

VU Research Portal

Motivation and academic performance of ethnic minority medical students

Isik, U.

2019

document version

Publisher's PDF, also known as Version of record

[Link to publication in VU Research Portal](#)

citation for published version (APA)

Isik, U. (2019). *Motivation and academic performance of ethnic minority medical students: 'Struggling and coping in the path from student to doctor'*.

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

E-mail address:

vuresearchportal.ub@vu.nl

6

“What kind of support do I need to be successful as an ethnic minority medical student?” Straight from the horse’s mouth.

U Isik, VUmc
A Wouters, VUmc
G Croiset, VUmc
RA Kusurkar, VUmc

Submitted

Abstract

Background

To be in alignment with the increasing diversity in the patient population, the ethnic minorities should have appropriate representation in health care professions. Medical students from ethnic minorities therefore need to be successful in their medical studies. The current literature highlights that they underperform in comparison with the ethnic majority students. The aim of the present study is to gain insight into what medical students from ethnic minorities experience during their education and what they need to become or stay motivated and to perform to their full potential.

Methods

Semi-structured interviews with eighteen medical students from ethnic minorities were performed. A constructivist paradigm was adopted.

Results

Students' negative experiences could be categorized as follows: (1) the effect of discrimination, (2) a lack of representation of ethnic minority role models, (3) no sense of belonging, (4) a lack of medical network, (5) differences and difficulties in cultural communication and language, and (6) examiner bias in clinical assessments. Their support needs could be categorized as: (1) creating more awareness about diversity and other religions, and a support group, (2) having visible ethnic minority role models, (3) understanding for each other (ethnic minorities and ethnic majorities), (4) facilitating support in networking, (5) providing guidance in communication skills and overcoming language barriers, (6) having timely communication about students' performance, and (7) changing the clerkship grading.

Conclusions

Supporting these students is essential for creating a good and safe educational and practical environment for ethnic minority students.

Introduction

The patient population is becoming increasingly diverse. In order to be in alignment with this change and to ensure equitable healthcare, ethnic minorities should have appropriate representation in health care professions. Therefore it is essential that medical students from ethnic minorities can be successful in their medical study. However, medical students with an ethnic minority background underperform compared to medical students with an ethnic majority background ^[1,2]. They score lower on knowledge and skills assessments in preclinical and clinical education ^[2]. In addition, ethnic minority students have difficulties in qualifying for specialty training ^[3].

There could be several explanations for this phenomenon. Research has shown that small differences in assessed performance lead to larger differences in grades in ethnic minority students underrepresented in medicine (e.g. African Americans and Hispanics) than students not underrepresented in medicine (e.g. White students) ^[4]. Moreover, according to specialists and heads of departments, ethnic minority students and physicians had less understanding of what it means to enter into specialty training and were less aware of the importance to start preparing for specialty training early in their education ^[3]. An explanation for this could be that ethnic minority students are often the first in their family to go to university or to study medicine ^[3]. Ethnic minority students experience barriers in their academic medicine careers that negatively influence their likelihood of success [5-8], such as a lack of diversity in faculty groups, which can lead to feelings of isolation for racial and ethnic minority students within the academic community. In order to design a programme to support ethnic minority students to be successful in medical education, more insight into the factors and mechanisms leading to their underperformance and what can make it better is needed.

Research has shown that medical students from ethnic majorities were more likely to receive a higher grade for their clerkship performance compared to ethnic minority students ^[2]. A study by Van Andel suggests that these differences may be attributed to the type of assessment used ^[9]. The use of several assessments performed by different assessors at various moments decreased the variation in clinical grades based on students ethnicity.

In addition, a qualitative study showed that medical students from ethnic minorities experience different factors that influence their education, motivation and academic performance ^[8]. Examples of these include the lack of role models or a medical network, having the feeling of being 'the other' due to their ethnic background, miscommunication, and remarks about their appearance (e.g. wearing a head scarf) and accent. The ethnic minority students regularly experienced discrimination and cultural distance ^[8]. The difficulties that these students

encounter in combination with the variation in grades could have consequences for the representation of ethnic minorities in the medical profession, because it may hamper the influx of ethnic minority physicians into residency ^[3, 8]. In the present study we decided to focus on how to support ethnic minority students during their medical study.

Motivation has been shown as a crucial factor for learning and academic success. Further, motivation can be influenced by various factors. A systematic review has shown different factors influencing motivation which could be classified as individual, family-related, school-related, and social factors ^[10]. However, in this review there were only a few studies concerning higher education and no studies concerning medical education.

In addition, a quantitative study showed that autonomous motivation (acting out of true interest or finding an activity personally important) had a positive association with GPA through achieving strategy (effective use of time and space to achieve a good grade) for medical students from the ethnic majority group ^[11]. This relation was not found in the ethnic minority groups, which suggests that for these students, other factors influence (the relation between motivation and) academic performance. Insight into these factors and their mechanisms can be used to identify domains in which medical schools can make changes to ensure that ethnic minority students can be successful in the medical curriculum.

The aim of this study is to gain insight into what medical students from ethnic minorities need in their education to become or stay motivated and to perform to their full potential. The findings may be used to create a support system to facilitate the study success of ethnic minority students. The following research questions guided this study:

1. How do experiences of medical students from ethnic minorities influence their motivation and academic performance?
2. What support structures can be organised in the medical curriculum according to medical students from ethnic minorities and how?

Methods

Study design

This qualitative study intended to capture the experiences and needs of ethnic minority students in the medical curriculum. A constructivist paradigm was used, in which data and analysis are formed based on the interaction of the experiences of both respondents and researchers ^[12-15].

Participants and procedure

Medical students from ethnic minorities from all six years of medical study, enrolled at VUmc School of Medical Sciences, Amsterdam, the Netherlands, were invited to participate in this study. In this medical school approximately 30% of the students are from ethnic minorities. The first three years of the medical study form the preclinical education and the last three years form the clinical education ^[16]. In this study the definition of ethnic minority was in alignment with the Statistics Bureau of the Netherlands (CBS, www.cbs.nl): "a person with at least one parent born outside the Netherlands". Because of the sensitivity of the study topic snowball sampling was used to gather students ^[17]. Interviews were conducted until we had gathered sufficient, appropriate and rich data to answer the research questions.

Data collection and analysis

Semi-structured interviews were conducted at VUmc School of Medical Sciences in the period August-October 2018. The first author (UI), with an ethnic minority background, performed the face-to-face interviews using a semi-structured interview guide (see appendix A). Immediately after the interviews the interviewer wrote memos ^[18]. Data were audiotaped and transcribed verbatim. Thematic analysis, a method that focuses on identifying patterned meaning across the dataset, was used to code and analyse the data ^[19]. UI coded all interviews using ATLAS.ti. The second researcher (AW) coded two interviews independently. The differences in the coding were discussed until consensus was reached. Because there were not many differences, the first researcher coded the remaining interviews. Moreover, through iterative discussion the research team reached consensus about the findings.

Ethical approval

Participants were informed that participation in the study was voluntary, that their data would be handled confidentially, and that (non-)participation would not have consequences for their study. Written informed consent was gathered from all participants prior to conducting the interviews. This study was approved by the Ethical Review Board of the Netherlands Association for Medical Education (NVMO-ERB, dossier no. 2018.5.7).

Results

Eighteen students participated in this study (11 female, 7 male). Three were in year 1, three students in year 2, one in year 3, four in year 4, two in year 5, and three in year 6 of medical school. One student had finished his preclinical education and was waiting to start with his clinical education. Another student was doing her clinical education, but decided

to stop for a while. The respondents reported the following for their parents' country of birth: Afghanistan, Armenia, Egypt, Ghana, Philippines, Morocco, Nigeria, Russia, Syria, Turkey, Ukraine, and Uzbekistan. One student reported that one of his parents was born in the Netherlands, however he was raised with the culture of his mother's ethnic minority background. The length of the interviews ranged from 31 minutes to 65 minutes. Students' experiences could be categorized as reported in Table 1.

Table 1. Influencing factors and the support needs of medical students from ethnic minorities.

Influencing experiences	Support needs/tips
Experiences of discrimination	<ul style="list-style-type: none"> • Creating more awareness about diversity and about other religions among all students • Installing a support group with students to discuss experiences of discrimination
Lack of representation of ethnic minorities and role models	<ul style="list-style-type: none"> • Having visible role models (with an ethnic minority background)
No sense of belonging	<ul style="list-style-type: none"> • Voluntary (instead of mandatory) participation in physical examination as a subject for peers to practise on • More inclusive introduction days (at the beginning of the study) by making them attractive for a diverse group of students • Understanding for each other (ethnic minorities and ethnic majorities)
Lack of medical network	<ul style="list-style-type: none"> • Facilitating guidance in networking
Cultural communication differences and language difficulties	<ul style="list-style-type: none"> • Providing guidance in communication skills and overcoming language barriers • Training to be assertive
Examiner bias in clinical assessments	<ul style="list-style-type: none"> • Assessors should communicate in time with students about their performance • Changing the clerkship grading

Experiences of discrimination

Students experienced or had heard stories of friends who experienced demotivating discriminating comments related to their ethnic background in different educational settings, such as in a study group or during their clerkships:

"Yes, I know a Dutch majority medical resident. He said: "Fatima (name changed for anonymity) sorry, but yes your name is Fatima, and maybe you don't speak Dutch completely correctly so you're ten nil down. [...] You will always have to work 10 times harder than a Dutch Freek, Joris (Dutch names for males) or whoever. It

does not matter if they make the same mistakes, as a foreigner you will have a disadvantage and it will always stay that way." I did not believe him, but it turns out that's just the way it works." (S1, female)

"Another friend of mine is Iranian, and I spoke to her yesterday and she says: '[...] In the beginning, I very often experienced that wherever I was, Dutch people were very reserved in communicating with me.' She has a light skin colour but she has dark curls, a foreign name, of course, and she said, a medical specialist asked her recently: 'Do you drink alcohol? Yes. Do you smoke? No. Are you Muslim? No, Ok.' That was the professor (medical department) who asked her about this, because they find it scary or something." (S1, female)

The students have their own way of coping with such experiences, such as ignoring those comments and continuing what they were doing:

"Yes, just answer and smile, stupidly smile. You do not even enter into the discussion. Yes sometimes you dwell on it and sometimes not. That's how my friends deal with it. Also, I know several people, (ethnicity) people who have failed an exam. Yes, how do they deal with it.. as I said, just keep going on." (S1, female)

Another student explained that she wanted to stay herself despite the different expectations of others:

"And my goal was to just be myself, I've always been very relaxed and calm and I'm not going to pretend and act happy, I do not feel like it. [...] If I had been a boy, a White boy, and bigger, then they wouldn't be as daring against you, I think." (S2, female)

Another student expressed the effort she puts in to reduce the chance of being disadvantaged because of her background and religion:

"[...] By distinguishing myself I want to reduce the chance. Like, by being so good that they cannot push you away. That they really have to think about 'okay, do we want her or not!'" (S3, female)

Further it was expressed that (discriminating) experiences depend on the location of the clerkship and the culture of the department. One of the students explained that she almost wanted to quit her education because of it, but she got over it, and accepted it as it is. This

student also explained that sometimes students, including herself, pretend to be someone they are not and conform to the majority group to be accepted and to get into a specialty training:

"And sometimes I even go along with their conversation for fun and then I think 'yes, that is what you want to hear right? That is not what I think...' Yes, but what else should I do, it is all a game, unfortunately. It sounds very manipulative what I'm saying now, but that's how it works. [...] So if they (colleagues from ethnic majority) make racist remarks, 'yes, there are those street youths around these days, surely many of them are Moroccans'. Yes that's just what it is, I agree with them." (S1, female)

"[...] a Surinamese boy, he is really black, and he really wants... what did he want to be? Dermatologist I think, and that is also very difficult to entry. And he says: 'just those blonde girls', and he is just joining the conversation with them. He says to her: 'yes I just do it, just enjoying Fleur (a Dutch female name) with a cup of coffee because it's fun', he doesn't give a damn about her life, he just wants to get into a specialty training, 'fake it until you make it' that's everyone's advice..." (S1, female)

Support needs: Students' support needs in this domain pertain to the creation of more awareness about diversity and other religions to reduce such discriminatory comments. There is also a need for support groups to discuss with other students how to handle such situations:

"How you deal with those comments that you can get. I've never heard it or anything like that, but sometimes you get remarks that may not be *meant* to be racist or discriminatory, but I am not sure how to interpret those. So how can you... certain clues or something. [...] How to deal with someone who says something about you.. or does something against you. Do you take it personally that you look like that, or because it is something you do, or whatever... So how do you deal with it? Something like that." (S2, female)

Moreover a regular one-on-one guidance with a counsellor was advised because this might be a more safe setting to discuss (negative) experiences. A platform to talk about the prejudices that exist was also mentioned to help students increase their chances of being successful:

"Or maybe a workshop with both ethnic minority students and doctors, who then

discuss among each other what's going on with them, and where... what prejudices do ethnic minority students think the majority have about them. And vice versa, what kind of prejudices do they (ethnic minorities) have about the specialist, and what can be done about it? Eh, what are really prejudices, really stereotypes that might be stereotypical [...]" (S4, male)

Lack of representation of ethnic minorities and role models

Students explained that the medical doctors usually are White and male, and that there is a lack of a representation of ethnic minorities in the medical field. A student expressed her doubts of becoming a resident because of her ethnic background. She explained however that she could understand it, because 'like attracts like':

"[...] I think everyone, as a medical student, tries to imagine what kind of doctor he will become, or what will he look like when he walks around the hospital, or in another practice or outside the hospital. At that moment I could no longer imagine, 'oh in the future I will also be a resident'. Because I saw only Dutch people around and that surprised me. [...] yes, they are still people from the study programme committee, they are usually Dutch people, from the previous generation, of the older generation, regardless, they choose people who they trust the most, or in whom they then have the most confidence in, and I can also imagine, that 'like attracts like', from that principle." (S5, female)

Furthermore, the students mentioned that they lack role models with an ethnic minority background:

"[...] you have no example. You have neither someone who can mentor you, nor an example to work towards. Because even if you are doing an internship in your first year and in hospitals where you only see White doctors and then you think: Ok, but will I ever get there? I think that this just less applicable for the ethnic majorities... Yes, it is a piece of representation that they do have, and people from ethnic minority groups simply do not have that, or less, I think." (S6, male)

Support need: Different students expressed that role models (from ethnic minorities) can be supportive and motivating:

"Well, I think that if he (a specialist with an ethnic minority background) can do it, so as an ethnic minority, then it would also be possible for other ethnic minorities or me to succeed." (S7, female)

Senior students or specialists were seen as role models and could serve as a role model in different ways. They can teach, coach, help to support the students (as a mentor/teacher) based on their own experiences in their path to become a doctor:

"Yes, because if you come across it, for example in the hospital or in the university, then you know: 'oh the supervisor dealt with it that way'. Or we had discussed that at the time, and other students dealt with it that way, let me also try that. And then you have tools that can help you, and if that ensures that you are positive in the study, and therefore does not influence your study results in a negative way, then the chance is greater that you continue with the study, and that you remain enthusiastic for the study. And that has a positive influence on your medical knowledge and experience that you gain, and for your collegiality towards others." (S8, male)

"But it would be nice if such people for example are invited for a presentation and not only a Moroccan surgeon, but for example also a Surinamese doctor, just really different people, and yes that students see, you know if you do this and this then you will also get there." (S3, female)

No sense of belonging

Students expressed that they have no sense of belonging to the medical environment. A student even mentioned that she knew students that dropped out of the medical education, because they felt that they did not belong to the medical doctor group. Students also explained the experienced difficulties of ethnic minority students during their physical examination, because of their religion. The idea that they have might have to undress during practical sessions caused unease.

Moreover ethnic minority students experienced less belonging to majority students because of different interests:

"[...] for example they organize the introduction days, yes some people do not participate and for example I did not participate because of religious reasons that I ... that introduction days are still seen as a celebration, and drinking and everything. And that's why I do not participate, it is not fun for me to participate." (S3, female)

"Because they try to do that, they try to organize something in a way that makes the whole group more connected, these are the introduction days to get to know each other, but ethnic minority groups really feel left out. I went there once, I had booked for 2 days, and the first day I was there and there was alcohol everywhere again and I did not feel comfortable at all, and then the second day I also did not

go." (S9, female)

A consequence is a division between ethnic minority and majority students:

"The majority group has that feeling of belonging together because they have had introduction days together, so then they know each other a bit, but an ethnic minority group ... if they are Muslim for example, or religious or Christian or whatever also, then they try it, but then they feel a bit weird. And then they do not go anymore, and then they come back to the lecture hall, and then the majority group usually have people they know about the introduction days, and the minority group is like, I don't know anyone yet so I go and look for the minority group." (S9, female)

A participant told that it is a pity that there is sometimes no click between ethnic minority and majority students:

"The most of what I encounter, and that is just what I regret, is that you see that there is sometimes no click between majority students and minority students, that's why you also see that the minority students hang out more together. And partly it is understandable because they share the same identity, the same norms and values, but also in dealing with or communication, the dry communication, you see that things can go wrong, for example. And cannot go wrong in the sense that it has drastic consequences, but just incomprehension for each other. And that's why we don't speak to each other, or we speak very superficially. And maybe we only talk about technical matters such as where we will have practical lessons, or have you already done the assignment for ... but from a substantive point of view, then ... then it doesn't get far. And that's too bad... [...]" (S8, male)

Another student expressed that as an ethnic minority student, you should be very intrinsically motivated to cross the finishing lane. Having others in your surroundings that can join you in the conversation, think along with you, and help you, makes it easier.

Support needs: Giving students the choice to be a subject during physical examination or not was mentioned as a solution for religious ethnic minority students:

"Yes, if you want it then, there are usually other girls who want to do it. I never took off my pants and I've always had the opportunity to practice, and other students too, so it should be voluntary, I think. [...] So in my practical lessons I really never had problems with it." (S7, female)

The introduction days can be made more attractive for all students by separating the

informative part from the social activities, and/or making the social activities interesting for all students, such as gymnastics:

"[...] Often also something playful (referring to gymnastics), just doing something fun. [...] But just doing something nice, if you take that aspect and thereby connect ethnic groups with the majority, that helps." (S9, *female*)

Another support tip was creating more understanding for each other (ethnic minorities and ethnic majorities):

"And it does not have to be that ethnic minorities have to assimilate, have to be like the majority students, but that there is just understanding for each other and that they can work together. Because they will be colleagues later on, the future doctors. And for that they have to have understanding and by them I mean the ethnic minority students, and it is useful if ethnic minority students simply realize what the problems are, how do my peers, my co-ethnic minority students deal with it, what can I do to go through the study? And it would be nice if there is a good collaboration with the majority students." (S8, *male*)

Lack of medical network

The lack of a medical network was expressed by several students. Students mentioned that ethnic minority students generally do not have a medical doctor as a parent:

"For example, Moroccans, Turks who start studying medicine, do usually not have a mother or father who is a doctor, do not have a network of doctors, so their information from the medical world is quite limited. And in most cases actually nil, nothing. While the ethnic majority students have a dad, mom, uncle, the parents of their boyfriend, girlfriend who are a doctor, and who sometimes explain things and who sometimes says: 'hey, your daughter, son is studying medicine. This is nice, would he would he want to do this', and you already have a network. The Moroccans, Turks and other ethnic minority medical students are 1-0 behind in that concern." (S8, *male*)

A student expressed how lacking a medical network can be a problem in medical education:

"That there is always being emphasized that you have to network, and that it is very difficult because, for example, I do not have any family members working in the medical world and in your second year you have to arrange a GP internship, for example, to name something very concrete. Well and then you hear from your

Dutch majority friends that they found a doctor in no time, while I had to mail all around Amsterdam and then randomly have to find someone." (S6, *male*)

This student also mentioned that he missed the support from the medical school.

"I think that others also experience this problem, because I do not know very many students with an ethnic minority background of whom the parent is a specialist, so that remains difficult. And I also think, I am second generation (ethnicity) in the Netherlands, and most (people from ethnic minority background) who live here, they also do cleaning work, or they have lower-skilled job, so it is very difficult for me to build connections. And if your parent is not even a doctor, then you also have these connections are an alternative in order to progress somewhere." (S10, *female*)

Another student explained that students from ethnic minorities usually live in communities in which family is an important aspect and the need to connect with others, outside the family, is limited. This results in not learning how to make connections outside the community. Moreover, students believe that that they will not succeed because of stories about ethnic minority students being less likely to get hired and that is why they think you should stay away from doing things like that. For ethnic minorities networking is a process of coming out of their comfort zone, and for ethnic majority students it is a more natural thing.

Support needs: Our participants wished to be facilitated in building and maintaining a network and they suggested that this should include help from an ethnic minority (role model). Different ways concerning guidance in networking were mentioned: providing workshops, offering networking events, lectures, receiving tips and help from senior students etc. Another idea was involving ethnic minority students more in research that is related to their identity/ethnicity. This way they might be more willing to help with the research and at the same time they can build their network. However, a few ethnic minority students expressed that you have to take matters into your own hands and build your own network.

Differences and difficulties in cultural communication language

Cultural communication differences between the ethnic majority group and minority groups include misinterpretation or misunderstanding by someone from the ethnic majority group of what is being said by an ethnic minority student. Sometimes students from ethnic minorities do not respond on someone's remark because they think: "Never mind, he did

not understand my question."

"And I had that feeling, and then I asked fellow students, and I have experienced it also myself that you just do not get the answer to your question. You get an answer to another question, but that is how that person interpreted it." (S8, male)

Assertiveness was also mentioned. One student explained the differences in being assertive between students from ethnic minority and ethnic majority as follows:

"[...] I think that students from ethnic majorities are certainly more assertive. But that is because the circumstances make it easier for them to be assertive. It is much easier to be assertive when it comes naturally for you, and I mean it is not the case that everything comes naturally for every ethnic majority, but I do think that in general, as an ethnic minority student you have many more challenges ... yet many more obstacles, encountering obstacles. And then it is much more difficult to be assertive. So I think that ethnic majority students are more assertive, but that is also because they have grown up in an environment where they are expected to be assertive, and in which it is motivated. While ethnic minority students are often told, you know the bigger they are, the harder they fall, try not to attract too much attention ... ethnic minority students often have to give up a part of themselves to belong in the family. I think that ethnic majority students are brought up more individualistic because in the end it is about you. [...] Because they (ethnic majority students) have been raised more individualistic. They enter a world where it is normal that you are assertive." (S6, male)

Language difficulties also influenced ethnic minorities during their education. A student mentioned his difficulty with writing an essay about physical examination:

"[...] it took me more time than a normal Dutch student, so I have the feeling that I ... a kind of powerless feeling." (S11, male)

Support needs: Help in communication and language/writing skills is needed. Furthermore, role models can help with situations in which ethnic minority students encounter communications differences or are misunderstood:

"So put a person from the same (ethnic) group, because he will also understand better how people mean things. Often people from the ethnic minority groups have a certain culture, and with that a certain religion, but those people are not waiting to

announce their religion to everyone. So if I ask a question for a certain purpose, then the ethnic minority supervisor can understand the question from my perspective, from my cultural and religious value. And the ethnic majority supervisor does not understand that, because he does not know the value that I have. So as a listener you have to understand where does a question come from. And then I can also answer him like that. That is regarding the supervisor..." (S8, male)

Further, a few students expressed that for ethnic minority students it is important (to learn) to be assertive. One student even expressed that being assertive is the key message, also for networking.

Examiner bias in clinical assessments

The participants perceived subjectivity in the assessment of the clerkship performance. For this student it is an explanation to the differences in grades between ethnic minority and majority students:

"Well, because if you are not right up the alley of a specialist, or do not fit within a team, that is also immediately included in your grade, I'm almost certain. So yes, I never link it very much to the competencies that students have or do not have, or maybe miss, and that they because of that get lower marks, less good study results, but I link it much more to the subjectivity of the assessment." (S12, female)

Support needs: Students proposed several changes, e.g. timely and honest communication between supervisors and students about students' clerkship performance and changing the grading scale from 0-10 into 'pass' and 'fail':

"..the way in which the study results are also collected in the master, you cannot avoid subjectivity. You will work in a department, your performance will be assessed so there is simply an opinion of an assessor and the people who work there. The question is, do you want to put marks on that too? Is that something you want, do you select the good doctors that way. In the end, maybe we just have to go to a 'pass-fail' system and I think that is actually more relevant than an 8 or a 9 or a 7 (on a scale of 0-10). It doesn't make sense at all, what is a 7, what is an 8 and what is a 9. I am sure that the medical school faculty have heard that more often, and by abolishing that you might actually have that difference..." (S12, female)

Preconditions

Students also stressed some preconditions to the proposed support interventions.

Students mentioned that support programs should not result in ethnic minority students being put away as a separate needy group. Interventions should therefore be offered to and aimed at the entire student population:

"Because there is perhaps a barrier that people have that kind of oh, if I go there then maybe I am such a person who ... you know, it is perhaps that you indirectly create a kind of separation between the large group that really has a background, different from Dutch, and people who do have. And if so, you might get a split again." (S13, male)

"...because the moment that you focus on this too much, I think then people will also, the people will also recoil, not recoil, but that they think forget about it, because why are you focusing on this so much.." (S14, female)

Another precondition was that interventions should be offered from the beginning of medical school:

"In the beginning of the year, so not that it is suddenly halfway through the year, when it is actually already a bit too late. If you are struggling a little, say in those first two months. Because those first few months are the hardest." (S6, male)

Discussion

This study aimed to gain insight into what medical students from ethnic minorities need in their education to become or stay motivated and to perform to their full potential. The students in our study described different experiences influencing the education of ethnic minority students, such as discrimination, a lack of representation of ethnic minority role models, and a lack of medical network. In addition, students mentioned support needs, if fulfilled, could help ethnic minority students, such as creating more awareness about diversity and other religions, visible ethnic minority role models, and guidance in networking.

The issues of 'no sense of belonging' and 'being the other' have previously been identified in studies among both ethnic minority students^[8, 20] and ethnic minority residents^[21]. These studies indicate that ethnic minority students struggle with their sense of belonging throughout the entire medical education continuum. Our study highlights the need for offering resources to create a better understanding between ethnic minorities and majorities.

The current and previous studies indicate the lack of ethnic minority role models^[8, 22, 23]. Furthermore, ethnic minority residents reported that they have less relevant academic network, usually do not have much experience in networking and lack role models^[3]. To reduce a future educational and professional gap between ethnic majority and minority students, ethnic minority students could benefit from help to improve their skills to build and maintain networks, and seeing ethnic minority role models from early on in their education. Moreover, role modelling by physicians from ethnic minorities could be crucial as their influence is expressed through the hidden curriculum rather than the formal curriculum. Visible role models from ethnic minorities, could help ethnic minority students realize that their dream and goal of becoming a doctor is feasible^[24]. However, there were a few ethnic minority students expressing that you have to take matters into your own hands and build your own network, so this might not work for all ethnic minority students.

Language barriers and differences in communication style could also have negative consequences for ethnic minority students' education. Such aspects usually pertain to not being assertive and easily being misunderstood. Generally, ethnic minority students speak Dutch fluently, sometimes only with an accent, because they are born and raised in the Netherlands. However, there are also ethnic minority students that moved later in their lives to the Netherlands and face problems with the Dutch language. Ethnic minority students are aware that they should be assertive and advise other students to be assertive too^[25]. Specialists and heads of departments pointed out that being very assertive is crucial in profiling yourself for specialty selection^[3]. However, being assertive can be difficult for ethnic minorities because of their ethnic background^[3, 8]. Uncertainty about language can also be an underlying factor why interactions with other students or teachers fail to appear (e.g. not daring to ask questions because of language insecurity), in understanding the learning material and being able to follow the lessons^[25]. These findings show that it is crucial that medical schools train students early in the curriculum how to be assertive, and also offer help in acquiring the majority language to remove these barriers in the long run. Medical students who received an assertiveness training significantly improved in their assertiveness and self-esteem compared to medical students who did not receive an assertiveness training^[26].

Examiner bias in clinical assessments was also expressed. There was a need for better, honest, and timely communication about students' clinical performance. Moreover, it was mentioned that subjectivity might be reduced by changing the clerkship grading system from a '0-10' scale into 'pass' and 'fail'. Another quantitative study also identified the subjectivity among assessors based on students' ethnicity. The use of several assessments performed by different assessors on various moments decreased the variation in clinical

grades based on students ethnicity ^[9].

Strengths and limitations

This study gained strength by conducting all interviews by a researcher who had an ethnic minority background herself. This helped the participants in openly share their experiences and in gaining understanding from an ethnic minority perspective ^[27]. However, a pitfall could be that the researcher could share her own experiences while collecting the data, but the researcher was aware that she should use her own experiences as a lens to gain understanding in participants' experiences ^[28]. Another strength is that the support needs that indicate how ethnic minority students could be helped in medical education originated from ethnic minority students' perspective.

A limitation of this study was the definition of 'ethnic minority'. The definition of the Statistics Bureau of the Netherlands (CBS; www.cbs.nl) was used, which defines an ethnic minority person as follows: 'a person with at least one parent born outside the Netherlands'. It might be that potential participants who have the feeling being an ethnic minority were excluded from this study, because we applied the definition of the CBS.

Recommendations of ethnic minority students

All students will have their own struggles during their path to become a doctor. However, students from ethnic minorities also face the above described experiences, showing that they experience additional struggles than ethnic majority students.

Several recommendations for students and staff in medical education arise from students' suggestions in our study. The students and staff should be aware that ethnic minority students struggle within the educational and practical environment based on above noted experiences. Students described the following recommendations that could support ethnic minority students in their education:

- Experiences of discrimination: create more awareness about diversity and about other religions among medical staff and students. Moreover, a peer support group would help the students to share their experiences with other ethnic minority students, and offer each other help.
- Lack of representation of ethnic minorities and role models: coaching/training/help/support from role models (with an ethnic minority background) is needed.
- No sense of belonging: 1) give students a choice in whether or not to be a subject during physical examination, 2) make activities during introduction days attractive for all students. 3) create more understanding for each other (ethnic minorities and ethnic majorities) and awareness about ethnic differences.

- Lack of medical network: create opportunities to build and maintain networks, e.g. involving students more in research related to their ethnicity to have the possibilities to create a network.
- Cultural communication differences and language difficulties: Training in communication skills and overcoming language barriers was recommended. In addition, ethnic minority students were advised (to learn) to be assertive, and an assertiveness training was recommended.
- Examiner bias in clinical assessments: 1) Assessors should communicate better and timely with students about their performance (during clerkship), 2) implementing change in the clerkship grading.

Conclusion

Results of our study suggest that ethnic minority students face several situations that influence their education and (still) have need for (specific) support. Supporting ethnic minority students is essential to create a good and safe educational and practical environment for these students in order to be successful.

Acknowledgements

We would like to thank the medical student from an ethnic minority background for giving her own reflection and feedback on our findings.

References

1. Woolf K, Potts HWW, McManus IC. Ethnicity and academic performance in UK trained doctors and medical students: systematic review and meta-analysis. *BMJ*. 2011;342:d901.
2. Stegers-Jager KM, Steyerberg EW, Cohen-Schotanus J, Themmen APN. Ethnic disparities in undergraduate pre-clinical and clinical performance. *Med Educ*. 2012;46:575-85.
3. 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(4):995-1010.
4. Teherani A, Hauer KE, Fernandez A, King TE, Lucey C. How Small Differences in Assessed Clinical Performance Amplify to Large Differences in Grades and Awards: A Cascade With Serious Consequences for Students Underrepresented in Medicine. *Acad Med*. 2018;93(9):1286-1292.
5. Cohen JJ. Time to shatter the glass ceiling for minority faculty. *JAMA*. 1998;280:821-822.
6. Fang D, Moy E, Colburn L, Hurley J. Racial and ethnic disparities in faculty promotion in academic medicine. *JAMA*. 2000;284:1085-1092.
7. Mahoney MR, Wilson E, Odom KL, Flowers L, Adler SR. Minority faculty voices on diversity in academic medicine: Perspectives from one school. *Academic Medicine*. 2008;83:781-786.
8. Isik U, Wouters A, Verdonk P, Croiset G, Kusurkar RA. 'As an ethnic minority, you just have to work twice as hard.' Experiences and motivation of ethnic minority students in medical education. Submitted.
9. Van Andel CEE, Born MPh, Themmen APN, Stegers-Jager KM. Broadly sampled assessment reduces ethnicity related differences in clinical grades. *Medical Education*. 2019;53:264-275.
10. Isik U, El Tahir O, Meeter M, Heymans MW, Jansma, EP, Croiset G, Kusurkar RA. Factors influencing academic motivation of ethnic minority students: a review, *SAGE Open*. 2018;8:1-23.
11. Isik U, Wilschut J, Croiset G, Kusurkar RA. The role of study strategy in motivation and academic performance of ethnic minority and majority students: a structural equation model. *Advances in Health Sciences Education*. 2018;23:921.
12. Bergman E, de Feijter J, Frambach J, Godefröoij M, Slootweg I, Stalmeijer R, et al. AM last page: a guide to research paradigms relevant to medical education. *Acad Med*. 2012;87(4):545.
13. Corbin J, Strauss A. *Basics of Qualitative Research*, 3rd edn. London: Sage Publications; 2008.
14. Kuper A, Reeves S, Levinson W. An introduction to reading and appraising qualitative research. *BMJ*. 2008;337:a288.
15. Ng S, Lingard L, Kennedy TJ. *Qualitative research in medical education: Methodologies and methods*. Understanding Medical Education: Evidence, Theory and Practice. Edited by: Swanwick T. Oxford: John Wiley & Sons; 2013, 371-384.
16. Ten Cate O. Medical education in the Netherlands. *Medical Teacher*. 2007;29:752-757.
17. Oliver P. Snowball sampling. In: Jupp V, editor. *The SAGE dictionary of social research methods*. London: Sage; 2006.
18. Birks M, Chapman Y, Francis, K. Memoing in qualitative research: probing data and processes. *Journal of Research in Nursing*. 2008;13:68-75.
19. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology*. 2006;3:77-101.
20. Leyerzapf H, Abma T. Cultural minority students' experiences with intercultural competency in medical education. *Medical Education*. 2017;51:521-530.
21. Osseo-Asare A, Balasuriya L, Huot SJ, Keene D, Berg D, Nunez-Smith M, et al. Minority resident physicians' views on the role of race/ethnicity in their training experiences in the workplace. *JAMA Network Open*. 2018;1:e182723.
22. Lempp H, Seale C. Medical students' perceptions in relation to ethnicity and gender: A qualitative study. *BMC Medical Education*. 2006;6:17.
23. Odom K, Roberts LM, Johnson R, Cooper L. Exploring obstacles to and opportunities for professional success among ethnic minority medical students. *Academic Medicine*. 2007;82: 46-153.
24. Hafferty FW, Gaufberg E. The hidden curriculum In: Dent JA, Harden RM, editors. , eds. *A Practical Guide for Medical Teachers*. London, United Kingdom: Churchill Livingstone; 2013.
25. Wolff, R. P. Presteren op vreemde bodem: Een onderzoek naar sociale hulpbronnen en de leeromgeving als studiesuccesfactoren voor niet-westerse allochtone studenten in het Nederlandse hoger onderwijs (1997-2010). Dissertation, Institute for Migration & Ethnic Studies (IMES), University of Amsterdam, the Netherlands; 2013.
26. Lin YR, Shiah IS, Chang YC, Lai TJ, Wang KY, Chou KR. Evaluation of an assertiveness training program on nursing and medical students' assertiveness, self-esteem, and interpersonal communication satisfaction. *Nurse Education Today*. 2004;24:656-665.
27. Rifi H. *Veiled ambitions: Female Muslim medical students and their different experiences in medical education*. Master thesis 2014. VU University Medical Center, Department of Medical Humanities.
28. Berger, R. Now I see it, now I don't: Researcher's position and reflexivity in qualitative research. *Qualitative Research*. 2015;15:219-234.

Appendix A. Interview guide**Interview questions**

1. In your ideal world, how would medical education look like?
2. What are the aspects that influence your motivation and academic performance within the learning environment?
3. What should be done in the curriculum to help you to stay motivated during your education?
4. Do you have other ideas about what could help you stay motivated and perform better during the education?
5. If you could set up a support program yourself with the aim of motivating/encouraging students from ethnic minority groups, how would you do it?