DOI: 10.7860/JCDR/2019/40867.13123

Original Article

Education Section

Exploring the Dimensions of Group Discussion in Problem-based Learning among a Diverse Group of International Students: A Qualitative Study

REEM RACHEL ABRAHAM[1], JANNEKE M FRAMBACH[2], MASCHA VERHEGGEN[3], DIANA HJM DOLMANS[4]

ABSTRACT

Introduction: Group discussions have the potential to contribute positively to the learning process in Problem-based learning (PBL) but can be challenging for newcomers.

Aim: To explore factors which influenced group discussions in PBL, among a group of international students pursuing an undergraduate medical program at International Track in Medicine, Maastricht University, The Netherlands.

Materials and Methods: Semi-structured in-depth individual interviews were conducted with students (n=11) and tutors (n=4). The interview data were subjected to thematic analysis. Following the initial coding, the codes were analysed for patterns and similar or related codes were put under a category. Thereafter, these categories were clustered into common themes and interpreted.

Results: Factors such as international diversity in PBL groups, tutors' friendly approach and subject expertise, and a curriculum with sufficient self-study time, were found as facilitating factors for discussion. Both dominant and silent behaviour of students, as well as some cultural factors were found to hinder discussions. Three recommendations in terms of providing adequate training to tutors, sensitising students regarding cultural values and providing avenues for socialisation emerged from the study.

Conclusion: This study provided evidence that international diversity is a positive factor for group discussions. It also added to the existing body of PBL research that cultural and contextual factors influenced group discussions in PBL sessions. Cultural factors were found to have less positive impact on year 1 students from some countries. However, students from these countries were able to overcome their cultural barriers due to the beneficial effects of the diverse nature of PBL groups, and were found to be active participants in second year.

Keywords: Culture, English language proficiency, Group dynamics, Student diversity, Tutor

INTRODUCTION

Student-centred educational approaches utilising small group learning activities demand a great deal of responsibility and active engagement in group learning from students, in contrast to teacher-centred approaches [1]. PBL is one of the most widely used student centred approaches in health profession's education [2,3]. One of the cardinal elements of PBL is group discussions, through which collaborative learning occurs. When students elaborate on information among group members, when they ask and answer doubts, the process of group discussion is fostered and collaborative explanations are derived from these group discussions [3]. Group discussions have the potential to contribute positively to the learning process in PBL [3,4], but can be challenging for students who enter the medical school, who are new to the PBL approach. Therefore, group discussions in PBL constitute a pivotal area for further research.

The '*PBL group*' which includes group members (students) and tutor are partners in the PBL process and are expected to work together. So, it is important that both parties are sensitised to the factors which could influence group discussions within a diverse student group, in order to bring about feelings of interdependence [5] and a more collaborative discourse in group discussion [6] which results in learning. Student diversity is acclaimed to be an important factor that will help institutions to prepare culturally competent future doctors [7]. Bate E et al., reported that the benefits associated with learning from a diverse group of students are applicable to all students in a small group setting, irrespective of their racial or ethnic diversity [2]. According to Gurin P et al., interactions between people from diverse backgrounds (interactional diversity), is associated with positive educational benefits [8].

Karle H et al., has reported that cultural and contextual factors are not taken into serious account during enactment of medical education practices at culturally and contextually diverse settings [9]. Wong AK, proposed that culture and context are important elements in medical education [10]. Culture is defined as '*shared motives, beliefs, values and identities of people* [11,12] interacting with a dynamic social *context*' [13]. PBL is a complex learning context, influenced by several *contextual* factors like curriculum, the case scenario, students' level of prior knowledge, group dynamics and tutor performance which are all inter-related [3]. In a comparative study reported by Frambach JM et al., in two non-Western and one Western medical school, *cultural* factors were found to influence group discussions in PBL [14]. Several studies have reported that culture influences communication styles of students [15,16]. Awareness of cultural factors would improve social cohesiveness between group members [17,18] which could be beneficial for learning [19-21]. Understanding the influence of cultural and contextual factors and also the links between these factors are essential to maximise student learning through PBL. This is because, in PBL, learning happens through interactions and interactions could become more effective in a culturally sensitive learning environment. There is a paucity of research on group discussions within PBL groups comprising educationally and culturally diverse international students. The aim of the present study was to investigate the factors influencing discussion within a PBL group comprising a diverse group of international students and also to explore how these factors exerted their influence.

MATERIALS AND METHODS

The present qualitative, explorative study which was conducted between May to July 2017, adopted a case study research design which provided insights with respect to the nature and depth of student group discussions in real, natural contexts. The study received ethics approval from the Netherlands Association for Medical Education (NVMO), The Netherlands (NERB dossier number: 866).

Study Setting

The International Track in Medicine (ITM) which is a three year English bachelors program in medicine offered by the Faculty of Health, Medicine and Life Sciences (FHML), Maastricht University, Netherlands was the study setting. This institution was selected because; ITM is one of the pioneers in the field of PBL, has been practising PBL for >40 years and has contributed significantly to the understanding of the process and outcomes of PBL. The ITM program, based on the themes of globalisation and international collaboration, caters to the educational needs of local as well as international students, training them towards a holistic approach to medical practice. The summary of student characteristics and curriculum structure in year 1 and 2 are indicated in [Table/Fig-1].

Demographics	Year 1	Year 2
Total number of students	47	60
The Netherlands and Europe	30	30
Middle East	17	30
Weekly work schedule		
PBL tutorials per week	2	2
Lectures per week	2	2
Average PBL group size	10	10
Total self-study time	25 hours	25 hours

[Table/Fig-1]: Demographics and characteristics of weekly academic activities in ITM.

Study Participants

Undergraduate year 1 medical students (n=6) who were exposed to the PBL system for almost 10 months and medical students who were at the middle of year 2 (n=5); 4 males and 7 females who were Dutch (n=4), European (n=4) and Middle East students (n=3) were one group of participants. Four female PBL tutors who had experience of >10 years in tutoring year 1 and year 2 students were also included. All the participants were recruited by one of the co-authors who personally informed all students about this research study and asked them whether they were willing to be participants. Those students who expressed their interest to be a participant were sent an email invitation directing them to the first author.

Data Collection

This was done by the principal investigator (PI). Observable discussion behaviours (for e.g., tutor behaviour, students posing challenging/critical thinking questions, sharing knowledge among group, openly criticising, dominant versus silent behaviours) in three year 1 PBL sessions were documented in an observation book. Individual semi-structured interviews which lasted for an hour were conducted after obtaining consent from the participants and the interviews are audio recorded. The interview questions for the participants focused on their general perceptions regarding group discussions in PBL, their experiences with a diverse set of group members as well as tutors, the challenges they have faced and about the assessment in PBL. Data collection was continued until it reached saturation. To enhance the trustworthiness of the data, member checking was done by requesting all the participants to review the transcribed interview data, which was sent to them via email. Apart from that, the principal investigator had frequent meetings with the co-investigators to discuss the process and preliminary findings.

Data Analysis

The interview data were subjected to thematic analysis. Each interview was transcribed verbatim, the data were carefully read and all statements related to the research question were identified and were given a code. Following the initial coding, the codes were analysed for patterns and similar or related codes were put under a category. Thereafter, these categories were clustered into common themes and interpreted. To enhance trustworthiness of the data interpretations, frequent discussions with the co-investigators was done.

RESULTS

Findings from observations of PBL sessions revealed that diverse perspectives on the topic brought forth during discussion, a friendly and non-authoritarian approach by tutors, a proactive approach by some students in terms of presenting learning goals and contributing to discussion from the beginning, and explaining topics in own words rather than repeating from text books were found to facilitate discussions. Findings from the interviews revealed favourable as well as unfavourable factors that could influence group discussions within diverse PBL groups [Table/Fig-2].

Favourable factors	Unfavourable factors
Diverse perspectives to the topic of discussion brought forth by student diversity	Too dominant (due to increased content knowledge, personality) as well as silent behaviour (due to lack of English language proficiency, to avoid face loss)
Curriculum structure with sufficient self-study time	
Tutors' subject expertise and ability to create a friendly learning environment	Incompatible cultural factors such as social disconnection from the group, uncomfortable attitude regarding open discussion and interaction with students of both genders within PBL groups

[Table/Fig-2]: Summary of main findings from interviews.

Favourable Factors

Student diversity within PBL groups enriched discussion by bringing varied perspectives to the topic being discussed and by enabling opportunities for feedback.

Students as well as tutors seemed to appreciate that diversity brought varied perspectives to the topic from educationally and culturally diverse students, which promoted a deep understanding of the topic being discussed.

'When the group is international, it is really nice to see how people think differently, their views' (Student: year 1)

'Multicultural groups are more interesting, because there is more diversity, more points of view, and sometimes that is determined by their background so that every student brings with him or her, their own cultural environment. Discussion in a group consisting of only Dutch students is more formal and adhering to the books, than it is in a multicultural group which has so many different personalities and cultural backgrounds' (Tutor 2).

Students seemed to regard open discussions in PBL as a group learning process, where there was scope for getting corrective feedback from the group, which would stick to their minds long-term, helping them not to repeat the same mistakes again.

'When I make a mistake I get corrected, and I would never do it again, because as there is serious discussion, people would say no, that's just wrong, and it will stick in your head forever. I really like it. (Student: year 2).

Sufficient self-study time enabled students to prepare adequately and thereby actively participate in discussions

The curriculum structure in ITM, with sufficient self-study time and less of lectures seemed to demand more responsibility and a high level of preparation from students and therefore forced them to contribute actively in discussions. However, some students found it challenging to get attuned to this system in the beginning of

year 1 and therefore were less active in discussions. Nevertheless, they could get adapted to the system towards the end, with more participation in discussions.

'I think it is really good now….it helps me to structure my time a lot better, with more self-study time. I am enjoying, I can spend as much time as I want in studying. Rather than going to the lecture hall and listening to a lecture'. (Student: year 1)

Tutors' subject expertise and their ability to create a safe and friendly atmosphere facilitated discussion

All students of the present study preferred tutors to be subject experts as they could lead them in the right track, if the discussion deviated from the desired direction and could also make them aware of the knowledge gaps during discussion.

'It really helps if the tutor was knowledgeable about the block itself' (Student: year 1)

Students as well as tutors believed that creating a friendly, non-threatening atmosphere is important for effective discussion. Students also preferred tutors to be non-dominant.

'I like tutors who allow students to make a small joke… tutors must create a friendly atmosphere where people are comfortable to speak'. (Student: year 1)

'Tutors who interfere more shut down the discussion'. (Student: year 2)

Therefore, the discussions were found to be facilitated by a close interplay between the depth of discussion that student diversity within PBL groups brought in, a curriculum structure with adequate self-study time which enabled students to be more actively engaged with content, thereby helping them to be active in discussions and tutor characteristics such as subject expertise and facilitation skills.

Unfavourable Factors

Both dominant and silent behaviour of students hindered discussion

Students who had a dominant nature, either as a personality trait or due to high content knowledge, inhibited other group members who were not of the same personality or who did not have content knowledge in par with the dominant students, from contributing to discussions. From the quotes below, it could be argued that some dominant students had a high level of content knowledge compared to the silent students. Their level of preparation which was reflected in terms of their contribution to the discussion seemed to decrease confidence level of other group members, thereby hampering their participation. However, the tutors tended to consider the presence of students who had a high level of content knowledge as an advantage as they felt that it never created silence in the group, and also helped in deep learning.

'But when I see their (dominant students') participation, preparation, explanation far beyond what I prepare, I have a little lack of confidence in that situation. There is no extra space for me to explain. (Student: year 1)

Every time I spoke something, this guy interrupted me and told me I was wrong, even though I was not. That greatly frustrated me and he dominated me in every discussion we had. (Student: year 2)

It was found that the silent behaviour of some students to avoid making mistakes in English in order to prevent face loss, hindered discussion, as evident from the quotes below. Some students spoke English fast and fluently, could explain well and therefore tended to participate more. This behaviour was observed in group discussions by the first author of this study. When students whose first language was not English, witnessed this level of participation by the above group of students, they perhaps felt less confident to participate.

'Some students do not speak English well, which is a challenge to group discussion'. (Student: year 1)

'If a person is comfortable speaking English and he is well prepared, then he is confident in contributing to group discussions'. (Tutor 1)

Some students tended to repeat the same text material in books, as they probably found it difficult to give explanations in their own words due to language barriers, which created boredom and less stimulation for other group members to contribute.

'In general, some students seem to be talking something straight out of textbook. They say things less in their own words and more in the words that they have read' (Student: year 1).

From the quotes above, it could be asserted that lack of English language proficiency could be the reason for silent behaviour of some students which in turn could hinder discussions to some extent.

Disconnect between students' cultural values and PBL values could be unfavourable for open discussion

Majority of the students didn't have strict traditions and religious values that were incompatible with open discussions and towards mingling with students of both genders. However, some students in year 1 were not used to open discussions during PBL sessions, due to their cultural and religious values which did not encourage outspoken behaviours, open criticisms, and discussions amidst a group of both genders. There also seemed to be hierarchical differences between males and females, which hindered equal participation from some year 1 students. However, in year 2, these group of students tended to overcome these inhibitions and gradually became more active in discussions as reflected by them as well as tutors.

'I am not comfortable speaking with girls. I am more comfortable with boys. Shaking hands with opposite sex is entirely normal for some cultures. But for us, it is prohibited. In the beginning, I refused to shake hands with girls, I still have my religious rules. Even the girls from my country are separate here, they have their own groups; male group, female group' (Student: year 1)

'Back in my country, in university, we have a different way of learning….males and females are separate…When I came here it was difficult…I thought the PBL system is not a good way of learning…But now I feel PBL is more comfortable than the old boring methods where the lecturer will talk and talk… you become less motivated…' (Student: year 2)

'Female students from some countries are passive during the first few discussion sessions. When I ask something they answer…' (Tutor 3)

To summarise, both dominant and silent behaviour of students could be unfavourable for effective discussions. Lack of English language proficiency and contextual incompatibility of cultural values in terms of open discussions, interactions amongst students of both genders and social disconnection with group members raised challenges for effective discussions mainly in year 1.

DISCUSSION

This study explored the factors which influenced group discussions in PBL, among a group of international students pursuing an undergraduate medical program at ITM. Student diversity was a dominant facilitating factor for discussions. Through in-depth interviews, we found that there were contextual as well as cultural factors which either favoured or hindered group discussions in PBL, which are in line with the study by Frambach JM et al., [14].

International Diversity

Both students and tutors in the present study enjoyed diversity as it brought different international as well as local perspectives on the topic being discussed which added vigour to the discussion and this supports a report by Lohfeld L et al., [22]. In a diverse student group, when the less active students witness and experience the active contribution from other group members, they would get motivated to perform better. This is in line with Singaram VS et al.,

findings that collaboration in a heterogeneous group of students provided a platform to nurture positive interactions [23]. Diversity is acclaimed to be the potential strength of any university, in terms of providing varied educational experiences to students and teachers [24]. In a study reported by Mclean M et al., the researchers found that culturally diverse PBL groups had a positive influence on the cognitive, affective and social domains of their experiences in PBL group discussions [25]. In the present study, students' claims that, having a diverse group of students within a PBL group have helped them to discuss/interact/talk with other students, will help them to communicate with patients in future (social domain), have trained them to listen to people when they point out mistakes (affective domain) and have helped them to obtain a broader view of the topic (cognitive domain) support the findings of Mclean M et al., [25].

Contextual Factors

Curriculum structure [14] and the role of tutor [14,26] as factors influencing discussion have been previously reported. However, a curriculum with sufficient self-study time as one of the factors facilitating discussion is a new finding. Previous studies have reported that tutors play a cardinal role in fostering effective group discussions [14,22,27] and the present study findings are also in the same line.

Cultural Factors

The present study supports Frambach JM et al., findings and gathered evidence for the fact that cultural values of a mix of diverse students within individual PBL groups, in an international PBL setting could influence group discussion [28]. In some cultures, more gentle mannerisms such as listening, than talking amidst a group of people and avoiding open criticisms is appreciated, whereas in others, speaking up openly what one feels right is acceptable. The current study's findings that too much dominant or silent behaviours hindered discussion and the preference for a balance between the two, is in line with a previous study by Lohfeld L et al., who reported that students preferred a balance between dominant and silent behaviours in group discussion, which according to them was essential for a good tutorial session [22]. The dominant and silent traits were also observed as challenging factors in group discussion, in a study conducted by Ahmed Z [29]. Research reports from an Australian study revealed that dominant student behaviour in PBL often had a negative impact on group interactions, but in some instances did facilitate learning by maintaining the flow of discussion [30].

Differences in the level of English language proficiency were found to be an important cultural factor influencing group discussion. In a study reported by Singaram VS et al., students who did not have English as their first language exhibited more silent behaviour in group discussions [23]. The present study findings are in line with this report, in that students' whose mother tongue was not English, were found to contribute less in discussions in year 1. In some countries, secondary school education is delivered in their mother tongue, which is a cultural entity. When students from these countries enter a foreign medical school where the medium of instruction is English, they probably find it challenging to communicate in a foreign language, which of course gets corrected over time.

Mixing with students of both genders emerged as another cultural factor influencing discussion in this study. A research report by Selleger VJ et al., stated that female Muslim students were reluctant to participate in physical examination training among groups of mixed gender [31]. In the present study too, some students' strict cultural and religious values could have made them feel uncomfortable to speak in groups with both genders. These cultural and religious values could sometimes be interpreted as 'silence' by other group members and also by the tutors who are Dutch, in majority. Nevertheless, all tutors in the present study agreed that, with positive feedback and by motivating silent students, they could overcome their inhibitions over time.

This study also revealed social connectivity as another cultural factor which could influence effective group discussions. A report by Leyerzapf H et al., reported that social disconnectivity of minority students with other students was one of the factors responsible for poor academic performance of minority students (students from countries other than Western countries) [32]. The social disconnection because of their strict religious and cultural values as stated by some students in this study probably made it difficult for them to actively contribute in discussions at the start of year 1.

A strength of this study is that the data collection was done by the first author, who was completely new to the study setting and with the participants and who was therefore in a position to adopt an open, explorative approach.

LIMITATION

Firstly the sample size was minimal as the first author could reside at Maastricht only for seven weeks and this made it really cumbersome to do more interviews. However, data saturation had reached with the interviews conducted and this was confirmed by the research supervisors. Secondly, the findings of the study cannot be generalised as the study looked at participants from only one medical school. Nevertheless, the findings did confirm earlier research reports.

CONCLUSION

In a nutshell, this study provided evidence that international diversity is a positive factor for group discussions. It also added to the existing body of PBL research that cultural and contextual factors influenced group discussions in PBL sessions. Cultural factors were found to have more impact on year 1 students from some countries. However, students from these countries were able to overcome their cultural barriers, probably due to the beneficial effects of the diverse nature of PBL groups, and were found to be active participants in year 2.

ACKNOWLEDGEMENTS

The authors wish to thank all the participants of this study.

REFERENCES

[1] Edmunds S, Brown G. Effective small group learning: AMEE Guide No.48. Med Teach. 2010; 32:715-26.
[2] Bate E, Hommes J, Duvivier R, Taylor DCM. Problem-based learning (PBL): Getting the most out of your students- Their roles and responsibilities: AMEE Guide No. 84. Med Teach. 2014;36:01-12.
[3] Dolmans DHJM, De Grave W, Wolfhagen IHAP, Van der Vleuten CPM. Motivational and cognitive processes influencing tutorial groups. Problem-based learning: future challenges for educational practice and research. Med Educ. 2005;39:732-41.
[4] Visscheers-Pleijers AJSF, Dolmans DHJM, Wolfhagen IHAP, Van der Vleuten CPM. Development and validation of a questionnaire to identify learning oriented group interactions in PBL. Med Teach. 2005;27:375-81.
[5] Johnson DW, Johnson RT. Social interdependence theory and university instruction: Theory into practice. Swiss J Psychol. 2002;61:119-29.
[6] Van Meter P, Stevens RJ. The role of theory in the study of peer collaboration. J Exp Educ. 2000;69:113-27.
[7] Brief for Amici Curiae Association of American Medical Colleges, et al. in Support of Respondents, pg. #, Fisher v. University of Texas at Austin, No. 11-345 (U.S. cert. grantedFeb.21,2012).http://www.americanbar.org/content/dam/aba/publications/supreme_court_preview/briefs/11-345_resp_amcu_aamc.authcheckdam.pdf.Accessed January 7, 2015.
[8] Gurin P, Dey EL, Hurtado S, Gurin G. Diversity and higher education: Theory and impact on educational outcomes. Harv Educ Rev. 2002;72:330-66.
[9] Karle H, Christensen L, Gordon D, Nystrup J. Neocolonialism versus sound globalisation policy in medical education. Med Educ. 2008;42:956-58.
[10] Wong AK. Culture in medical education: comparing a Thai and a Canadian residency programme. Med Educ. 2011;45:1209-19.
[11] House RJ, Hanges PJ, Javidas M, Dorfman PW, Gupta V. Culture, leadership and organizations. The GLOBE Study of 62 societies. Sage Publications: Inc; 2004.
[12] Joy S, Kolb DA. Are there cultural differences in learning style? Int J Interult Relat. 2009;33:69-85.

[13] Taylor JS. Confronting culture in medicine's culture of no culture. Acad Med. 2003;78:555-59.
[14] Frambach JM, Driessen EW, Beh P, Van der Vleuten CPM. Quiet or questioning? Students' discussion behaviours in student-centred education across cultures. Stud High Educ. 2014;39:1001-21.
[15] Brew FP, Tan J, Booth H, Malik I. The effects of cognitive appraisals of communication competence in conflict interactions: a study involving western and chinese cultures. J Cross Cult Psychol. 2011;42:856-74.
[16] Smith PB. Communication styles as dimensions of national culture. J Cross Cult Psychol. 2011;42:216-333.
[17] Slavin RE. When and why does cooperative learning increase achievement? Theoretical and empirical perspectives. In: Slavin RE, editor. Cooperative learning. Needham Heights, MA: A Simon & Schuster Company; 1995. Pp. 145-171.
[18] Stanley D. The Social Effects of Culture. 2006. CJC31:ISSN 1499-6642. Available at: <http://www.cjc-online.ca/index.php/journal/article/view/1744/1857>. Date accessed: 22 Aug. 2017. doi:https://doi.org/10.22230/cjc.2006v31n1a1744.
[19] Baldwin TT, Bedell MD, Johnson JL. The social fabric of a team-based M.B.A. program: Network effects on student satisfaction and performance. Acad Manage J. 1997;40:1369-97.
[20] Hommes J, Rienties B, De Grave W, Bos G, Schuwirth L, Scherpbier A. Visualising the invisible: The impact of informal interaction on student learning. Adv Health Sci Educ. 2012a;17:743-57.
[21] Jippes E, Achterkamp MC, Brand PLP, Kiewiet DJ, Pols J, Engelen JMLV. Disseminating educational innovations in health care practice: Training versus social networks. Soc Sci Med. 2010;70:1509-17.
[22] Lohfeld L, Neville A, Norman G. PBL in Undergraduate Medical Education: A Qualitative Study of the Views of Canadian Residents. Advan Health Sci Educ. 2005;10:189-214.
[23] Singaram, VS, van der Vleuten CPM, Stevens F, Dolmans DHJM. "For most of us Africans, we don't just speak": A qualitative investigation into collaborative heterogeneous PBL group learning. Advan Health Sci Educ. 2011;16:297-310.
[24] Bollinger LC. The need for diversity in higher education. Acad Med. 2003;78:431-36.
[25] McLean M, Van wyk JM, Peters-Futre EM, Higgins-Opitz SB. The small group in problem-based learning: more than a cognitive 'learning' experience for first-year medical students in a diverse population. Med Teach. 2006;28:e94-e103.
[26] Doherty DO, Mc Keague H, Harney S, Browne G, McGrath D. What can we learn from problem-based learning tutors at a graduate entry medical school? A mixed method approach. BMC Med Educ. 2018;18:96.
[27] Dolmans DH, Gijselaers WH, Moust JH, de Grave WS, Wolfhagen IH, van der Vleuten CPM. Trends in research on the tutor in problem-based learning: conclusions and implications for educational practice and research. Med Teach. 2002;24:173-80.
[28] Frambach JM, Driessen EW, Chan Li-Chong, Van der Vleuten CPM. Rethinking globalization of problem-based learning: how culture challenges self-directed learning. Med Educ. 2012;46:738-47.
[29] Ahmed Z. Problems of group dynamics in problem based learning sessions. J Ayub Med Coll Abbottabad. 2014;26(2):230-34.
[30] Iqbal M, Velan GM, Sullivan AJO, Balasooriya C. Differential impact of student behaviours on group interaction and collaborative learning: medical students' and tutors' perspectives. BMC Med Educ. 2016;16:217.
[31] Selleger VJ, Bonke B, Leeman YAM. Student diversity at Erasmus Medical Centre Rotterdam: does it make any difference? Med Teach. 2006;28:e142-e48.
[32] Leyerzapf H, Abma TA, Steenwijk RR, Croiset G, Verdonk P. Standing out and moving up: performance appraisal of cultural minority physicians. Adv Health Sci Educ Theory Pract. 2015;20:995-1010.

PARTICULARS OF CONTRIBUTORS:
1. Professor, Department of Physiology, College of Applied Medical Sciences, Imam Abdulrahman Bin Faisal University (formerly University of Dammam), Al Jubail, Kingdom of Saudi Arabia.
2. Assistant Professor, Department of Educational Development and Research, Faculty of Health, Medicine and Life Sciences, School of Health Professions Education, Maastricht University, Netherlands.
3. Supporting Staff, Department of Educational Development and Research, Faculty of Health, Medicine and Life Sciences, School of Health Professions Education, Maastricht University, Netherlands.
4. Professor, Department of Educational Development and Research, School of Health Professions Education, Faculty of Health, Medicine and Life Sciences, Maastricht University, Netherlands.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:
Reem Rachel Abraham,
Professor, Department of Physiology, College of Applied Medical Sciences, Imam Abdulrahman Bin Faisal University (Formerly University of Dammam), Al Jubail, Kingdom of Saudi Arabia.
E-mail: rrabraham@iau.edu.sa

FINANCIAL OR OTHER COMPETING INTERESTS: None.

Date of Submission: **Jan 13, 2019**
Date of Peer Review: **May 30, 2019**
Date of Acceptance: **Jun 20, 2019**
Date of Publishing: **Sep 01, 2019**