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Gender Differences in Vitreoretinal Practice: A National Survey of Indonesian Vitreoretinal Society (INAVRS) Members

Gitalisa Andayani Adriono

gitalisa.andayani@ui.ac.id

University of Indonesia

Sarah Kamiela Juffry

University of Indonesia

Referano Agustiawan

Jakarta Eye Centre

Muhammad Bayu Sasongko

Universitas Gadjah Mada

Habibah S Muhiddin

Hasanuddin University

Nadia Artha Dewi

University of Brawijaya

Sauli Ari Widjaja

Rumah Sakit Dokter Soetomo

Andi Arus Victor

University of Indonesia

Ari Djatikusumo

University of Indonesia

Anggun Rama Yudhanta

University of Indonesia

Mario Marbungaran Hutapea

University of Indonesia

Sita Paramita Ayuningtyas

University of Indonesia

Ohisa Harley

Padjadjaran University

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Adriono et al

Gender Differences in Vitreoretinal Practice: A National Survey of Indonesian Vitreoretinal Society (INAVRS) Members

Gitalisa Andayani **Adriono**[1,2,3*], Sarah Kamiela **Juffry**[2], Referano **Agustiawan**[3], Muhammad Bayu **Sasongko**[4], Habibah S **Muhiddin**[5,6], Nadia Artha **Dewi**[7], Sauli Ari **Widjaja**[8], Andi Arus **Victor**[1,2], Ari **Djatikusumo**[1,2], Anggun Rama **Yudantha**[1,2], Mario Marbungaran **Hutapea**[1,2,3], Sita Paramita **Ayuningtyas**[1,2], Ohisa **Harley**[9,10,11]

[1] Department of Ophthalmology, Kirana Eye Center - Cipto Mangunkusumo National General Hospital, Jakarta, Indonesia

[2] Faculty of Medicine, University of Indonesia, Jakarta, Indonesia

[3] JEC Eye Hospitals & Clinics, Jakarta, Indonesia

[4] Department of Ophthalmology, Faculty of Medicine, Public Health and Nursing, Gadjah Mada University, Jogjakarta, Indonesia

[5] Department of Ophthalmology, Faculty of Medicine, Hasanuddin University, Makassar, Indonesia

[6] JEC Eye Hospitals & Clinics, Makassar, Indonesia

[7] Department of Ophthalmology, Faculty of Medicine, Brawijaya University, Malang, Indonesia

[8] Department of Ophthalmology, Dr. Soetomo General Academic Hospital, Surabaya, Indonesia

[9] Department of Ophthalmology, Faculty of Medicine, Padjajaran University, Jatinangor, West Java, Indonesia

[10] Netra Eye Clinic, Bandung, West Java, Indonesia

[11] Department of Ophthalmology, Universitas Padjajaran Hospital, West Java, Indonesia

Correspondence:

Gitalisa Andayani Adriono, MD, PhD

Department of Ophthalmology, Kirana Eye Center - Cipto Mangunkusumo National General Hospital, Jakarta, Indonesia

Kimia Street, Jakarta, Indonesia, 10320

Tel: +62 811 131 660

Email: gitalisa.andayani@ui.ac.id

ORCID ID: https://orcid.org/0000-0003-1521-459X

Authors' emails:

Sarah Kamiela Juffry sarahjuffry@gmail.com

Referano Agustiawan referanoagustiawan@gmail.com

Muhammad Bayu Sasongko mb.sasongko@ugm.ac.id

Habibah S Muhiddin muhiddinhabibah@yahoo.co.id

Nadia Artha Dewi nadia_dewi@ub.ac.id

Sauli Ari Widjaja sauliawidjaja@gmail.com

Andi Arus Victor arvimadao@yahoo.com

Ari Djatikusumo dr_djatikusumo@yahoo.com

Anggun Rama Yudhanta ramalangka@gmail.com

Mario Marbungaran Hutapea hutapeafk2000@gmail.com

SIta Paramita Ayuningtyas ayusita_84@yahoo.com

Ohisa Harley ohisa23001@mail.unpad.ac.id

Abstract:

Purpose: To investigate gender-based differences in professional characteristics, career barriers, and workplace perceptions among members of the Indonesian Vitreoretinal Society (INAVRS).

Study design: Original article, cross-sectional study.

Methods: A cross-sectional survey of 145 INAVRS members was conducted, assessing demographics, surgical workload, and career perceptions. Statistical analysis included Chi-Square or Fisher's exact tests for categorical data, Mann-Whitney U tests for ordinal/Likert data, and multivariate logistic regression to evaluate the association between gender and surgical subspecialization.

Results: No significant gender differences were found in age, practice years, and academic engagement. Although surgical practice and surgical procedure volumes did not differ significantly between genders (p=0.093; p=0.066), female gender was associated with lower odds of surgical subspecialization after adjustment for age and years of practice (aOR=0.50, p = 0.067). Male specialists

identified maternity-related career interruption as a significant barrier to women's career advancement (p=0.001), whereas female specialists reported underrepresentation in leadership (p=0.045). Paradoxically, women reported significantly higher perceived institutional support (p=0.017) alongside significantly higher perceived need for additional training (p=0.027). Overall satisfaction was similar in both genders (p=0.678). Male specialists more frequently agreed to vitreoretinal practice having a more negative impact on family time (p=0.047).

Conclusion: Despite comparable demographic and professional characteristics, perceptual and structural differences persist in Indonesian vitreoretinal practice. Targeted mentorship and flexible training models are essential to address the additional training needs and leadership gaps identified by female practitioners.

Keywords: Differences, Gender, Vitreoretinal, Barriers, Workplace.

Introduction

The medical profession has been experiencing a substantial influx of female representation over the past few decades, with women amounting to approximately half of medical school graduates in the Western countries.[1] However, Gill et al. reported gender disproportionality still exists in 104 countries with less than 50% female doctors in most regions (America 46%, West Pacific 41%, Southeast Asia 39%, East Mediterranean 35%, and Africa 28%). A different phenomenon can be observed in Europe with 53% female representation.[1,2] Similarly, in Indonesia, the female proportion is particularly high, reaching 60% of medical graduates nationwide.[3] Despite the growing number, gender differences remain evident across medical specialties, especially in leadership roles, senior academic positions, subspecialty education, and wage. This trend is notable in ophthalmology. In 2019, there were approximately 27% of female ophthalmologists in the United States, placing ophthalmology 3rd among other surgical specializations in regards to female representation. Compared to other ophthalmological subspecializations, vitreoretinal showed lowest female representation at around 19% in 2018.[1,4]

Gender equity has been extensively studied and its benefits have been documented, such as improving innovation and productivity, as well as, better decision-making. Within the medical field, equity is trusted to increase connections and empathy with patients, improve patients' satisfaction level, and reduce morbidity rate. A past research reported that female vitreoretinal surgeons exhibited quicker learning

curve during retinal detachment surgery training, compared to their male counterparts.[5] The causes of gender inequality are complex and multifactorial, with certain barriers faced by women, including the lack of female leaders, support, and mentorship during surgical training. This is exacerbated by unequal distribution of sponsorship and research grants, along with incessant income differences. Moreover, surgical subspecialties such as vitreoretina require time-consuming additional training, more frequent emergency calls, and more demanding and unpredictable schedule that may dissuade female ophthalmologists from pursuing said training. Another potential factor contributing to gender roles, in terms of personal life, is the unequal distribution of domestic duties. Female doctors including VR specialists tend to face greater household and childcare responsibilities compared to their male counterparts, potentially influencing career progression.[1,2,4]

A survey conducted by the European Society of Vitreoretina Specialists (EURETINA) revealed that female vitreoretinal specialists perceived fewer opportunities for career advancement and unequal compensation compared with their male colleagues. Female respondents also identified male-dominated workplace culture as the most significant barrier to career progression. Overall, the EURETINA survey demonstrated systematic differences between male and female respondents in perceptions related to career development, institutional support, access to training opportunities, and work-life balance.[6]

Previous surveys conducted in the United States and Europe have consistently demonstrated gender differences between female and male physicians, particularly in leadership and academic positions, career advancement, and remuneration.[1,8] A recent Japanese Retina and Vitreous Society (JRVS) survey provides a pertinent Asian comparison to this matter, the study reported that among 607 participants, women had lower very-high job satisfaction compared to men and more often considered life events as career obstacles than men, both were statistically significant.[9] The study itself adopted the EURETINA survey.

Although gender differences have been widely investigated in many high-income countries, data specific to Indonesia, where more than 50% of practicing physicians are women, remain limited, including within the vitreoretinal subspecialty.

Therefore, this study aimed to explore demographic characteristics, as well as differences in perceptions, professional experiences, and academic activities among female and male members of the Indonesian Vitreoretinal Society (INAVRS). Moreover, to investigate and understand the extent of

gender differences that may exist, as well as to provide a more comprehensive understanding of career potential, barriers, and enabling factors within the Indonesian context. The data may be used to optimize and fully harness the potential of these practitioners.

Material and Methods

The study was conducted in accordance with the Declaration of Helsinki and approved by the Ethics Committee of the Faculty of Medicine, University of Indonesia – Cipto Mangunkusumo Hospital (protocol number: 25–09–1496).

Study Design and Sample Collection

This study employed a cross-sectional study design using an online survey methodology. The data collected consisted of primary data obtained directly from survey respondents. The study was conducted nationwide across Indonesia, with respondents comprising both male and female members of the Indonesian Vitreoretinal Society (INAVRS) practicing in a range of academic institutions and clinical settings. Data collection was carried out over a two-month period, from October to November 2025.

The online survey was administered using a Google Forms questionnaire. The questionnaire was in English and its items were adapted from the EURETINA “Women in Retina” Survey,[6,7] with permission and approval obtained from EURETINA. Several additional questions were included to capture information related to workload and academic activities. Questions regarding career, support, workplace culture, barrier, and enabler items used tick-box or multiple-response format. Job satisfaction was extracted using the 0-10 scale. Other questions, including three remuneration items (fairness of pay, adequacy of pay, and fee negotiation), the recommendation item (whether retina is suitable for women), and family interaction item (whether vitreoretina reduces family time) applied the ordered response categories (Likert scale).

Inclusion and Exclusion Criteria

Eligible participants were those who were registered as active members of the Indonesian Vitreoretinal Society (INAVRS), acting as vitreoretinal specialists, vitreoretinal fellow/trainee (medical, surgical, or

both), or as general ophthalmologists. There were 267 INAVRS members in total, 126 females (47%) and 141 males (53%). The 145 analyzed responses represented 54.3% of reported membership, with more female participants (87/126 women; 69%) than male participants (58/141 men; 41.1%).

All participants were instructed to provide informed consent and to voluntarily complete the online questionnaire in its entirety. Meanwhile, participants were excluded from the study if they failed to complete all sections of the online questionnaire or withdrew informed consent at any point during the study.

Data Collection

Collected data included independent variables, including gender, age, professional status, field of practice, length of professional practice, practice setting, and family status. The dependent variables consisted of participants' perceptions regarding workplace culture, work-life balance, salary and benefits, career advancement opportunities, and mentorship and professional development.

Statistical Analysis

Descriptive findings were presented as n (%) for categorical variables and median (interquartile range [IQR]) for skewed numerical variables. Categorical variables were analyzed using the Pearson's Chi-Square test or Fisher's exact test when there are small, expected cell counts. The p-values for multi-select items were computed by converting each option into a separate binary indicator (selected vs not selected), then testing each indicator by Chi-square test or Fisher's exact test. The percentages for such items should not be summed across options. Ordinal data from Likert-scale items were analyzed using the Mann-Whitney U test to compare median scores between genders, presented as median and interquartile range (IQR). Ordered response categories and the overall 0-10 satisfaction score were compared between genders using Mann-Whitney U tests. A multivariate binary logistic regression model was constructed to identify gender as an independent predictor of surgical vitreoretinal specialization, adjusting for age and years of practice. Data analysis was conducted using IBM SPSS version 27.0 (IBM Corp., Armonk, NY, USA). Statistical significance was set at $p < 0.05$.

Results

Demographics, Professional Engagement, Clinical Workload, and Subspecialty Trends

A total of 145 members of the Indonesian Vitreoretinal Society (INAVRS) were analyzed (n=58 males, n=87 females). Analysis found no significant baseline demographic differences between genders, specifically, age distribution (p=0.891), professional status as specialist or fellow (p=0.610), and years of practice (p=0.504). Subspecialty training showed a non-significant trend toward greater surgical/combined training among males (75.4%) compared with females (61.9%) (p=0.093). Reported workplace settings showed no statistically significant difference between genders. Public/general hospital work was reported by 53.4% of men versus 56.3% of women (p=0.733), and private hospital/eye-clinic work by 74.1% versus 70.1% (p=0.598), with respondents able to select multiple settings. Participation in academic activities also showed no significant difference, including teaching (p=0.328), research engagement (p=0.945), and conference presentations (p=0.555). Although male respondents demonstrated numerically higher procedural volumes, differences did not reach statistical significance. Median medical retina volume was 40 cases/month in males versus 25 in females (p=0.071). Median surgical retina volume was 10 cases/month in males versus 7 in females (p=0.066) (Table 1) (Figure 1).

Table 1. Baseline demographics and professional characteristics.

Variable	Gender (n = 145)		*p*-value
	Male (n = 58)	Female (n = 87)	
Age group (number [%]) <45 years >45 years	 34 (58.6%) 24 (41.4%)	 50 (57.5%) 37 (42.5%)	0.891
Professional status (number [%])^ VR Specialist VR Fellow	 41 (70.7%) 17 (29.3%)	 58 (66.7%) 29 (33.3%)	0.610
Subspecialty training (number [%])# Medical retina Surgical retina / Combined	 14 (24.6%) 43 (75.4%)	 32 (38.1%) 52 (61.9%)	0.093
Practice years (number [%]) <10 years >10 years	 39 (67.2%) 19 (32.8%)	 63 (72.4%) 24 (27.6%)	0.504
Practicing at public / general hospital (number [%])^	31 (53.4%)	49 (56.3%)	0.733
Practicing at private hospital / clinic (number [%])^	43 (74.1%)	61 (70.1%)	0.598
Teaching activity (number [%])	19 (32.8%)	22 (25.3%)	0.328

Research engagement (number [%])	25 (43.1%)	38 (43.7%)	0.945
Conference presentation (number [%])	42 (72.4%)	59 (67.8%)	0.555
Medical retina case volume (median [IQR], procedures/month)[$]	40 (47)	25 (40)	0.071
Surgical retina case volume (median [IQR], procedures/month)[$]	10 (29)	7 (20)	0.066

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192 IQR: interquartile range.

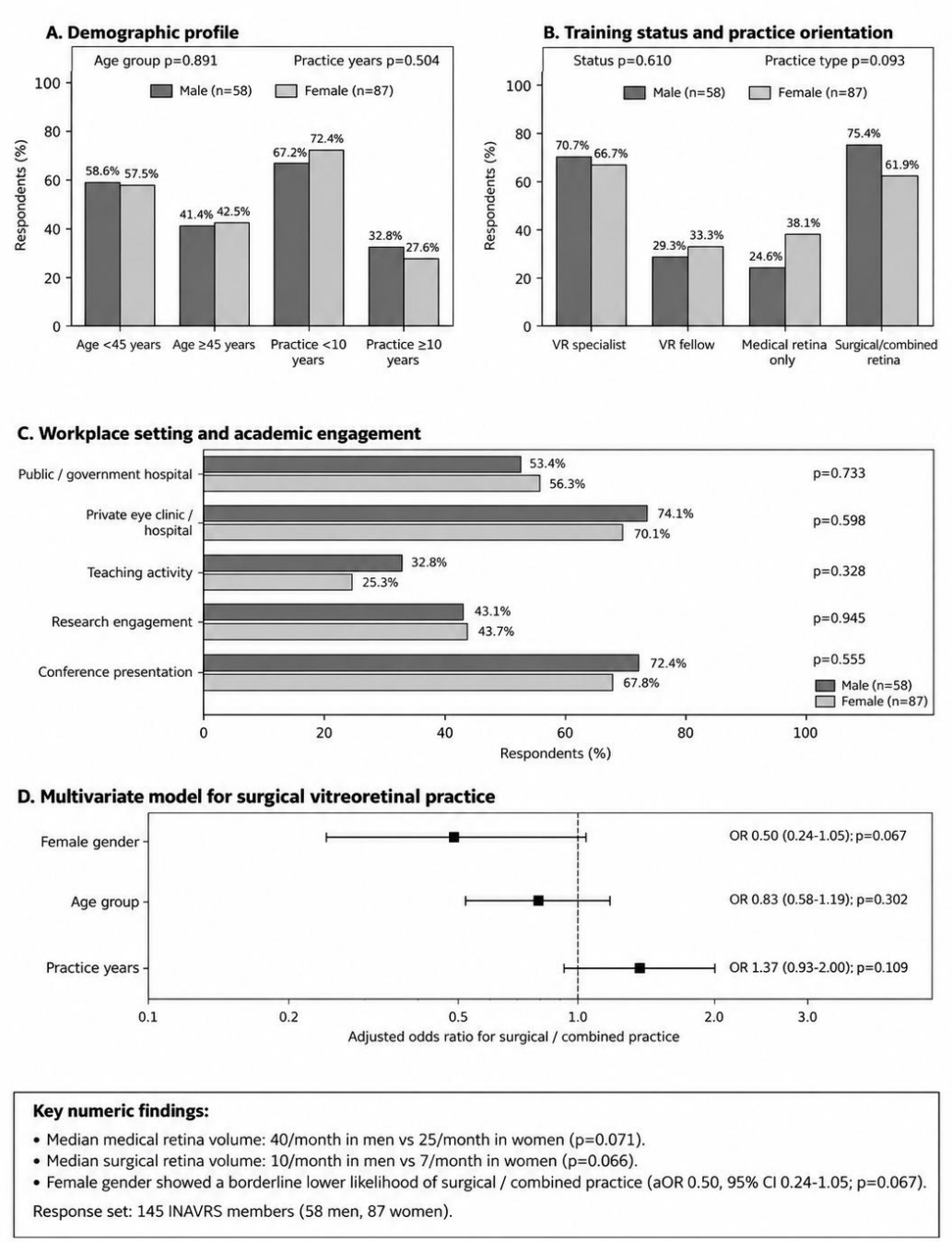
193 Statistical Test: Chi-Square test

194 [^]Multi-select, collected data is more than 145 in total

195 [#]Excluded n=4 ‘not yet performed retinal procedure’ from this comparison

196 [$]Statistical Test: Mann-Whitney test

197



Key numeric findings:

- Median medical retina volume: 40/month in men vs 25/month in women (p=0.071).
- Median surgical retina volume: 10/month in men vs 7/month in women (p=0.066).
- Female gender showed a borderline lower likelihood of surgical / combined practice (aOR 0.50, 95% CI 0.24-1.05; p=0.067).

Response set: 145 INAVRS members (58 men, 87 women).

Figure 1. Demographics, professional status and engagement, and multivariate model of surgical vitreoretinal practice.

In multivariate logistic regression adjusting for age and practice years, female gender was associated with lower odds of surgical vitreoretinal practice (OR 0.5; 95% CI 0.24–1.05; p=0.067). Although not statistically significant, this finding warrants further investigation into potential gender-related differences in surgical subspecialization. (Table 2) (Figure 1D).

Table 2. Multivariate analysis of factors predicting surgical vitreoretinal practice.

Variable	OR (95% CI)	P-value
Female gender	0.5 (0.24 – 1.05)	0.067
Age group	0.83 (0.58 – 1.19)	0.302
Practice years	1.37 (0.93 – 2.00)	0.109

Barriers and Enablers to Women's Career Advancement

Significant gender-based differences were observed in perceived barriers to women's career advancement. Time-out due to maternity leave was more frequently identified by male respondents (81%) than female respondents (55.2%) (p=0.001). Conversely, underrepresentation in leadership was more frequently reported by females (16.1%) than males (5.2%) (p=0.045). The expectation of constant availability was commonly selected in both groups (62.1% men and 65.5% women; p=0.671).

Other barriers, including corporate culture, constant availability expectations, workplace flexibility, unconscious bias, and sponsorship inequity did not differ significantly. Regarding potential enablers, while no single factor reached significance, both genders expressed high demand for flexible working (>70%) and mentorship programs (>70%) (Figure 2).

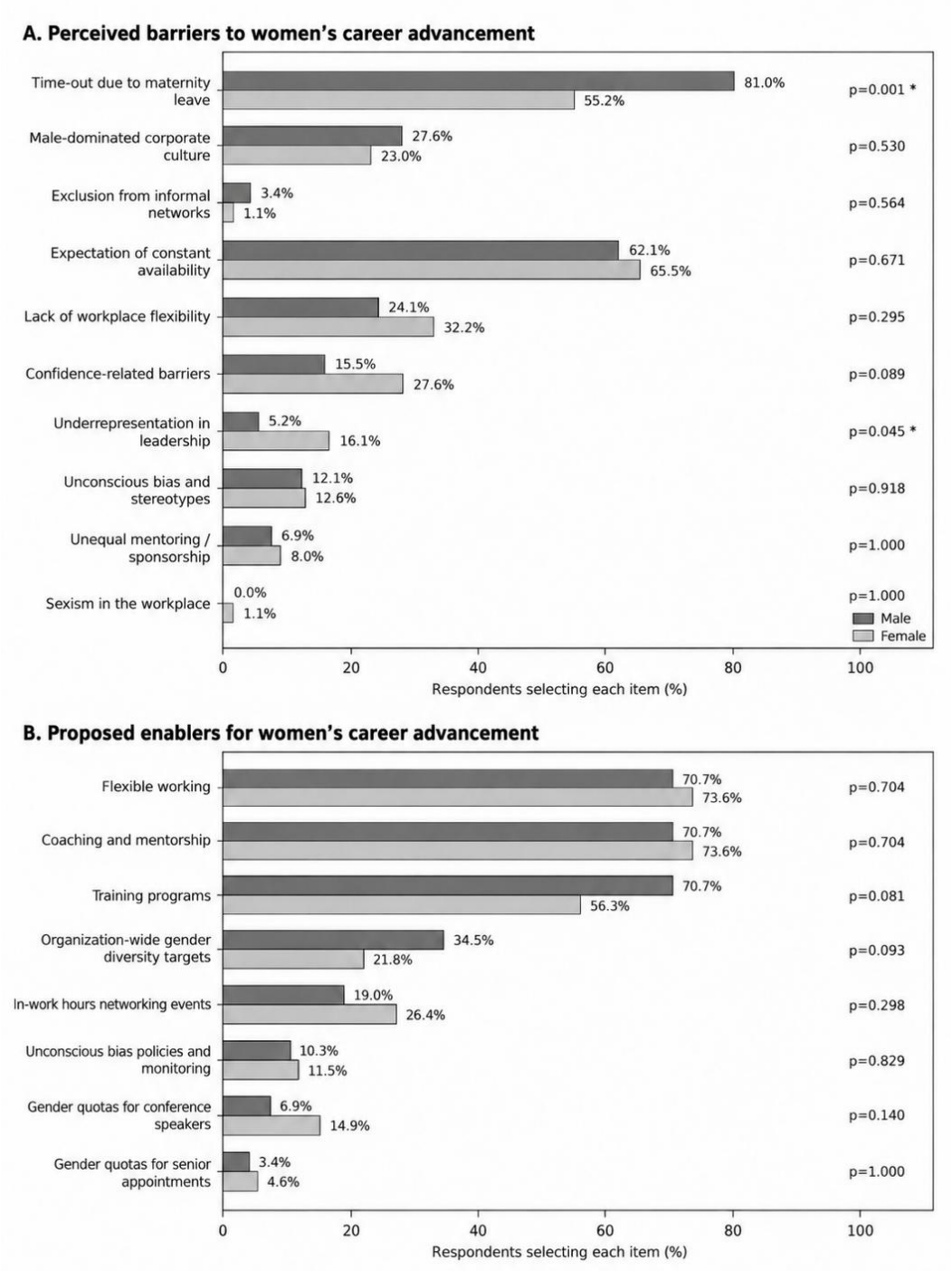


Figure 2. Career barriers and proposed enablers regarding women's career advancement.

Workplace Culture, Training Needs, and Work-Life Balance

Perceptions of personal growth, clarity of career pathway, and feedback structures were statistically similar between genders. However, female specialists reported significantly higher perceived institutional support for women (52.9% females vs 32.8% males, p=0.017) (Figure 3A). Both genders detailed similar agreement with statements regarding workplace culture (Figure 3B). One exception

regarding the training and development statements was that female specialists reported significantly higher unmet training needs (66.7% females vs 48.3% males, p=0.027) (Figure 3C). Other training items, including interest in mentorship, access to support for difficult patients, as well as opportunities to improve skills in the current workplace did not differ significantly. Difficulty attending training because of competing commitments was selected by 8.6% of men and 20.7% of women, however it did not reach statistical significance (Figure 3C).

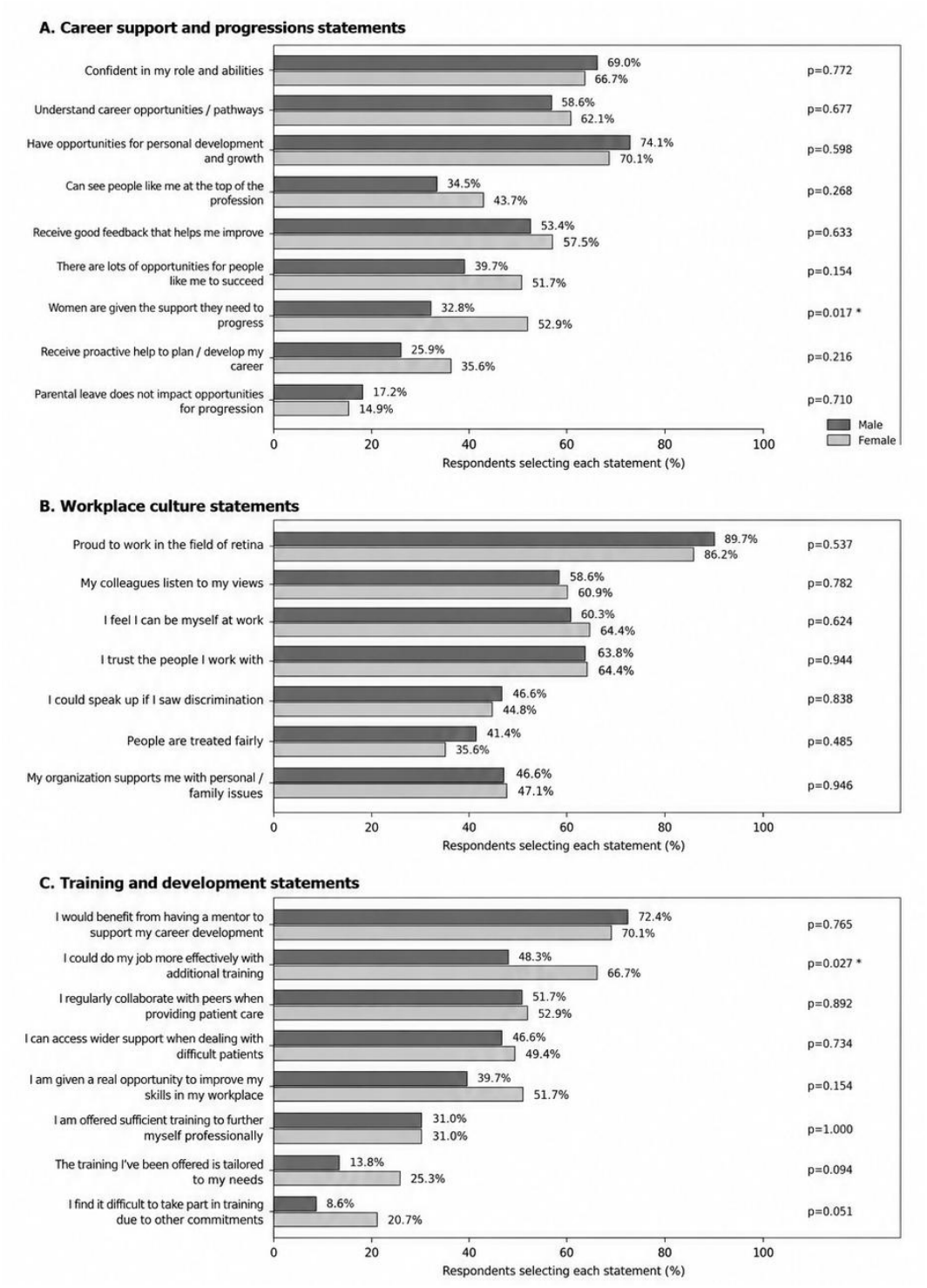


Figure 3. Perceptions of career, workplace culture, and training needs by gender.

The overall job satisfaction was high and comparable in both genders, noting generally positive professional experiences (median 8; p=0.678) (Figure 4A). Compensation fairness, pay equity, and negotiation confidence did not significantly differ by gender (Figure 4B-D). Career trajectory relative to personal expectations was similarly distributed (p=0.778), and both genders broadly regarded retina as a good workplace for women (p=0.842) (Figure 4E-F). More male specialists reported a stronger agreement regarding negative impact of vitreoretinal practice on family time (6/58 [10.3%] strongly agree and 36/58 [62.1%] agree; combined 72.4%) compared to female specialists (12/87 [13.8%] strongly agree and 33/87 [37.9%] agree; combined 51.7%) (p=0.047) (Figure 4G). The survey did not measure actual family-contact hours and childcare workload, therefore, this unexpected pattern should not be interpreted as an indicator of women having lower domestic responsibilities.

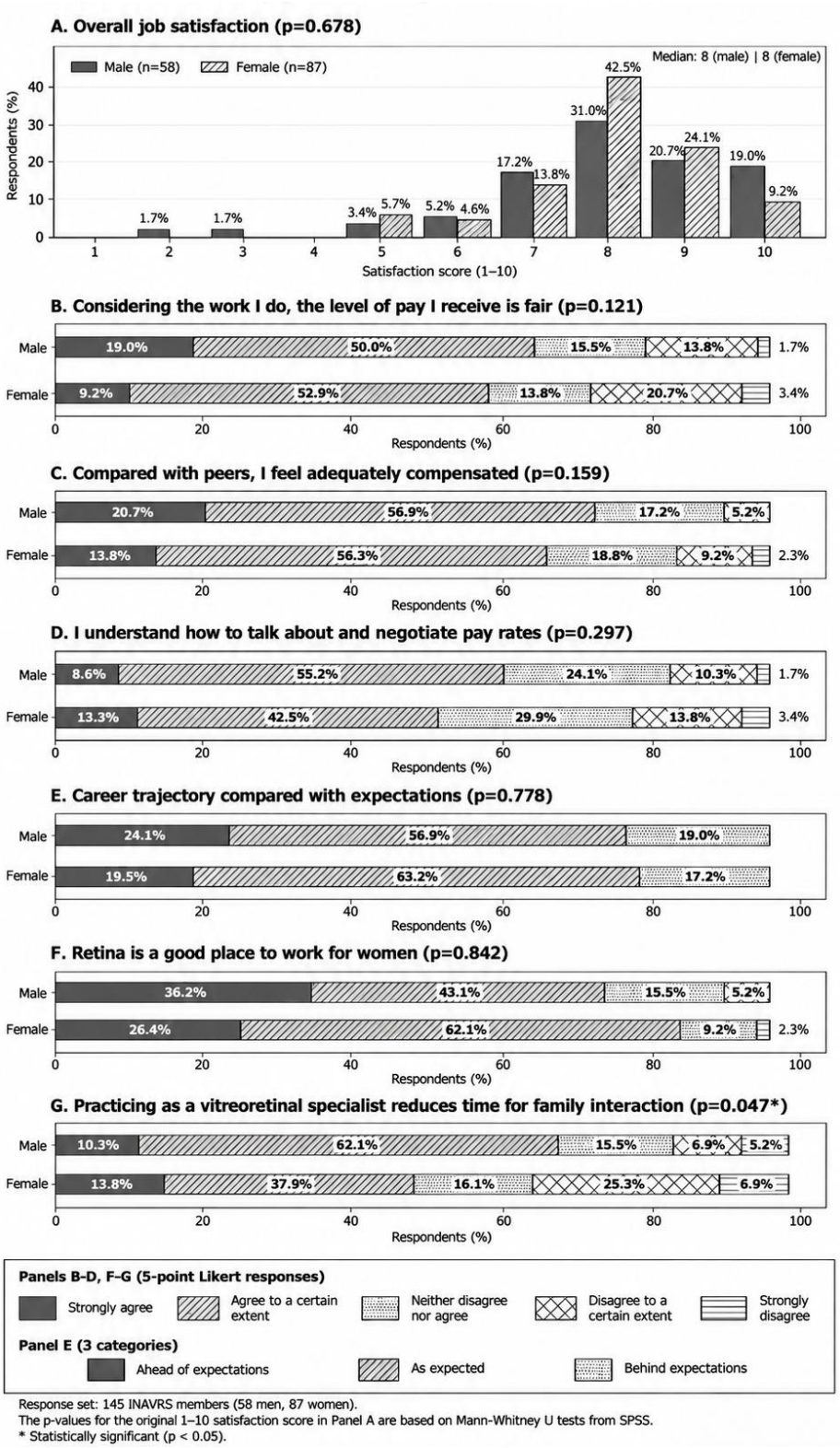


Figure 4. Perceptions of job satisfaction, remuneration, and work-life balance by gender.

Discussion

The study explored gender-related differences in professional characteristics, clinical practice, academic activities, perceived career barriers, and work-related experiences among members of the Indonesia Vitreoretinal Society (INAVRS). The study showed that demographic parity between male and female vitreoretinal specialists in Indonesia exists, however, significant perceptual and structural gaps remain. The findings revealed broadly similar distributions in several measured professional characteristics and academic activities between male and female respondents, alongside numerical differences in vitreoretinal training pathways and clinical workload. Differences were also observed in the perceptions of selected career barriers and certain reported professional experiences. Taken together, these findings suggest that overall professional characteristics or job satisfaction alone may not adequately capture gender-related differences in vitreoretinal practice, and that selected aspects of career development and workplace experience warrant further investigation.

One notable finding was the numerical difference in surgical or combined vitreoretinal training between male and female respondents. The proportion reporting surgical or combined training was higher among men than women (75.4% versus 61.9%), although this difference did not reach statistical significance ($p = 0.093$). Conversely, women were more likely to receive medical-retina-only training (37%). This suggests that while the door to the field is open, access to the operating theatre remains unequal. Gender parity exists within society membership, yet differences seem to remain in workplace settings and academic participation. Although surgical case volumes did not differ significantly between genders ($p = 0.066$), our findings suggest potential differences in surgical engagement and professional development needs. Female respondents demonstrated lower adjusted odds of surgical vitreoretinal practice (aOR = 0.50; 95% CI: 0.24–1.05; $p = 0.067$), despite not being statistically significant.

A similar phenomenon is reported in Japan, where vitrectomy performance was reported by 70.1% of men and 30.5% of women ($p<0.001$), reflecting a large practice difference.[9] This phenomenon actually existed since trainee or fellowship period in other developed countries, as presented in a 2023 US subspecialty fellowship analysis by Ali et al. that found retina to be male-predominant among matched applicants.[10] Moreover, Gill et al reported that female trainees of Royal Australian and New Zealand College of Ophthalmologists (RANZCO) completed 41.7% fewer cataract operations at the end of their

training compared to male counterparts between year 1 to 4 of training.[11] Other studies that compared residents' surgical logbook in Australian and US ophthalmology populations also showed fewer completed procedures among female trainees.[12,13]

Accordingly, women in this study more frequently reported a need for additional training compared to their male counterparts (66.7% vs 48.3%; p=0.027). These findings should be perceived as educational needs rather than proof of inadequate surgical competence. It suggests that procedural volume alone may not fully capture differences in perceived training needs and surgical experience. Factors such as operative autonomy, mentorship opportunities, and access to complex surgical procedures may warrant further investigation.

An interesting finding in our study was the coexistence of significantly higher perceived institutional support for women among female respondents (52.9% vs. 32.8%; p = 0.017) and the aforementioned greater perceived need for additional training. These findings suggest that supportive institutional culture alone may not necessarily reflect the adequacy of professional development opportunities, it may still be insufficient for example, in addressing structural inequities in surgical mentorship, case allocation, or schedule flexibility. Gill et al., reported similar discrepancies between perceived support and actual advancement metrics have been documented in international ophthalmology cohorts, where equity policies exist but representation gaps persist.[1]

The perceived underrepresentation in leadership roles as career barrier was more frequently selected by women than men (16.1% vs 5.2%; p=0.045), consistent with broader evidence that women remain less visible in leadership, editorial, and major-meeting roles in many settings.[13-18] Reeves et al reported that in the American Society of Retina Specialists, women's membership increased from 11% in 2007 to 19.7% in 2020 while only 1 of 23 society presidents from 1983 to 2020 was a woman.[5] Camacci et al reported that out of 1077 journal editorial and professional society board members, 74% were men and 26% were women, with 92.3% of editors-in-chief or presidents being men and only 7.7% were women.[14] Sridhar et al. demonstrated persistent underrepresentation of women in vitreoretinal meeting faculty roles, suggesting that differences in surgical visibility and academic exposure may emerge

despite similar workforce participation.[17] Similarly, Reeves et al. reported gender differences in leadership recognition and society awards within vitreoretinal, reinforcing the possibility that structural advancement pathways differ by gender even when clinical participation appears equivalent.[5]

Another finding from Emami-Naeini et al. that documented slower promotion trajectories and lower representation of women in senior academic ranks in ophthalmology, independent of productivity metrics.[11] On the other hand, Rivera et al. concluded that female senior authorship significantly increased over the last decade, more prominently in journals with higher representation of female editorial board members.[15] This demonstrates that the absence of visible role models in high-stakes surgical and academic positions may contribute to diminished perception of career progression and may partially explain the higher additional training needs reported by women in our cohort. In comparison, the opposite circumstance where women are more represented in leading positions appears to advance women's career in general.

More men than women (81% vs 55.2%) selected maternity-related career interruption as a highly significant barrier ($p=0.001$) to women's advancement. This result needs careful interpretation, since it asks which barrier respondents consider important for women overall, not whether female respondents themselves had taken maternity leave or experienced any career interruption. In the Japanese survey, 74.9% of women versus 44.3% of men agreed that life events impede their own career, a broader worded construct ($p<0.001$).[9] However, this result may reflect traditional characterizations of surgical subspecialties, including vitreoretina, where prolonged training, emergency call responsibilities, and unpredictable schedules may disproportionately impact women especially during childbearing years. The EURETINA Women in Retina Survey highlighted maternity-related interruptions as a critical structural challenge among female vitreoretinal specialists in Europe.[6] This impact may be enhanced in settings where formal maternity support and flexible training pathways are less standardized.

Unexpectedly, men more frequently reported that vitreoretinal practice reduced their time for family interaction compared to women (72.4% vs. 51.7%; $p = 0.047$). This finding contrasts with a study conducted by Lowenstein et al. that recorded female physicians in surgical subspecialties continue to shoulder disproportionate domestic and childcare responsibilities.[6] However, perceived reductions in

family interaction time should not be equated with the distribution of domestic responsibilities, as other factors may contribute to these perceptions. The factors may include differences in family circumstances, professional responsibilities, and individual expectations, although these were not directly evaluated in our study.

Regardless of these differences, overall job satisfaction remained high and comparable between male and female respondents (median 8 in both genders; p = 0.678), suggesting substantial resilience and professional commitment among female vitreoretinal specialists. This finding parallels with existing studies indicating that female ophthalmologists often report comparable or even higher professional fulfillment, despite structural obstacles.[1,6] This study diverged most clearly in career satisfaction with the JVRS study, where only 7.5% of its female members versus 19% of male members reported being very satisfied with their career (p<0.001).[9]

Perceived fairness of compensation, adequacy of pay relative to peers, and confidence in pay negotiation did not differ significantly between genders (p=0.121, 0.159, and 0.297, respectively). These results were the opposite of other high-income countries, for example, in US studies, actual salary data revealed gender-associated differences in compensation among academic ophthalmologists and first-year ophthalmologists entering practice.[18,19]

Addressing gender gaps are essential in ensuring that demographic parity translates into equitable professional progression. Future strategies should involve coordinated efforts across institutions, healthcare providers, and industry stakeholders to establish and sustain a fair and inclusive career advancement. At the institutional level, it should be considered to increase flexibility within vitreoretinal fellowship programs to accommodate varied life stages, developing “return-to-surgery” mentorship initiatives that may help mitigate skill attrition and confidence gaps among practitioners re-entering surgical practice after maternity leave. Hospitals and clinics should adopt family-supportive workplace policies, including schedule flexibility and appropriate facilities such as dedicated lactation spaces, to reduce structural barriers during critical career phases. Professional organizations, including INAVRS, can play a central role by implementing structured longitudinal mentorship and leadership development programs, ensuring equitable access to surgical training opportunities, and promoting transparent

criteria for leadership appointments. Industry stakeholders and scientific meeting organizers may also contribute by ensuring gender equity in sponsored symposia, faculty representation, and podium roles at major scientific meetings. Consideration of targeted research funding initiatives and recognition awards may further help bridge academic gaps. Collectively, these measures may help transform supportive culture into measurable structural equity.

This study provides one of the first national-level assessments of gender differences within a vitreoretinal subspecialty workforce in Southeast Asia. These findings are particularly relevant as global ophthalmology faces increasing demands for subspecialty services, highlighting the importance of ensuring equitable workforce development across diverse healthcare systems. Bridging these gaps will be essential not only for achieving gender equity, but also strengthening sustainability and capacity of vitreoretinal workforce in Indonesia and similar healthcare settings.

Several limitations should be considered when interpreting these findings. First, its cross-sectional design precludes causal inference and cannot establish whether gender-related differences in perceptions or professional characteristics influence subsequent career progression. Second, responses were self-reported and may be subject to recall or perception bias. Third, participation by approximately half of the reported membership may have introduced nonresponse bias if respondents differed from nonrespondents in relevant professional characteristics or experiences. Fourth, the study examined multiple outcomes, increasing the possibility of chance findings. Results with p-values close to the conventional significance threshold should therefore be interpreted cautiously, particularly when the analyses are exploratory. Fifth, the sample included respondents at different professional stages and with potentially different vitreoretinal training backgrounds. These differences may influence clinical workload and academic activity independently of gender. These limitations underscore the need for careful interpretation and further investigation using larger samples, clearly defined outcomes, and objective measures of professional activity. Nevertheless, the nationwide sampling of INAVRS members strengthens generalizability within Indonesia.

Conclusion

In conclusion, this study identifies differences in professional experiences and perceived career opportunities among female and male INAVRS members, despite broadly comparable demographic characteristics, academic engagement, and overall job satisfaction. Although differences in surgical/combined practice orientation and procedural volumes did not reach statistical significance, women exhibited a numerical tendency toward lower surgical vitreoretinal specialization. Female specialists more frequently expressed underrepresentation and the need for additional training, suggesting potential disparities in professional development opportunities. Interestingly, male specialists more frequently identified that vitreoretinal practice reduced their family interaction time, underlining the complexity of gender-related work–life balance perceptions. Addressing these challenges through increased flexibility in training, structured mentorship, family-supportive workplace policies, and intentional efforts to promote women into surgical, academic, and leadership pathways may be instrumental in establishing a more equitable and inclusive vitreoretinal workforce in Indonesia.

List of Abbreviations

1. aOR : Adjusted Odds Ratio
2. CI : Confidence Interval
3. EURETINA : European Society of Retina Specialists
4. INAVRS : Indonesian Vitreoretinal Society
5. IQR : Interquartile Range
6. OR : Odds Ratio
7. SD : Standard Deviation
8. SPSS : Statistical Package for the Social Sciences
9. VR : Vitreoretinal

Declarations

Ethics approval and consent to participate

The study was conducted in accordance with the Declaration of Helsinki and approved by the Ethics Committee of the Faculty of Medicine, University of Indonesia – Cipto Mangunkusumo Hospital (protocol number: 25–09–1496).

Consent for publication

Consent was obtained from participants in the beginning of the questionnaire.

Availability of data and materials

All data generated and analysed during this study are included in this published article, datasets used are available from the corresponding author upon reasonable request.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

GAA and SKJ conceptualized the manuscript. GAA, SKJ, RA, MBS, HSM, NAD, SAA, AAA, AD, ARY, MMH, SPA, and OH constructed the questionnaire then distributed it among INAVRS members. GAA, SKJ analyzed and interpreted the respondents' data regarding the gender differences. All authors read, revised, and approved the final manuscript.

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