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# Sexism and Gendered Medical Specialty Preferences among Medical Students at UIN Jakarta

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## Abstract

Anchored in Joan Acker's theory of gendered organizations, this study examines how institutionalized gender norms influence medical specialty preferences. Gendered perceptions often reinforce occupational segregation, where "masculine" specialties are male-dominated and "feminine" ones by women. This research aims to identify gender differences in specialty preferences and the extent to which stereotypes, segregation, sexism, and patriarchy shape these preferences among 211 medical students at UIN Jakarta. Data were collected via questionnaires and analyzed using T-tests and logistic regression in STATA 13. Results reveal that female students show stronger preferences for Dermatology and Venereology, and Obstetrics and Gynecology, fields typically associated with femininity. Hostile sexism had no significant effect, while benevolent sexism exhibited nuanced influences: beliefs in female purity positively correlated with Internal Medicine, whereas beliefs in female frailty correlated positively with Dermatology and Venereology, and Obstetrics and Gynecology, but negatively with Internal Medicine. Segregation negatively affected Internal Medicine preference, and stereotypes were negatively associated with Dermatology and Venereology, and Cardiovascular. Domestic patriarchal roles increased preference for Surgery but decreased interest in Pediatrics and Psychiatry. While public patriarchal roles had opposite effects, promoting Pediatrics preference while reducing interest in Obstetrics and Gynecology. These findings highlight how entrenched gendered and cultural logics continue to shape medical specialty preferences within institutional contexts.

**Keywords:** Gendered Organizations; Occupational Stereotypes; Masculine Roles; Feminine Roles; Medical Specialty Preferences

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## Introduction

Choosing a medical specialty is a critical decision that not only determines future career trajectories but also reflects a student's developing professional identity. Understanding what influences this decision is essential, especially considering its impact on workforce distribution, shortages, and broader health system needs. Several studies have examined the factors that shape specialty preferences among medical students. Previous research has identified multiple contributing factors, including parental occupation in the healthcare sector, parental income, early decisions to pursue medical education (Syakurah et al. 2014), work-life balance, personal interests, and expected income (Andarwati et al. 2016). Among these, gender has consistently emerged as a significant factor in the choices and preferences of doctors and medical students (Asaad et al. 2020; Bhat, D'souza, and Fernandez 2012; Buddeberg-Fischer et al. 2003, 2006; Fukuda and Harada 2010; Kaliyadan et al. 2015; Yin et al. 2021). While men and women may express similar interest, these preferences are shaped within context of social norms and values that define what is considered appropriate for each gender to pursue (Fernández et al. 2006), Consequently, individuals tend to pursue specialties that align with socially accepted gender roles (Miller and Budd 1999; Miller and Hayward 2006; Stockard and McGee 1990).

As of now, despite increasing attention to the shortage and maldistribution of doctors, significant gender disparities persist within medical specialties. For instance, data from various regions, including the Western Pacific, Southeast Asia, the Eastern Mediterranean, the Americas, and Africa show that the majority of nurses are female, with males comprising a minority (Boniol et al 2019). Furthermore, data from the Canadian Medical Association indicate that surgical specialties remain male-dominated, with men representing 70.6% of surgeons, while women constitute only 29.4%. Similarly, in Indonesia, the gender ratio varies significantly across medical specialties (BPS Kota Pontianak 2019; BPS Provinsi DKI Jakarta 2021).

Buddeberg-Fischer et al. (2003) identified that female medical students tend to demonstrate personality traits oriented toward interpersonal relationships and stability (e.g. empathy, relational awareness, family responsibilities, and job security). In contrast,


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male students more frequently exhibit characteristics associated with independence, assertiveness, self-confidence, income and prestige. These gendered personality patterns are reflected in specialty preferences, whereby males predominantly select fields that emphasize technical expertise, such as Surgery, while females are more inclined toward specialties characterized by intensive patient interaction, such as Obstetrics and Gynecology. As a result, gender stereotypes contribute to the perception that men are perceived as more qualified for surgery, while women are better suited for non-clinical medical disciplines (Mathew and John 2021).

This exposure to gender stereotypes subsequently leads students to be more interested in occupations that are seen as matching and typically dominated by their own gender (Miller 2004). As Miller and Hayward (2006) note, when jobs are segregated by gender, individuals tend to choose occupations that are deemed appropriate for their gender. This pattern indicates that specialty preferences are not purely individual choices, but are shaped by occupational stereotypes related to masculinity and femininity. Furthermore, gender-based occupational stereotypes have been found to be a stronger predictor of career preference than other factors such as income, perception, challenge, or responsibility (Stockard and McGee 1990).

This issue warrants further attention in light of Freidson's argument that the institutions and structures of the medical profession play a central role in shaping gendered specialty preferences (Freidson 1970). These institutional frameworks govern the opportunities and experiences available to male and female medical students, leading to distinct career trajectories. Within organizational contexts, medical school experiences, which are often marked by hostile or sexist environments, can discourage women from pursuing certain specialties (Kristoffersson et al. 2018). For instance, gendered patterns of specialization led to a greater concentration of women in less prestigious fields such as pediatrics and psychiatry (Davis G and Allison R 2013; Alers et al. 2014).

These gendered specialization patterns reflect not only individual preferences but also institutional practices that regulate opportunities, reinforce norms, and perpetuate inequalities within the medical profession. This article poses the following research questions: (1) Do male and female students differ in their preferences for medical

specialties? (2) Do gender stereotypes, sexism, and patriarchal values influence the types of medical specialties students prefer?

## Methods

### Data

The population for this study consists of students from the Faculty of Medicine at Syarif Hidayatullah State Islamic University Jakarta (UIN Jakarta) who are active during the 2023/2024 academic year, for a total of 447. The total population of 447 was selected using Slovin's formula to obtain the research sample.

$$n = \frac{N}{1 + N(e^2)} \qquad \text{(Equation 1)}$$

$$n = \frac{477}{1 + 477(0.05^2)}$$

$$n = 211$$

The research instrument uses survey data collected through a questionnaire via Google Forms. The statistical analysis for this study was conducted using STATA 13.

### Procedure

This study uses probability sampling techniques, specifically stratified random sampling. After obtaining a list of active students of the Faculty of Medicine at UIN Jakarta from the 1st, 3rd, 5th, and 7th semesters for the 2023/2024 academic year, the author initially calculates the number of respondents from each semester to be included as research samples using the following equation:

$$n_i = \frac{N_i}{N}\ x\ n \qquad \text{(Equation 2)}$$

Subsequently, the participation rate was obtained among the students of the Faculty of Medicine, UIN Jakarta, who are the research sample (**Table 1**).


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**Table 1**. Research Sample from Each Semester

| Semester | Total Population | Measures of Sampel |
|---|---|---|
| I | 125 | **59** |
| III | 114 | **54** |
| V | 103 | **49** |
| VII | 105 | **49** |
| **Total** | 447 | **211** |

*Source: primary data by the author (2023)*

Afterward, the author conducted random sampling to obtain a list of respondents' names, which were matched with the randomly-generated numbers from the Generator application.

**Variables and Measures**

The questionnaire consists of three sections. The first section contains questions aimed at identifying respondents' preferences for medical specialties. The survey covers a total of seven medical specialties: Pediatrics, Surgery, Dermatology and Venereology, Cardiovascular, Psychiatry, Obstetrics and Gynecology, and Internal Medicine. Respondents who prefer any of these seven specialties are assigned a code of 1, while those who do not prefer any of these specialties are assigned a code of 0.

The first section of the survey consists of two questions. The first question is, "In your opinion, who should be the specialist doctor for each of the following medical specialties? Is it male, female, or both male and female?" This question aims to assess the extent to which each medical specialty is gender-stereotyped. The second question is, "In your opinion, who should be prioritized to become the specialist doctor for each of the following medical specialties? Is it male, female, or both male and female?" This question aims to assess the extent to which medical specialties are gender-segregated. These questions are adapted from the study by (Miller and Hayward 2006). Occupational stereotypes and occupational segregation are measured and coded into three categories: 0 = Male; 1 = Female; and 2 = Both Male and Female.

In the second section, the author presents seven statements to measure the variables of sexism using a detailed questionnaire designed by (Barnes et al. 2020) divided into benevolent sexism (BS) and hostile sexism (HS). In this study, benevolent sexism (BS) is further divided into two aspects: female's purity and female's frailty. The variables of sexism are measured using a Likert scale, coded into four categories: 1 = Strongly Disagree; 2 = Disagree; 3 = Agree; and 4 = Strongly Agree. The sexism variable is subjected to factor analysis, resulting in three factors (**Table 2**). Higher factor loadings indicate a stronger correlation between the sexism variables and the factor.


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**Table 2.** Sexism: Rotated Factor Loadings, Communalities ($h^2$) and Percent of Variance

| Variable | Factor 1 Hostile | Factor 2 Benevolent Purity | Factor 3 Benevolent Frailty | $h^2$ |
|---|---|---|---|---|
| Women are too easily offended. | **0.67** | 0.04 | 0.08 | 0.54 |
| Most women fail to appreciate all the men do for them (women). | **0.65** | 0.15 | -0.05 | 0.53 |
| Women tend to exaggerate problems. | **0.72** | 0.14 | 0.05 | 0.44 |
| Women possess a higher level of purity compared to men. | 0.16 | **0.47** | 0.05 | 0.74 |
| Men should be willing to sacrifice their own well-being to meet the needs of women. | 0.26 | **0.58** | 0.18 | 0.55 |
| In times of disaster, women should be rescued before men. | 0.01 | 0.34 | **0.39** | 0.72 |
| Women should be protected and respected by men. | 0.06 | 0.23 | **0.42** | 0.75 |
| **Percentage of variance explained** | **1.52** | **0.78** | **0.38** | |

*Source: primary data processed by the author (2024)*

In the second section, the author also includes seven statements from (Goldscheider et al. 2014) to measure the variables of patriarchy (**Table 4**). The scale used to measure respondents' views on domestic and public roles is coded into four categories: 1 = Strongly Disagree; 2 = Disagree; 3 = Agree; and 4 = Strongly Agree. Factor analysis results in two factors, with higher scores indicating a stronger perspective on patriarchal gender roles (**Table 3**).

**Table 3.** Patriarchy: Rotated Factor Loadings, Communalities ($h^2$) and Percent of Variance

| Variable | Factor 1 Domestic | Factor 2 Public | $h^2$ |
|---|---|---|---|
| It is better for everyone if men work to earn money and women take care of the home and children. | **0.66** | 0.18 | 0.51 |
| It is not good for a relationship if a woman earns more than a man. | **0.34** | 0.26 | 0.71 |
| In general, men can be better political leaders than women. | **0.46** | 0.31 | 0.58 |
| Mothers or women who do not genuinely need money should not have to work. | **0.61** | 0.15 | 0.59 |
| Preschool children are likely to suffer if their mother works full-time. | 0.30 | **0.50** | 0.63 |
| Regardless of any career a woman may have, her most important role in life remains being a mother. | 0.15 | **0.50** | 0.70 |
| **Percentage of variance explained** | **1.27** | **0.73** | |

*Source: primary data processed by the author (2024)*

**Note:** The item "The children will be fine if their mother earns money and their father takes care of the home and children" is excluded because its factor loading is below 0.32, indicating a weak correlation between the item and the factor.

In the final section, question items for measuring sociodemographic variables are included to gather detailed respondent profiles. The characteristic details of the respondents observed in this study are generally presented in **Table 4**.


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**Table 4.** Descriptive Statistic

| Variable | Obs | Percent | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|---|
| **Sexism** | | | | | | |
| Women are too easily offended. | 211 | | 2.80 | 0.79 | 1 | 4 |
| Most women fail to appreciate all the men do. | 211 | | 1.92 | 0.09 | 1 | 4 |
| Women tend to exaggerate problems. | 211 | | 2.39 | 0.94 | 1 | 4 |
| Women possess a higher level of purity. | 211 | | 2.52 | 0.99 | 1 | 4 |
| Men should be willing to sacrifice their own well-being to meet the needs of women. | 211 | | 2.24 | 0.95 | 1 | 4 |
| Women should be rescued before men. | 211 | | 2.78 | 0.93 | 1 | 4 |
| Women should be protected and respected. | 211 | | 3.57 | 0.66 | 1 | 4 |
| **Patriarchy** | | | | | | |
| Men work to earn money and women take care of the home and children. | 211 | | 2.05 | 0.97 | 1 | 4 |
| Mother earns money and Father takes care of the home and children. | 211 | | 2.02 | 0.97 | 1 | 4 |
| Woman earns more than a man. | 211 | | 1.95 | 0.88 | 1 | 4 |
| Men can be better political leaders. | 211 | | 2.70 | 0.93 | 1 | 4 |
| Mothers/women should not have to work. | 211 | | 1.78 | 0.88 | 1 | 4 |
| Preschool children are likely to suffer if their mother works full-time. | 211 | | 2.78 | 0.88 | 1 | 4 |
| Woman's most important role is to be | 211 | | 3.35 | 0.82 | 1 | 4 |

a mother.

**Occupational Stereotypes**

| **Who should become a specialist doctor** | | |
|---|---|---|
| **Pediatrics** | | |
| Male | 1 | 0.47 |
| Female | 44 | 20.85 |
| Both Male and Female | 166 | 78.67 |
| **Surgery** | | |
| Male | 56 | 26.54 |
| Female | 3 | 1.42 |
| Both Male and Female | 152 | 72.04 |
| **Dermatology and Venereology** | | |
| Male | 6 | 2.84 |
| Female | 49 | 23.22 |
| Both Male and Female | 156 | 73.93 |
| **Cardiovascular** | | |
| Male | 28 | 13.27 |
| Female | 7 | 3.32 |
| Both Male and Female | 176 | 83.41 |
| **Psychiatry** | | |
| Male | 27 | 12.80 |
| Female | 12 | 5.69 |
| Both Male and Female | 172 | 81.52 |
| **Obstetrics and Gynecology** | | |
| Male | 8 | 3.79 |
| Female | 60 | 28.44 |
| Both Male and Female | 143 | 67.77 |
| **Internal Medicine** | | |
| Male | 13 | 6.16 |


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| | | |
|---|---|---|
| Female | 6 | 2.84 |
| Both Male and Female | 192 | 91.00 |
| **Occupational Segregation** | | |
| **Who should be prioritized to become a specialist doctor** | | |
| **Pediatrics** | | |
| Male | 6 | 2.84 |
| Female | 59 | 27.96 |
| Both Male and Female | 146 | 69.19 |
| **Surgery** | | |
| Male | 71 | 33.65 |
| Female | 2 | 0.95 |
| Both Male and Female | 138 | 65.40 |
| **Dermatology and Venereology** | | |
| Male | 9 | 4.27 |
| Female | 50 | 23.70 |
| Both Male and Female | 152 | 72.04 |
| **Cardiovascular** | | |
| Male | 32 | 15.17 |
| Female | 3 | 1.42 |
| Both Male and Female | 176 | 83.41 |
| **Psychiatry** | | |
| Male | 24 | 11.37 |
| Female | 23 | 10.90 |
| Both Male and Female | 164 | 77.73 |
| **Obstetrics and Gynecology** | | |
| Male | 16 | 7.58 |
| Female | 60 | 28.44 |
| Both Male and Female | 135 | 63.98 |

| | | |
|---|---|---|
| **Internal Medicine** | | |
| Male | 19 | 9.00 |
| Female | 11 | 5.21 |
| Both Male and Female | 181 | 85.78 |
| **Medical Specialty Preferences** | | |
| **Pediatrics** | | |
| Choose | 44 | 20.85 |
| Did Not Choose | 167 | 79.15 |
| **Surgery** | | |
| Choose | 24 | 11.37 |
| Did Not Choose | 187 | 88.63 |
| **Dermatology and Venereology** | | |
| Choose | 18 | 8.53 |
| Did Not Choose | 193 | 91.47 |
| **Cardiovascular** | | |
| Choose | 11 | 5.21 |
| Did Not Choose | 200 | 94.79 |
| **Psychiatry** | | |
| Choose | 11 | 5.21 |
| Did Not Choose | 200 | 94.79 |
| **Obstetrics and Gynecology** | | |
| Choose | 16 | 7.58 |
| Did Not Choose | 195 | 92.42 |
| **Internal Medicine** | | |
| Choose | 12 | 5.69 |
| Did Not Choose | 199 | 94.31 |
| **Age** | | |
| 16 - 18 years old | 47 | 22.27 |
| 19 years old | 45 | 21.33 |
| 20 years old | 49 | 23.22 |


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| | | |
|---|---|---|
| 21 - 26 years old | 70 | 33.18 |
| **Gender** | | |
| Male | 71 | 33.65 |
| Female | 140 | 66.35 |
| **Semester** | | |
| 1st Semester | 59 | 27.96 |
| 3rd Semester | 54 | 25.56 |
| 5th Semester | 49 | 23.22 |
| 7th Semester | 49 | 23.22 |
| **Tuition Fee** | | |
| 1st Group | 6 | 2.84 |
| 2nd Group | 7 | 3.32 |
| 3rd Group | 15 | 7.11 |
| 4th Group | 16 | 7.58 |
| 5th Group | 60 | 28.44 |
| 6th Group | 55 | 26.07 |
| 7th Group | 52 | 24.64 |
| **Domicile** | | |
| Outside JABODETABEK | 89 | 42.18 |
| JABODETABEK | 122 | 57.82 |
| **Senior High Education** | | |
| Public High School | 88 | 41.71 |
| Private High School | 42 | 19.91 |
| Public Islamic High School | 31 | 14.69 |
| Private Islamic High School | 50 | 23.70 |
| **Father's Occupation** | | |
| Farmer | 5 | 2.37 |
| Laborer / Housemaid | 1 | 0.47 |
| Motorcycle taxi Driver / Taxi Driver | 2 | 0.95 |

| | | |
|---|---|---|
| (online/offline) | | |
| Do not have a permanent job | 4 | 1.90 |
| Seller | 5 | 2.37 |
| Small Business Owner | 11 | 5.21 |
| Large Business Owner / Contractor | 10 | 4.74 |
| Private Employee | 50 | 23.70 |
| Civil Servant | 55 | 26.07 |
| Profession (Lawyer, Doctor, etc.) | 21 | 9.95 |
| Teacher or Lecturer | 12 | 5.69 |
| Retired | 18 | 8.53 |
| Unemployed | 17 | 8.06 |
| **Mother's Occupation** | | |
| Farmer | 1 | 0.47 |
| Do not have a permanent job | 2 | 0.95 |
| Seller | 4 | 1.90 |
| Small Business Owner | 10 | 4.74 |
| Large Business Owner / Contractor | 9 | 4.27 |
| Private Employee | 11 | 5.21 |
| Civil Servant | 52 | 24.64 |
| Profession (Lawyer, Doctor, etc.) | 15 | 7.11 |
| Teacher or Lecturer | 25 | 11.85 |
| Retired | 1 | 0.47 |
| Housewife | 77 | 36.49 |
| Unemployed | 4 | 1.90 |
| **Father's Income** | | |
| Less than IDR 1 million | 84 | 39.81 |
| IDR 1-5 million | 58 | 27.49 |
| IDR 5-15 million | 69 | 32.70 |


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| | | |
|---|---|---|
| **Mother's Income** | | |
| Less than IDR 1 million | 128 | 60.66 |
| IDR 1-5 million | 32 | 15.17 |
| IDR 5-15 million | 51 | 24.17 |
| **Father's Educational Background** | | |
| Below Bachelor Degree (S1) | 43 | 20.38 |
| Above Magister (S2) | 168 | 79.62 |
| **Mother's Educational Background** | | |
| Below Bachelor Degree (S1) | 65 | 30.81 |
| Above Magister (S2) | 146 | 69.19 |

*Source: primary data processed by the author (2024)*

Respondents are distributed across the 1st semester (N = 59), 3rd semester (N = 54), 5th semester (N = 49), and 7th semester (N = 49). The average age of participants is between 21 and 26 years old (33.18%). Of the total 211 participants, 66.35% are female and 33.65% are male. This gender imbalance in the research sample, which is predominantly female, is a common phenomenon in universities where females still constitute the majority of students compared to males (Asaad et al. 2020). The majority of participants reside in urban areas within JABODETABEK (57.82%). Over half of the participants (41.71%) are from public high schools, followed by private Islamic high schools (23.70%), private high schools (19.91%), and public Islamic high schools (14.69%).

## Theoretical Framework

This study employs Gendered Organization Theory (Acker 1990) to examine how institutional structures shape medical specialty preferences. Acker argues that organizations are not gender-neutral, but systematically reproduce gender hierarchies through both formal arrangements and informal practices. Acker identified five dimensions of gendering within organizations: the division of labor based on gender norms, symbolic constructions that reinforce masculine dominance, patterns of interaction shaped by gender expectations, the internalization of gendered identities, and organizational logic that embeds assumptions

about competence and authority. These processes often operate subtly through policies, procedures, and social interactions that appear neutral but, in effect, reproduce structural inequality (Acker 1990).

While Acker's theory explains how gender is embedded and reproduced within organizational structures, Freidson's perception on professional institutionalization also provides a lens to understand how gendered dynamics function within the hierarchical and culturally specific frameworks of the medical profession (Freidson 1970). This intersection is particularly relevant in the context of institutional religiosity including Islamic universities, where religious ideals and organizational hierarchies co-produce gendered expectations that shape medical specialty preferences. These institutional barriers, including limited access to networks and unequal promotion pathways, contribute to the persistent underrepresentation of women in leadership roles (O'Neil and Hopkins 2015; Hart 2016). In such context, women's career trajectories in these settings reflect a complex interplay between individual aspirations, societal norms, and structural constraints.


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### Hypotheses

Medical specialty preferences are influenced not only by gendered organizational structures and divisions of labor, but also by individual attitudes toward gender stereotypes, levels of sexism, and patriarchal values. Based on these considerations, the following hypotheses are proposed.

H1: There is a significant difference in preferences for choosing medical specialties between male and female respondents ($H_1$);
H2: Individuals hold stronger gender-stereotypical views about occupations are more likely to choose medical specialties that align with their gender stereotypes ($H_2$);
H3: Individuals with higher levels of sexism and patriarchal values are more likely to choose medical specialties that reflect traditional gender norms roles compared to those who are not ($H_3$).

## Results

### Preferences for Medical Specialties by Gender

The T-test analysis aims to examine differences in medical specialty preferences between male and female students. A result is considered statistically significant if the p value is below 0.05. Students' preferences for medical specialties exhibit diverse conditions. Statistically, this diversity in the choice of specialties indicates no significant difference between male and female preferences across most specialties, except for Dermatology and Venereology, as well as Obstetrics and Gynecology.

**Table 5.** T-test for Medical Specialty Preferences by Gender

| Medical Specialty Type | Obs | Mean | Std. Err | Std. Dev. | 2-Tail Prob. |
|---|---|---|---|---|---|
| **Pediatrics** | | | | | |
| Male | 71 | 0.23 | 0.05 | 0.42 | 0.67 |
| Female | 140 | 0.2 | 0.03 | 0.40 | |
| **Surgery** | | | | | |
| Male | 71 | 0.14 | 0.04 | 0.35 | 0.38 |
| Female | 140 | 0.1 | 0.02 | 0.30 | |
| **Dermatology and Venereology** | | | | | |
| Male | 71 | 0.01 | 0.01 | 0.12 | **0.01** |
| Female | 140 | 0.12 | 0.03 | 0.33 | |
| **Cardiovascular** | | | | | |
| Male | 71 | 0.07 | 0.03 | 0.26 | 0.40 |
| Female | 140 | 0.43 | 0.02 | 0.20 | |
| **Psychiatry** | | | | | |
| Male | 71 | 0.01 | 0.01 | 0.12 | 0.08 |
| Female | 140 | 0.07 | 0.02 | 0.26 | |
| **Obstetrics and Gynecology** | | | | | |
| Male | 71 | 0.00 | 0.00 | 0.00 | **0.00** |
| Female | 140 | 0.11 | 0.03 | 0.32 | |
| **Internal Medicine** | | | | | |
| Male | 71 | 0.06 | 0.03 | 0.23 | 0.10 |
| Female | 140 | 0.06 | 0.02 | 0.23 | |

*Source: primary data processed by the author (2024)*

Based on the T-test results, among the seven medical specialties, only two show significant differences in preferences between male and female students. Female students demonstrate a higher preference for both Dermatology and Venereology ($p < 0.05$) as well as Obstetrics and Gynecology ($p < 0.05$). The proportion of females (0.12) is higher than that of males (0.01) who chose Dermatology and Venereology. Additionally, no male respondents


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(0.00) expressed a preference for Obstetrics and Gynecology, while a higher proportion of females (0.11) chose this specialty. Statistically, no significant differences were found for Pediatrics, Surgery, Cardiovascular, Psychiatry, and Internal Medicine, indicating both genders tend to choose these specialties.

## Gender-Based Occupational Stereotypes and Occupational Segregation towards Medical Specialties Preferences

This study aims to examine gender-based occupational stereotypes and patterns of segregation across seven medical specialties. Respondents are asked to decide, "In your opinion, who should be the specialist doctor for each of the following medical specialties? Is it male, female, or both male and female?" and "In your opinion, who should be prioritized to become the specialist doctor for each of the following medical specialties? Is it male, female, or both male and female?". Most respondents believe that all medical specialties can be pursued by both males and females, however, a notable proportion perceive certain specialties as gender-segregated and stereotyped.

**Figure 1.** Stereotypes

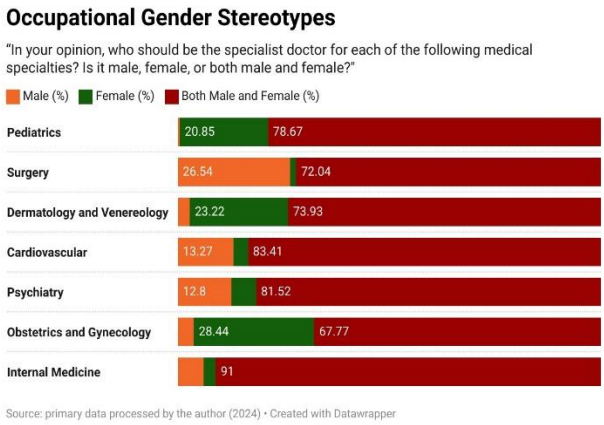
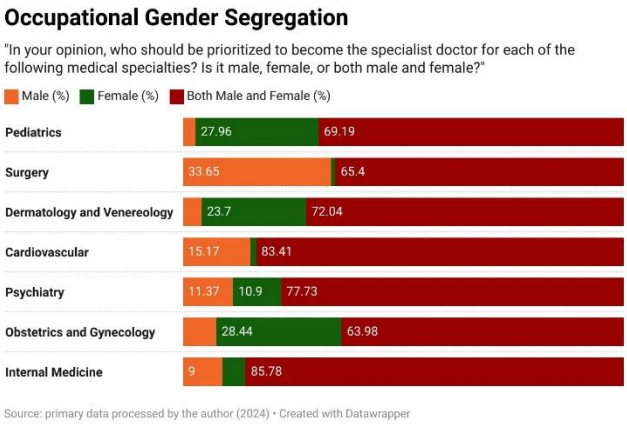



**Figure 2.** Segregation




*Source: primary data processed by the author (2024)*

The bar chart shows that most respondents agree all medical specialties can be pursued by both men and women. However, aside from Surgery (26.54%), three specialties, namely Cardiovascular (13.27%), Psychiatry (12.80%), and Internal Medicine (6.16%) are

still largely perceived as male-dominated fields (**Figure 1**). A similar trend appears in prioritization responses, where Surgery (33.65%), Cardiovascular (15.17%), Psychiatry (11.37%), and Internal Medicine (9.00%) are more often seen as suited for men (**Figure 2**), suggesting the persistence of occupational stereotypes associated with masculine roles.

Conversely, Pediatrics (20.85%), Dermatology and Venereology (23.22%), and Obstetrics and Gynecology (28.44%) are more frequently perceived as female specialties (**Figure 1**). Prioritization responses also reflect this bias, with many indicating these fields as more suitable for women, particularly in Pediatrics (27.96%), Dermatology and Venereology (23.70%), and Obstetrics and Gynecology (28.44%) (**Figure 2**). These patterns illustrate enduring gender-based stereotypes, where certain specialties are associated with feminine traits, reinforcing occupational segregation.

**Determinant Factors of Medical Specialties Types**

The results of the logistic regression test are to assess the validity of hypotheses $H_2$ and $H_3$. The interpretation of the logistic regression's results based on the coefficient values is presented in **Table 6**.


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**Table 6.** Logistic Regression of Seven Types of Medical Specialties

| Variable | (1) Pediatric | (2) Surgery | (3) Derma-tology | (4) Cardio-vascular | (5) Psychi-atry | (6) Obgyn | (7) Internal Medicine |
|---|---|---|---|---|---|---|---|
| **Sexism** | | | | | | | |
| Hostile Sexism | -0.24 | -0.42 | 0.50 | 0.83 | 0.32 | -0.53 | -0.65 |
| | (0.26) | (0.38) | (0.55) | (0.53) | (0.48) | (0.47) | (0.49) |
| Benevolent Sexism – | 0.25 | -0.11 | -0.97 | -0.66 | 0.29 | -0.17 | **2.10**** |
| Female Purity | (0.34) | (0.47) | (0.68) | (0.68) | (0.68) | (0.59) | **(0.90)** |
| Benevolent Sexism – | -0.22 | -0.72 | **2.53***** | 0.83 | -0.06 | **1.54*** | **-3.07***** |
| Female Frailty | (0.43) | (0.50) | **(0.96)** | (0.90) | (0.70) | **(0.79)** | **(1.03)** |
| **Patriarchy** | | | | | | | |
| Domestic Patriarchal | **-0.55*** | **0.78*** | 0.48 | -0.53 | **-1.28*** | 0.79 | 0.59 |
| Gender Roles | **(0.33)** | **(0.43)** | (0.54) | (0.65) | **(0.75)** | (0.52) | (0.64) |
| Public Patriarchal | **0.80**** | -0.30 | -1.07 | -0.64 | -0.04 | **-1.43**** | 0.46 |
| Gender Roles | **(0.36)** | (0.42) | (0.66) | (0.62) | (0.66) | **(0.67)** | (0.65) |
| **Stereotype in** | 0.85 | | | | | | |
| **Pediatrics** | (0.68) | | | | | | |
| **Segregation in** | 0.80 | | | | | | |
| **Pediatrics** | (0.52) | | | | | | |
| **Stereotype in** | | 0.08 | | | | | |
| **Surgery** | | (0.33) | | | | | |
| **Segregation in** | | 0.19 | | | | | |
| **Surgery** | | (0.32) | | | | | |
| **Stereotype in** | | | **-2.11***** | | | | |
| **Dermatology and** | | | **(0.70)** | | | | |
| **Venereology** | | | | | | | |

| Variable | (1) Pediatric | (2) Surgery | (3) Derma-tology | (4) Cardio-vascular | (5) Psychi-atry | (6) Obgyn | (7) Internal Medicine |
|---|---|---|---|---|---|---|---|
| **Segregation in** | | | 0.71 | | | | |
| **Dermatology and** | | | (0.83) | | | | |
| **Venereology** | | | | | | | |
| **Stereotype in** | | | | **-1.05**** | | | |
| **Cardiovascular** | | | | **(0.51)** | | | |
| **Segregation in** | | | | -0.43 | | | |
| **Cardiovascular** | | | | (0.56) | | | |
| **Stereotype in** | | | | | 0.25 | | |
| **Psychiatry** | | | | | (0.99) | | |
| **Segregation in** | | | | | 0.58 | | |
| **Psychiatry** | | | | | (0.97) | | |
| **Stereotype in** | | | | | | -0.43 | |
| **Obstetric and** | | | | | | (0.69) | |
| **Ginecology** | | | | | | | |
| **Segregation in** | | | | | | -0.53 | |
| **Obstetric and** | | | | | | (0.68) | |
| **Ginecology** | | | | | | | |
| **Stereotype in** | | | | | | | 1.31 |
| **Internal Medicine** | | | | | | | (0.90) |
| **Segregation in** | | | | | | | **-1.31**** |
| **Internal Medicine** | | | | | | | **(0.53)** |
| **Gender** (ref = Male) | | | | | | | |
| Female | **-0.78*** | -0.47 | **3.54***** | 0.45 | 0.90 | | 1.24 |
| | **(0.48)** | (0.66) | **(1.37)** | (0.97) | (1.19) | | (1.13) |


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| Variable | (1) Pediatric | (2) Surgery | (3) Dermatology | (4) Cardiovascular | (5) Psychiatry | (6) Obgyn | (7) Internal Medicine |
|---|---|---|---|---|---|---|---|
| **Age** | | | | | | | -0.30 |
| | | | | | | | (0.34) |
| **Age** (ref = 16-18 years old) | | | | | | | |
| 19 years old | -0.80 | -0.63 | -0.30 | 1.17 | -0.13 | -0.78 | |
| | (0.56) | (0.76) | (1.36) | (1.12) | (1.52) | (1.68) | |
| 20 years old | -0.18 | -0.90 | **2.46**** | 1.02 | 0.18 | 1.86 | |
| | (0.49) | (0.84) | **(1.07)** | (1.13) | (1.38) | (1.29) | |
| 21-26 years old | **-0.89*** | 0.14 | 0.21 | 0.10 | 1.34 | **2.64**** | |
| | **(0.52)** | (0.61) | (1.09) | (1.13) | (1.20) | **(1.22)** | |
| **Father's Income** (ref = Less than IDR 1 million) | | | | | | | |
| IDR 1-5 million | 0.32 | **-1.27*** | -0.03 | -0.66 | -1.56 | **1.45*** | -1.06 |
| | (0.51) | **(0.74)** | (0.89) | (0.95) | (1.18) | **(0.84)** | (1.09) |
| IDR 5-15 million | -0.04 | -0.54 | 1.05 | -1.87 | 0.22 | 0.63 | -1.03 |
| | (0.44) | (0.58) | (0.81) | (1.25) | (0.74) | (0.79) | (0.89) |
| **Mother's Income** (ref = Less than IDR 1 million) | | | | | | | |
| IDR 1-5 million | -1.05 | 1.09 | **2.29**** | 1.03 | 0.18 | -1.04 | -1.02 |
| | (0.70) | (0.72) | **(0.96)** | (1.11) | (1.30) | (1.22) | (1.60) |
| IDR 5-15 million | -0.35 | -0.03 | **1.75**** | -0.15 | 0.97 | -0.43 | 0.21 |
| | (0.46) | (0.63) | **(0.82)** | (0.98) | (0.78) | (0.79) | (0.89) |

| Variable | (1) Pediatric | (2) Surgery | (3) Derma-tology | (4) Cardio-vascular | (5) Psychi-atry | (6) Obgyn | (7) Internal Medicine |
|---|---|---|---|---|---|---|---|
| **Father's Educational Background** (ref = Below Bachelor Degree (S1)) | | | | | | | |
| Above Magister (S2) | -0.47 | -0.37 | **-1.64*** | -1.25 | -0.06 | -0.09 | 0.85 |
| | (0.50) | (0.74) | **(0.95)** | (1.11) | (0.99) | (0.74) | (1.05) |
| **Mother's Educational Background** (ref = Below Bachelor Degree (S1)) | | | | | | | |
| Above Magister (S2) | -0.03 | **1.59**** | 0.25 | 0.86 | -0.06 | **-1.20*** | -0.90 |
| | (0.45) | **(0.79)** | (0.81) | (1.10) | (0.87) | **(0.70)** | (0.91) |
| Constant | -3.99** | -4.22** | -1.92 | 0.71 | -6.88* | -0.59 | -3.59 |
| | (2.04) | (1.82) | (3.21) | (2.35) | (3.72) | (2.73) | (3.70) |
| Observations | 211 | 211 | 211 | 211 | 211 | 211 | 211 |

*Source: primary data processed by the author (2024)*

*Standard errors in parentheses*

**** p<0.01, ** p<0.05, * p<0.1*

The regression results indicate that students' specialty preferences are influenced not only by explicit gender stereotypes but also by underlying attitudes related to sexism and patriarchal values. This is reflected in the finding that beliefs portraying women as "pure" are significantly associated with a preference for Internal Medicine ($p < 0.05$). In contrast, those who hold the belief that women are inherently weak (benevolent sexism in the frailty


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dimension) tend to avoid Internal Medicine ($p < 0.01$), which is often associated with heavy workloads, high responsibility, and less alignment with traditionally feminine traits. Instead, these individuals are more likely to choose Dermatology and Venereology ($p < 0.01$) and Obstetrics and Gynecology ($p < 0.1$), as these fields are symbolically perceived as safer and more compatible with feminine roles.

Domestic patriarchy increases the preferences of choosing Surgery ($p < 0.1$), while decreasing preferences for Pediatrics ($p < 0.1$) and Psychiatry ($p < 0.1$), suggesting that traditional gender ideologies still influence how students imagine professional roles. On the other hand, public patriarchy shows a positive association with Pediatrics ($p < 0.05$). However, individuals who support traditional views that limit women's roles in public life are negatively correlated with Obstetrics and Gynecology ($p < 0.05$).

Additionally, a stronger endorsement of gender stereotypes was negatively associated with preferences for Dermatology and Venereology ($p < 0.01$) and Cardiovascular ($p < 0.05$), suggesting that these fields may be seen as too prestigious to be linked with excessive femininity. Moreover, students with segregative views tended to show less interest in Internal Medicine ($p < 0.05$), possibly perceiving it as misaligned with traditional feminine roles.

Medical specialty preferences are influenced not only by gender stereotypes, sexism, and patriarchy, but also by students' social class backgrounds. The data indicate that students whose mothers hold postgraduate degrees (Master's or Doctoral) are approximately 1.59 times more likely to choose Surgery, but less likely to choose Obstetrics and Gynecology ($p < 0.1$). This may reflect an intergenerational transmission of professional values and ambition, in which highly educated mothers provide both inspiration and perceived legitimacy for pursuing prestigious and competitive specialties. Similarly, students whose fathers possess postgraduate education tend to show a lower preference for Dermatology and Venereology ($p < 0.1$). These patterns suggest that social class can both constrain and enable access to specific medical career paths, operating in conjunction with gendered norms and expectations.

Unexpectedly, female students do not exhibit a higher preference for Pediatrics compared to males, as indicated by a statistically lower regression coefficient of 0.78. In

contrast, Dermatology and Venereology are specialties strongly shaped by feminine constructions, often associated with culturally ascribed feminine traits. This study found that female students showed a significantly higher preference for Dermatology and Venereology ($p < 0.01$), compared to their male counterparts, particularly among those aged 20 compared to those aged 16–18 ($p < 0.05$). Conversely, students aged 21–26, who may begin to value hands-on patient experience tend to show a higher preference for Obstetrics and Gynecology ($p < 0.05$), and a lower preference for Pediatrics ($p < 0.1$). From an economic perspective, students whose fathers earn IDR 1–5 million are more likely to prefer Obstetrics and Gynecology ($p < 0.1$) and less likely to choose Surgery ($p < 0.1$) than those whose fathers earn less than IDR 1 million.

## Discussion

This study demonstrated gender differences in specialty preferences among medical students, and the relationship between medical specialty and gender (stereotype, sexisme, and patriarchy). As a result, this study indicates significant gender differences only for Dermatology and Venereology and also Obstetrics and Gynecology, with a higher proportion of females showing interest in these fields (**Table 5**). Contrary with previous literature indicating clear gender differences with women have higher preference to choosing various medical specialties than men (Alers 2015; Infante-Perea et al. 2019; Masters and Barth 2022), however, the finding of this study showed students in Indonesia has a similar pattern that the specialties generally preferred by women are Dermatology and Venereology as well as Obstetrics and Gynecology (Yin et al. 2021).

Women's decision-making in specific specialties is often influenced by factors such as working hours and patient preferences, while men choose specialties based on skills and expected income (Mathew and John 2021). These considerations reflect the impact of gender stereotypes, as women are often entrusted with domestic duties and caregiving responsibilities, while men are expected to be the primary earners (Mathew and John 2021). Other studies have found that Obstetrics and Gynecology are preferred among women due to patient perception preferences, and women are more interested in Dermatology due to its


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perceived value as an ideal field for patient care (Mathew and John 2021). Despite gender stereotypes, women acknowledge and remain satisfied with their choice of these two fields of medicine (Mathew and John 2021)**.**

On the other hand, this study also revealed a tendency toward gender segregation patterns in the selection of medical specializations among students at the Faculty of Medicine Syarif Hidayatullah State Islamic University Jakarta (UIN Jakarta) (**Figure 1 and Figure 2**). For instance, male students were more likely to choose fields such as Surgery, while female students tended to be associated with specializations like Dermatology and Venereology, as well as Obstetrics and Gynecology. This pattern cannot be attributed solely to personal preference or rational considerations, rather, it reflects the influence of social constructions of gender roles operating within the organizational context.

Gender moderates the impact of pressure to conform to female-dominated job interests (Masters and Barth 2022). An increase in the pressure on men to align with gender norms may decrease their interest in female-dominated professions (Masters and Barth 2022). Pauletti et al. (2017) show that men are more sensitive to unacceptable than to acceptable stereotypical messages. In contrast, women are more responsive to positive stereotypical messages about desired behaviors than to messages about negative stereotypes or behaviors they should avoid (Pauletti et al. 2017). This is reflected in the logistic regression model analysis, which shows that male students are less likely to prefer Obstetrics and Gynecology, a specialization that is commonly stereotyped as a field for women (see **Table 6**).

To understand this phenomenon within the context of medical education, it is important to examine how medical specializations themselves are gendered. This highlights the notion that occupations can carry gendered meanings. As Acker (1990) states, “organizations are gendered,” meaning that organizational structures, rules, and cultures systematically shape and reproduce gender norms through everyday work practices. As a consequence, medical students do not choose specializations solely based on interest or career prospects, but also on how they interpret which gender roles are considered “appropriate” or “suitable” for themselves.

The findings of this study also show that gender stereotypes and segregation do not play a positive role. In fact, stereotypes show a significantly negative association specifically with preferences for Dermatology and Venereology, as well as Cardiovascular. Meanwhile, gender segregation exhibits a significantly negative association with the preference for Internal Medicine (see **Table 6**). This suggests that students who hold rigid beliefs about gender divisions tend to avoid specializations they perceive as inconsistent with socially constructed expectations of masculinity or femininity. These findings align with the concept of gendered organizations (Acker 1990), in which social values are internalized into professional choices, even before students enter the actual clinical workforce.

In this phenomenon, patriarchal and sexist values extend beyond mere individual attitudes to reflect broader social structures. Dinah et al. (2020) emphasize that everyone holds sexist beliefs to some degree. Koch et al. (2014) further explain that sexism influences job preferences among men and women by shaping their attitudes, motivations, and career choices. These structural and attitudinal factors are reflected in this study's findings on how sexist beliefs shape medical specialization preferences among students.

Individuals with a high level of sexism, particularly those who believe that men and women have inherently different roles, are more likely to accept gender-stereotyped divisions in medical specializations. Obstetrics and Gynecology, as well as Dermatology and Venereology, are often perceived as "safe spaces" to express caring or nurturing roles traditionally associated with femininity. As a result, students who endorse the belief that women are frail tend to choose specializations that align with this symbolic meaning. On the other hand, specializations such as Internal Medicine, which demand extensive clinical engagement and complex technical work, are more likely to be avoided by those who hold this 'frail women' belief. In contrast, individuals who believe that women are pure are statistically more likely to prefer Internal Medicine (see **Table 6**).

This pattern suggests that traditional gender ideology, particularly aspects of domestic patriarchy, not only influences perceptions of what roles are considered "suitable" for men and women but also intersects with structural and practical factors such as work setting and schedule flexibility. Domestic patriarchy increases students' inclination to prefer Surgery while decreasing their inclination to choose Pediatrics and Psychiatry (see **Table 6**),


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and this reinforces the argument that traditional gender ideologies continue to shape how students conceptualize professional roles. Furthermore, women with a patriarchal mindset tend to uphold their own stereotypical beliefs (Ferdoos and Zahra 2016), which interact with practical considerations influencing specialization choices.

This preference pattern makes more sense when considering the structural characteristics of Pediatrics and Psychiatry. Pediatrics and Psychiatry are widely recognized as well-suited to outpatient or community-based practice, offering greater accessibility and flexibility compared to hospital-based specialties such as Surgery or Internal Medicine. Community clinics reduce travel barriers and allow for more adaptable scheduling and longer consultation times, which help lower non-attendance rates, particularly in deprived areas (McLeod et al. 2015). Overall, outpatient care is generally more cost-efficient than hospital-based services, as it leverages existing community resources more effectively (Fung and Lim-Ashworth 2017).

These structural features, when viewed through the lens of institutional religiosity, reveal how gendered expectations shape perceived career compatibility. Advantages such as flexible scheduling and community-based service delivery may hold particular appeal for women navigating traditional gender roles. Within institutional contexts shaped by religious and cultural norms, traditional religious beliefs often frame women's work as secondary, leading to lower aspirations for women compared to men (Schnabel et al. 2022). Religious involvement reinforces these expectations: men’s religiosity tends to align with provider roles, while women's emphasizes personal moral values and caregiving, particularly in households with children, which can further constrain professional ambitions (Becker and Hofmeister 2001). In this sense, preference for Pediatrics or Psychiatry may reflect not only personal interest or skills alignment, but also because these fields offer work arrangements that are more compatible with negotiation of institutional and cultural expectations regarding gender and work.

This contrasts with individuals holding patriarchal views about gender roles in public areas, who tend to reject women’s presence in professional settings. These individuals show a stronger preference for Pediatrics but are less willing to pursue careers in Obstetrics and Gynecology. This suggests that students consider not only the patient’s gender but also

societal ideas about women's roles. Pediatrics is seen as a safer and more acceptable field for women, while specializations involving direct contact with the female body, such as Obstetrics and Gynecology, tend to be avoided because they may be viewed as inappropriate within patriarchal norms.

Besides the influence of gender, sexism, and patriarchy, this study also shows that social class significantly affects medical specialization preferences. In particular, students whose mothers have higher education and income tend to choose specializations like Surgery as well as Dermatology and Venereology (see **Table 6**), which are often linked to higher social status. This suggests that social class shapes not only educational access but also career preferences within certain social contexts, reflecting how family background influences opportunities and perceptions of prestige in the medical field.

Above all, the findings of this study indicate that the majority of students hold egalitarian views on gender. This study supports Asaad et al. (2020)'s idea that both men and women should be able to pursue medical specialties in accordance with their interests, irrespective of gender. However, while readers might argue that the effects of stereotypes, segregation, sexism, and patriarchy are generally not significant, I believe it would be unwise to disregard these predictors when analyzing individual preferences for medical specialties.

## Conclusion

This study shows that students' medical specialty preferences are closely tied to gender constructions embedded within structured and culturally shaped organizations. Although many students hold gender-neutral views, there remains a tendency toward gender segregation, with specialties still associated with masculinity or femininity. The main findings from this analysis indicate that a greater proportion of women show a higher preference for Dermatology and Venereology, as well as Obstetrics and Gynecology, compared to men when choosing a medical specialty. While stereotypes, segregation, sexism, and patriarchy were not consistently statistically significant in the regression model, this article highlights that social and cultural dynamics continue to shape medical students'


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career choices in nuanced and sometimes unexpected ways, highlighting the need to account for this complexity in understanding their professional decision-making.

This study has several limitations. First, it focuses only on seven of the most competitive medical specialties in Indonesia, despite the wide range of options available. Second, the sample is predominantly female, which may limit the generalizability of the findings to a more gender-balanced population. Third, the lack of accessible national-level data on gender distribution across specialties in Indonesia poses challenges for broader analysis of trends and disparities.

Therefore, solutions to this dynamic must go beyond policy reform alone. While implementing formal and transparent recruitment and promotion processes can support greater diversity, lasting change requires institutions to also address the cultural and symbolic mechanisms that continue to reproduce inequality. The state plays a crucial role in supporting this transformation, through equitable parental leave policies and affordable childcare access. However, traditional notions of masculinity, particularly the emphasis on the breadwinner role, still hinder the equal distribution of domestic responsibilities. Cultural efforts are thus needed to reconstruct more inclusive and equitable understandings of masculinity and femininity, beginning with interventions in media and education.

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