their supports are very different to OTs who may work one-on-one with a supervisor or in supervised clinical practice. If you were to continue to include ALL disciplines I think you need to consider utility of the results, and be clear about your reasons for doing so.</p> <p>One last thing about scoping studies... what you are describing about inclusion and exclusion criteria (primary studies only, excluding all other literature, policies, abstracts, lit reviews) do not seem to fit with the aim of scoping studies which is about scoping a topic rather than integrating what is known- which aim to bring together diverse sources to create a big picture of what is known and what the gaps are. Your described aim, intent and inclusion exclusion and aims sound like you should be using integrative review methods instead. You may like to look at some papers comparing review types to help clarify which type of review to choose (e.g. Grant, M.J. & Booth, A. (2009) A typology of reviews: an analysis of 14 review types and associated methodologies. Health Information & Libraries Journal, 26, 2, 91-108). I hope these questions help you refine your process.</p>
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REVIEWER	<p>Lia Fluit Radboudumc Health Academy Radboud University Medical Center Nijmegen The Netherlands</p>
REVIEW RETURNED	29-Nov-2019

GENERAL COMMENTS	<p>General comments</p> <p>Thank you for the opportunity to review this research protocol. I applaud the authors for planning a scoping review (that can be complex and time consuming) on a relevant and important topic. The authors used an appropriate style that made it easy to follow their methods and results.</p> <p>Generally speaking, more information about who the 'clinicians' are would be useful to understand the introduction. For me, with a medical background, it was difficult to understand that there is a transition from student to qualified clinician, as in medical education there is a residency training in between. Furthermore, it seems that there is no kind of internships as the authors explain that students have to transfer the theoretical knowledge immediately into practice.</p> <p>Detailed feedback</p> <p>Abstract</p> <p>As it is unclear what kind of students this study focusses on, it is difficult to understand the abstract.</p> <p>Furthermore, in the introduction the problem could be described briefly, what is it why this review study is needed. Also indicate what kind of results will be reported.</p> <p>Introduction</p> <p>Please add information concerning the context of the study, in this case occupational therapy. The underlying question is how students shape their professional role during the transition from school to practice, without specific training like internships or residencies.</p>
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	<p>I think it is a relevant question, and there a lot of literature concerning the transition to the professional context. In the literature this can be described as organizational socialization. See for instance Kearney 2015 (reconceptualizing beginning teacher induction as organizational socialization: a situated model). This could be helpful to frame the research question maybe.</p> <p>The authors have described the aims and objectives of the scoping review, the research question is described in the method section. I would advise to be more precise who these health clinicians are.</p> <p>Methods The authors use the Arksey & O'Malley's framework that is adequate for scoping reviews. However, there is additional research build on this framework, that I would advise to incorporate. (see for instance Levac 2010 Implementation science; Daudt 2013 BMC Medical research Methodology)</p> <p>Concerning the databases: why is ERIC and PSYCHINFO not included for searching literature? Study selection: authors exclude grey literature. Why is that? Often grey literature is included in scoping reviews.</p> <p>Study screening: Please describe more in detail how the screening process will be done: Who will do the screening (title/abstract screening and full text)? What if researchers disagree, how will this be solved? Do the authors have the inclusion criteria for the screening?</p> <p>Charting the data If I understand it correctly, the search will retrieve data from different types of education as the search is not only for occupational health. I would think that type of education and having a kind of internship during education will be an important factor.</p> <p>Research Team Who are the research team members? It would be helpful to have a sense of their expertise. This brings up some reflexivity issues that might be worth mentioning.</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer 1's comments: Pauline Calleja, Griffith University, Australia

Comments	Actions
I am concerned about the clarity of the cohort of this study. From your research questions and aims it appears that you are looking at factors for ALL health students transition?	The focus of the scoping review is indeed on all health profession students.

<p>I can see that you have included some nursing papers in your background and the rest are allied health (specifically OT). Is it your intention to describe these factors for ALL allied health, nursing, medicine? If so I think you need to be clear about that, as it reads very specific to OTs in the background</p>	<p>The intention of the authors is to describe the factors that affect the transition from student to independent practitioner for all health professions.</p> <p>Five more articles (4 nursing and 1 medicine) have been reviewed and added to the background. They read as follows:</p> <p>In a phenomenological study conducted by Brennan et al (4) in the United Kingdom, junior doctors who participated in the study described their transition from medical student to junior doctors as extremely stressful; both physically and emotionally. The study highlighted that, participants were overwhelmed with feelings of anxiety due to uncertainty about their clinical decisions including diagnosis and treatment.(4)</p> <p>Also in the nursing profession, consistent emphasis is placed on supervision as an effective strategy to help new graduate nurses to relate the knowledge acquired in the classroom to practice.(11,12,13)</p> <p>Regan et al (15) highlighted that, formal orientation and mentorship facilitate new health professional's transition into practice.</p>
<p>This will also mean the review is likely to be very very large. The nursing papers alone on this topic are extensive.</p>	<p>The authors performed an initial database search and therefore acknowledge that the review will be very large. However, the results will be screened against predetermined inclusion and exclusion criteria to select relevant studies in order to answer the research question.</p>
<p>The other things that concern me is that I am not sure how useful it would be to include nursing, medicine and allied health together. This is because their expectations of how they work, the transition support related to that are very, very different and even context can be a factor (e.g. nurses in rural and remote locations vs nurses in metropolitan locations are mostly not expected to work at the same level of autonomy in their career as medicine graduates or allied health graduates are - plus there are levels of nurses this is especially true for - e.g. LPNs or Enrolled Nurses in the USA and Australia) - this concerns me for transferability of your findings.</p>	<p>Thank you very much for this comment. For the overarching study going forward, the focus will be on occupational therapy but as a starting point, we did not feel we could ignore literature published on transitions of other health professionals. So, if something is clearly not relevant, it will not be taken up going forward, however as a starting point, we do want to broadly look at all health professionals</p>

<p>Also when I searched your string I came up with thousands more results, so is the search string results you present for each database after you screen and include/exclude? that was not clear to me. Once I started including and excluding, I was still left with many more results as well.</p>	<p>Thank you for this comment. The search was performed on 3rd May, 2019 and the results presented for each database was the number of studies retrieve without including/excluding. Also, limiters were applied which were not reported in the scoping review protocol. The following has now been added:</p> <p>An initial search was done on April 3, 2019 to check the suitability of the search string.(16) These results are presented in Table 2. Limiters applied were: published date (January 1999 to April 2019), SmartText searching and Language (English only).</p>
<p>I wonder if it would be more reasonable to group together those disciplines who work similarly as the focus of this study... e.g. nurses in their transition year usually do not work in independent practice, usually have structured transition programs in place, and their supports are very different to OTs who may work one-on-one with a supervisor or in supervised clinical practice. If you were to continue to include ALL disciplines I think you need to consider utility of the results, and be clear about your reasons for doing so.</p>	<p>May we clarify that the screening will be done in such a way as to only include sources describing the transition for health professionals who transition into independent practice. The authors will report on the factors that impact transition into practice – which can be facilitators, barriers or coping strategies.</p>
<p>One last thing about scoping studies... what you are describing about inclusion and exclusion criteria (primary studies only, excluding all other literature, policies, abstracts, lit reviews) do not seem to fit with the aim of scoping studies which is about scoping a topic rather than integrating what is known- which aim to bring together diverse sources to create a big picture of what is known and what the gaps are. Your described aim, intent and inclusion exclusion and aims sound like you should be using integrative review methods instead. You may like to look at some papers comparing review types to help clarify which type of review to choose (e.g. Grant, M.J. & Booth, A. (2009) A typology of reviews: an analysis of 14 review types and associated methodologies. Health Information & Libraries Journal, 26, 2, 91-108).</p>	<p>The reason authors decided to only include primary studies in the scoping review is to prevent sources being included twice. If systematic reviews and other secondary sources are included, the primary articles that comprise these studies are reported on twice. Also, systematic reviews or other secondary sources include primary sources that fall outside the date range of the scoping review and so to keep it consistent, secondary sources will be excluded from the review. However, we will use the reference lists of secondary sources to identify the primary sources that fall within the date range and meet selection criteria; these will be included in the review.</p> <p>The authors are only interested in research-based evidence on the transition into practice.</p>
<p>I hope these questions help you refine your process.</p>	<p>Thank you very much for your comments and the opportunity to clarify aspects of the scoping review protocol.</p>

Reviewer 2's comments: Lia Fluit, Radboudumc Health Academy Radboud University Medical Center Nijmegen, The Netherlands

<p>I applaud the authors for planning a scoping review (that can be complex and time consuming) on a relevant and important topic. The authors used an appropriate style that made it easy to follow their methods and results.</p>	<p>Thank you kindly.</p>
<p>Generally speaking, more information about who the 'clinicians' are would be useful to understand the introduction.</p>	<p>Thank you for this comment. The authors have decided to change 'clinicians' to 'health professionals' to reflect a person who belongs to and works in accordance with the standards of a health profession. The topic now reads:</p> <p>'Exploring the factors that affect new graduates' transition from students to clinician health professionals: A systematic scoping review protocol.'</p> <p>This change has been made throughout the manuscript</p>
<p>For me, with a medical background, it was difficult to understand that there is a transition from student to qualified clinician, as in medical education there is a residency training in between. Furthermore, it seems that there is no kind of internships as the authors explain that students have to transfer the theoretical knowledge immediately into practice.</p>	<p>We acknowledge that different health professions have different types of graded practical and clinical exposures that bridges between classroom teaching and independent practice. These are called different labels and they vary in size. For example, occupational therapists complete 1000 hours of clinical experience as part of their education and training. So, the authors consider practical, clinical hours and all other kinds of clinical exposures and internships as still being part of being a student. And the transition we are interested is the transition people make having complete their education and training into independent practice. The following has been added to the protocol for clarity.</p> <p>Health professions' education programmes offer different types of graded practical exposure, designed to bridge learning between classroom teaching and clinical practice. For some health professions the practical exposure is embedded in the curricula while others complete a component of their curriculum before entering a distinct internship. These differ in terms of level of expectation, duration and level of independence required. For example, occupational therapists complete 1000 hours of clinical experience as part of their education and training.(16) For the purpose of the scoping review, the authors will consider all practical and</p>

	clinical exposure required as part of curricula leading up to qualification as entry-level health practitioners to be a component of learning and thus completed in capacity as student health professional. The transition we are interested is the transition health professionals make having completed their education and training into independent practice.
Abstract	
<p>As it is unclear what kind of students this study focusses on, it is difficult to understand the abstract.</p> <p>Furthermore, in the introduction the problem could be described briefly, what is it why this review study is needed. Also indicate what kind of results will be reported.</p>	<p>The study will focus on new health graduates transitioning from being a student to being a health professional. The study will include all health professions like occupational therapists, physiotherapists, medical doctors, nurses and speech therapists.</p> <p>The scoping review will map the existing literature pertaining to the factors that impact transition into practice for new health graduates, to inform a larger study to be conducted in Ghana on this subject. The following has been added to the introduction:</p> <p>The scoping review will inform a larger study to be conducted in Ghana on the factors that impact transition of new health graduate into independent practice.</p>
Introduction	
Please add information concerning the context of the study, in this case occupational therapy. The underlying question is how students shape their professional role during the transition from school to practice, without specific training like internships or residencies. I think it is a relevant question, and there a lot of literature concerning the transition to the professional context. In the literature this can be described as organizational socialization. See for instance Kearney 2015 (reconceptualizing beginning teacher induction as organizational socialization: a situated model). This could be helpful to frame the research question maybe.	<p>Thank you for this comment.</p> <p>This comment will be addressed by changes detailed in the last paragraph of the introduction in the manuscript.</p>
The authors have described the aims and objectives of the scoping review, the research question is described in the method section. I would advise to be more precise who these health clinicians are.	<p>Thank you for this comment. The study will focus on new health graduates transitioning from being a student to being a health professional. The study will include all health professions like occupational therapists, physiotherapists, medical doctors, nurses, speech therapists etc</p>

Method	
The authors use the Arksey & O'Malley's framework that is adequate for scoping reviews. However, there is additional research build on this framework, that I would advise to incorporate. (see for instance Levac 2010 Implementation science; Daudt 2013 BMC Medical research Methodology)	<p>Thank you for this recommendation. The authors have read the recommended article and relevant recommendations which were not already incorporated have been incorporated in the method section. The following has been added to the method section as recommended in the article:</p> <p>Taking the research question and purpose into consideration, the following electronic databases have been chosen for the search for relevant literature for this review: PubMed, EBSCOhost ...</p>
Concerning the databases: why is ERIC and PSYCHINFO not included for searching literature?	The chosen databases and the search strings were developed in consultation with an experienced subject librarian. The researchers did not include ERIC (Educational Resource Information Center) database because ERIC materials are exclusively education data. This scoping review is however practice-related. Also, the authors searched for studies related to this scoping on ERIC and PsycNET (which includes PsycARTICLES and PsycINFO) and retrieved zero studies. Therefore, ERIC and PsycINFO will not be included in the databases search.
Study selection: authors exclude grey literature. Why is that? Often grey literature is included in scoping reviews.	Thank you for this comment. In this particular scoping review, the researchers are particularly interested in research-based evidence
<p>Study screening:</p> <p>Please describe more in detail how the screening process will be done:</p> <p>Who will do the screening (title/abstract screening and full text)? What if researchers disagree, how will this be solved? Do the authors have the inclusion criteria for the screening?</p>	<p>Thank you for this comment. All the detailed information on the study screening you require have already been described under 'study selection' in the method section. The following have however been added for clarity:</p> <p>Following the title and abstract screening, the full texts of the included publications will be uploaded for full text screening against the same predetermined inclusion and exclusion criteria by the same three reviewers.</p>
<p>Charting the data</p> <p>If I understand it correctly, the search will retrieve data from different types of education as the search is not only for occupational health. I would think that type of education and having a kind of internship during education will be an important factor.</p>	Thank you for this comment. May we clarify that practical, clinical hours and all other kinds of clinical exposures and internships as still part of being a student. And the transition we are interested is the transition people make having complete their education and training into independent practice. Also, the study will focus exclusively on all new graduate health professionals transitioning into independent practice. Therefore the 'health profession' will be recorded as part of study characteristics instead of 'type of education'. This information has been

	provided in 'charting the data' in the method section.
Research Team Who are the research team members? It would be helpful to have a sense of their expertise. This brings up some reflexivity issues that might be worth mentioning.	In order to protect blind review, we will only provide short non-identifying information about the authors. The first author is a masters student from an African University that his masters at another African university. The second author is an associate professor in occupational therapy with a doctorate in occupational therapy. The third author also has a doctorate in occupational therapy.

VERSION 2 – REVIEW

REVIEWER	Pauline Calleja CQUniversity, Australia
REVIEW RETURNED	17-Feb-2020

GENERAL COMMENTS	Thank you for the inclusion of other health professions to round out the argument and background for the paper. You still have not addressed the issues around the type of review you are undertaking - you are still only allowing research articles only while using a scoping review approach. As fed back last time, this sounds more like an integrative review. You have not argued this choice or changed any aspects of the method as suggested in the previous review.
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REVIEWER	Cornelia Fluit Radboud University Medical Centre Health Academy Nijmegen , The Netherlands
REVIEW RETURNED	29-Jan-2020

GENERAL COMMENTS	<p>Dear authors, Thank you for reviewing the revised research protocol. The authors made several changes, and to my opinion the revised protocol has been improved.</p> <p>I have some questions or suggestions that the authors might consider for the final version of their protocol.</p> <p>By changing the word clinician into health professional the introduction is easier to understand. My only doubt would be that 'health professional' is a very broad term and therefore this could include many professions, while the authors are interested in occupational health professionals. Maybe some kind of selection to have more comparable professionals could be helpful. Following the exclusion criteria medical doctors have to be excluded as they do not practice independently after finishing undergraduate</p>
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	<p>medical education.</p> <p>Page 6, line 38-40: I agree that inadequate preparation for transition into practice can contribute to unsafe/ineffective care. Furthermore, there is literature that it can also lead to burnout and dropout of starting professionals.</p> <p>Method: I still have some hesitation to call this study a scoping review, based on the inclusion and exclusion criteria and grey literature is excluded,</p> <p>page 12, line 48: authors state: Full text publications which meet the inclusion and exclusion criteria will be selected. This is unclear for me.</p>
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VERSION 2 – AUTHOR RESPONSE

Reviewer 1's comments: Pauline Calleja, Griffith University, Australia.

Reviewer:

Thank you for the inclusion of other health professions to round out the argument and background for the paper. You still have not addressed the issues around the type of review you are undertaking - you are still only allowing research articles only while using a scoping review approach. As fed back last time, this sounds more like an integrative review. You have not argued this choice or changed any aspects of the method as suggested in the previous review.

Response: Thank you for this comment. In as much as there are several published scoping reviews that include only primary studies without grey literature, we have decided to change the study into an integrative review. This change has been made throughout the document and integrative review methodology has been described in the method section.

Reviewer 2's comments: Lia Fluit, Radboudumc Health Academy Radboud University Medical Center Nijmegen, The Netherlands

Reviewer:

Thank you for reviewing the revised research protocol. The authors made several changes, and to my opinion the revised protocol has been improved.

Response:

Thank you

Reviewer:

I have some questions or suggestions that the authors might consider for the final version of their protocol.

By changing the word clinician into health professional the introduction is easier to understand. My only doubt would be that 'health professional' is a very broad term and therefore this could include many professions, while the authors are interested in occupational health professionals. Maybe some kind of selection to have more comparable professionals could be helpful.

Response:

The authors are interested in the factors that affect the transition of new graduates of all health professions. An initial database search has been conducted and even though the number of articles retrieved were voluminous, the authors are confident that it is manageable.

Reviewer:

Following the exclusion criteria medical doctors have to be excluded as they do not practice independently after finishing undergraduate medical education

Response:

Thank you for this comment. The authors did not mean 'independent' per se. The authors use 'transition into independent practice' to mean the stage in the life of a health professional, where they are no longer students but are novice professionals striving to achieve professional competence (independent practice). The illustration below was included to depict the period between being a supervised student in a learning environment and being a competent practitioner who completed the transition.

"Please find the diagram in the attached document". This diagram has been added to the protocol under 'inclusion criteria'.

Reviewer:

Page 6, line 38-40: I agree that inadequate preparation for transition into practice can contribute to unsafe/ineffective care. Furthermore, there is literature that it can also lead to burnout and dropout of starting professionals.

Response:

Yes thank you.

Reviewer:

Method: I still have some hesitation to call this study a scoping review, based on the inclusion and exclusion criteria and grey literature is excluded,

Response:

The authors have decided to conduct an integrative review instead. The change has been made throughout the document including the methodology.

Reviewer:

page 12, line 48: authors state: Full text publications which meet the inclusion and exclusion criteria will be selected. This is unclear for me.

Response:

This statement has been rephrased as follows:

Data will be extracted from full text research studies that meet the inclusion criteria to form this integrative review.

VERSION 3 – REVIEW

REVIEWER	Pauline Calleja CQUniversity, Australia
REVIEW RETURNED	07-May-2020

GENERAL COMMENTS	Thank you to the authors for taking the feedback on board and realigning the review type and clarifying issues that were unclear.
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REVIEWER	Cornelia Fluit Radboud University Medical Centre Nijmegen Radboudumc Health Academy dep. Postbox9101 6500HB Nijmegen The Netherlands
REVIEW RETURNED	27-Apr-2020

GENERAL COMMENTS	<p>General comments</p> <p>Thank you for the opportunity to re-review this research protocol. I want to compliment the authors about the way they improved this manuscript. I think it is now ready for acceptance.</p> <p>Detailed feedback</p> <p>Abstract It is clearly formulated what this study is about</p> <p>Introduction The introduction has been changed adequately</p> <p>Methods The authors have changed their methodology into a integrative review instead of a scoping review. This is an appropriate method, and it is well described.</p> <p>Charting the data There are only two minor points : Page 11: line 40, it says error. Page 12, line 12-14: it is stated that: 'Full text publications which meet the inclusion and exclusion criteria will be selected for data extraction.' Please rephrase this sentence.</p>
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