

Impact of Women's Domination in Plastic Surgery Residency Program in Indonesia

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Background: A shift in gender dominance from man to woman in the medical field has occurred from time to time globally, including in Indonesia's plastic surgery community. This shift may alter the education and clinical settings of plastic surgery. This study aimed to explore the effect of the phenomenon of women's dominance in plastic surgery residency programs in Indonesia.

Methods: This qualitative study was conducted using a phenomenological approach on three plastic surgery residency programs in Indonesia. Academic report review, focus group discussions, and in-depth interviews of residents, lecturers, residency program managers, and alumni user groups were selected using the maximum variation sampling method. Data obtained were analyzed and processed thematically.

Results: Three themes emerged based on the educational process timeline: pre-education, intra-education, and post-education. Each timeline had several themes that mutually influenced the educational process. In the pre-educational process, residents' personal characters were affected by societies' positive and negative perceptions. The working environment, impact of women's dominance, and cultural dimension affected the intra-educational process. When entering the career life, residents expected an ideal working environment and had particular workplace preferences to achieve their well-being.

Conclusions: The impact of women's dominance during the educational program affected residents' daily dynamics. However, this dominance did not affect the quality of education and workloads. (*Plast Reconstr Surg Glob Open* 2021;9:e3757; doi: 10.1097/GOX.0000000000003757; Published online 17 August 2021.)

INTRODUCTION

Men once dominated the medical field, but over time, the number of female doctors increased and eventually dominated the profession.¹⁻³ In recent decades, the number of students enrolled in medical science and

residency program has exponentially increased.¹ However, the number of female students in the medical fields is still less representative.²

Although the surgical field is still generally dominated by men, the number of female surgeons has increased. In the late 2000s, women accounted for 10%–20% of all surgeons.⁴⁻⁶ A notable surge in the number of female plastic surgery residents was reported in the United States of America (USA) between the year 1998 and 2018 (13% and 34%, respectively).⁷ Despite that, the ratio of male to female plastic surgeons in the USA is approximately 5:1.⁸ Several studies focused on alteration in women's dominance evaluated by how they deal with their profession as a doctor. However, only a few studies explored the effect of the gender dominance shift to health systems and services.¹

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A similar phenomenon can be observed in Indonesia's plastic surgery community. In 2018, 44% of Indonesian registered plastic surgeons were women.⁹ There are five plastic surgery residency programs in Indonesia. Indonesia's plastic and reconstructive surgery implemented university-based residency program in Universitas Indonesia, Universitas Padjajaran, Universitas Airlangga, Universitas Udayana, and Universitas Syiah Kuala. Universitas Indonesia had 39 plastic surgery residents, of whom 71.8% were women.¹⁰ Universitas Padjajaran also shows dominance in female plastic surgery residents (63.6%). Unlike the aforementioned institutions, Universitas Airlangga had an equal number of female and male plastic surgery residents. Based on these data, in the next 5 years, the number of Indonesian female plastic surgeons is predicted to increase to 55.7% out of 280 plastic surgeons.

Women were once believed to have less interest in the surgical field. However, it has been shown otherwise in plastic surgery. The alteration in gender dominance is believed to affect plastic surgery educational system and services. Identification of the effect of gender dominance shift through a qualitative approach could provide a valuable insight into this matter. Therefore, this study aimed to explore the effect of the female domination phenomenon in Indonesia's plastic and reconstructive surgery residency programs from the perspective of the residents, lecturers, residency program managers, and alumnus users.

METHODS

This qualitative study was conducted using a phenomenological approach on the three earliest plastic reconstructive and aesthetic surgery residency centers in Indonesia: faculty of medicine in Universitas Indonesia, Universitas Airlangga, and Universitas Padjajaran. This research was conducted to explore the phenomenon of female dominance in plastic surgery residency programs in Indonesia by analyzing residents' interests, perceptions of the program before undergoing education, satisfaction, difficulties, and reasons for prolonged residency duration.

This research targeted Indonesian aesthetic and reconstructive plastic surgeons' academic community, which was further grouped into four: residents, lecturers, residency program managers, and alumnus users. Research respondents were selected using maximum variation sampling method. The resident respondents were divided into three based on the completed length of study: one semester, five to seven semesters, nine to 10 semesters, and more than 10 semesters; then further divided based on their genders. Meanwhile, in lecturer groups, respondents were recruited based on their gender and institution. The alumni user group consisted of hospital director, head of hospital surgical department, human resources staff of related institutions, plastic surgery private clinic owners, and plastic surgery association member. Lastly, the alumnus user group was varied based on the gender, background, and graduates being evaluated.

Research data were collected by academic report reviews, focus group discussions, and in-depth interviews.

Residents of the same gender, length of study, and institution were grouped into one focus group. Meanwhile, the lecturers, residency program manager, and alumnus user respondents underwent an in-depth interview. The focus group discussions and in-depth interviews were carried out with an open-ended questionnaire developed based on literature review. (See appendix, Supplemental Digital Content 1, which displays the questionnaire. <http://links.lww.com/PRSGO/B752>.) This process was recorded with a digital recording device. Each respondent obtained an informed consent letter as evidence of permission, data confidentiality, and data obtained would not affect respondents' education process.

The research was conducted in January 2020. Data collection was carried out with ethical approval letters from the Medical Research Ethics Committee of the Faculty of Medicine, Universitas Indonesia and Dr. Soetomo Surabaya General Hospital. These letters include research approval in all centers. Online platforms were used to collect data due to national travel restriction during the COVID-19 pandemic. Data collection using an online platform did not hinder or limit data collection according to direct research methods.

RESULTS

A total of 62 plastic surgery residents (40 women, 22 men), eight residency program managers (four men, four women), six lecturers (three women, three men), and seven alumnus users (three men, four women) were included in this study. Table 1 features the distribution of research participants. Based on the completed level of study in 2019–2020, there were two groups with no respondents. Lecturer respondents were further divided based on gender and institution. Only alumni user groups who managed the plastic surgery graduates were included as respondents. Public hospital directors, heads of surgical departments, human resources staff, private clinic owners who employ plastic surgeons, and the representative of the Indonesian plastic surgery organization were included as the respondents (Table 1).

Based on the resident groups' academic reports, 11 of them had exceeded the expected graduation period. Nevertheless, seven of 11 residents in the more than 10 semesters group had a grade point average of 3.40, which was similar to the other groups' mean grade point average (3.45).

Of the 11 residents (81.8%) of the more than 10 semesters group, nine respondents were women. The majority of the respondents from the residents groups were married (63.6%), followed by 27.3% individuals who were not married, and 9.1% were divorced.

We managed the respondents' answers by classifying the theme and identified the phenomenon until the data were saturated to emerge the theme, subtheme, and sub-subtheme. Table 2 depicts the theme and subtheme identified in this study. Then we elaborated the result into a diagram (Table 2, Fig. 1).

The participants' perceptions over the identified study theme and subtheme are presented in Supplemental Digital Content 2. (See appendix, Supplemental Digital Content 2, which displays the identified aspects of study. <http://links.lww.com/PRSGO/B753>.)

Table 1. Research Participant Distribution

| Group | Institution/Role | Length of Study | Gender | Total Population | Total Respondents |
|---------------------------|---|-----------------|--------|------------------|-------------------|
| Residents | Universitas Indonesia | 1 semester | Women | 1 | 1 |
| | | | Men | 3 | 3 |
| | | 5–7 semesters | Women | 3 | 2 |
| | | | Men | 1 | 1 |
| | | 9–10 semesters | Women | 5 | 5 |
| | | | Men | 1 | 1 |
| | | >10 semesters | Women | 4 | 4 |
| | | | Men | 1 | 1 |
| | Universitas Padjajaran | 1 semester | Women | 2 | 2 |
| | | | Men | 1 | 1 |
| | | 5–7 semesters | Women | 5 | 5 |
| | | | Men | 2 | 2 |
| | | 9–10 semesters | Women | 1 | 1 |
| | | | Men | 1 | 1 |
| | | >10 semesters | Women | 2 | 2 |
| | | | Men | — | — |
| Universitas Airlangga | 1 semester | Women | 4 | 4 | |
| | | Men | — | — | |
| | 5–7 semesters | Women | 7 | 7 | |
| | | Men | 12 | 7 | |
| | 9–10 semesters | Women | 5 | 4 | |
| | | Men | 5 | 4 | |
| | >10 semesters | Women | 3 | 3 | |
| | | Men | 1 | 1 | |
| Lecturers | Universitas Indonesia | Women | — | 1 | |
| | | Men | — | 1 | |
| | Universitas Padjajaran | Women | — | 1 | |
| | | Men | — | 1 | |
| | Universitas Airlangga | Women | — | 1 | |
| | | Men | — | 1 | |
| Residency program manager | Universitas Indonesia | Women | — | 2 | |
| | | Men | — | 1 | |
| | Universitas Padjajaran | Women | — | 1 | |
| | | Men | — | 2 | |
| | Universitas Airlangga | Women | — | 1 | |
| | | Men | — | 1 | |
| Alumnus user | Hospital director | Women | — | — | |
| | | Men | — | 1 | |
| | Head of hospital surgical department | Women | — | — | |
| | | Men | — | 2 | |
| | Human resources staff of surgical department | Women | — | 2 | |
| | | Men | — | — | |
| | Private clinic owner | Women | — | 1 | |
| | | Men | — | — | |
| | General secretary of Indonesia's plastic and reconstructive surgery association | Women | — | 1 | |
| | | Men | — | — | |

DISCUSSION

Despite a dramatic increase in women entering the surgical field, only a few studies had explored the effect of women's dominance in plastic and reconstructive surgery

on the quality of education and health services.¹ In 2010, Hofstede et al discovered that in countries with feminine culture, such as Indonesia, women could pursue higher education based on their interests.¹¹ Medical students, despite their gender, would continue to take their chances to go after higher education. This research proves the interest encouraged them to pursue specialist education. Interest in surgical procedures would also urge female doctors to enter surgical departments.

The internal and external motivations, and role models' traits, may affect an individual's career path choice. This study found that the resident respondents' motivation to pursue plastic and reconstructive surgery was attributable to the number of plastic surgery cases faced during their studies, internships, and other clinical experiences. This finding is similar to a study in 2008 by Greene et al, in which the rise in interest toward plastic and reconstructive surgery, observed since 2002 in the USA, was owing to the increase in exposure of plastic surgery cases to medical students.¹²

In the USA, a majority of the society perceives plastic surgery as an aesthetic-related surgical field.^{13,14} This is on par with our finding in Indonesia. However, the existing

Table 2. Identified Themes and Subthemes

| Theme | Subtheme |
|---|---|
| Pre-education | |
| Motivation | Internal motivation External motivation |
| Public perception (on plastic surgery) | Positive Negative |
| | |
| Intra-education | |
| Working environment | Positive Negative |
| Study | Women point-of-view Men point-of-view |
| Cultural dimension | Leadership Role in family Institutional culture Masculinity and femininity |
| | |
| | |
| | |
| Post-education | |
| Graduates distribution | Ideal condition Workplace preference |

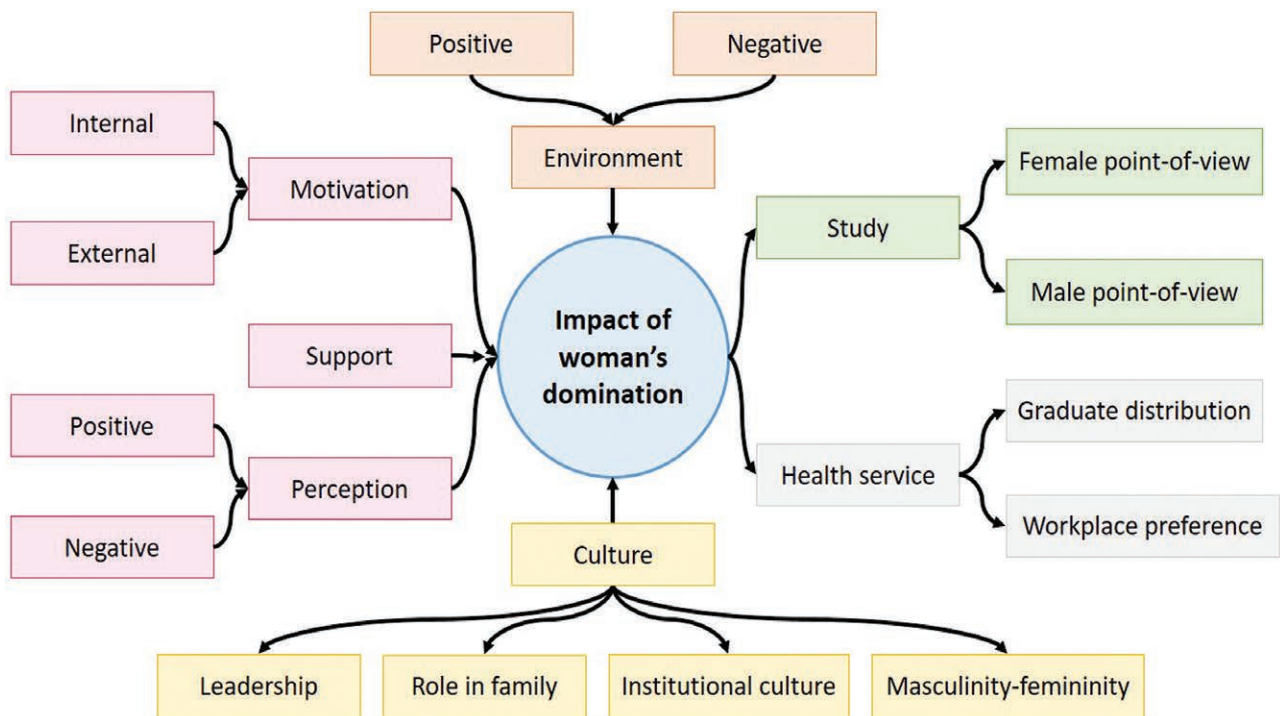


Fig. 1. Theme and subtheme connections developed through thematic analysis of data.

society’s misperceptions of plastic surgery did not lessen residents’ interest in either the aesthetic or reconstructive part of the field. Similar findings were discovered in a study by Atashroo et al. The interest toward reconstructive cases and aesthetic cases of plastic surgery was comparable.¹⁵

Based on the Greene et al study, medical students consider plastic surgeons to have a higher income than other surgeons, considering more cases handled were private patients.¹² Similar to this research, financial matters play a part in respondents’ consideration to pursue plastic surgery. Respondents considered plastic surgeons to be financially stable.

Moreover, an amiable lecturer and professor were shown to influence the resident’s characters as well as interest in plastic surgery. This study supports Hofstede et al’s findings in which role model’s characters, namely good work ethics, communication, composure, and wisdom would enhance student’s personalities and interest in plastic surgery.¹¹

Women are believed to have nonaggressive traits.¹¹ Consequently, women who were eager to be in a surgical department would opt for plastic surgery, considering it is viewed as less aggressive. Our study reveals that plastic surgery was assumed to encounter fewer emergency cases than other surgical fields. A study by Atashroo et al stated that plastic surgery residency programs were appealing due to the residents’ well-being because less emergency cases enabled them to have a work–life balance.¹⁵

Physical and mental health play a part on how residents could withstand abundant workloads and changes during residency. Feminine groups tend to desire leisure

time, which would allow them to physically and mentally recharge.¹¹ This research found that cultural dimension also affects the need for leisure time during education. Leisure time would enable residents to balance their role as residents and part of family. This finding is supported by Levinson et al in which female doctors tend to choose specialties with more flexible working hours and fewer emergency cases to achieve a work–life balance. Due to their role as mothers, these individuals are likely to work fewer hours than full-time doctors for their child-related matters.¹

In contrast with masculine societies such as the USA, a greater number of cases and surgeries were found to be more appealing to residents.¹⁵ Moreover, US female residents were likely to delay pregnancy (33%–34%).¹⁶ Capek et al recorded that 43% of female residents experienced a decrease in productivity after having children.¹⁷ The masculine community culture saw failure in education as disreputable.¹¹ Thus, in the USA, residents prefer to delay pregnancy than to lower their productivity.

An individual’s potential was agreed on by the residents, lecturers, and residency program managers to be the main aspect to support learning. Residents chose to work with colleagues and be supervised by mentors based on their expertise. In addition, the residency program manager also chooses to accept new residents solely on their capability, regardless of gender. This is on par with the USA residency program, where no exclusivity of certain gender was observed. Resident candidates were selected based on their academic report, leadership skill, research and academic interests, along with recommendation letters.¹⁸ This is triangulated among male and female residents, lecturers, and residency program managers.

In the USA, female residents were more likely to prefer mentors who are of the same gender. This phenomenon happened because they usually have a role model of the same gender throughout the residency.¹⁶ Having a mentor of the same gender would elevate resident's managerial skill, knowledge, self-confidence, and professionalism.¹⁹ Sambunjak et al added the same gender between female residents and mentors was shown to inspire the residents to balance personal life with work-life.²⁰ Although some respondents believed that the same gender between residents or mentor and residents would facilitate the ease of communication, most residents would choose mentors based on their experience rather than gender.

In this study, gender dominance did not affect the quality of education and workload. The same amount of workload was given to all residents. Based on lecturers and residency program manager respondents, both genders were given the same task and requirements to pass the program. However, patients, especially women, prefer to be handled by doctors of the same gender. This is owing to religious reasons and higher empathy shown by female residents, allowing them to be more open during consultation.^{16,21,22}

This study found that plastic surgeons had the same opportunity to lead regardless of gender. Even an alumnus user respondent stated that women tend to not take roles as leaders, which is similar to the finding in Levinson et al.¹ Albeit no dominance in men's leadership status, this study found that female plastic surgeons prefer to discard a leadership chance. They did not want to be seen authoritative. This is in congruent with Hofstede et al, in which women prefer to be seen as compromising.¹¹ Thus they tend to be project initiators. On the contrary, a leadership gap for women was found in the USA.²¹ This is due to limited opportunities given to female doctors to lead.²³

Residents who experienced a delay in completing residency were stated to have gone through family-related problems, which deplete their time and energy. Women are known to be in charge of the household and men to be responsible for financial matters. These took part in the resident's well-being and would cause finishing the program be more challenging.¹⁵

A flexible work schedule was found to be preferable in this research. Nevertheless, many respondents aspire to work in the hospitals, such as governmental, teaching, and referral hospitals located outside Indonesia's urban area. Some respondents also prefer to work both in the hospital and clinics with flexible working hours. Indonesian plastic surgery residents favored working in the hospitals due to higher numbers of challenging reconstructive cases. They also believed that working in clinics would not satisfy their desire to help the community. On the contrary, in the USA, female plastic surgeons were 33% more likely to work in clinics than male surgeons (13%). Working in clinics was believed to allow female surgeons to have a work-life balance.^{24,25}

CONCLUSIONS

The shift in gender dominance has occurred in the medical field, including in Indonesia's plastic surgery

community. Through this research, it can be concluded that neither society's misperception regarding plastic surgery nor workload demotivated student's interest in becoming a plastic surgeon. Instead, this inspired them to participate and improve Indonesia's plastic surgery service to society. Furthermore, this study demonstrates that the impact of women dominating plastic surgery residency programs would solely affect the dynamic between residents, not the quality of education or workload given to residents.

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