PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	A qualitative evaluation of the impact of a medical student school outreach project on both medical students and school pupils
AUTHORS	Brown, Megan; Ahuja, Neha; Sivam, Vanessa; Khanna, Alisha; Parekh, Ravi

VERSION 1 – REVIEW

REVIEWER	Gupta, Shalini University of Dundee
REVIEW RETURNED	13-Dec-2022

GENERAL COMMENTS	It would be useful for the reader to have an idea of the demographic characteristics of the participants, both the medical students and the school pupils. A little elaboration of the sessions on Mental and sexual Health would aid the paper.

REVIEWER	Carson, Dean Umea University
REVIEW RETURNED	22-Mar-2023

GENERAL COMMENTS	The most interesting part of the paper is the paragraph following Figure 2, which clearly shows the low (or even zero) priority the medical school actually attached to this project, and possibly, by extension, to community engagement. I assume that the original design (four session, presentation, debrief) was based on some evidence that this structure is what is needed or desirable to 'do' effective engagement of this type. Having the program curtailed therefore makes it difficult to validate the research design as an 'evaluation' or an assessment of 'outcome' of "how community engagement projects influence medical students and school pupils", since this was not a community engagement 'project'. It was one (and a half or less) interactions between medical students and school pupils. I think the authors need to be very clear about what their research actually does – gets some idea of the response by medical students and school pupils to one (basically) education session. I also find it difficult to map this education session to the concept of service learning, as I fail to see where the 'service' was. Perhaps this is reflected in the results (the school students also apparently failed to see what 'service' they were receiving). What the results seem to indicate is that medical students would not be averse to a 'real' community engagement project involving secondary school students. School students needed to feel that

	the project was really aimed at them (taking into account their previous learning, for example). It is possible that a real project might have had benefits for students not recognized in this curtailed event. The Discussion is very good, and makes many valid points if mapped to an approprite research question. I think the paper could be improved substantially by focusing on insights into what went wrong in this 'project'. Clearly, the medical school was not committed to it, there was insufficient structure to make it work for medical students and school pupils… and so on. The main learning for me from the paper is that a cavalier attitude to community engagement runs risks of disengaging, and medical schools need to really decide if they are committed to this aspect of learning or not. If not, don't do it. If so, do it 'properly' (with this paper giving some insights into what 'properly' might mean for engagement with secondary schools). There is a wealth of literature about medical students delivering these sorts of education programs in secondary schools – Patalay in the UK, Brinker in Germany and many others. Perhaps this paper could be better informed by understanding how and why those projects 'worked' (or not – although I acknowledge it is hard to tell when those with a vested interest in the project are doing the evaluation!). A revised paper of this nature would make a substantial and (often lacking) critical contribution to the study of community-engaged medical schools.

VERSION 1 – AUTHOR RESPONSE

Reviewer comment	Response
Reviewer 1 It would be useful for the reader to have an idea of the demographic characteristics of the participants, both the medical students and the school pupils.	Thank you for this suggestion. Unfortunately, ethical processes at our institution preclude the collection of this data unless it is directly relevant to the study research question. Given that we were not focused on exploring the influence of a demographic factor, we were not able to collect demographic data, and so cannot report this.
Reviewer 1 A little elaboration of the sessions on Mental and sexual Health would aid the paper.	Thank you for this suggestion. We have added additional detail on the sessions to the methods section of the paper: *"Medical students were given two broad topics to help them design lessons for school pupils – mental health and wellbeing; and sexual health and wellbeing. These priority areas were agreed*

	through discussion with the schools involved as areas of need for school pupils and alignment with the medical students' curriculum. Medical students worked in groups to develop their lesson plan for the school they were attached to and delivered their lesson plan in pairs. Students were given guidance on possible content areas for each topic (e.g., within mental health and wellbeing, they were advised they needed to cover variation in mental health; spotting signs when someone isn't well; coping strategies; and where to seek help); but there was flexibility in detailed content and delivery methods depending on each student group."
Reviewer 2 The most interesting part of the paper is the paragraph following Figure 2, which clearly shows the low (or even zero) priority the medical school actually attached to this project, and possibly, by extension, to community engagement. I assume that the original design (four session, presentation, debrief) was based on some evidence that this structure is what is needed or desirable to 'do' effective engagement of this type. Having the program curtailed therefore makes it difficult to validate the research design as an 'evaluation' or an assessment of 'outcome' of "how community engagement projects influence medical students and school pupils", since this was not a community engagement 'project'. It was one (and a half or less) interactions between medical students and school pupils. I think the authors need to be very clear about what their research actually does – gets some idea of the response by medical students and school pupils to one (basically) education session.	We appreciate these thoughts. The original design was based on an existing schools project at Imperial College, different in focus, and voluntary rather than mandatory. The schools project in this paper is extended in length based on positive feedback received from this previous project. We have made this origin apparent within our revisions within our methods section. From our reading and research, there is no best practice in terms of the optimal structure for schools engagement projects. Therefore, we feel unable to make comments about validating this evaluation in our paper. We do feel that our research question should keep its evaluative focus. At this point, we worry that changing our research question would not accurately reflect our intentions, focus, the questions we asked, or the research we gained ethical approval for. Further, though the students only taught one session, as detailed in our methods, they had more engagement than this in terms of planning and developing the session. However, we recognise the reviewer's feedback on articulating the lessons learned and challenges faced in implementing this project more clearly. We have made changes throughout this manuscript to enhance this focus, including creation of a new summary table in the discussion, bringing together our key lessons learned and recommendations. We would also like to draw attention to supplementary material 3, which contains expansive logistical recommendations that play a key role in terms of the lessons learned from this project.

Reviewer 2 I also find it difficult to map this education session to the concept of service learning, as I fail to see where the 'service' was. Perhaps this is reflected in the results (the school students also apparently failed to see what 'service' they were receiving).	We agree that how we have conceptualised service learning in relation to the project could be clearer. We have further emphasised our community-engaged approach to selecting the topics that the sessions focussed on (i.e., mental health and sexual health) in the methods of the paper – these aligned with the content requested by the Hammersmith and Fulham Youth Council, and the Personal, Social, Health and Economic national curriculum the schools follow, in addition to the Year 5 medical school curriculum. In delivering this content, we see the medical students as delivering an essential service in terms of teaching to the school pupils, which aligns with the definition of service learning from Sigmon (reference 10) we supply in our methods. We have added detail to the section of our methods describing service learning about how we see this concept as aligning with the focus of our project: *"This Schools Project was intended to engage medical students in service learning – the project was designed in collaboration with local young people and schools, and aligned to both those needs identified, national school pupil curricula, and medical student curricula in terms of the content focus."* A focus of our discussion is already on how we can recommend improvements to enhance the service learning potential of this project, which we feel speaks to the disparity in terms of pupil experiences evident in the results: *"Fundamentally, as Furco[13] notes, service-learning projects must 'equally benefit the provider and the recipient of the service' (p.5). Our conceptualisation of service learning as a spectrum spanning from service to learning[10] which must involve mutual benefit or synergy[11] can help us make sense of our participants' experiences and offer important messages for educators interested in creating and implementing service learning (in particular, school teaching) projects."*

Reviewer 2 What the results seem to indicate is that medical students would not be averse to a 'real' community engagement project involving secondary school students. School students needed to feel that the project was really aimed at them (taking into account their previous learning, for example). It is possible that a real project might have had benefits for students not recognized in this curtailed event.	Whilst we agree that a more expansive project could have had additional benefits (indeed, we make this point several times in our discussion, e.g. "*If students had the opportunity to reflect on their experiences immediately following session delivery, some of the benefits of reflection in reference to service-learning might have been realised*"), we disagree that this was not a "real" community engagement project. The reviewer does not provide a benchmark for what they consider to be "real" in terms of community engagement, so this is difficult to respond to. We believe our project was "real" community engagement in that it was a co-creation between medical school faculty and the local community, was designed with service learning in mind and, even in a form that was limited by external constraints, offered benefits, particularly for the medical students involved.
Reviewer 2 The Discussion is very good, and makes many valid points if mapped to an approprite research question. I think the paper could be improved substantially by focusing on insights into what went wrong in this 'project'. Clearly, the medical school was not committed to it, there was insufficient structure to make it work for medical students and school pupils… and so on. The main learning for me from the paper is that a cavalier attitude to community engagement runs risks of disengaging, and medical schools need to really decide if they are committed to this aspect of learning or not. If not, don't do it. If so, do it 'properly' (with this paper giving some insights into what 'properly' might mean for engagement with secondary schools).	Thank you for the positive feedback regarding our discussion. As previously, we do not feel comfortable in terms of transparency and methodological rigour altering our research question (which is the question we have ethical approval for, and that which guided research design and conduct) at this stage. Whilst we have made edits to our discussion to emphasise lessons learned and challenges in response to the comments in regards to focussing on what "Went wrong" with the project, we have not changed our research question and so the ultimate focus of our discussion remains unchanged.
Reviewer 2 There is a wealth of literature about medical students delivering these sorts of education programs in secondary schools – Patalay in the UK, Brinker in Germany and many others. Perhaps this paper could be better informed by understanding how and why those projects 'worked' (or not – although I acknowledge it is	Thank you for signposting us to Patalay and Brinker. However, given the reviewer did not signpost any specific references, it is challenging to know which might be relevant. We reviewed Praveetha Patalay's body of work and identified the following reference as possibly relevant:

hard to tell when those with a vested interest in the project are doing the evaluation!).	Patalay, P., Annis, J., Sharpe, H., Newman, R., Main, D., Ragunathan, T., Parkes, M. and Clarke, K., 2017. A pre-post evaluation of OpenMinds: A sustainable, peer-led mental health literacy programme in universities and secondary schools. *Prevention Science*, *18*, pp.995-1005. We have integrated this reference into our discussion, drawing on the finding that school pupils find being taught by medical students acceptable, and to integrate the recommendation that a project led by undergraduate student increases perceived relevance. We reviewed Titus Brinker's body of work, and identified the following study as potentially relevant: Brinker TJ, Stamm-Balderjahn S, Seeger W, Klingelhöfer D, Groneberg DA. Education Against Tobacco (EAT): a quasi-experimental prospective evaluation of a multinational medical-student-delivered smoking prevention programme for secondary schools in Germany. BMJ open. 2015 Sep 1;5(9):e008093. This study does not provide information on medical students' experiences but shows that a medical student delivered intervention can be effective with school pupils. We have used this reference in our discussion to further emphasise that school projects delivered by medical students can be effective in changing school pupil behaviour. Unfortunately, the "many others" writing on this topic remain elusive to us. On review of the literature, we could find very little on school projects led by medical students within medical education. We have integrated the above references, and on reviewing the literature once again, feel we have captured the references that speak to the experiences of medical students

	and school pupils within medical education schools projects.

VERSION 2 – REVIEW

REVIEWER	Carson, Dean Umea University
REVIEW RETURNED	18-May-2023

GENERAL COMMENTS	The paper is much improved in terms of structure and clarity of reporting the results (especially the new summary table). I am still uncomfortable with promoting this teaching session as 'community engaged' (since the Medical School was very quick to disengage), co-creative (since the Medical School exercised its power of veto, reflecting the true power relationships in designing and implementing this project), or even service learning (although certainly this was an intent and by narrow definition the teaching session was a service learning exercise, I suppose). I'm not sure that we learn very much from the paper apart from that there is potential for valuable outcomes from these sorts of projects, although this particular one didn't realise much of that potential because of the lack of commitment from the Medical School. However, I see that Reviewer 1 has no such concerns, and acknowledge that I may be 'stuck' unfairly on these ideas. I humbly stand down, and leave the publication decision to the discretion of the editor!

VERSION 2 – AUTHOR RESPONSE

Reviewer/Editor Comment	**Response**
Please revise the 'Strengths and limitations of this study' section of your manuscript (after the abstract). This section should contain up to five short bullet points, no longer than one sentence each, that relate specifically to the methods. The novelty, aims, results or expected impact of the study should not be summarised here.	We have updated the 'Strengths & limitations" section as suggested. This now includes 4 short bullet points.
The paper is much improved in terms of structure and clarity of reporting the results (especially the new summary table).	Many thanks for these comments.
I am still uncomfortable with promoting this teaching session as 'community engaged' (since the Medical School was very quick to	We would respectfully challenge the comments made by Reviewer 2.

disengage), co-creative (since the Medical School exercised its power of veto, reflecting the true power relationships in designing and implementing this project), or even service learning (although certainly this was an intent and by narrow definition the teaching session was a service learning exercise, I suppose).	We feel strongly that the project being described is community-engaged and co-created. As described in the methods, the project was developed in partnership with our community partners, based on mutual priorities. Topics and learning objectives for the students were chosen in collaboration with our school partners. The decision to 'disengage' was made in partnership with the schools based on the logistical challenges described. In addition, the university continues to have strong collaborative relationships with these schools. Other community engagement projects, including medical student projects from other years, remain in place and we continue to explore new opportunities with our school partners. Therefore, we have made the following edits: • Updated the definition and reference relating to community engagement. • In the methods section, an addition has been made to explain that the decision to end the project was made with our school partners. • A sentence has been added at the end of the 'Context of the schools project' to explain that the university has not disengaged from our partners, and we continue with other community projects involving medical students from other years.
I'm not sure that we learn very much from the paper apart from that there is potential for valuable outcomes from these sorts of projects, although this particular one didn't realise much of that potential because of the lack of commitment from the Medical School.	We would again challenge this comment from reviewer 2. We have described the importance of community perspectives in the evaluation and research relating to community engagement projects in medical education.

	Our findings are from a ‘real-life’ community engagement project, which faced logistical challenges, which other medical educators will be able to relate strongly to. We therefore feel that the lessons we have learned in table 1, would be of particular interest for educators involved in the development and delivery of medical curricula.
Superscripts should be replaced with [] for in text references	Amended