Amid the Era of Globalization: What Key Factors Influencing the Selection of an Ophthalmology Residency among Trainees in Thailand?

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Abstract

Purpose: To evaluate factors influencing the decision-making of current Ophthalmology residents when deciding for Ophthalmology Residency Training Program Applications in Thailand.

Setting/Venue: Online-based survey was initiated in Thailand during November 2022 to January 2023.

Method: The study is an online-based, cross-sectional study among current Ophthalmology residency trainees from 12 institutions. Focused group analysis among randomized sample of trainees and content analysis was processed for the questionnaire. ANOVA and Pearson correlation were used in the study to determine the statistical relationships among the collected data.

Results: Eighty five trainees completed the survey, comprising 23 (27.06%) first year residency trainees, 35 (41.18%) second year residency trainees and 27 (31.76%) third year residency trainees. Of these, 56 (65.88%) trainees graduated from medical school in urban areas, 29 (34.12%) graduated from rural areas. Female trainees predominated, with the total of 52 (61.18%), with a mean age of 29 years old. Of all the trainees, 46 (54%) work in urban areas and 39 (46%) work in rural areas. The most influential factors were characteristics of work that involved surgical and medical skills (mean 4.18/5), flexibility and freedom of work (mean 4.15/5) and non-emergency settings (mean 4.07/5). The area of medical school graduation was correlated with flexibility and freedom of work (R-28.0, p-value < 0.05). The age was correlated with attitude about future planning (R 22.5, p-value < 0.05) and nature of work that involved surgical and medical (R 22.2, p-value < 0.05). The area of work was correlated with original affiliation (R 29.6, p-value < 0.05) and chance of being sued (R 27.5, p-value < 0.05).

Conclusion: Nature of work that involved surgical and medical skills, flexibility and freedom in work, and non-emergency settings were the most influential factors that influenced the decision to apply for Ophthalmology Residency Training respectively. There were some correlations between factors such as the area of which they completed undergraduate medical training, age and the area of work, which also influenced the choice of ophthalmology training.

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Background

Choosing a career path for further specialization after completing medical school is a dilemma that newly graduated physicians encounter.[1] Numerous factors influence the choice of medical specialty.[2-5] In general, these factors can be divided into two categories: intrinsic factors, encompassing personal attributes, preferences, and gender and extrinsic factors which relate to the work environment, controllable lifestyle and other elements.[6] Recent literature indicates that lifestyle issues, such as work-life balance, are increasingly important in physicians' career choice decisions, leading to a

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transition in the trend toward minor surgical and non-surgical fields.[7,8]

Ophthalmology specialty training in Thailand began many decades ago. Over the past decade, the trend toward Ophthalmology specialty training among newly graduated physicians has increased, resulting in an increasingly competitive application process. Despite increasing popularity, a study conducted in the United States identified several main factors influencing the choice of Ophthalmology residency, including high clinical and surgical volume, diversity of pathology, resident-attending relationships, work-life balance, interview experience with faculty, and proximity of training location to applicant's family.[9,10] In Saudi Arabia, factors include personal interest, satisfaction from improving the patient's quality of vision, good patient prognosis, and the appeal of being an ophthalmologist were significantly associated with choosing Ophthalmology compared to other factors.[11,12] In India, the major influencing factor for choosing Ophthalmology was adequate time, while a significant deterrent was the steep learning curve.[7] Reviewing the available local literature, a study carried out at Thammasat University, Thailand, revealed that factor influencing inclination towards Ophthalmology as a future career was the cleanliness of the operating field; conversely, the inevitable competition was a significant deterrent.[13]

Although the previous study explored the reasons behind the preference for Ophthalmology training at a single university in Thailand, there are no multi-institutional studies investigating the factors influencing the decision to apply for Ophthalmology training across the country. Thus, this study aims to evaluate the factors influencing the decision-making process of current Ophthalmology trainees from multi-institutions when selecting an Ophthalmology residency training program in Thailand.

Materials and Methods

A cross-sectional descriptive study was conducted involving current Ophthalmology residents from 12 different medical institutions across Thailand using an online-based research questionnaire. The questionnaire was developed through a literature review, focused group analysis among a randomized sample of ophthalmology trainees, followed by content analysis. The questionnaire consisted of 39 questions divided into two sections: demographic data and questions regarding the factors influencing the decision to apply for an Ophthalmology training program. The questions are presented in *Figure 1*.

Thai Ophthalmology residents from first to third or fourth- year were invited to participate in an anonymous questionnaire. The sample size was calculated using Yamane T. formula (1973). Being an Ophthalmology resident in Thailand was considered as an inclusion criterion. Conversely, incomplete survey responses were considered as an exclusion criterion. Self-administered-Questionnaire links were distributed to Thai Ophthalmology residents.

Ethical approval for this study was obtained from Thammasat University Ethical Committee, Thailand. The ethics committee approval documents can be accessed through the survey. Completion of the first two questions of the questionnaire served as consent. Participants were assured of their anonymity and the confidentiality of their responses. Responses were collected from November 2022 to February 2023. A total of 85 participants were included in the study.

The collected data was analyzed through IBM® Statistical Package for the Social Science (SPSS®) version 29.0. Pearson correlation analysis was employed in the study to determine the statistical relationships among the collected data. A P-value of less than or equal to 0.05 was considered statistically significant.

Table 1: Questions regard the influencing factors of choosing to apply for Ophthalmology training program

	Influencing Factors
1	Character of Work (Surgical & Medical)
2	Flexibility and Freedom of Work
3	Personal Preference
4	Mostly Non-emergency Cases
5	Personality
6	Personal Empathy to Help Ophthalmology Patients
7	Overall Satisfaction in Daily Work and Achievement
8	Work-life Balance
9	Professional Reputation
10	Ophthalmology Staff Satisfaction
11	Competitive Rate
12	Training Institution
13	Opportunity for Future Promotions
14	Academic Performances in Ophthalmology
15	Overall Academic Performances (GPA)
16	Societal Acceptance
17	Income
18	Given Opportunity from Original Affiliation
19	Family Expectations
20	Overall Satisfaction of Original Affiliation
21	Gender Identity
22	Risk of infection or Danger in the course of work
23	Attitude about Future Planning
24	Previous Clinical Opportunity in Ophthalmology
25	Persuasion from Close Individuals
26	Risk of Being Sued

Results

Demographic Data

Eighty-five participants aged 25 to 32 years old completed the questionnaire. *Figure 2* shows the demographic data of the respondents. The majority of the respondents were female (61.18%). The average age of the participants was 29 years. Of the respondents, 23 (27.06%) were first year residency trainees, 35 (41.18%) and 27 (31.76%) were second and third residency trainees respectively. A majority of respondents graduated from medical school located in urban and outskirt areas 56 (65.88%). The remaining respondents completed their medical degrees in suburban areas (34.12%). Upon graduation, most of the respondents worked at university hospitals (68.24%), followed by Community hospitals (18.82%), General hospitals (8.24%), and specialty hospitals (4.71%). Regarding post-graduation working locations, 46 (54%) of the trainees continued to work in urban areas, while 39 (46%) worked in rural areas.

Table 2: Demographic Data of the Participants

	Characteristics	N (85)	%
Residency Training Level	First Year Residency Trainees	23	27.06
	Second Year Residency Trainees	35	41.18
	Third Year Residency Trainees	27	31.76
Gender	Male	33	38.82
	Female	52	61.18
Graduated Medical School Location	Urban and Outskirt Area	56	65.88
	Suburban area	29	34.12
Post-Graduation Working Hospital Type	University Hospital	58	68.24
	General Hospital	7	8.24
	Specialty Hospital	4	4.71
	Community Hospital	16	18.82
Post-Graduation Work Area	Rural	39	46
	Urban	46	54

The most influential factors were the characteristics of work that involved surgical and medical skills (mean 4.18/5), flexibility and freedom of work (mean 4.15/5), personal preferences (mean 4.13/5) and non-emergency settings (mean 4.07/5). The mean score of each factor is shown in *Figure 3*.

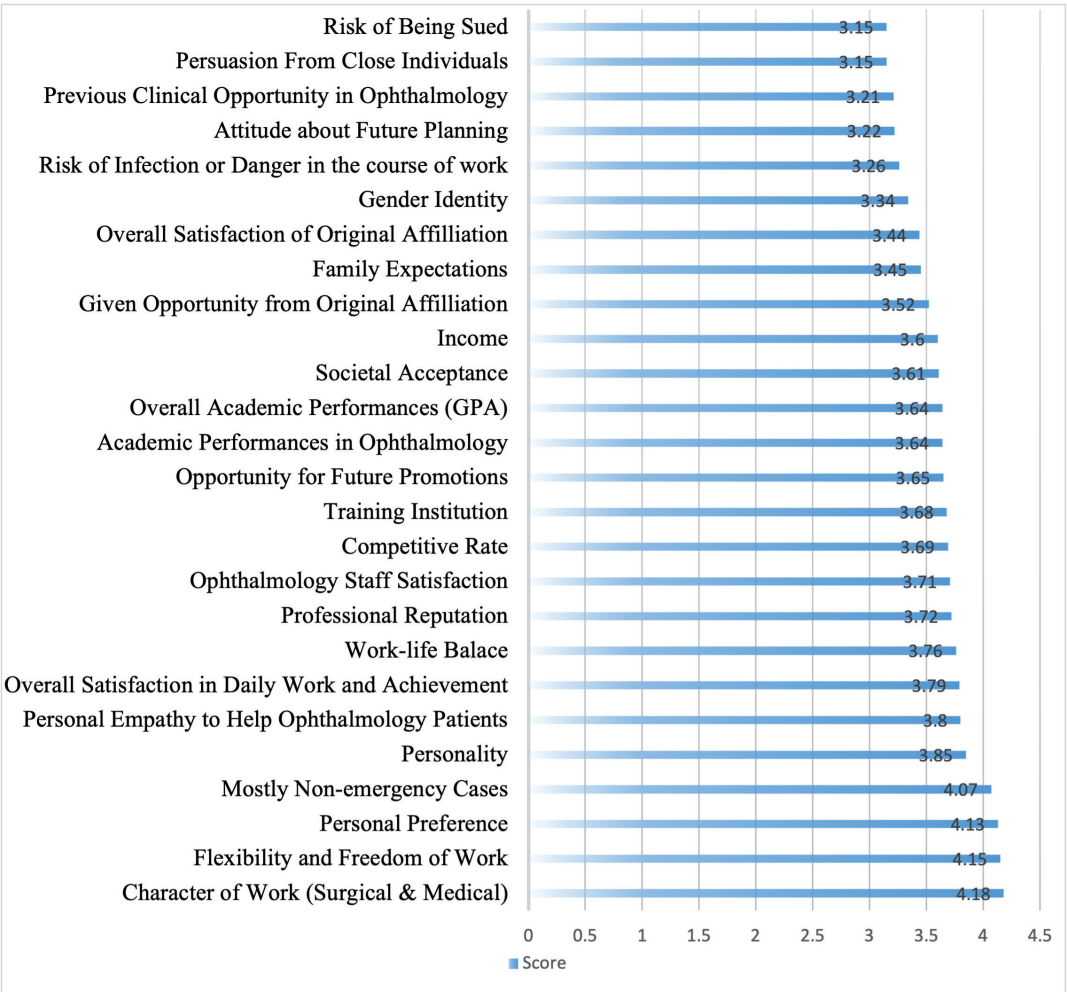


Figure 1: Ranking of Mean Score of each influencing factors

The area of medical school graduation was correlated with flexibility and freedom of work (R 28.0, P < 0.05). The age was correlated with attitude about future planning (R 22.5, P < 0.05) and nature of work that involved surgical and medical (R 22.2, P < 0.05). The area of work was correlated with original affiliation (R 29.6, P < 0.05) and chance of being sued (R27.5, P-value < 0.05) as shown in *Figure 4*.

Table 3: Pearson Correlation of each associated factors

	Flexibility and Freedom of Work	
Graduated Medical School Locations	Pearson Correlation	-.280
	Sig. (2-tailed)	.010
	N	85
	Attitude about Future Planning	
Age (Year)	Pearson Correlation	-.225
	Sig. (2-tailed)	.038
	N	85
	Character of Work (Surgical and Medical)	
	Pearson Correlation	-.222
	Sig. (2-tailed)	0.42
	N	85
	Given Opportunity from Original Affiliations	
Post-Graduation Work Area	Pearson Correlation	-.296
	Sig. (2-tailed)	.006
	N	85
	Chance of Being Sued	
	Pearson Correlation	-.275
	Sig. (2-tailed)	0.11
	N	85

Discussion

Choosing a specialty after completing medical school is a complex decision influenced by various factors. The desire to engage surgical and medical skills was identified as the most influential factor, with a mean score of 4.18 out of 5. This preference aligns with findings from the study in the United States, where the preference of high clinical and surgical volume in ophthalmology is documented. Flexibility and work-life balance are also considered as critical factors influencing career choice, with a mean score of 4.15 out of 5. It can be seen that many medical professionals nowadays prioritize manageable schedules and ability to maintain autonomy over work. From the study, data suggests that urban medical school graduates perceive greater flexibility in their careers, implying that the training institution location can shape their professional perspectives. Demographic factors include age and gender also played a role in choosing a specialty. The correlation between age and future planning attitudes indicates that senior residents may take a more structured approach to their career choices, likely influenced by their life experiences. The majority of respondents being female suggests a shift in gender representation in ophthalmology. The competitive nature of ophthalmology residency programs has emerged as a concern, illustrating a gap between aspirational factors and the realities of the selection process. This suggests that further investigation is needed into how competition affects career trajectories of medical graduates.

Implications

The findings of this study underscore the importance for the medical policymakers to understand the diverse factors influencing specialty selection. By acknowledging the unique intrinsic and extrinsic motivators, educational programs can refine their curricula to attract talented individuals in Ophthalmology specialty. Moreover, addressing the competitive nature of Ophthalmology residency applications through mentorship programs, career counseling, and enhanced visibility of the field's benefits could provide a more positive outlook among graduates considering Ophthalmology.

Limitations and Future Research

Although this research provides valuable insights, it has limitations as the study is cross-sectional and self-reported data may introduce biases. Future research could expand to include other medical specialties to provide comparative insights that could improve our understanding of medical specialty decision-making in Thailand. Moreover, it could be extended to similar research focusing on factors influencing the decision to be a fellowship. Alternatively, a progressive study could be conducted on the same population over the next 3-5 years to track whether they continue to a fellowship or remain in general ophthalmology, and to identify the factors influencing their choices.

Conclusion

There are various factors influencing the choosing of Ophthalmology specialty. From the study, the factors with the most influence on the choosing of Ophthalmology residency training were the nature of work that involved surgical and medical skills, flexibility and freedom in work, personal preference and non-emergency settings respectively. Furthermore, there were correlations between factors including area of which doctors completed their undergraduate medical training, age and post-graduation working area, which also influenced the reasons for choosing ophthalmology residency training.

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