

## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) 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>	"Where are you really from?": A qualitative study of racial microaggressions and the impact on medical students in the United Kingdom
<b>AUTHORS</b>	Morrison, Nariell; Zaman, Tabbasum; Webster, Georgia; Sorinola, Olanrewaju; Blackburn, Clare

### VERSION 1 – REVIEW

<b>REVIEWER</b>	Rastogi, Ritika Brigham and Women's Hospital
<b>REVIEW RETURNED</b>	04-Jan-2023

<b>GENERAL COMMENTS</b>	<p>Thank you for the opportunity to review this important paper, which qualitatively explores UK GEM RM students' experiences of racial/ethnic microaggressions and the impact of such experiences upon their well-being and education. The paper undoubtedly makes an important contribution using appropriate methods and the authors note several practical implications based on their findings.</p> <p><b>GENERAL:</b></p> <p>1. The terminology used throughout the paper is inconsistent; in the introduction the authors discuss their rationale for the term "RM" but the following terms are also used throughout: race, BME, ethnicity. It would be best for the authors to maintain consistency in the label used, or clarify why a different term is being used in each instance.</p> <p>2. I would like to see discussion of the health and microaggression literature and more discussion of the underlying mechanisms. I do not think the use of qualitative methods in the present study should preclude the authors from discussing the existing quantitative research in the introduction or discussion, as well as the theoretical literature on microaggressions.</p> <p><b>INTRODUCTION:</b></p> <p>1. Page 6, line 36 (P6 L36) refers to research on "undergraduate medical students" in the United States, but to my knowledge there are no undergraduate medical degrees in the US education system. Perhaps the authors were referring to "premedical" students, that is, students who may be concentrating in any field of study (e.g., psychology, Spanish, creative writing, economics) but who are simultaneously enrolled in coursework that will prepare them to apply for a medical program? Please clarify.</p> <p>2. In P6 L49 the authors discuss the impacts of microaggressions on learning. Please expand to discuss potential consequences that have been identified in the literature.</p>
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3. In P7 L10 “accounts” should read “account”

#### RESULTS:

1. I do not feel the labels for the themes always align with the subsequent data discussed. While I appreciated that the authors in some instances used brief quotes which were illustrative of the content of the theme, I also felt at times the theme label misrepresented the content of the theme. For example, to my mind, “hear it and deal with it” implies that RM students should simply “deal with” experiences of racial microaggressions by “putting their head down” and ignoring. In other words, they should just deal with these experiences and move on. However, this is not at all what the theme is highlighting and in fact the quotes illustrate that students are specifically calling for authority/faculty intervention during microaggressive instances.

2. Some of the themes overlap. For instance, “The Brown Group” does not seem very distinguishable from “you guys look so alike.” Evidence of this would be the first quote under “The Brown Group,” which seems to fit very well under “you guys look so alike” as well.

3. I would like the authors to unpack and expand further on what elements of each quote they are highlighting for each theme. Can you interpret/analyze a bit more what the participants are sharing? For instance, the “where are you from” theme seems to be picking up on perpetual foreigner ideology and Whiteness as the norm. Yet, I do not see discussion of this in the results nor the discussion section.

4. Some context is needed for “Mrs Bibi syndrome,” as I do not think readers outside of the UK (myself included) will understand this reference.

5. I would like the racial/ethnic background for each participant to be provided in-text so the reader can get a better sense of the lived experiences that might motivate a particular quote. E.g., instead of citing that a quote was stated by P5, I might say “P5 (Black British female)”.

6. P21 L12 should read “was a commonly HELD perception that...”

7. P21 L14 should read “RM backgrounds WHO were selected...”

8. The themes of “a thread of student education” and “shifting the majority culture” seem to overlap, as both discuss curriculum reform. Are the education programs listed under “a thread of student education” not a form of structural change, or change to the majority culture?

#### DISCUSSION

1. I like the theme labels listed for the seven types of microaggressions on P21 L54-60. These seem more specific and appropriate than the brief quotes such as “The Brown Group” and “One and Two.”

2. Please unpack and cite the cognitive evidence of the mechanism underlying microaggression experiences and worsened wellbeing (e.g., when discussing the “additional mental burden” on P23 L21), for instance limbic activation during an exam.

	<p>3. P27 L25-46, please give statistics about RM rates in medicine in the UK, what percentage of physicians in the UK are white?</p> <p>4. P25 L3 the authors mention the strength of the group interview methodology in that it allowed participants to build upon each others' responses. However, this was not apparent from the results section and I wonder whether there are illustrative quotes of an exchange between 2+ participants which the authors could share in-text.</p> <p>5. I appreciate the discussion of cognitive load theory in the implications section. Yet, I still feel there is very limited unpacking of how and why microaggressions affect health, cognition, and achievement, why this is consequential for GEM students specifically, and why microaggressions are an important area of study as opposed to macro-aggressive experiences (e.g., overt use of slurs, physical harassment). Why do microaggressions matter? In other words, beyond the implications for practice, what are the unique contributions of this paper and the findings to the field and future research? Please also mention cognitive load theory in the introduction.</p> <p>6. P27 L24 the authors mention the "clinical environment." This is intriguing to me - I'd like to read more about the clinical environment versus the classroom environment and how GEM students' experiences might vary across these contexts. I wonder also what the authors' perspective is on the question of whether medical staff should intervene if a patient (versus another clinician or an educator) is committing a microaggression against a student.</p>
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<b>REVIEWER</b>	Wong, Sylvie Columbia University
<b>REVIEW RETURNED</b>	07-Jan-2023

<b>GENERAL COMMENTS</b>	<p>This study studied 21 racial minority graduate-entry medical students and underscored how experiences of racial micro aggressions during medical school impacted their performance and well-being. This study is very important in highlighting the ramifications of racial micro aggressions. Minor changes are recommended below to improve manuscript:</p> <p>1) Introduction, p.6, in line 13: "differential attainments ... represented complex, systematic inequalities" - be more specific on factors that give white counterparts advantage of performing better on clinical competence markers as compared to RM students</p> <p>2) why specifically study medical students? how might their experiences differ from other graduate students? in what ways can their experiences generalize/not generalize to other students?</p> <p>3) Introduction P.2 - in addition to note that "cautious not to dismiss the use of racial categories with which people identify" - please add a sentence of the limitation to group all racial minorities in one group -- what are the risks/ limitations of doing so? e.g., how does black vs. Asian participants' experiences differ in terms of microaggressions? For example, microaggressions against Asians are sometimes seemingly "positive" (e.g. stereotyping Asians as over-achieving, smart, diligent) but highlight how it's still harmful</p> <p>4) Introduction - since focused on RM students, consider adding minority stress theory as a framework</p> <p>5) Methods - note limitations with virtual and group-based interviews</p> <p>6) "Strengths and weaknesses" p.24 - only listed the benefits of qualitative interviews - again, please list limitations of the group-</p>
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	<p>based nature of the interviews -- what might be left out? who type of participants may not have been comfortable to participate at all? whose perspectives may this study leave out?</p> <p>7) p.25 "transferability" of results - be more explicit and clear about what settings these results may or may not translate to. Also note that qualitative research in general does not aim to generalize (e.g., as in quantitative research with a bigger N), but to highlight lived experiences.</p> <p>8) Implications: discuss specific focus on medical student population - are the recommendations you suggested also applicable to other graduate students/ RM students at large? why might med students need specific interventions re: racial microaggressions?</p>
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<b>REVIEWER</b>	Zhang, Emily Boston College
<b>REVIEW RETURNED</b>	08-Jan-2023

<b>GENERAL COMMENTS</b>	<p><b>General Comments</b></p> <p>The current manuscript is well-written and describes a research study that uses qualitative, semi-structured focus groups to explore medical students' experiences of racial microaggressions and their impact (N=21). This study has important implications for addressing racial microaggressions within the medical school context given its documented impacts on students' learning and well-being. One general concern I have is about the length of the manuscript; some areas could be written in a more concise manner. In addition, the link between racial microaggressions and academic performance seem unclear in some parts of the paper. The comments below provide some suggestions to further enhance the manuscript.</p> <p><b>Introduction</b></p> <p>The introduction is concise and creates a clear frame for the study – I offer a few minor comments below:</p> <ul style="list-style-type: none"> <li>• P. 5: “Although these studies document medical students’ reports of microaggressions and provide some evidence of impacts on learning.... they offer few insights into how microaggressions directly and indirectly impact on learning and ultimately, attainment”: This sentence implies that the current study will examine attainment, which is slightly different from learning and performance – perhaps a different wording would work better here.</li> <li>• P. 6: “We have chosen the term RM throughout this paper”: It may be helpful to briefly re-state “racially minoritized” as the abbreviation here given that it is easy to mistake it with “racial microaggressions”</li> <li>• It may aid the flow of the paper to slightly reorganize the introduction so the final paragraph describes the current study aims (perhaps the language component of RM could be described prior).</li> </ul> <p><b>Methods</b></p> <p>Generally, the authors provide a very thorough review of the Methods – given that the current manuscript is up to 9400 words, I recommend significantly shortening this section and only providing the critical details for replicating the study. I also propose a few additional suggestions:</p> <ul style="list-style-type: none"> <li>• I appreciate the authors’ use of reflexivity within the study. I think it is important to note the authors themselves have experienced racial discrimination firsthand; in addition, I think it could be useful to take this a step further and describe how these experiences and RM identities may affect the way the data are interpreted.</li> <li>• In Data Collection Methods, it would be useful for the authors to describe the interview domains and provide a general overview or</li> </ul>
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	<p>example of the types of questions asked within the text.</p> <p><b>Results</b></p> <ul style="list-style-type: none"> <li>• It would be helpful for authors to describe the racial/ethnic breakdown of the participants within the text, given that the focus of the study is on RM students.</li> <li>• For word count purposes, some of the context within the quotes could be removed (e.g., the first sentence of the quote block at the bottom of page 12 could be removed: “I changed my name well...”). Or, each example could use only one or two quotes.</li> <li>• For some of these quotes/themes, I think including the participants’ racial/ethnic background would be useful context with the quotes and would also help further highlight the heterogeneity of racial microaggression experiences among RM individuals. This may be especially important given that literature on racial microaggressions typically explores microaggressions in the context of a specific racial background (e.g., in the context of U.S.-based research, assumption of criminality is usually particularly salient for Black individuals, and perpetual foreigner may be a common theme among Asian Americans).</li> <li>• The themes under “impact of racial microaggressions” seem to address the impact of microaggressions more on student learning and mental well being – there is less about academic performance. Could authors make this link clearer or remove?</li> <li>• Within the Results, it is unclear how many participants endorsed each theme or what constituted “often” or “strong” views or whether there were opposing views to each of the themes. Some discussion about this would be useful.</li> </ul> <p><b>Discussion</b></p> <p>Overall, this study makes important contributions to the research of racial microaggressions, particularly in the graduate medical field. I make some additional recommendations below:</p> <ul style="list-style-type: none"> <li>• P. 21: “Seven types of racial microaggressions were reported by students, including assumptions of being foreign, assumptions of intellectual inferiority, denials of racial experiences, group labelling, misidentification, and stereotyping.” It would be helpful to use this language within the Results section when describing the findings so the readers can follow these themes in a clearer manner.</li> <li>• The summary of findings within the first three paragraphs could be condensed for word count or written in a more concise way so that the authors are able to describe how their study fits within the literature sooner within the Discussion.</li> <li>• Bottom of page 22 (“this study makes a significant contribution to the literature...”): The authors note that this study theorizes about the cause of academic underperformance – was this question specifically asked within the interviews and focus groups? Again, the link between microaggressions and academic performance in particular could be clarified within the current study.</li> <li>• The Strengths and Weaknesses section could be condensed for conciseness and word count.</li> </ul>
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**VERSION 1 – AUTHOR RESPONSE**

Reviewer: 1  
 Dr. Ritika Rastogi, Brigham and Women's Hospital  
 Comments to the Author:

Thank you for the opportunity to review this important paper, which qualitatively explores UK GEM RM students' experiences of racial/ethnic microaggressions and the impact of such experiences upon their well-being and education. The paper undoubtedly makes an important contribution using appropriate methods and the authors note several practical implications based on their findings. Our response: Thank you for taking the time to review our manuscript. We welcome your comments and hope we have addressed them to your satisfaction.

#### GENERAL:

1. The terminology used throughout the paper is inconsistent; in the introduction the authors discuss their rationale for the term "RM" but the following terms are also used throughout: race, BME, ethnicity. It would be best for the authors to maintain consistency in the label used, or clarify why a different term is being used in each instance.

Our response: we have noted this inconsistency and reduce the terms we have used. We have explained why we use the term race and defined it (pg 6). Some participants use the term BME in the focus groups. It is only used in the quotes. We have preserved the term BME in any quotes to maintain authenticity and have explain this on pg6.

2. I would like to see discussion of the health and microaggression literature and more discussion of the underlying mechanisms. I do not think the use of qualitative methods in the present study should preclude the authors from discussing the existing quantitative research in the introduction or discussion, as well as the theoretical literature on microaggressions.

Our response: As suggested, we have discussed some of the health and microaggression literature and the physiological underlying mechanisms. In response to the point about a qualitative paper not precluding discussion of the quantitative literature, we have added references to quantitative studies from the wider literature on microaggressions. Additionally, references 19, 20, 22 and 23 refer to quantitative studies of microaggression experiences among medical students.

#### INTRODUCTION:

1. Page 6, line 36 (P6 L36) refers to research on "undergraduate medical students" in the United States, but to my knowledge there are no undergraduate medical degrees in the US education system. Perhaps the authors were referring to "premedical" students, that is, students who may be concentrating in any field of study (e.g., psychology, Spanish, creative writing, economics) but who are simultaneously enrolled in coursework that will prepare them to apply for a medical program? Please clarify.

Our response: we have deleted the term 'undergraduate' to avoid confusion. We were referring to all medical students (pre-clinical and clinical).

2. In P6 L49 the authors discuss the impacts of microaggressions on learning. Please expand to discuss potential consequences that have been identified in the literature.

Our response: As suggested, we have discussed some of the potential consequences that has been identified in the wider literature.

3. In P7 L10 "accounts" should read "account"

Our response: corrected

#### RESULTS:

1. I do not feel the labels for the themes always align with the subsequent data discussed. While I appreciated that the authors in some instances used brief quotes which were illustrative of the content of the theme, I also felt at times the theme label misrepresented the content of the theme. For example, to my mind, "hear it and deal with it" implies that RM students should simply "deal with" experiences of racial microaggressions by "putting their head down" and ignoring. In other words, they should just deal with these experiences and move on. However, this is not at all what the theme is highlighting and in fact the quotes illustrate that students are specifically calling for authority/faculty intervention during microaggressive instances.

Our response: The use of participants' words to name themes is common and appropriate in qualitative research. As the reviewer found the theme name for 'Hear it and deal with it unclear', we have changed the theme name to 'Staff should hear it and deal with it'. In addition, the theme names for the 'Experiences of microaggressions' have also been changed as you and Reviewer 3 also suggested: this should help the theme labels more clearly align with the content.

2. Some of the themes overlap. For instance, “The Brown Group” does not seem very distinguishable from “you guys look so alike.” Evidence of this would be the first quote under “The Brown Group,” which seems to fit very well under “you guys look so alike” as well.

Our response: We have combined the sections previously called ‘The Brown Group’ and ‘You guys look alike’ into one theme. We have called this theme ‘Group Labelling’. We have used the data from the original two themes to illustrate that there were two dimensions to this.

3. I would like the authors to unpack and expand further on what elements of each quote they are highlighting for each theme. Can you interpret/analyze a bit more what the participants are sharing? For instance, the “where are you from” theme seems to be picking up on perpetual foreigner ideology and Whiteness as the norm. Yet, I do not see discussion of this in the results nor the discussion section.

Our response: we have referred to perpetual foreigner ideology and Whiteness as the norm in the discussion. We hope that the change of theme name to Assumptions of being foreign also helps. We have also tried to unpack some quotes a little more (but without adding too much to the word count, which is a concern for Reviewer 3).

4. Some context is needed for “Mrs Bibi syndrome,” as I do not think readers outside of the UK (myself included) will understand this reference.

Our response: in recognition of this concern, we have changed the theme title to Stereotyping. We have also added a brief explanation in parentheses.

5. I would like the racial/ethnic background for each participant to be provided in-text so the reader can get a better sense of the lived experiences that might motivate a particular quote. E.g., instead of citing that a quote was stated by P5, I might say “P5 (Black British female)”.

Our response: this has been added.

6. P21 L12 should read “was a commonly HELD perception that...”

Our response: corrected

7. P21 L14 should read “RM backgrounds WHO were selected...”

Our response: corrected

8. The themes of “a thread of student education” and “shifting the majority culture” seem to overlap, as both discuss curriculum reform. Are the education programs listed under “a thread of student education” not a form of structural change, or change to the majority culture?

Our response: As suggested, we have combined the above into one theme and discuss the two aspects within it.

#### DISCUSSION:

1. I like the theme labels listed for the seven types of microaggressions on P21 L54-60.

Our response: As suggested we have used the labels in the discussion section to renamed the types of microaggressions in the results section.

2. Please unpack and cite the cognitive evidence of the mechanism underlying microaggression experiences and worsened wellbeing (e.g., when discussing the “additional mental burden” on P23 L21), for instance limbic activation during an exam.

Our response: As suggested we have included some of the evidence regarding the physiological stress responses linked to experiencing microaggressions.

3. P27 L25-46, please give statistics about RM rates in medicine in the UK, what percentage of physicians in the UK are white?

Our response: We have added information on the percentage of UK medical students who identify as RM and the percentage of doctors in the UK that are white.

4. P25 L3 the authors mention the strength of the group interview methodology in that it allowed participants to build upon each others’ responses. However, this was not apparent from the results section and I wonder whether there are illustrative quotes of an exchange between 2+ participants

which the authors could share in-text.

Our response: We have added an example into the theme 'A sense of doubt'. This illustrates how the responses of 3 participants build upon each other's responses.

5. I appreciate the discussion of cognitive load theory in the implications section. Yet, I still feel there is very limited unpacking of how and why microaggressions affect health, cognition, and achievement, why this is consequential for GEM students specifically, and why microaggressions are an important area of study as opposed to macro-aggressive experiences (e.g., overt use of slurs, physical harassment). Why do microaggressions matter? In other words, beyond the implications for practice, what are the unique contributions of this paper and the findings to the field and future research? Please also mention cognitive load theory in the introduction.

Our response: We have provided an explanation of why microaggressions are an important area of study as opposed to overt racism in the introduction. We have stated what the unique contributions of this paper in the discussion section and explained how our findings build upon previous research in the medical education field. We have also highlighted areas for future research based on our findings in the future research sub-section of the discussion. We have chosen not to mention cognitive load theory in the introduction considering reviewer 3's comment on reducing the word count.

6. P27 L24 the authors mention the "clinical environment." This is intriguing to me - I'd like to read more about the clinical environment versus the classroom environment and how GEM students' experiences might vary across these contexts. I wonder also what the authors' perspective is on the question of whether medical staff should intervene if a patient (versus another clinician or an educator) is committing a microaggression against a student.

Our response: We have made it clearer which microaggressions were more commonly experienced in particular environments. We did not specifically ask students how their experiences varied across classroom and clinical environments, but our analysis suggested that some were common in the clinical environment (e.g. assumptions of being foreign and renaming) and classroom environment (e.g. denial of racist experiences). We have also referred to this in the discussion section. Our view is that all staff (and students) should receive bystander training so that they can respond in an appropriate way to microaggressions they witness. As discussed by Bullock et al\*, any response to microaggressions from patients' needs to take account of the microaggression context and student preferences and provide educational safety for the students. Training to respond appropriate is paramount.

\*Bullock J. et al (2021) No One Size Fits All: A Qualitative Study of Clerkship Medical Students' Perceptions of Ideal Supervisor Responses to Microaggressions. *Academic Medicine*, Vol. 96, No. 11S / November 2021 Supplement

Reviewer 2: Sylvie Wong, Columbia University

Comments to the Author:

This study studied 21 racial minority graduate-entry medical students and underscored how experiences of racial micro aggressions during medical school impacted their performance and well-being. This study is very important in highlighting the ramifications of racial micro aggressions. Minor changes are recommended below to improve manuscript:

Our response: Thank you for taking the time to review our manuscript. We welcome your comments and hope we have addressed them to your satisfaction.

1) Introduction, p.6, in line 13: "differential attainments ... represented complex, systematic inequalities" - be more specific on factors that give white counterparts advantage of performing better on clinical competence markers as compared to RM students

Our response: We have added some more detail here.

2) why specifically study medical students? how might their experiences differ from other graduate students? in what ways can their experiences generalize/not generalize to other students?

Our response: We focused on medical students as the authors are involved in medical education as either current or recent students themselves or as medical educators or researchers. Some of the experiences identified in this study have also been identified in studies of other health care students. We have put a reference relating to this.

On the issue of generalisability, we recognise that for most qualitative studies, generalisability is an inherent difficulty. The aim of this study was not to provide generalisations, but to provide an



exploration of the topic, with a view to promote reflection by academic staff, clinicians, students and other stakeholders in other medical schools, and inform future research.

3) Introduction P.2 - in addition to note that "cautious not to dismiss the use of racial categories with which people identify" - please add a sentence of the limitation to group all racial minorities in one group -- what are the risks/ limitations of doing so? e.g., how does black vs. Asian participants' experiences differ in terms of microaggressions? For example, microaggressions against Asians are sometimes seemingly "positive" (e.g. stereotyping Asians as over-achieving, smart, diligent) but highlight how it's still harmful

Our response: we have added a sentence as requested.

4) Introduction - since focused on RM students, consider adding minority stress theory as a framework

Our response: We have considered this however, as this was not part of the original theoretical framework, we do not feel it is appropriate to introduce a new framework at this stage. We have however, added some discussion on minority stress theory and the life-change model of stress as possible mechanisms by which racial microaggressions lead to poor psychological and physical health outcomes for RM students.

5) Methods - note limitations with virtual and group-based interviews

Our response: please note that this is discussed in the strengths and limitations section that forms part of the discussion section.

6) "Strengths and weaknesses" p.24 - only listed the benefits of qualitative interviews - again, please list limitations of the group-based nature of the interviews -- what might be left out? who type of participants may not have been comfortable to participate at all? whose perspectives may this study leave out?

Our response: there are several references to the limitations of focus groups and online groups in this section but we have added some further detail (but please note that reviewer 3 has asked us to reduce the word count in this section).

7) p.25 "transferability" of results - be more explicit and clear about what settings these results may or may not translate to. Also note that qualitative research in general does not aim to generalize (e.g., as in quantitative research with a bigger N), but to highlight lived experiences.

Our response: We have some further detail and been clearer that the study does not aim to generate generalisable data.

8) Implications: discuss specific focus on medical student population - are the recommendations you suggested also applicable to other graduate students/ RM students at large? why might med students need specific interventions re: racial microaggressions?

Our response: As requested, we have added a paragraph at the end of the Implications section.

Reviewer: 3

Dr. Emily Zhang, Boston College

Comments to the Author:

Review of: "Where are you really from?": A qualitative study of racial microaggressions and the impact on medical students in the United Kingdom

Journal: BMJ Open

Manuscript Number: BMJOpen-2022-069009

Article Type: Original research

#### General Comments

The current manuscript is well-written and describes a research study that uses qualitative, semi-structured focus groups to explore medical students' experiences of racial microaggressions and their impact (N=21). This study has important implications for addressing racial microaggressions within the medical school context given its documented impacts on students' learning and well-being. One general concern I have is about the length of the manuscript; some areas could be written in a more concise manner. In addition, the link between racial microaggressions and academic performance seem unclear in some parts of the paper. The comments below provide some suggestions to further

enhance the manuscript.

Our response: Thank you for taking the time to review our manuscript. We welcome your comments and hope we have addressed them to your satisfaction. We have attempted to reduce the length of the manuscript (for example, by reducing the methods section and strengths and weaknesses section), however we have had to balance this with the additions requested by the other reviewers.

#### Introduction

The introduction is concise and creates a clear frame for the study – I offer a few minor comments below:

- P. 5: “Although these studies document medical students’ reports of microaggressions and provide some evidence of impacts on learning.... they offer few insights into how microaggressions directly and indirectly impact on learning and ultimately, attainment”: This sentence implies that the current study will examine attainment, which is slightly different from learning and performance – perhaps a wording would work better here.

Our response: As suggested, we have removed the word attainment and reworded the sentence.

- P. 6: “We have chosen the term RM throughout this paper”: It may be helpful to briefly re-state “racially minoritized” as the abbreviation here given that it is easy to mistake it with “racial microaggressions”

Our response: changed to racially minoritised as suggested.

- It may aid the flow of the paper to slightly reorganize the introduction so the final paragraph describes the current study aims (perhaps the language component of RM could be described prior).

Our response: As requested, we have reorganised the introduction and clarified the study’s aims in the final paragraph of the introduction.

#### Methods

Generally, the authors provide a very thorough review of the Methods – given that the current manuscript is up to 9400 words, I recommend significantly shortening this section and only providing the critical details for replicating the study. I also propose a few additional suggestions:

Our response: As requested, we have made some changes to reduce the word count in the methods section.

- I appreciate the authors’ use of reflexivity within the study. I think it is important to note the authors themselves have experienced racial discrimination firsthand; in addition, I think it could be useful to take this a step further and describe how these experiences and RM identities may affect the way the data are interpreted.

Our response: As suggested in strengths and weaknesses section, we have added a sentence about how the authors’ RM backgrounds and previous experiences may have affected data interpretation.

- In Data Collection Methods, it would be useful for the authors to describe the interview domains and provide a general overview or example of the types of questions asked within the text.

Our response: Rather than add to the length of the methods section we have included the interview schedule as supplementary material.

#### Results

- It would be helpful for authors to describe the racial/ethnic breakdown of the participants within the text, given that the focus of the study is on RM students.

Our response: this has been added

- For word count purposes, some of the context within the quotes could be removed (e.g., the first sentence of the quote block at the bottom of page 12 could be removed: “I changed my name well...”). Or, each example could use only one or two quotes.

Our response: As requested, we have shortened some quotes.

- For some of these quotes/themes, I think including the participants’ racial/ethnic background would be useful context with the quotes and would also help further highlight the heterogeneity of racial microaggression experiences among RM individuals. This may be especially important given that literature on racial microaggressions typically explores microaggressions in the context of a specific

racial background (e.g., in the context of U.S.-based research, assumption of criminality is usually particularly salient for Black individuals, and perpetual foreigner may be a common theme among Asian Americans).

Our response: As requested we have added participants' self-identified racial/ethnic group.

- The themes under “impact of racial microaggressions” seem to address the impact of microaggressions more on student learning and mental well being – there is less about academic performance. Could authors make this link clearer or remove?

Our response: We have made the link of the impact of microaggressions on academic performance clearer by emphasising the reduced access and disruption of student learning opportunities coupled with the disengagement from learning leading to reduced academic performance clearly noted by majority of students in the study.

- Within the Results, it is unclear how many participants endorsed each theme or what constituted “often” or “strong” views or whether there were opposing views to each of the themes. Some discussion about this would be useful.

Our response: We have added some detail to indicate the strength of responses.

#### Discussion

Overall, this study makes important contributions to the research of racial microaggressions, particularly in the graduate medical field. I make some additional recommendations below:

- P. 21: “Seven types of racial microaggressions were reported by students, including assumptions of being foreign, assumptions of intellectual inferiority, denials of racial experiences, group labelling, misidentification, and stereotyping.” It would be helpful to use this language within the Results section when describing the findings so the readers can follow these themes in a clearer manner.

Our response: Thank you for this suggestion. We agree that this makes it clearer. We have changed the theme names as suggested.

- The summary of findings within the first three paragraphs could be condensed for word count or written in a more concise way so that the authors are able to describe how their study fits within the literature sooner within the Discussion.

Our response: We have edited this section to make it slightly shorter.

- Bottom of page 22 (“this study makes a significant contribution to the literature...”): The authors note that this study theorizes about the cause of academic underperformance – was this question specifically asked within the interviews and focus groups? Again, the link between microaggressions and academic performance in particular could be clarified within the current study.

Our response: We specifically asked participants “Do you think racial microaggressions have impacted your learning and performance at medical school? If so, can you explain how racial microaggressions have impacted your learning and performance?” Thus, our findings in the ‘Impact of racial microaggressions’ theme represent participants’ responses to this question. As previously suggested, we have made the link of the impact of microaggressions on academic performance clearer.

- The Strengths and Weaknesses section could be condensed for conciseness and word count.

Our response: As requested, we have made some changes to reduce the word count in the strengths and weaknesses section.

### VERSION 2 – REVIEW

<b>REVIEWER</b>	Rastogi, Ritika Brigham and Women's Hospital
<b>REVIEW RETURNED</b>	06-Mar-2023
<b>GENERAL COMMENTS</b>	Thank you to the authors for addressing the comments; the revisions are thoughtful and important. Undoubtedly these revisions strengthen the clarity and implications of the paper by highlighting its many strengths and contributions. I appreciate the inclusion of

	literature on the mechanisms underlying the effects of microaggressions upon health and learning processes as they further bolster the implications of the present study and the need to support RM GEM students.
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<b>REVIEWER</b>	Zhang, Emily Boston College
<b>REVIEW RETURNED</b>	09-Mar-2023

<b>GENERAL COMMENTS</b>	<p>Thank you for the opportunity to review this manuscript. The authors have made appropriate and thoughtful revisions to the current manuscript, clarifying my original concerns related to the paper. The comments below provide a few additional suggestions to aid revisions of this paper:</p> <ul style="list-style-type: none"> <li>• Again, I appreciate the reflexivity process, but I think the “how” is still missing from this section – reflexivity statements should go beyond simply stating one’s identities; the purpose of reflexivity is to help us identify how our lens may be affecting our research. I personally think it would be a clearer use of the reflexivity paragraph to include this description of “how” here rather than elaborating upon this within the strengths and limitations section – otherwise, the reflexivity paragraph about researcher identities stands alone and leads the reader to make the assumptions about how these identities might affect the research.</li> <li>• Thank you for including the interview questions as supplementary material; for ease of reading, I think it would be helpful to include a sentence or two about what the interviews entailed within the text (under Data Collection Methods on p. 8)</li> <li>• When discussing how data were categorized, it may be useful for authors to clarify they were categorized based off of interview questions given that it wasn’t a part of the thematic analysis itself (p. 9)</li> <li>• This is a relatively minor suggestion – the assumptions made about students’ English language proficiency (p. 11) seems like it would be better suited under the theme “assumption of being foreign.”</li> <li>• “Denial of racial experiences” (p. 11) – are these incidents related to denial of racism? If so, perhaps the language “racism” instead of “racial experiences” might be more accurate here.</li> <li>• I think the theme “stereotyping” could be slightly more specific, given that assumption of being foreign and assumption of intellectual inferiority could also be considered stereotypes.</li> <li>• The six themes included under “impact of racial microaggressions” (p. 13) seem like they could be categorized or each tied to academic learning, performance, and mental well being, as authors state – perhaps including these outcomes to the themes might add clarity to what each of the themes mean at first glance from a reader (i.e., clarifying the impact of racial microaggressions – on what?)</li> <li>• On the top of p. 14, authors describe how some students tried to cope with microaggressions by trying to fit in and conform. This idea seems slightly separate from the theme of feeling uncomfortable and out of place. Perhaps it might be better as its own theme, to highlight ways of coping with microaggressions?</li> <li>• Check formatting of quotes on p. 14-15 (Participant X is included at the beginning of each of the quotes)</li> <li>• The theme “additional burden” could be renamed to be more descriptive (p. 15)</li> <li>• I wonder if the theme “lack of learning opportunities” (p. 15) could benefit from being renamed as well – perhaps it’s not the mere lack</li> </ul>
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	<p>of learning opportunities, but the way opportunities are actively denied (framing this theme as more active by the perpetrator rather than passive)?</p> <ul style="list-style-type: none"> <li>• The theme “shifting the majority culture” could be clarified – shifting the majority culture to what – perhaps a more antiracist stance? (p. 19)</li> </ul>
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## VERSION 2 – AUTHOR RESPONSE

Reviewer: 1

Dr. Ritika Rastogi, Brigham and Women's Hospital

Comments to the Author:

Thank you to the authors for addressing the comments; the revisions are thoughtful and important. Undoubtedly these revisions strengthen the clarity and implications of the paper by highlighting its many strengths and contributions. I appreciate the inclusion of literature on the mechanisms underlying the effects of microaggressions upon health and learning processes as they further bolster the implications of the present study and the need to support RM GEM students.

Our response: Thank you for taking the time to review our manuscript. We appreciate your comments and are pleased that we have addressed them to your satisfaction.

Reviewer: 3

Dr. Emily Zhang, Boston College

Comments to the Author:

Thank you for the opportunity to review this manuscript. The authors have made appropriate and thoughtful revisions to the current manuscript, clarifying my original concerns related to the paper.

Our response: Thank you for taking the time to review our manuscript. We are pleased we have clarified and addressed your comments to your satisfaction.

The comments below provide a few additional suggestions to aid revisions of this paper:

- Again, I appreciate the reflexivity process, but I think the “how” is still missing from this section – reflexivity statements should go beyond simply stating one’s identities; the purpose of reflexivity is to help us identify how our lens may be affecting our research. I personally think it would be a clearer use of the reflexivity paragraph to include this description of “how” here rather than elaborating upon this within the strengths and limitations section – otherwise, the reflexivity paragraph about researcher identities stands alone and leads the reader to make the assumptions about how these identities might affect the research.

Our response: We have added to this paragraph, further detailing how our team’s diverse perspectives, backgrounds, and experiences of racial microaggressions has affected our research.

- Thank you for including the interview questions as supplementary material; for ease of reading, I think it would be helpful to include a sentence or two about what the interviews entailed within the text (under Data Collection Methods on p. 8)

Our response: We have included two sentences, in the first paragraph of the data collection methods section, to explain what the interviews entailed.

- When discussing how data were categorized, it may be useful for authors to clarify they were categorized based off of interview questions given that it wasn’t a part of the thematic analysis itself (p. 9)

Our response: As suggested, we have added a sentence about this on page 9.

- This is a relatively minor suggestion – the assumptions made about students’ English language proficiency (p. 11) seems like it would be better suited under the theme “assumption of being foreign.” Our response: As suggested, we have reviewed the assumptions made about students’ English language proficiency and moved this section under the theme “assumption of being foreign.”

- “Denial of racial experiences” (p. 11) – are these incidents related to denial of racism? If so, perhaps the language “racism” instead of “racial experiences” might be more accurate here. Our response: As suggested, we have renamed the theme “Denial of individual racism” for clarity.

- I think the theme “stereotyping” could be slightly more specific, given that assumption of being foreign and assumption of intellectual inferiority could also be considered stereotypes. Our response: We have renamed the theme “Stereotyping of behaviour”.

- The six themes included under “impact of racial microaggressions” (p. 13) seem like they could be categorized or each tied to academic learning, performance, and mental well being, as authors state – perhaps including these outcomes to the themes might add clarity to what each of the themes mean at first glance from a reader (i.e., clarifying the impact of racial microaggressions – on what?) Our response: We have renamed section “impact of racial microaggressions on academic learning, performance, and mental wellbeing” for clarity. However, upon reviewing the six themes we do not think that each theme can be discretely linked to academic learning, performance, or mental wellbeing. We feel that this is moving beyond the data. The sections, however, do highlight participants’ narratives on how the impacts made them feel and affected their learning.

- On the top of p. 14, authors describe how some students tried to cope with microaggressions by trying to fit in and conform. This idea seems slightly separate from the theme of feeling uncomfortable and out of place. Perhaps it might be better as its own theme, to highlight ways of coping with microaggressions? Our response: As described in the paper, some students tried to fit in and conform as a direct consequence to them feeling uncomfortable and out of place. There was not enough data to warrant a separate theme.

- Check formatting of quotes on p. 14-15 (Participant X is included at the beginning of each of the quotes) Our response: We have amended the formatting of the quotes.

- The theme “additional burden” could be renamed to be more descriptive (p. 15) Our response: We have decided to keep the theme name “additional burden” as this accurately reflects the participants’ responses. We also clearly describe theme in the first sentence of the theme’s first paragraph.

- I wonder if the theme “lack of learning opportunities” (p. 15) could benefit from being renamed as well – perhaps it’s not the mere lack of learning opportunities, but the way opportunities are actively denied (framing this theme as more active by the perpetrator rather than passive)? Our response: As suggested, we have renamed this theme to “denied learning opportunities” and amended the first two sentences to emphasise the active denial of opportunities by perpetrators.

- The theme “shifting the majority culture” could be clarified – shifting the majority culture to what – perhaps a more antiracist stance? (p. 19) Our response: As suggested, we have renamed this theme to “shifting the majority culture to an anti-racist stance”.