

# ATTITUDES TOWARDS GENDER DISCRIMINATION IN MEDICINE AMONG INTERNS AT MARMARA UNIVERSITY FACULTY OF MEDICINE, ISTANBUL, TURKEY

Ahmed Nazım Canatan<sup>1</sup>, Aylin Duriye Çevikel<sup>1</sup>, Tala Kanaan<sup>1</sup>, Abdülqayum Mohammasool<sup>1</sup>

Marmara University School of Medicine, İstanbul, TÜRKİYE

## ABSTRACT

**Aims:** Gender roles vary from society to society and are subject to change over time. Failure to be gender-sensitive in a physician's professional role and practice can result in negative consequences such as gender discrimination and influence various aspects of medical education, career opportunities, and specialization selection. Gender discrimination can lead to a division in selection of profession and lead to certain jobs being dominated by either men or women. The aim of this study is to reveal the perceptions of intern medical students at Marmara University Pendik Education and Research Hospital about gender inequality and how this issue affects their medical education.

**Methods:** The present study is cross-sectional in nature. An eleven-item questionnaire adapted from a similar study was applied to determine the opinions of interns regarding gender inequality and discrimination and how this issue has affected their medical education. Out of the 245 interns reached, 150 (62%) agreed to participate in our study. Links to the questionnaire were sent to participants via WhatsApp. Participants remained anonymous throughout the study.

**Results:** Forty six percent (n=69) of participants were male and 54.0% (n=81) were female. The majority of students wanted to specialize in a surgical field during the beginning of their medical training (53.3%), whereas the most desired branches to specialize in towards the end of medical school were internal branches (52.0%). Interns stated that they encountered sexist behaviors/expressions from their peers, members of faculty, as well as deans (54.67%, 66.0%, and 58.0% respectively) (p=0.169, 0.297 and 0.647 respectively). 39.3% of interns believe that gender equality is not given due importance in medical school (p=0.05). The majority of participants (56.7%) agreed that female interns are more exposed to sexism than male interns (p=0.016). Males are the preferred gender among interns for surgical branches (p=0.01) as well as specialties including invasive procedures (p=0.02). 56.0% of participants agree that a female physicians' profession/specialty plays a major role in her decision to have children later in life (p=0.063).

**Conclusion:** Gender discrimination is an important issue that affects different aspects of life, including medicine. Gender equality must be promoted throughout medical school; this can be achieved by integrating gender awareness into the curriculum of medical education and providing positive role models and purposeful teaching during internships. Further efforts are needed to cultivate a culture of gender inclusivity throughout this transformative process.

**Keywords:** Gender in medicine, gender discrimination, gender inequality, medical education, interns

## INTRODUCTION

Gender is defined by the World Health Organization as "the characteristics of women, men, girls, and boys that are socially constructed" (1). This definition includes standards and roles lined with being a woman, man, girl, or boy. In the past, many

Western societies have subscribed to the notion that women are naturally more nurturing than men (2). One of the ways women were expected to conform to this traditional feminine gender role was by prioritizing their families and working full-time within their homes instead of pursuing jobs outside (2). Other



**Address for Correspondence:** Ahmed Nazım Canatan, Marmara University School of Medicine, İstanbul, TÜRKİYE  
e-mail: drcanatan@gmail.com  
ORCID iDs of the authors: ANC: 0000-0002-5182-665X; ADÇ: 0000-0002-3134-8996; TK: 0000-0003-0252-4986;  
AM: 0000-0002-0227-3817.  
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attributes associated with femininity include being nurturing, sensitive, supportive, gentle, and sweet (2). On the contrary, men were traditionally viewed as natural leaders within their households (3). As per the traditional masculine gender role, men were expected to provide for their families financially and make important decisions (3). Other characteristics linked to masculinity include dominance, aggression, competition, invulnerability, and risk-taking (3). Gender roles vary from society to society as well as culture to culture and are subject to change over time (1). Gender discrimination is when individuals are negatively treated because of their gender and as a result, are barred from certain opportunities, resources, and rights (4). Research has uncovered evidence of gender inequality in the workplace, with women falling behind men in terms of salary and career progression (5). Women often receive less favorable work conditions, including lower pay, less autonomy, and limited authority, and are frequently relegated to dead-end jobs, reducing their chances of promotion (5). Additionally, women are less likely to hold positions of authority within their workplaces than men (5). According to Schmitt et al. (6) findings, women were at a disadvantage in almost every economic measure when compared to men. Discrimination based on gender is known to influence health, especially mental health. Occupational stress, depression, discomfort, rage, anxiety, alienation, as well as feelings of vulnerability, have been observed in women who have been discriminated against due to their gender (7). Gender discrimination can lead to a division in a selection of professions and lead to certain jobs being dominated by either men or women (7). In medicine for example; women dominate fields that are more nurturing and supportive in nature such as Obstetrics and Gynecology (83.4%), Allergy and Immunology (73.5%) and Pediatrics (72.1%). Whereas men dominate more physically demanding and competitive fields such as Orthopedic surgery (84.6%), Neurological surgery (82.5%) and Interventional radiology (80.8%) (8). Gender roles reflect societal gender stereotypes and differences, which are shaped by cultural views, belief systems, images, and expectations regarding masculinity and femininity (9-11). Society expects women to prioritize raising children and performing household chores, as well as to show their devotion to their husbands in an obedient, patient, understanding, and affectionate way, while men are expected to provide for their families through physically demanding work (9). Women are expected to follow gendered-stereotypes outside of their homes and in their professional lives as well (9). For instance, occupations such as teaching, secretarial work, and nursing are deemed appropriate for women, while fields like politics, leadership, and management tend to be closed off to them (9,11,12). Medical professionals tend to adhere to traditional gender roles in their work, which can have negative consequences for patients (13). For instance, female patients are more likely to be asked about their families than male patients, as doctors believe that family issues are more relevant to women (14). This bias also affects the diagnostic process, with many doctors being hesitant to diagnose women with coronary artery disease, and more likely to label their symptoms as psychosocial

(13). On the other hand, men with symptoms of depression are more likely to be diagnosed with burnout syndrome (15). Furthermore, research indicates that female patients tend to receive more diagnoses of nonspecific symptoms and signs than their male counterparts, due to doctors' gender-based perceptions (13). Studies have demonstrated that a lack of gender sensitivity among medical professionals can have severe consequences, including gender discrimination and harassment in medical education, career opportunities, and specialty selection (16). Furthermore, gender-related matters are significantly important in medical education (10). As such, many medical schools have begun incorporating gender awareness into their curricula (10, 12). This study aimed to identify and reveal the perceptions of final-year medical students (interns) at Marmara University Pendik Education and Research Hospital regarding gender equality and how this issue has affected their education thus far. Various aspects of the relationship between gender and education will be explored in this study.

## MATERIAL AND METHODS

This study was approved by the Ethics Committee of Marmara University Faculty of Medicine and the Dean's Office (protocol number: 09.2022.615, dated: 01/04/2022). All subjects participated voluntarily. All participants provided informed consent forms to participate in this study. This study was in adherence to the principles of the Declaration of Helsinki. The present study is cross-sectional and descriptive in nature. An evaluation was made by applying a questionnaire to determine the opinions of senior medical students (interns) at Marmara University Pendik Education and Research Hospital about gender equality and how this issue affects their education. All 245 intern students undergoing education at Marmara University Pendik Education and Research Hospital at the time of the study were given the questionnaire; of which 62% (n=150) responded. The questionnaire was sent as a Google Forms link through WhatsApp to all 245 interns. The names of participants were not recorded, all participants were evaluated anonymously.

The survey's questions are aimed to answer these questions: Which specialties do medical students consider suitable for which gender? What are the views of medical students towards gender roles in the education process? To what extent do faculty, health personnel, and peers positively contribute to promoting gender equality in the education process of interns? Do medical students think that there is gender discrimination in the content of the education program, in its application, and in the structuring of the exams and tests? There are a total of 11 items in the questionnaire. The first seven items are questions collecting socio-demographic information. The remaining 4 items are sets of questions that are tailored to our research questions. The questionnaire was adapted from a study conducted in 2020 titled "Gender in Medical Education in Turkey: The Intern Perspective" and used with the permission of the authors (4). The questionnaire has been attached as a supplementary document (Supplementary File). The

demographic variables of the study were age, marital status, and gender; while the dependent variables were the choice of the specialty of the interns, their exposure to sexist expressions, the effects of gender in medical education, and their attitudes towards gender roles.

### Statistical Analysis

A trial version of the Statistical Program for Social Sciences was used for the analysis of the data. Mean and standard deviation were used for continuous variables. Descriptive statistics were used to express the findings of this study. Frequencies and percentages were used to illustrate distribution of findings, mean values were used to show central tendencies, and standard deviations were used to demonstrate variability in findings. The chi-square test was used for comparison. A p-value less than 0.05 was deemed significant.

## RESULTS

A total of 150 students participated in our study. 46% (n=69) were male, and 54% (n=81) were female. 98% (n=147) were single, and only 2% (n=3) were married. The mean age of the participants was 24±1. Table 1 shows the fields of specializations that participants wanted to enter at the beginning of medical school versus towards the ending of their medical education. When asked the question "Do you think that the concept of gender equality is given due importance during medical education?"; 27.3% of the participants (53.7% male and 46.3% female) agreed, 39.3% of the participants did not agree (44.1% male and 55.9% female), and 33.3% of the participants were undecided (42% male and 48% female) (p=0.05). When asked the question "How did your gender affect your work and education life during your clinical education and internship process?"; 18.7% of the participants (21.6%

male and 78.4% female) stated that they were adversely affected, 24.7% of the participants (75% male and 25% female) stated that they were positively affected, 56.6% of the participants (47.1% male and 52.9% female) stated that it did not affect their lives (p<0.05). Table 2 shows the responses to five questions about exposure to sexist expressions and behaviors. It is important to note that the results of Table 2 were not statistically significant with a p-value greater than 0.05. The interns were asked which gender they preferred in different roles, and the findings are summarized in Figure 1. It is important to note that participants that selected "Gender is of no importance" mean that they do not have a preference for either gender in that particular role - they are neutral. Only the results related to "physician", "role model", "branches with invasive procedures" and "surgical branches" were found to be statistically significant with p-values of 0.025, 0.000, 0.001 and 0.002, respectively. Significant results from Figure 1 were reorganized as Figure 2 for better representation. Overall, 1.33% of participants preferred their physician to be a female, whereas 5.33% preferred their physician to be a male. The remaining participants (93.33%) did not have a preference of gender for their physicians. Interestingly, 0% of male interns prefer females as their physicians, and 10% of male interns prefer males as their physicians (p=0.025). This suggests that there is a statistically significant difference in the preference of the gender of a physician, supporting the hypothesis of an inequality in gender preference in favor of male physicians among interns. Overall, 6.67% of participants preferred their role models to be female, whereas 8.67% preferred their role models to be a male. The remaining participants (84.67%) did not have a preference of gender for their role models. Women are seen as role models by 11% of females and only 1% of men. On the other hand, men were seen as role models by 17% of males and only 1% of females (p<0.001). This indicates that there is a statistically significant difference in the preference of the gender of a role model, supporting the hypothesis of an inequality in gender preference in favor of male role models among interns. Overall, 0.67% of participants preferred females as physicians in branches with invasive procedures, whereas 13.33% preferred males as physicians in branches with invasive procedures. The remaining participants (86.00%) did not have a preference of gender for physicians

**Table 1: Students' specialization preferences.**

| Specialties    | Beginning of Medical School (%) | Ending of Medical School (%) |
|----------------|---------------------------------|------------------------------|
| Basic sciences | 2.00                            | 4.00                         |
| Internal       | 31.33                           | 52.00                        |
| Surgical       | 53.33                           | 36.00                        |
| Undecided      | 13.33                           | 8.00                         |

**Table 2: Exposure to sexist expressions and behavior during interns' medical education.**

|   | Yes (%) | No (%) | Undecided (%) | p-value |
|---|---------|--------|---------------|---------|
| I have encountered gendered discourse and behaviors by my peers during my medical education.  | 54.67   | 38.67  | 6.67          | 0.169   |
| I have encountered gendered discourse and behaviors by members of teaching staff during my medical education.                                       | 66.00   | 29.33  | 4.67          | 0.297   |
| I have encountered gendered discourse and behaviors by health personnel during my medical education.  | 9.33    | 75.33  | 15.33         | 0.270   |
| I have encountered gendered discourse in various situations (presentations, discussions, at the patient bedside, etc.) during my medical education. | 50.00   | 40.67  | 9.33          | 0.675   |
| I have encountered gendered discourse and behavior by deans and assistant deans during my medical education.  | 58.00   | 36.67  | 5.33          | 0.647   |

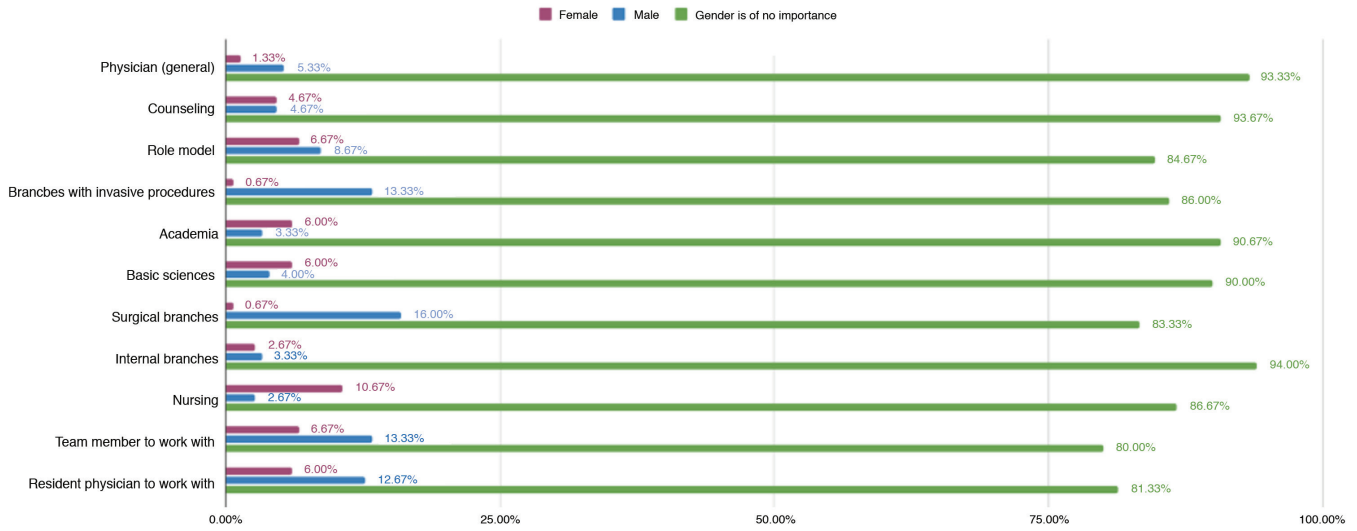


Figure 1: The genders that interns prefer for certain roles in healthcare.

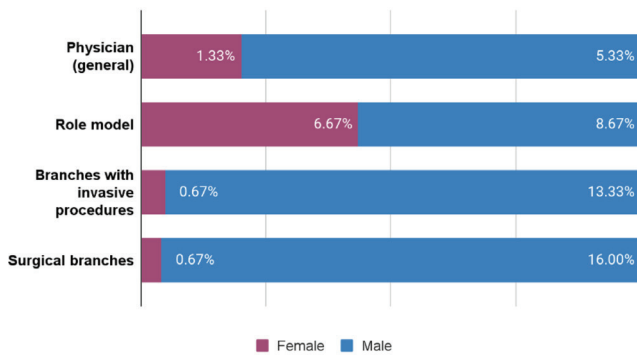


Figure 2: The genders that interns prefer for certain roles in healthcare (significant results).

in branches with invasive procedures. 0.67% of participants preferred females as physicians in surgical branches, whereas 16.00% preferred males as physicians in surgical branches. The remaining participants (83.33%) did not have a preference of gender for physicians in surgical branches. In general, men are preferred over women in branches where invasive procedures are intense (13%) ( $p=0.001$ ) and in surgical branches (16%) ( $p=0.002$ ) which means there is a statistically significant difference in the preference of the gender of a surgeon as well as a physician performing invasive procedures, supporting the hypothesis of an inequality in gender preference in favor of male surgeons and physicians among interns. Table 3 shows the answers given to the questions about the effect of gender on a physicians' daily life practicing medicine. Seven out of twenty-one questions were found to have statistically significant answers as indicated in Table 3. Table 4 shows the answers to the questions about the effect of gender concerning medical education on a scale from 5 to 1; 5 being "strongly disagree", 4 being "disagree", 3 being "undecided", 2

being "agree" and 1 being "strongly agree". Only one out of the fifteen questions was found to have a statistically significant answer as indicated in Table 4.

### DISCUSSION

The present study deals with gender discrimination in medical education/practice in Türkiye from the perspective of intern doctors. While 78% of the females stated that their gender had a negative impact on their lives during the internship, 75% of the males stated that their gender had a positive impact on their lives during the same period ( $p<0.001$ ). This suggests that there is a statistically significant difference in the impact of gender on the lives of interns, supporting the hypothesis of an inequality in the impact over the lives of interns in favor of the male gender. This situation is similar in other medical faculties in Türkiye where the same research was conducted (4). The research reveals that doctors face gender-based challenges in their practical lives rather than in their years of education (4). Similar studies on this topic have reported that gender bias is more commonly defined by women (17, 18). We observed that the areas of specialization that many interns thought about when they were beginning the faculty changed as they were approaching the ending of medical school. The percentage of participants that had a field in mind to specialize in increased from 60.66% (when they were beginning medical school) to 91.33% (when they were finishing medical school) ( $p=0.021$ ). It can be concluded that there is a statistically significant difference in the career choice of interns, supporting the hypothesis that newly beginning medical students have not yet been influenced into a career path by their surroundings yet. Gender did not play a significant role in this change ( $p=0.645$ ), indicating that factors outside of gender discrimination may play a vital role in determining career choices of medical students. While the percentage of students preferring surgical branches decreased from 53% to 36%, the percentage of students preferring internal branches increased



**Table 3: Interns' gender-based perceptions regarding physicians and medicine.**

|  | Female (%) | Male (%) | Both female and male (%) | p-value |
|--|------------|----------|--------------------------|---------|
| .... physicians are subjected to mobbing.  | 12.67      | 2.67     | 84.67                    | 0.043*  |
| .... physicians are polite toward patients.  | 14.00      | 6.00     | 80.00                    | 0.101   |
| .... physicians establish greater emotional bonds with patients.   | 36.67      | 1.33     | 62.00                    | 0.187   |
| .... physicians are more stressed due to workload and family responsibility.   | 44.00      | 4.00     | 52.00                    | 0.001*  |
| .... physicians inspire greater confidence.  | 5.33       | 7.33     | 87.33                    | 0.809   |
| .... physicians earn more money.   | 0.67       | 31.33    | 68.00                    | 0.404   |
| .... physicians are more effective in emergency situations.  | 0.67       | 12.67    | 86.67                    | 0.024*  |
| .... physicians make good managers.  | 4.00       | 9.33     | 86.67                    | 0.007*  |
| .... physicians are harder working.  | 6.67       | 9.33     | 84.00                    | 0.005*  |
| .... take greater care over dress and appearance because of professional anxieties.  | 54.67      | 0.67     | 44.67                    | 0.496   |
| .... are more subjected to occupational violence because of their gender.  | 39.33      | 13.33    | 47.33                    | 0.090   |
| .... physicians are more subjected to disturbing behavior from the opposite sex in their professional lives due to their gender.                   | 76.00      | 2.00     | 22.00                    | 0.003*  |
| .... physicians cause greater workforce losses because of their biological and social characteristics (such as military service and giving birth). | 42.00      | 5.33     | 52.67                    | 0.543   |
| .... physicians are more respected and appreciated by management.  | 3.33       | 32.67    | 64.00                    | 0.033   |
| .... are more successful when their spouses are doctors.   | 12.67      | 2.67     | 84.67                    | 0.927   |
| .... physicians' professions play a role in their decisions to have children.  | 58.00      | 2.00     | 40.00                    | 0.063   |
| .... physicians support their male colleagues more in professional matters.  | 4.67       | 29.33    | 66.00                    | 0.562   |
| .... physicians work in easier fields with fewer shifts.   | 32.67      | 2.67     | 64.67                    | 0.375   |
| Medicine is a branch of science dominated by .... physicians.  | 3.33       | 27.33    | 69.33                    | 0.078   |
| .... physicians can live without occupational anxieties because of their gender  | 5.33       | 35.33    | 59.33                    | 0.036*  |
| I would recommend a .... physician to my patients/relatives  | 1.33       | 9.33     | 89.33                    | 0.132   |

\*p&lt;0.05

from 31% to 52% ( $p=0.024$ ). There is a statistically significant difference in the preference of internal branches over surgical branches, supporting the hypothesis that surgical branches are generally more difficult in comparison to internal branches. However, gender did not play a significant role in this change ( $p=0.328$ ), once again showing that perhaps factors besides gender discrimination may play a vital role in determining career choices of medical students. It may mean that other factors such as workload, personal life, and financial situation can have a strong influence on their choice of specialization. It shows that today's medical students are more aware of what they want as a specialty branch, rather than being influenced by gender discrimination or socially imposed roles when choosing their specialty.

Our research revealed that none of the male interns (0%) preferred females over males as their physician or surgeon. Compared to a study conducted among the general population in Saudi Arabia, it was seen that both genders preferred male physicians in surgical branches (50% of men and 39% of women, General Surgery) ( $p=0.017$ ) because they believed they were more knowledgeable (19). According to their findings, while female patients preferred to be examined by female physicians (54%, Internal Medicine) ( $p=0.034$ ), it was observed that male

patients did not have a gender preference for their physician (55% in Internal Medicine) ( $p=0.028$ ) (19). This may reveal that although interns have the experience of working in a hospital setting -where they see both genders asexually talented- they are still affected by societal stereotypes. In our study, interns stated that they were also exposed to gender discrimination during their medical education. More than 50% of the candidates agree that female students are more exposed to sexism than male students. A study among fourth-year medical students at public and private medical schools in the United States showed that gender discrimination and sexual harassment were more likely to influence the choice of specialties in female students who had previously reported sexual harassment during their education (20). This highlights that while gender discrimination is an important issue in medical education/practice, it can influence major career-related decisions such as choosing certain specialties in different geographic regions. A study conducted at the Harvard Medical School Department of Health Policy and Management demonstrated that female physicians are more patient-centered, encouraging, and reassuring, communicate better with their patients and spend more time with their patients compared to their male counterparts (21). Interns in our study however stated that both male and female

**Table 4: Interns' perceptions concerning medical education.**

|  | Strongly disagree (%) | Disagree (%) | Undecided (%) | Agree (%) | Strongly agree (%) | p-value |
|--|-----------------------|--------------|---------------|-----------|--------------------|---------|
| My gender had an impact on my choice of entering medical school.   | 77.33                 | 8.67         | 10.00         | 2.00      | 2.00               | 0.483   |
| The medical education I have received respects gender equality.  | 12.00                 | 7.33         | 28.67         | 24.00     | 28.00              | 0.732   |
| During my internship, the division of labor within the team was made regardless of gender.   | 8.00                  | 10.00        | 18.00         | 16.67     | 47.33              | 0.269   |
| During my internship, faculty members or residents preferred to work with male students.   | 34.67                 | 24.00        | 20.67         | 14.00     | 6.67               | 0.073   |
| Female interns suffer more from gender discrimination than male interns.   | 17.33                 | 8.67         | 17.33         | 32.67     | 24.00              | 0.016*  |
| The gender of a medical student is correlated with being successful on an exam.  | 60.00                 | 14.00        | 13.33         | 6.67      | 6.00               | 0.754   |
| Female medical students use their sexuality to pass courses.   | 62.00                 | 18.00        | 9.33          | 6.67      | 4.00               | 0.104   |
| During exams, faculty members are egalitarian and do not possess a sexist point of view.   | 11.33                 | 16.00        | 22.67         | 21.33     | 28.67              | 0.141   |
| Faculty members working in surgical branches emphasize that surgical branches are more suitable for male students.   | 16.67                 | 12.00        | 24.00         | 28.00     | 19.33              | 0.956   |
| The sentence "You can't do it" is said more to female students than to male students.  | 17.33                 | 10.00        | 16.67         | 29.33     | 26.67              | 0.532   |
| Faculty administrations want male students to take part in student representation as opposed to female students.   | 56.67                 | 14.00        | 17.33         | 7.33      | 4.67               | 0.213   |
| Female faculty members do not like female students.  | 26.00                 | 24.67        | 19.33         | 18.67     | 11.33              | 0.624   |
| Medical students benefit from the opportunities of medical education (clinical training, participation in congresses, etc.) without gender discrimination. | 10.00                 | 6.67         | 12.67         | 20.67     | 50.00              | 0.151   |
| It is my belief that there are sexist course materials in our curriculum (presentations, lecturer hand resources, videos, etc.).                           | 50.00                 | 18.67        | 16.67         | 8.00      | 6.67               | 0.226   |
| In small group educational environments, faculty members are egalitarian and do not demonstrate sexism.  | 10.67                 | 12.00        | 22.67         | 16.00     | 38.67              | 0.632   |

\*p&lt;0.05

doctors are reassuring, treat their patients kindly, and establish emotional bonds with their patients (87.3%, 80.6% and 62%, respectively) ( $p=0.809$ ,  $p=0.101$  and  $p=0.187$ , respectively). It is obvious to us that interns in our study believe that the gender of the physician is not important in establishing a healthy doctor-patient relationship. This may mean that a doctor's perspective may differ from that of the general population, while also being based on practical experience with colleagues rather than societal and personal views. Medical textbooks, curricula, and other educational resources often contain gender bias, which can negatively affect individuals' attitudes and decision-making processes (17). This can then influence the career opportunities and expectations of students. According to the study participants, academics may also encourage students to choose certain specialty fields based on their gender (17). Our study sheds light on a crucial issue in medicine that can often be overlooked or ignored. By examining the attitudes of interns at Marmara University Faculty of Medicine towards gender discrimination, our research offers new insights into the nature of this problem in the medical profession. Our findings contribute to a growing body of literature that highlights the need for greater awareness and action to address gender discrimination in medical education and practice. Gender

awareness must be promoted from an early process in medical education in order to get ahead of gender discrimination both in medical practice as well as society. This study provides a valuable baseline for future research and interventions aimed at reducing gender discrimination and improving equity and diversity in medicine. Our research underscores the importance of addressing gender discrimination not only for the well-being of medical professionals but also for the quality of patient care and the overall health of society. A limitation of our study was low interest by participants to fill out the questionnaire. The questionnaires were distributed to participants during the last few months of medical school. This is a very busy and stressful period for interns as they are preparing for their medical licensing exams as well as arranging graduation arrangements. Many participants did not fill out the questionnaire. Among those that did, we can not be sure if they rushed through the questions. Another limitation of this study is that it was only conducted in a single hospital (Marmara University Pendik Education and Research Hospital). As a result, the results of this study can not be generalized for a larger population. Finally, it is important to emphasize that our study primarily focuses on the subjective experiences and perceptions of the participants, rather than providing objective measures. We recognize the

inherent subjectivity of the data and the potential limitations associated with relying solely on subjective accounts.

## CONCLUSION

Gender discrimination is an important issue that affects different aspects of life, including medicine. Our research has shown that doctors make decisions without considering their gender, rather they make judgments based on the gender of other doctors. When we compare the results of this study with those of others, it is obvious that gender discrimination in medical education/practice is prevalent all across the globe. To prevent gender discrimination in medical practices and society, it is crucial to promote gender awareness from the beginning of the medical education process. This can be achieved by integrating gender awareness into the curriculum of medical education and providing positive role models and purposeful teaching during internships. Further efforts are needed to cultivate a culture of gender inclusivity throughout this transformative process.

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**Ethics Committee Approval:** This study was approved by the Ethics Committee of Marmara University Faculty of Medicine and the Dean's Office (protocol number: 09.2022.615, dated: 01/04/2022).

**Informed Consent:** All participants provided informed consent forms to participate in this study.

**Conflict of Interest:** The authors declared no conflict of interest.

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**Supplementary File**

Questionnaire: Attitudes Towards Gender Discrimination in Medicine Among Interns at Marmara University Faculty of Medicine, Istanbul, Turkey

1. Gender: (select one)

- Female       Male

2. Age: .....

3. Marital status: (select one)

- Married       Single

4. Did you have a field in mind that you wanted to specialize in before starting medical school? (select one)

- No  
 If yes, which field: .....

5. Do you plan on specializing in any field now that you are finishing medical school? (select one)

- No  
 If yes, which field: .....

6. Do you think that the concept of gender equality is given due importance during medical education? (select one)

- No     Yes  
 Undecided

7. How did your gender affect your work and education life during your clinical education and internship process? (select one)

- Positively     Negatively     Undecided

8. This question assesses exposure to sexist expressions and behavior during interns' medical education. Do you agree or disagree with the below statements? (select one per row)

|  |       |          |           |
|--|-------|----------|-----------|
| I have encountered gendered discourse and behaviors by my peers during my medical education  | Agree | Disagree | Undecided |
| I have encountered gendered discourse and behaviors by members of teaching staff during my medical education                                       | Agree | Disagree | Undecided |
| I have encountered gendered discourse and behaviors by health personnel during my medical education  | Agree | Disagree | Undecided |
| I have encountered gendered discourse in various situations (presentations, discussions, at the patient bedside, etc.) during my medical education | Agree | Disagree | Undecided |
| I have encountered gendered discourse and behavior by deans and assistant deans during my medical education  | Agree | Disagree | Undecided |



9. This question assesses the genders that interns prefer for certain roles in healthcare. Which gender do you prefer for certain roles in healthcare? (select one per row)

|                                   | Female | Male | Gender is of no importance |
|-----------------------------------|--------|------|----------------------------|
| Physician (general)               |        |      |                            |
| Counseling                        |        |      |                            |
| Role model                        |        |      |                            |
| Branches with invasive procedures |        |      |                            |
| Academia                          |        |      |                            |
| Basic sciences                    |        |      |                            |
| Surgical branches                 |        |      |                            |
| Internal branches                 |        |      |                            |
| Nursing                           |        |      |                            |
| Team member to work with          |        |      |                            |
| Resident physician to work with   |        |      |                            |

10. This question assesses interns' gender-based perceptions regarding physicians and medicine. Which gender do you think most appropriately fits into the dotted lines? (select one per row)

|   | Female | Male | Both female and male |
|---|--------|------|----------------------|
| ...physicians are subjected to mobbing  |        |      |                      |
| ...physicians are polite toward patients  |        |      |                      |
| ...physicians establish greater emotional bonds with patients   |        |      |                      |
| ...physicians are more stressed due to workload and family responsibility   |        |      |                      |
| ...physicians inspire greater confidence  |        |      |                      |
| ...physicians earn more money   |        |      |                      |
| ...physicians are more effective in emergency situations  |        |      |                      |
| ...physicians make good managers  |        |      |                      |
| ...physicians are harder working  |        |      |                      |
| ...take greater care over dress and appearance because of professional anxieties  |        |      |                      |
| ...are more subjected to occupational violence because of their gender  |        |      |                      |
| ...physicians are more subjected to disturbing behavior from the opposite sex in their professional lives due to their gender                   |        |      |                      |
| ...physicians cause greater workforce losses because of their biological and social characteristics (such as military service and giving birth) |        |      |                      |
| ...physicians are more respected and appreciated by management  |        |      |                      |
| ... are more successful when their spouses are doctors  |        |      |                      |
| ...physicians' professions play a role in their decisions to have children  |        |      |                      |
| ...physicians support their male colleagues more in professional matters  |        |      |                      |
| ...physicians work in easier fields with fewer shifts   |        |      |                      |
| Medicine is a branch of science dominated by .... physicians  |        |      |                      |
| ...physicians can live without occupational anxieties because of their gender   |        |      |                      |
| I would recommend a .... physician to my patients/relatives   |        |      |                      |

11. This question assesses interns' perceptions concerning medical education. How much do you agree or disagree with the following statements? Select a number from 5 to 1. (Select one per row)

|  | 5 | 4 | 3 | 2 | 1 |
|--|---|---|---|---|---|
| My gender had an impact on my choice of entering medical school  |   |   |   |   |   |
| The medical education I have received respects gender equality   |   |   |   |   |   |
| During my internship, the division of labor within the team was made regardless of gender  |   |   |   |   |   |
| During my internship, faculty members or residents preferred to work with male students  |   |   |   |   |   |
| Female interns suffer more from gender discrimination than male interns  |   |   |   |   |   |
| The gender of a medical student is correlated with being successful on an exam   |   |   |   |   |   |
| Female medical students use their sexuality to pass courses  |   |   |   |   |   |
| During exams, faculty members are egalitarian and do not possess a sexist point of view  |   |   |   |   |   |
| Faculty members working in surgical branches emphasize that surgical branches are more suitable for male students  |   |   |   |   |   |
| The sentence "You can't do it" is said more to female students than to male students   |   |   |   |   |   |
| Faculty administrations want male students to take part in student representation as opposed to female students  |   |   |   |   |   |
| Female faculty members do not like female students   |   |   |   |   |   |
| Medical students benefit from the opportunities of medical education (clinical training, participation in congresses etc.) without gender discrimination |   |   |   |   |   |
| It is my belief that there are sexist course materials in our curriculum (presentations, lecturer hand resources, videos etc.)                           |   |   |   |   |   |
| In small group educational environments, faculty members are egalitarian and do not demonstrate sexism   |   |   |   |   |   |
| 5 = "strongly disagree" 4 = "disagree", 3 = "undecided" 2 = "agree" and 1 = "strongly agree"   |   |   |   |   |   |

This is the end of the questionnaire. Thank you for your time.