Student ethnicity predicts social learning experiences, self-regulatory focus and grades

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Abstract

Context: Ethnic minority students find that their ethnicity negatively affects the evaluation of their capacities and their feelings in medical school. This study tests whether ethnic minority and majority students differ in their ‘self-regulatory focus’ in clinical training, that is, their ways to approach goals, due to differences in social learning experiences. Self-regulatory focus consists of a promotion and prevention focus. People who are prone to stereotypes and unfair treatments are more likely to have a prevention focus and conceal certain identity aspects. The objectives of the study are to test whether ethnic minority students, as compared with ethnic majority students, are equally likely to have a promotion focus, but more likely to have a prevention focus due to more negative social learning experiences (Hypothesis 1), and whether the relationship between student ethnicity and clinical evaluations can be explained by students’ gender, social learning experiences, self-regulatory focus and impression management (Hypothesis 2).

Methods: Survey and clinical evaluation data of 312 (71.2% female) clerks were collected and grouped into 215 ethnic majority (69.4%) and 95 ethnic minority students (30.6%). Students’ social learning experiences were measured as perceptions of unfair treatment, trust in supervisors and social academic fit. Self-regulatory focus (general and work specific) and impression management were also measured. A parallel mediation model (Hypothesis 1) and hierarchical multiple regression analyses were used (Hypothesis 2).

Results: Ethnic minority students had higher perceptions of unfair treatment and lower trust in their supervisors in clinical training. They were more prevention focused in clinical training, but this was not mediated by having more negative social learning experiences. Lower clinical evaluations for ethnic minority students were unexplained. Promotion focus in clinical training and trust in supervisors positively relate to clinical grades.

Conclusion: Student ethnicity predicts social learning experiences, self-regulatory focus and grades in clinical training. The hidden curriculum plausibly plays a role here.
1 | INTRODUCTION

To facilitate a diverse population of doctors in the future, all medical students, including those from underrepresented minorities, should feel included at their medical school. Feelings of inclusion not only contribute to students' wellbeing, but also to motivation, self-esteem and academic performance. Little data, however, have been published with regard to how ethnic minority students experience their social and learning environment in medical school. The few published data show a consistent picture, though; ethnic minority students perceive that their capacities are systematically underestimated and that their ethnicity negatively affects their social learning experiences, such as a sense of belonging. This study tests whether potential differences in social learning experiences between ethnic minority and majority students affect students' 'self-regulatory focus', a psychological concept used to describe how people orientate themselves towards goals. These orientations are directed towards the presence/absence of positive future outcomes (promotion focus) and towards the presence/absence of negative future outcomes (prevention focus), depending on the person and situation. This study also tests whether lower clinical evaluations of ethnic minority students could be explained by students' social learning experiences, self-regulatory focus and impression management.

Three social learning experiences of medical students are specified in this study, namely; the extent to which students (a) perceive they are treated unfairly, (b) have trust in their clinical supervisors and (c) feel a social academic fit in clinical training. It is expected that ethnic minority students have more negative social learning experiences, because they are at a greater risk to receive lower grades and insufficient support and to experience negative effects of stereotypes and discrimination by supervisors and peers, as compared with ethnic majority students. More specifically, perceptions of unfair treatment could come from implicit criteria that are associated with professionalism, which may be harder to meet for ethnic minority students (as stated by minority respondents). For example, students' language use or way of performing language socially (even though perfectly Dutch and with a slight accent) and levels of assertiveness are likely to be mentioned as implicit criteria of professionalism. Also, the personal values of ethnic minority students are less likely to correspond with the values of a dominant organisational culture, which could result in a lack of trust in supervisors or school systems. Indeed, students could experience a misfit with the 'higher social class' or 'historically White, male' norms that rule in medical school. Furthermore, ethnic minority students may be more uncertain about their social belonging at medical school, for example, their social academic fit.

As mentioned above, self-regulatory focus can be divided into two self-regulatory systems, a so-called ‘promotion’, which sets goals in terms of aspirations and accomplishments, and a ‘prevention’ focus, which sets goals in terms of responsibility and safety. Self-regulatory focus can be chronic as well as situationally induced, implying that people can have both orientations simultaneously. People with a promotion focus and who use self-promotion tactics tend to receive more positive social evaluations. A clinical evaluation could be seen as a type of social evaluation, and grades are therefore expected to be positively linked to students' promotion focus and expressions to promote oneself. There is no reason to suggest that ethnic minority and majority students differ in their promotion focus in clinical training.

However, they could differ in their prevention focus in clinical training, because people from stereotyped groups and people who perceive that they have been treated unfairly are more likely to have a prevention focus. As ethnic minority students are at a greater risk of loss in social evaluations, because of a higher likelihood to be stereotyped, they could be more prevention focused in medical school. This could for instance mean that they speak cautiously and that they actively try to avoid mistakes. In other words, ethnic minority students could feel under threat and be fearful of the negative consequences of being oneself at work. Feeling under threat, in turn, could also hinder performance and personal engagement, which could create the impression that the person is unmotivated. Indeed, hiding certain identity aspects in the workplace can be a costly strategy. Impression management is therefore also taken into account in this study. Furthermore, both chronic and work-related self-regulatory focus are measured in this study, because if one's chronic focus is different from one's work-related focus, then clinical training could have a situational effect. Finally, gender is taken into account because female students are more likely to get higher clinical grades. Following this line of arguments, the present study tests two hypotheses:

1. Ethnic minority students, as compared with ethnic majority students, are equally likely to have a promotion focus in clinical training, but are more likely to have a prevention focus in clinical training. The relationship between student ethnicity and prevention focus in clinical training is mediated by social learning experiences.

2. The relationship between student ethnicity and clinical evaluation could be explained by students' gender, social learning experiences, self-regulatory focus in clinical training and impression management.

2 | METHODS

2.1 | Context

This study was conducted at the Erasmus MC Medical School in Rotterdam, the Netherlands. The numerical representation of
non-Western ethnic minority students in this medical school (~23%) falls behind on a city level (38.9%) but exceeds the numerical representation of non-Western ethnic minorities on a country level (14.1%), and other medical schools. The Master phase mainly consists of six integrated blocks in which different disciplines are combined. Each block starts with a few weeks of thematic education, after which the acquired knowledge is applied in that clerkship. The blocks occur in the following order: 10 weeks internal medicine; 10 weeks surgery; 10 weeks paediatrics; gynaecology and obstetrics; 10 weeks neurology and psychiatry; 9 weeks dermatology, ear, nose and throat surgery, and ophthalmology; and finally 9 weeks family and social medicine. The other part of the Master consists of research and elective clerkships.

2.2 Procedure

Students in clinical training were asked to complete a paper-and-pen or online survey at the end of a lecture, which took 5–10 min of their time. No compensation was offered. Participation was voluntary, and informed consent was obtained. Pseudo-anonymity for participants was guaranteed, as clinical evaluation data were retrieved by the use of students' numbers, after which the student numbers were permanently deleted from the data file. Ethical permission was approved by the Medical Research Ethics Committee (METC) at Erasmus MC Medical School (MEC-2019-0649).

2.3 Variables and measures

The survey consisted of five variables that had previously been used in social psychological research. Scales were translated from English to Dutch using the back-translation-procedure and scale instructions were specified to the context of medical education or ‘clerkships’, more precisely. Scale items that needed to be reversed were reversed. Internal reliabilities (α) for each of the scales were checked and reported in Table 1, and subsequently, items were averaged and computed into a single continuous score for each scale.

2.3.1 Perceptions of unfair treatment

This 9-item scale asked respondents to indicate to what extent they experienced certain situations during their clerkships, on a Likert scale ranging from 1 (never), to 5 (almost every day). An example item is ‘People acting as if they are better than you’.

2.3.2 Trust in supervisors

A 7-item scale asked respondents to what extent they trusted their supervisors during their clerkships, on a Likert scale ranging from 1 (highly disagree), to 5 (highly agree). An example item is ‘In general, I believe my supervisor’s motives and intentions are good’.

| Table 1 | Mean differences between ethnic minority and ethnic majority students, p values in bold are significantly below .05 |
|---------|---------------------------------------------------------------------------------------------------------------|
|         | Ethn nic majority students | Ethn nic minority students | p value | Cohen d |
| α       | n   | Mean ± SD | n   | Mean ± SD |           |          |
| Perceptions of unfair treatment | 0.84  | 214 | 1.99 ± 0.58 | 95  | 2.20 ± 0.69 | <.01    | 0.33   |
| Trust in supervisors | 0.86  | 213 | 3.52 ± 0.69 | 95  | 3.22 ± 0.78 | <.01    | 0.42   |
| Social academic fit | 0.89  | 213 | 5.14 ± 0.75 | 93  | 4.98 ± 0.82 | 0.1     |        |
| Promotion focus in clinical training | 0.81  | 212 | 4.28 ± 0.66 | 90  | 4.41 ± 0.62 | 0.1     |        |
| Promotion focus: gains | 0.69  | 212 | 3.87 ± 0.89 | 90  | 4.00 ± 0.83 | 0.24    |        |
| Promotion focus: achievement | 0.76  | 212 | 4.7 ± 0.74  | 90  | 4.76 ± 0.73 | 0.52    |        |
| Promotion focus: ideals | 0.71  | 212 | 4.26 ± 0.86 | 90  | 4.48 ± 0.94 | 0.06    |        |
| Prevention focus in clinical training | 0.7   | 212 | 4.67 ± 0.61 | 90  | 4.84 ± 0.64 | 0.03    | 0.27   |
| Prevention focus: oughts | 0.81  | 212 | 5.35 ± 0.57 | 90  | 5.38 ± 0.57 | 0.72    |        |
| Prevention focus: loss | 0.77  | 212 | 3.99 ± 0.98 | 90  | 4.31 ± 1.01 | 0.01    | 0.32   |
| Strategies to promote | 0.78  | 210 | 2.9 ± 0.58  | 89  | 2.76 ± 0.66 | 0.06    |        |
| Self-promotion | 0.82  | 210 | 3.13 ± 0.74 | 89  | 3.10 ± 0.83 | 0.73    |        |
| Ingratiation | 0.85  | 210 | 2.97 ± 0.89 | 89  | 2.72 ± 1.01 | 0.04    | 0.26   |
| Exemplification | 0.67  | 210 | 2.5 ± 0.90  | 89  | 2.35 ± 0.91 | 0.18    |        |
| Strategies to prevent | 0.66  | 210 | 2.66 ± 0.60 | 89  | 2.78 ± 0.65 | 0.12    |        |
| Promotion focus general | 0.84  | 202 | 6.13 ± 1.09 | 87  | 6.52 ± 1.15 | <.01    | 0.35   |
| Prevention focus general | 0.85  | 201 | 4.66 ± 1.43 | 87  | 4.87 ± 1.48 | 0.27    |        |
| Clinical evaluation | (–) | 211 | 7.83 ± 0.40 | 93  | 7.58 ± 0.50 | <.01    | 0.55   |

Note: Cohen d effect size 0.2 = small, 0.5 = medium, 0.8 = large effect size.

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2.3.3 | Sense of social academic fit

A 17-item⁴ scale asked respondents what studying medicine is like for them, on a Likert scale ranging from 1 (totally disagree) to 7 (totally agree). Example items are ‘People at my study accept me’ and ‘I fit in well at my study’.

2.3.4 | Self-regulatory focus

Respondents’ chronic self-regulatory focus was measured using an 18-item scale, including nine items for prevention and nine items for promotion.³⁵ This scale can be used as an alternative to the original Regulatory Focus Questionnaire (RFQ) of Higgins,⁸ as it measures individual’s subjective histories of success or failure in promotion and prevention focus. This scale is recommended for academic performance settings,³⁶ with responses given on a Likert scale ranging from 1 (not true at all) to 9 (very true). An example item is ‘In general, I am focused on preventing negative events in my life’. Work-related prevention and promotion focus were measured using another 15-item scale, including nine items for prevention and six items for promotion,³⁷ with a Likert answering scale ranging from 1 (never) to 6 (always). This scale was adapted from a work-related scale,³⁷ as the internships of clinical training happen in a workplace setting. An example item is ‘I do everything I can to avoid loss at work’. Three items from the prevention scale were excluded because these items concerned job security and were therefore considered as not applicable to medical students. The work-related regulatory focus scale is conceptually different from the original RFQ,⁸ as it captures the psychological state of an employee/clerk at any point in time, and is likely to change to situational cues.³⁷

2.3.5 | Impression management

An 11-item scale²⁸ was used to measure strategies to promote positive impressions in organisational settings, such as clinical training. Respondents are asked how often they behaved in a certain way at work (1 [never behave this way], 5 [often behave this way]). The scale consists of three sub-facets, namely, (1) self-promotion (four items), whereby students point out their abilities or accomplishments in order to be seen as competent; (2) ingratiation (four items), whereby students do favours or use flattery to elicit an attribution of likability; and (3) exemplification²⁸ (three items), whereby students self-sacrifice or go above and beyond the call of duty in order to gain the attribution of dedication. Given that these three strategies are aimed at increasing one’s competence, likeability and dedication, one average score was computed. Example items are ‘Make people aware of your skills or qualifications’ for self-promotion, ‘Compliment your colleagues so they will see you as likable’ for ingratiation, and ‘Stay at work late so people will know you are hardworking’, for exemplification. The original scale includes two other sub-facets (i.e., intimidation and supplication), but these behaviours (such as being aggressive or appearing needy) were considered uncommon for medical students and therefore were excluded. In addition, the authors created six items to assess strategies to prevent negative impressions. An example item is ‘I make sure that I am not associated to people or cases with a bad reputation’.

2.3.6 | Clinical evaluation

An average grade between 1 and 10 (1 [poor], 10 [excellent]) across the first six clerkships was retrieved from the university administration system. The average grade of the first five clerkships has been shown to be a good representation of all 10 clerkships²⁹ (note that the start order of the fifth/sixth clerkship varied among students, so that the first six were taken).

2.3.7 | Demographics

Respondents were asked to report their gender, age and (parental) country of birth. There are many ways to measure ethnicity, yet we deliberately chose to ask for (parental) country of birth because this is a stable fact, rather than a dynamic construct such one’s ethnic identity (i.e., a sense of self in terms of membership), which is likely to evolve and change in response to social psychological and contextual factors.⁴⁰ Based on parental country of birth, students were then classified into two groups: ethnic minority and ethnic majority students. Students with Western and non-Western migration backgrounds were classified together because the group of students with a Western migration background was too small to be tested separately (n = 22) and because those students are also likely to receive lower clinical evaluations.¹¹ ¹⁴

2.4 | Statistical power and analysis

The minimum recruitment target was set to 160 participants in total, in order to detect a medium effect size with eight predictors in a linear regression model, an error probability of \( \alpha = .05 \), and power \( \beta = .95 \), as calculated with G*Power software.⁴² Incomplete cases were list-wise deleted in analyses, as the assumptions of enough statistical power due to the study’s sample size and randomness of missing data were (still) met.

To test the first hypothesis regarding promotion focus in clinical training, an analysis of variance (ANOVA) was conducted to compare promotion focus in clinical training for ethnic minority and ethnic majority students. Regarding prevention focus in clinical training, a parallel mediation model was tested using Process.⁴³ First, the direct effect of student ethnicity on each of the three social learning experience mediators was tested, and then the direct effects of these on prevention focus in clinical training were tested. The indirect effect of student ethnicity on prevention focus in clinical training was tested using non-parametric bootstrapping.⁴³
To examine the unique contributions of each of the predictors in the explanation of clinical evaluations for the second hypothesis, a hierarchical multiple regression analysis was conducted with students’ ethnicity, gender, social learning experiences, self-regulatory focus in clinical training and impression management. Predictors were entered using a backward approach, based on the assumption that the predictor variables were not independent (i.e., multicollinearity).44 The backward selection method is often used and implies that the first model contained all of the considered predictor variables, after which the least significant variables, one after the other, are eliminated in the subsequent models. This proceeded until there were no more variables left to eliminate with p values >.10.45 All analyses were executed using IBM SPSS Statistics Data Editor, Version 25.0.

3 | RESULTS

3.1 | Participants

The total sample consisted of 312 medical students (71.2% female), of which 215 (69.4%) had a native Dutch background, 72 (23.2%) had non-Western migration backgrounds, and 23 (7.4%) had Western migration backgrounds. Most students with a non-Western migration background came from Turkey, Morocco, Iran, Iraq, Suriname, China and Afghanistan. After the sample was divided into two groups, it consisted of 215 ethnic majority students (69.4%) and 95 ethnic minority students (30.6%). Their average age was 24.50 years ± 2.25 and ranged between 21 and 43 years. Generally, ethnic minority students had more chronic promotion focus in life, than ethnic majority students (F[1, 288] = 7.73, p = .01), but there were no differences between the groups regarding chronic prevention focus in life (F[1, 287] = 1.23, p = .27), see Table 1.

3.2 | Correlations between social learning experiences and clinical evaluation

The findings showed that all social learning experiences were significantly positively related to each other, and significantly related to clinical evaluations, except for perceptions of unfair treatment, which had significant negative relationships. See an overview of all correlations among this study’s variables in Table 2.

3.3 | Hypothesis 1: Self-regulatory focus in clinical training

Findings showed that both student groups were equally likely to have a promotion focus in clinical training (F[1, 300] = 2.69, p = .10), see Table 1. Ethnic minority students were more likely to have a prevention focus in clinical training (B = .18, s.e. = .08, p = .03), less likely to have trust in clinical supervisors (B = −0.33, s.e. = .09, p ≤ .001), and more likely to have perceptions of unfair treatment, (B = 0.21, s.e. = .08, p < .01), see Table 1. However, student ethnicity did not influence social academic fit, (B = −0.17, s.e. = .10, p = .08). There was no indirect effect of student ethnicity on prevention focus in clinical training, as having a prevention focus in clinical training was not related to the potential mediators trust in supervisors (B = .05, s.e. = .06, p = .44), social academic fit (B = −.04, s.e. = .05, p = .36), and perceptions of unfair treatment (B = 0.7, s.e. = .07, p = .33), even though ethnic minority students did score lower on two out of three social learning experiences. Hence, Hypothesis 1 was largely supported, except for the finding that differences between ethnic minority and majority students in their prevention focus in clinical training were not mediated by their social learning experiences.

3.4 | Hypothesis 2: Clinical evaluations

The standardised regression coefficients and p values for the first and last model are presented in Table 3. The last model identified students’ ethnicity, gender, trust in supervisors and promotion focus in clinical training as variables that significantly relate to clinical evaluations. Students with higher clinical evaluations were more likely to have an ethnic majority background, to be female, to have more trust in their supervisors, and to have more promotion focus on clinical training. From the first to the last model, student ethnicity remained a significant predictor of clinical evaluations. Hence, the relationship between student ethnicity and clinical evaluations was unexplained by the other variables, which does not support Hypothesis 2.

4 | DISCUSSION

To our knowledge, this is the first study that shows that ethnic minority students, as compared with ethnic majority students, were more likely to be prevention focused in clinical training, that is, oriented towards loss aversion and fulfilling responsibilities, even though being generally more promotion focused in life. Ethnic minority students had more perceptions of unfair treatment and less trust in their supervisors, yet these more negative experiences were unrelated to having a prevention focus in clinical training. The relationship between student ethnicity and clinical evaluations was unexplained by students’ gender, social learning experiences, self-regulatory focus in clinical training or impression management. Female students, students with an ethnic majority background, students with more trust in their supervisors and students with more promotion focus in clinical training were more likely to receive higher clinical evaluations.

Our findings are consistent with literature showing that ethnic minority students perceive that their ethnicity negatively affects their school outcomes.5,7 A possible explanation of our findings lies in the situational effects that clinical training has on students. Assuming that formal curricula do not intentionally create group-based differences in experiences and outcomes, the explanation could be found in the
Table 2: Correlation matrix of variables

|                               | Perceptions of unfair treatment | Trust in supervisors | Social academic fit | Promotion focus in clinical training | Prevention focus in clinical training | Strategies to promote | Strategies to prevent | Chronic promotion focus | Chronic prevention focus | Clinical evaluation |
|--------------------------------|---------------------------------|----------------------|--------------------|-------------------------------------|--------------------------------------|-----------------------|----------------------|-----------------------|------------------------|-----------------------|
| Perceptions of unfair treatment|                                 |                      |                    |                                     |                                      |                       |                      |                       |                        |                       |
| Trust in supervisors           |                                 |                      |                    |                                     |                                      |                       |                      |                       |                        |                       |
| Social academic fit            |                                  |                      |                    |                                     |                                      |                       |                      |                       |                        |                       |
| Promotion focus in clinical training |                               |                      |                    |                                     |                                      |                       |                      |                       |                        |                       |
| Prevention focus in clinical training |                             |                      |                    |                                     |                                      |                       |                      |                       |                        |                       |
| Strategies to promote          |                                 |                      |                    |                                     |                                      |                       |                      |                       |                        |                       |
| Strategies to prevent          |                                 |                      |                    |                                     |                                      |                       |                      |                       |                        |                       |
| Chronic promotion focus        |                                 |                      |                    |                                     |                                      |                       |                      |                       |                        |                       |
| Chronic prevention focus       |                                 |                      |                    |                                     |                                      |                       |                      |                       |                        |                       |
| Clinical evaluation            |                                 |                      |                    |                                     |                                      |                       |                      |                       |                        |                       |

Note: Cohen $r$ effect size $0.1 = \text{small}, 0.3 = \text{medium}, 0.5 = \text{large effect size}$. $^\text{33,34}$

$^\ast p \text{value significant below <.01. } ^\ast\ast p \text{value significantly below <.05.}$
unintended consequences of a hidden curriculum. The hidden curriculum refers to the institution’s structure and culture, which consist of interpersonal encounters and what students learn outside of formal teaching.\(^5\) Indeed, medical schools can be seen as cultural entities that shape definitions of ‘good doctoring’\(^47,48\) and form professional identities.\(^49\) Even though it is unclear how professional identity formation is transmitted to students in a curriculum that is hidden,\(^50\) evidence suggests that it could be culturally biased,\(^16,19,49\) that is, reflecting White standards for professional behaviours.\(^51\) Clinical training could be tightly rule-bound and hierarchical,\(^29,48\) and socialisation can have significant psychological impact on students.\(^29,52\) In response to socialisation, ethnic minority students could situationally adapt a prevention focus in clinical training. Because of those clinical socialisation practices, ethnic minority students may struggle to fit in socially, to feel safe and to be oneself in clinical training.

Socialisation practices of medical students are greatly affected by role models,\(^53\) and students’ self-regulatory focus determines who inspires them.\(^35\) This implies that promotion-focused students are more likely to be motivated by positive role models, whereas prevention-focused students are more likely to be motivated by negative role models.\(^35\) Ethnic minority students, given that they could have both foci, might be inspired by positive as well as negative role models, yet the problem is that they see an overall lack of representative role models.\(^7\) When it comes to research regarding socialisation practices of medical students, we suggest to include self-regulatory focus as a factor, as it could provide meaningful information. Further, future researchers are asked to replicate our findings, and also examine whether ethnic minority students enter medical school with higher levels of prevention focus in clinical training, and/or whether prevention increases as medical school prolongs, from undergraduate to clinical training.

The finding that ethnic minority students were more prevention focused in clinical training was unexplained by perceptions of unfair treatment, contrary to what earlier research would suggest.\(^21\) Future research could examine whether social learning experiences, other than the ones we operationalised in our study, could explain this difference. Perceiving that one’s capacities are systematically underestimated\(^6\) could be a plausible explanation as such. Furthermore, the finding that ethnic minority students was more likely to find themselves in unfair situations has implications; perceptions of unfair treatment namely increase the likelihood of withdrawal from situations that might involve competition with majority groups.\(^54\) Ethnic minority students could thus forego opportunities for certain residency programs, which maintains the status quo and hinders diversity.\(^27\) However, they could also respond with redoubling their effort to aim for their academic goals despite of unfair treatments,\(^7,16\) and this could explain why ethnic minority students were found to be promotion focused\(^55\) as well. Research shows that when people with concealed identities are asked to promote positive impressions, their interactions with others are rated more positively by independent raters, as compared to when they are asked to prevent negative impressions.\(^52\) This is in line with our findings, because higher clinical evaluations were given to students with more promotion focus in clinical training. Yet, strategies to promote positive impressions were unrelated to promotion focus in clinical training and clinical evaluations, and ethnic majority students had similar levels of promotion focus in clinical training as ethnic minority students in our study. Hence, it remains a question why differences in clinical grades between ethnic minority and majority students exist.

Student ethnicity had a direct influence on clinical evaluations, even when adjusting for differences in gender, social learning experiences, self-regulatory focus in clinical training and impression management. These findings are in line with a systematic review that showed persistent ethnicity-related differences in grades, despite of psychological and demographic factors that were taken into account.\(^56\) In a next study, these researchers showed that student’s choice of friends were related to their grades.\(^57\) Indeed, students’ social capital in medical school, such as the likelihood of naming a clinician in one’s network, could differ across student ethnicities.\(^7,58\) Further research is needed to explain the relationship between student ethnicity and clinical evaluations, and again, the hidden curriculum could play a role here.\(^59\)

Our study was limited by the use of ethnic minority and ethnic majority categorizations. This means that we had pre-defined groups in order to predict outcome variables. Even though we categorised the sample into two groups because we aimed to statistically infer group differences, we do acknowledge the importance of intersectionality.\(^60,61\) Cultures are dynamic, and every person belongs to many cultures in which they could switch from day to day.\(^34\) Also, differences within cultures may be larger than differences between cultures. Future studies could take an intersectional approach and include categories of difference additional to ethnicity, such as class, sexuality religiosity, and so forth and their intersections, such that experiences of students who are ‘othered’ for various reasons, are taken into account.\(^62,63\) Nevertheless, a strength of this study was that we took the perspectives and reported the experiences of ethnic minority students themselves.\(^63\)

In sum, ethnic minority medical students, as compared with their ethnic majority counterparts, are more likely to have a chronic promotion focus in general life, yet a prevention focus in clinical training. They also have more perceptions of unfair treatment, less trust in
their supervisors and lower grades during their clerkships. Students’ gender, social learning experiences, self-regulatory focus and impression management could not explain the relationship between student ethnicity and clinical evaluations. Being an ethnic majority student, a female student, having trust in supervisors, and having a promotion focus in clinical training all uniquely increase the likelihood of getting higher clinical grades. Hence, systematic inequalities in experiences and outcomes based on student’s social group membership (i.e., ethnicity) can be predicted in clinical training—and this is why clinical training could be seen as a ‘prejudiced place’.64 Prejudice could namely stem from places, not only from people.64 Medical schools are thus recommended to create a more inclusive climate in clinical training.

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CONFLICT OF INTEREST
No competing interests.

ETHICS STATEMENT
Ethical permission was approved by the Medical Research Ethics Committee (METC) at Erasmus MC Medical School (MEC-2019-0649).

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