

## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (Error! Hyperlink reference not valid.) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Medical students' experience of the hidden curriculum around Primary Care careers: a qualitative exploration of reflective diaries
<b>AUTHORS</b>	Parekh, Ravi; Jones, Melvyn; Singh, Surinder; Yuan, Jack; Chan, See; Mediratta, Saniya; Smith, Rhys; Gunning, Elinor; Gajria, Camille; Kumar, Sonia; Park, Sophie

### VERSION 1 – REVIEW

<b>REVIEWER</b>	Alberti, Hugh Newcastle University, School of Medical Education
<b>REVIEW RETURNED</b>	20-Mar-2021

<b>GENERAL COMMENTS</b>	<p>This paper reports a novel and relatively unique, but robust, study of students perceptions of GP as a career option by collecting reflective diaries of 4 medical students over one academic year at 2 institutions. It is an important area of research with significant implications.</p> <p>Minor recommendations</p> <p>Abstract Although the number of students is relatively small, the number should be included in the abstract</p> <p>The authors use PHC doctors and GP seemingly interchangeably – they need to explain the difference – if there is any – and why they use them both or use one of them consistently.</p> <p>Intro Is there a better reference than the Wass report to support sentence 2 para 2 of the introduction?</p> <p>Methods You mention that the entries varied in length but it would be useful to know how many entries there were per student and the range. Reporting the year group of the 4 students will help contextualise the reflections and given that gender is one of the themes it would be useful to know the gender of the 4 students.</p> <p>Recommendations The third recommendations is rather vague and non-specific and could be strengthened</p> <p>Minor typos</p>
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	There are a number of extra spaces between words and in front of full stops especially in the results section. Line gaps after the subsection titles seem to vary
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<b>REVIEWER</b>	Deutsch, Tobias Medical Faculty, University of Leipzig, Department of General Practice
<b>REVIEW RETURNED</b>	29-Mar-2021

<b>GENERAL COMMENTS</b>	<p>Considering the presence of recruitment problems in general practice/ primary care in many countries worldwide, this study addresses an important issue of current political relevance. Positive as well as negative experiences during undergraduate medical education have a substantial impact on important medical students' career considerations (and finally choices). These experiences include the explicit, but also the 'implicit' or 'hidden' curriculum. The authors chose an innovative methodological qualitative research approach by analyzing reflective diaries of four students who participated in the study as so-called 'participant researchers'.</p> <p>Abstract, Background and study question: good.</p> <p>Methods: Recruitment:</p> <ol style="list-style-type: none"><li>1. The authors declare that 'Given the longitudinal nature of the study, four students were included to gather sufficient data entries over ten months to gain a sense throughout an academic year of the medical students' experiences.' As in my opinion the inclusion of only four students (spread across two medical schools and different stages of study) is among the most limiting factors of this study, I would appreciate a more detailed argumentation of this issue. I suggest to explain more precisely why it was not possible or suitable to involve more than four students at two medical schools...</li><li>2. The authors describe that students 'were recruited using a pragmatic approach through formal and informal networks.' In my opinion, more information is needed regarding this 'pragmatic recruitment' and the relationship of researchers and students. As described 'The project leads from both sites were all practising GPs and involved in GP undergraduate education.' I think that personal connection and knowledge about the researchers' intentions and goals might have influenced students' perceptions. In the Quorec-Statement the authors provide no substantial information regarding the following two questions: What did the participants know about the researcher? (e.g. personal goals, reasons for doing the research); What characteristics were reported about the interviewer/facilitator? (e.g. Bias, assumptions, reasons and interests in the research topic). Although the study design was no 'classical' interview or focus group, these questions should be answered.</li></ol> <p>Results: Good. The results provide interesting insights. Good selection of original statements'.</p>
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Discussion:

3. First, I miss a paragraph summarizing the main findings of the study at the beginning of the discussion section, which is quite helpful for people who are in the need to read papers quickly sometimes. Instead, the current paragraph "Discussion and Future Directions" starts with addressing a literature gap which has been the starting point for the study and a critical look at the study's methodology. I suggest to restructure the discussion.

4. In general, there is not much literature comparison in the paragraph "Discussion and Future Directions". I suggest to compare the findings a bit more with those of previous studies. I also think that the findings should be discussed with a more comprehensive view. For instance, the authors state that 'data suggest students perceive GP clerkships as being passive and boring' – How does that fit to the extensive and substantial evidence that undergraduate GP clerkships usually positively influence GP career choice?

Recommendations for practice:

5. The authors recommend that 'there is an imperative need for educators to tackle the pervasive impact of the hidden curriculum around careers. There is a need for all faculty to be increasingly accountable and aware of the impact of their comments, actions and the culture created which students experience.' To me, this seems to be a very challenging task. So, do the authors have any suggestions on how to manage this successfully? What could be promising approaches?

Implications for research:

6. The authors state that 'There is a need to conduct similar studies at other institutions internationally using a similar methodology and to explore how students' experiences prior to university may influence their perceptions of PHC careers. There is also a need to review the impact of outside influences on medical students, including the portrayal of doctors in the media.' Well, there seems to be already a substantial amount of literature including a lot of qualitative studies regarding the topic 'hidden curriculum' in undergraduate medical education and many of the findings in the present study have already been reported in a similar way. Wouldn't it be more interesting to conduct research on the measures that could be taken to overcome the 'badmouthing'/'GP bashing' at medical schools? In a current Scoping Review on hidden curricula in medical education (by the way I suggest to add this reference), Lawrence et al. (2018) conclude: 'Future medical education researchers should make clear the conceptual boundary or boundaries they are applying to the term "hidden curriculum," move away from general musings on its effects, and focus on specific methods for improving the powerful hidden curriculum.' Yazdani et al. (2019) described a model to manage hidden curriculum in medical education.

Literature:

- Lawrence C, Mhlaba T, Stewart KA, Moletsane R, Gaede B, Moshabela M. The Hidden Curricula of Medical Education: A Scoping Review. *Acad Med.* 2018 Apr;93(4):648-656.

- Yazdani S, Momeni S, Afshar L, Abdolmaleki M. A comprehensive model of hidden curriculum management in

medical education. J Adv Med Educ Prof. 2019 Jul;7(3):123-130.  
- Neve H, Collett T. Empowering students with the hidden curriculum. Clin Teach. 2018 Dec;15(6):494-499. doi: 10.1111/tct.12736. Epub 2017 Nov 27. PMID: 29178606.

Thanks for the possibility to review this interesting manuscript.

## VERSION 1 – AUTHOR RESPONSE

### Reviewer 1's comments:

#### Minor recommendations

##### Abstract

Although the number of students is relatively small, the number should be included in the abstract

This has been updated accordingly

The authors use PHC doctors and GP seemingly interchangeably – they need to explain the difference – if there is any – and why they use them both or use one of them consistently.

Many thanks, this has been modified to use the term GPs throughout.

##### Intro

Is there a better reference than the Wass report to support sentence 2 para 2 of the introduction?

The reference has been updated to the 2019 UKFPO F2 destination survey which is more appropriate and up to date.

##### Methods

You mention that the entries varied in length but it would be useful to know how many entries there were per student and the range.

This has been updated accordingly

Reporting the year group of the 4 students will help contextualise the reflections and given that gender is one of the themes it would be useful to know the gender of the 4 students.

This has been updated accordingly

##### Recommendations

The third recommendation is rather vague and non-specific and could be strengthened

This has been updated with extra detail and specifics, alongside additional relevant references.

##### Minor typos

There are a number of extra spaces between words and in front of full stops especially in the results section. Line gaps after the subsection titles seem to vary

This has been updated accordingly

## Reviewer 2's comments:

Abstract, Background and study question: good.

Methods: Recruitment:

1. The authors declare that 'Given the longitudinal nature of the study, four students were included to gather sufficient data entries over ten months to gain a sense throughout an academic year of the medical students' experiences.' As in my opinion the inclusion of only four students (spread across two medical schools and different stages of study) is among the most limiting factors of this study, I would appreciate a more detailed argumentation of this issue. I suggest to explain more precisely why it was not possible or suitable to involve more than four students at two medical schools...

The phenomenological nature of the study requires several entries over an academic year to understand the true experience of the students. This requires a significant time and effort commitment for the participant researchers. Therefore, it was felt more appropriate to recruit a smaller number of students who had an interest in medical education research and the hidden curriculum and were therefore able to commit to regular entries and research meetings, rather than try to recruit a larger number. This has been reflected in the methods section and we do acknowledge this also as a limitation of the study (see page 23).

2. The authors describe that students 'were recruited using a pragmatic approach through formal and informal networks.' In my opinion, more information is needed regarding this 'pragmatic recruitment' and the relationship of researchers and students. As described 'The project leads from both sites were all practising GPs and involved in GP undergraduate education.' I think that personal connection and knowledge about the researchers' intentions and goals might have influenced students' perceptions. In the Quorec-Statement the authors provide no substantial information regarding the following two questions: What did the participants know about the researcher? (e.g. personal goals, reasons for doing the research); What characteristics were reported about the interviewer/facilitator? (e.g. Bias, assumptions, reasons and interests in the research topic). Although the study design was no 'classical' interview or focus group, these questions should be answered.

The students were all interested in medical education research and had themselves noticed the effect of the hidden curriculum during their medical education careers. There were no personal connections or relationships with the researchers. As noted under recruitment (page 8), none of the students were likely to choose GP as their future specialty at the time of the study.

Discussion:

3. First, I miss a paragraph summarizing the main findings of the study at the beginning of the discussion section, which is quite helpful for people who are in the need to read papers quickly sometimes. Instead, the current paragraph "Discussion and Future Directions" starts with addressing a literature gap which has been the starting point for the study and a critical look at the study's methodology. I suggest to restructure the discussion.

This has been taken on board and the structure altered with the summary of the discussion at the start of the section.

4. In general, there is not much literature comparison in the paragraph "Discussion and Future Directions". I suggest to compare the findings a bit more with those of previous studies. I also think that the findings should be discussed with a more comprehensive view. For instance, the authors state that

'data suggest students perceive GP clerkships as being passive and boring' – How does that fit to the extensive and substantial evidence that undergraduate GP clerkships usually positively influence GP career choice?

The discussion section has been updated with further links to the current literature base and discussion of how our results fit with current understanding in this area.

Recommendations for practice:

5. The authors recommend that 'there is an imperative need for educators to tackle the pervasive impact of the hidden curriculum around careers. There is a need for all faculty to be increasingly accountable and aware of the impact of their comments, actions and the culture created which students experience.' To me, this seems to be a very challenging task. So, do the authors have any suggestions on how to manage this successfully? What could be promising approaches?

This has been addressed in response to reviewer 1

Implications for research:

6. The authors state that 'There is a need to conduct similar studies at other institutions internationally using a similar methodology and to explore how students' experiences prior to university may influence their perceptions of PHC careers. There is also a need to review the impact of outside influences on medical students, including the portrayal of doctors in the media.'

Well, there seems to be already a substantial amount of literature including a lot of qualitative studies regarding the topic 'hidden curriculum' in undergraduate medical education and many of the findings in the present study have already been reported in a similar way. Wouldn't it be more interesting to conduct research on the measures that could be taken to overcome the 'badmouthing'/ 'GP bashing' at medical schools? In a current Scoping Review on hidden curricula in medical education (by the way I suggest to add this reference), Lawrence et al. (2018) conclude: 'Future medical education researchers should make clear the conceptual boundary or boundaries they are applying to the term "hidden curriculum," move away from general musings on its effects, and focus on specific methods for improving the powerful hidden curriculum.' Yazdani et al. (2019) described a model to manage hidden curriculum in medical education.

Literature:

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- Yazdani S, Momeni S, Afshar L, Abdolmaleki M. A comprehensive model of hidden curriculum management in medical education. *J Adv Med Educ Prof.* 2019 Jul;7(3):123-130.
- Neve H, Collett T. Empowering students with the hidden curriculum. *Clin Teach.* 2018 Dec;15(6):494-499. doi: 10.1111/tct.12736. Epub 2017 Nov 27. PMID: 29178606.

An additional paragraph has been added to the implications section, focussing more on how the hidden curriculum can be addressed and the need for these interventions to be piloted and evaluated. The relevant references from the list provided have also been included. Within the introduction we do set out our conceptual understanding of the term "hidden curriculum" in relation to this study. We also acknowledge the critique within the literature, and why we feel this is still a valid term to be using in relation to this study.

## VERSION 2 – REVIEW

<b>REVIEWER</b>	Deutsch, Tobias Medical Faculty, University of Leipzig, Department of General Practice
<b>REVIEW RETURNED</b>	02-Jul-2021
<b>GENERAL COMMENTS</b>	The authors adequately addressed my concerns and recommendations.