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Original Article

Career Decision-Making, Subspecialty Trends, and Professional Satisfaction among Consultant Ophthalmologists in Pakistan: A Cross-Sectional Study.

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Abstract

Background:
The choice of medical specialty significantly influences a physician's career trajectory and long-term satisfaction. Ophthalmology is considered a lifestyle specialty due to its favorable work–life balance and clinical outcomes. However, limited evidence exists regarding career decision-making, subspecialty trends, and professional satisfaction among consultant ophthalmologists in Pakistan. This study aimed to evaluate career choice determinants, subspecialty trends, and levels of professional satisfaction among consultant ophthalmologists in Pakistan.

Methodology:
A descriptive cross-sectional study was conducted among 81 consultant ophthalmologists using non-probability convenience sampling at the 44th Karachi Annual Congress of Ophthalmology (KAROPHTH 2024). Data were collected through a structured, self-administered questionnaire assessing demographics, career motivations, subspecialty selection, and satisfaction levels. Analysis was performed using IBM SPSS version 26, and results were expressed as frequencies, percentages, and mean ± standard deviation.

Results:
The mean age was 45 ± 8 years, with males comprising 80.2% of participants. Most respondents reported medicine as their first career choice (86.4%) and selected ophthalmology based on personal interest (79.0%). Subspecialty training was reported by 67.9%, with vitreoretinal surgery being the most common (58.2%). Overall satisfaction was high (89.1%), and 87.7% would choose ophthalmology again. However, 12.3% considered alternative careers.

Conclusion:
Consultant ophthalmologists in Pakistan exhibit high professional satisfaction and strong career commitment. A minority considering alternative pathways highlights the evolving nature of career fulfillment.

Keywords:
Ophthalmology, Career Choice, Job Satisfaction, Subspecialty, Physicians, Workforce

Introduction

The selection of a medical specialty represents a critical milestone in a physician's professional journey, shaping clinical practice, career trajectory, and long-term satisfaction. Ophthalmology has emerged as a highly attractive specialty due to its unique integration of medical and surgical care, favorable patient outcomes, and comparatively balanced lifestyle [1–4]. These attributes have contributed to its characterization as a "lifestyle specialty," with multiple international studies consistently reporting high levels of job satisfaction among ophthalmologists [5].

Over recent decades, subspecialization has become an integral component of ophthalmology training, particularly in high-income countries. More than half of ophthalmology residents in the United States pursue fellowship training, with vitreoretinal surgery, medical retina, and cornea among the most sought-after fields [6].

Similar patterns have been observed in Canada, although variations exist in subspecialty preferences, with areas such as low-vision rehabilitation attracting fewer trainees [7]. However, these trends may not directly translate to lower-middle-income countries such as Pakistan, where healthcare infrastructure, training opportunities, and workforce distribution differ substantially [8].

In Pakistan, findings from the Rapid Assessment of Avoidable Blindness (RAAB) highlight cataract and refractive errors as leading causes of visual impairment, emphasizing the need for a well-trained and appropriately distributed ophthalmic workforce [9].

Despite this demand, structured fellowship opportunities remain limited in certain subspecialties, including pediatric ophthalmology, neuro-ophthalmology, and glaucoma [10–12]. This imbalance underscores the importance of understanding career decision-making and subspecialty trends within the local context.

Career choices in ophthalmology, as in other medical specialties, are influenced by a combination of personal, professional, and socio-cultural factors. These include personal interest, anticipated income, work-life balance, academic aspirations, gender dynamics, institutional environment, and family expectations [13]. Additionally, concerns such as burnout, unmet expectations, and limited mentorship opportunities are increasingly recognized in physician workforce studies, even within specialties reporting high satisfaction levels [14–15].

Most existing literature on ophthalmology career decisions is derived from residents or early-career physicians and is predominantly based in high-income settings with well-established training systems. There is a paucity of data focusing on fully trained consultant ophthalmologists in Pakistan, particularly regarding retrospective evaluation of career choices, current satisfaction levels, and consideration of alternative career pathways.

The present study aims to address this gap by exploring career motivations, subspecialty selection, and professional satisfaction among practicing consultant ophthalmologists in Pakistan. By examining their experiences and reflections, this study seeks to provide valuable insights for workforce planning, subspecialty training development, and strategies to enhance long-term career satisfaction within the field of ophthalmology.

Methodology

Study Design

This study was designed as a descriptive cross-sectional survey to evaluate career decision-making patterns and levels of satisfaction among consultant ophthalmologists practicing in Pakistan.

Ethics

Ethical considerations were addressed in accordance with the Declaration of Helsinki. Although formal prior approval from an institutional review board was not obtained, written informed consent was secured from all participants. Strict confidentiality and anonymity of responses were maintained throughout the study.

Setting

Data collection was conducted during the 44th Karachi Annual Congress of Ophthalmology (KAROPHTH 2024), held at Pearl Continental Hotel, Karachi, from August 30 to September 1, 2024. The congress served as a national platform, enabling access to a diverse pool of practicing ophthalmologists from different regions and subspecialties.

Participants

Participants included consultant ophthalmologists who had completed accredited postgraduate qualifications such as FCPS, FRCS, or equivalent, and were actively practicing within Pakistan. A non-probability convenience sampling technique was used to recruit participants attending the congress. Individuals who were residents in training, non-consultant physicians, or those who submitted incomplete questionnaires were excluded from the final analysis. This ensured that only fully qualified and actively practicing consultants contributed to the dataset.

Variables

The study variables encompassed demographic, professional, and career-related factors. Demographic variables included age, gender, and marital status, while professional variables comprised years of clinical experience, sector of employment (public/private/mixed), academic affiliation, working hours, and subspecialty status. Career-related variables included motivations for choosing medicine and ophthalmology, determinants of subspecialty selection, current satisfaction with specialty and subspecialty, willingness to choose ophthalmology again, and preferences for alternative career pathways.

Data Sources and Measurement

Data were collected using a structured, self-administered questionnaire developed after an extensive review of relevant literature. The instrument underwent expert evaluation for face and content validity by specialists in ophthalmology and medical education. Based on expert feedback, modifications were made to enhance clarity, relevance, and comprehensiveness. A pilot test was conducted among consultant ophthalmologists not included in the final sample to assess feasibility and comprehension. The questionnaire primarily consisted of dichotomous (Yes/No) items, supplemented by selected open-ended questions to capture alternative career preferences. Internal consistency reliability of the instrument was assessed using Cronbach's alpha (equivalent to KR-20 for binary variables), yielding a value of 0.72, indicating acceptable reliability.

Bias

Potential sources of bias included selection bias due to the use of convenience sampling at a national conference, which may not fully represent all practicing ophthalmologists in Pakistan. Response bias

was minimized by ensuring anonymity and voluntary participation. Additionally, recall bias may have influenced retrospective career decision responses. Efforts were made to reduce measurement bias through questionnaire validation and pilot testing.

Study Size

The sample size was calculated using the single proportion formula ($n = Z^2pq/d^2$) at a 95% confidence level. In the absence of local data, an expected satisfaction proportion of 86% was adopted from the American Academy of Ophthalmology survey [16]. With a margin of error of 7.5%, the initial estimated sample size was 82. After applying finite population correction based on an estimated 1,860 ophthalmologists in Pakistan [17], the adjusted required sample size was 79. Ultimately, 81 consultant ophthalmologists were included in the study.

Statistical Methods

Data analysis was performed using IBM SPSS Statistics version 26.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics were used to summarize the data. Categorical variables were presented as frequencies and percentages, while continuous variables were expressed as mean ± standard deviation. Only fully completed questionnaires were included in the final analysis. No inferential statistical testing was conducted, as the study was primarily descriptive in nature.

Results

Participants

A total of 81 consultant ophthalmologists were included in the final analysis, as all submitted questionnaires were complete and met the inclusion criteria. Participants were recruited during the 44th Karachi Annual Congress of Ophthalmology (KAROPHTH 2024), ensuring representation from a range of clinical settings and subspecialties across Pakistan. No participants were excluded after initial screening, as incomplete responses had already been filtered out prior to analysis.

Descriptive Data

The mean age of the participants was 45 ± 8 years. The majority of respondents were male 65 (80.2%), while females constituted 16 (19.8%). Most participants were married 77 (95.1%), with only a small proportion being single 4 (4.9%). In terms of professional profile, 26 (32.1%) were general ophthalmologists, whereas a larger proportion 55 (67.9%) had completed subspecialty training. Among subspecialists, vitreoretinal surgery was the most frequently reported field 32 (58.2%), followed by glaucoma 13 (23.6%), pediatric ophthalmology 6 (10.9%), and oculoplastics 4 (7.3%).

Regarding clinical experience, equal proportions of participants had ≤10 years 32 (39.5%) and 11–20 years 32 (39.5%) of practice, while 17 (21.0%) had more than 20 years of experience. The majority were practicing in the private sector 48 (59.3%), followed by public sector employment 23 (28.4%), and mixed practice settings 10 (12.3%).

Academic affiliation was reported by 26 (32.1%), whereas 55 (67.9%) were non-academic practitioners. In terms of workload, more than half of respondents reported working ≥7 hours daily, with 33 (40.7%) working 7–9 hours and 13 (16.1%) working 10–12 hours per day. These demographic and professional characteristics are summarized in Table 1.

Table 1: Demographic and Professional Characteristics of Participants (n = 81).

Variables		n (%)
Age (years); Mean ± SD		45 ± 8.0
Gender	Male	65 (80.2)
	Female	16 (19.8)
Marital Status	Married	77 (95.1)
	Single	4 (4.9)
Specialty	General Ophthalmology	26 (32.1)
	Subspecialty	55 (67.9)
Field of Subspecialty (n = 55)	Vitreoretinal	32 (58.2)
	Glaucoma	13 (23.6)
	Pediatric Ophthalmology	6 (10.9)
	Orbit and Oculoplastics	4 (7.3)
Duration of Practice (years)	≤10	32 (39.5)
	11–20	32 (39.5)
	>20	17 (21.0)
Work Sector	Private	48 (59.3)
	Public	23 (28.4)
	Mixed (both)	10 (12.3)
Academic Affiliation	Academic institution	26 (32.1)
	Non-academic	55 (67.9)
Average Daily Working Hours	1–3 hours	5 (6.2)
	4–6 hours	30 (37.0)
	7–9 hours	33 (40.7)
	10–12 hours	13 (16.1)

Table 2: Initial and Alternate Career Choices of Consultant Ophthalmologists (n = 81).

Variables	Yes n (%)	No n (%)
Chose medicine as first career preference	70 (86.4)	11 (13.6)
Selected ophthalmology based on personal interest	64 (79.0)	17 (21.0)
Chose current subspecialty by personal preference (n = 55)	48 (86.4)	7 (13.6)
Satisfied with ophthalmology as a specialty	73 (89.1)	8 (10.9)
Satisfied with current subspecialty (n = 55)	49 (88.9)	6 (11.1)
Would choose ophthalmology again	71 (87.7)	10 (12.3)

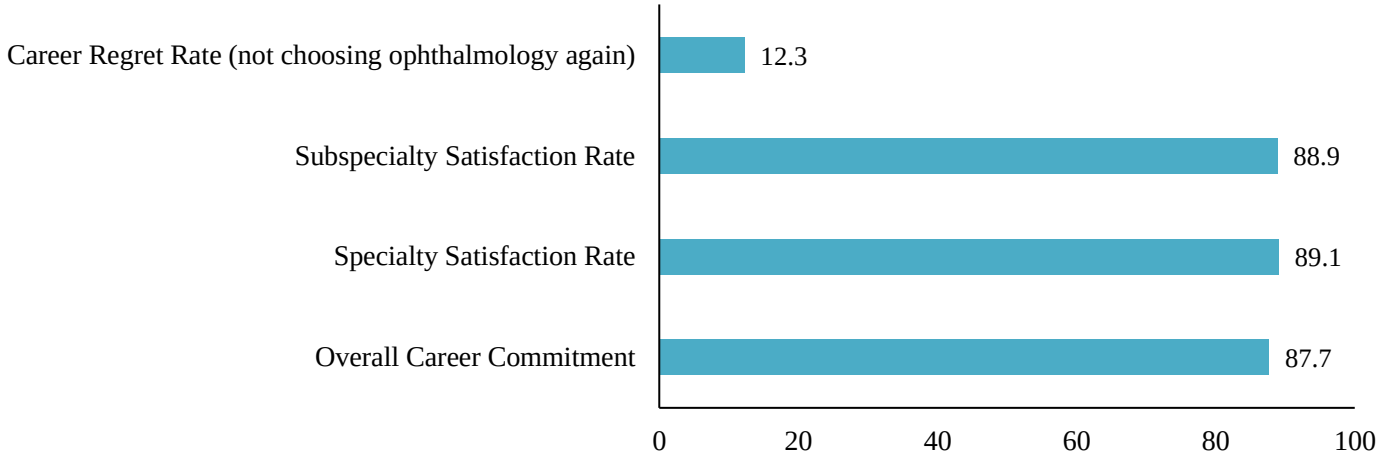

Figure 1: Composite Career Commitment Indicators.

Outcome Data

With respect to career decision-making, a substantial proportion of respondents 70 (86.4%) reported that medicine (MBBS) was their first career preference, while 64 (79.0%) indicated that ophthalmology was chosen based on personal interest. Among subspecialists (n=55), 48 (86.4%) selected their subspecialty based on personal preference.

Overall satisfaction with ophthalmology as a specialty was high, with 73 (89.1%) expressing satisfaction. Similarly, 71 (87.7%) participants reported that they would choose ophthalmology again if given the opportunity to restart their careers. Among subspecialists, 49 (88.9%) were satisfied with their current subspecialty, while a minority 6 (11.1%) expressed dissatisfaction and indicated alternative preferences, predominantly vitreoretinal and oculoplastic fields.

Among the 10 (12.3%) participants who would not choose ophthalmology again, alternative career preferences included internal medicine 3 (30%), neurosurgery 3 (30%), cardiology 2 (20%), and dermatology 2 (20%). Among those dissatisfied with their current subspecialty (n = 6), the majority preferred vitreoretinal surgery (n = 5), followed by oculoplastics (n = 1).

Main Results

The overall findings demonstrate a high level of career commitment and satisfaction among consultant ophthalmologists practicing in Pakistan. A strong alignment was observed between initial career preferences and eventual specialty choice, with most participants indicating intrinsic motivation as a key determinant. Subspecialty training was common, particularly in vitreoretinal surgery, reflecting current trends in ophthalmic practice.

Despite the high overall satisfaction, a small but notable proportion of participants expressed consideration of alternative career paths, indicating that career decision-making remains dynamic and multifactorial. The composite indicators of career commitment, including satisfaction with specialty, willingness to choose the same career again, and subspecialty satisfaction, are visually represented in Figure 1, reinforcing the consistency of positive professional outlook among the majority of respondents.

Discussion

The present study provides important insights into career decision-making patterns, subspecialty trends, and levels of professional satisfaction among consultant ophthalmologists practicing in Pakistan. A substantial proportion of respondents reported that medicine was their initial career preference and that ophthalmology was selected primarily based on personal interest. These findings are consistent with international literature, where intrinsic motivation, procedural interest, and perceived work-life balance are key determinants influencing the choice of ophthalmology as a specialty [13,18].

The study demonstrates a high level of overall career satisfaction, with the majority of participants expressing satisfaction with their specialty and willingness to choose ophthalmology again. This aligns with global evidence suggesting that ophthalmology is associated with favorable professional satisfaction compared to many other medical specialties [18,19]. While differences in healthcare systems and training environments limit direct comparisons, the consistency of these findings across diverse settings reinforces the perception of ophthalmology as a rewarding and sustainable career choice.

Subspecialization emerged as a prominent feature of professional development in this cohort, with a significant proportion of participants having completed fellowship training. Vitreoretinal surgery was identified as the most commonly pursued subspecialty, reflecting both global trends and local clinical demands. Previous studies have shown that subspecialty selection is influenced by factors such as clinical exposure, perceived career opportunities, and institutional support [11,20,21]. In the Pakistani context, variations in training availability and healthcare needs may further shape these patterns, highlighting the importance of expanding structured fellowship programs in underrepresented subspecialties [10–12,20].

Despite the overall high satisfaction, a small proportion of participants reported that they might reconsider their specialty choice or pursue an alternative career if given another opportunity. This finding should be interpreted cautiously, as retrospective reconsideration does not necessarily equate to dissatisfaction but may reflect evolving career perspectives, changing personal priorities, or exposure to different professional opportunities over time [18]. It underscores the dynamic and multifactorial nature of career satisfaction, which may extend beyond initial specialty selection.

Although factors such as burnout, mentorship, and institutional support are well-documented determinants of physician satisfaction, these variables were not directly assessed in the present study. Existing literature highlights the growing importance of these elements in shaping long-term professional fulfillment and workforce retention [5,15]. Future research incorporating validated measures of burnout, mentorship quality, and workplace environment would provide a more comprehensive understanding of the determinants of career satisfaction among ophthalmologists in Pakistan.

Female representation in the study was relatively low, limiting the ability to explore gender-based differences in career choices and satisfaction. International studies have reported evolving gender trends within ophthalmology, including variations in subspecialty preferences and leadership opportunities [22]. However, the present study was not designed to evaluate these aspects, and further research is needed to examine gender-related dynamics in the local context.

The findings highlight a strong alignment between initial career motivation and long-term professional satisfaction, while also acknowledging the complexity of career trajectories in ophthalmology. These insights have important implications for workforce planning, training program development, and policy formulation aimed at enhancing career satisfaction and retention within the ophthalmic workforce in Pakistan.

Limitations

This study has several limitations that should be considered when interpreting the findings. First, participants were recruited using a convenience sampling method at a single national conference, which may introduce selection bias and limit the generalizability of results to all ophthalmologists practicing in Pakistan. Second, the cross-sectional design captures perceptions at a single point in time and does not allow assessment of temporal changes in career satisfaction or causal relationships. Third, the relatively small sample size, particularly the limited number of female participants, restricted subgroup analyses, including gender-based comparisons. Fourth, the study relied on self-reported data, which may be subject to recall bias and social desirability bias. Fifth, the study was primarily descriptive and did not include inferential statistical analyses to explore associations between variables. Additionally, important determinants of professional satisfaction such as burnout, mentorship, institutional support, and workplace environment were not directly measured. The absence of these variables limits the depth of interpretation regarding the broader determinants of career satisfaction. Future studies employing larger, multicenter samples and incorporating validated psychometric tools are recommended to address these limitations.

Conclusion

The findings of this study demonstrate a high level of career satisfaction and professional commitment among consultant ophthalmologists practicing in Pakistan. Most participants reported that ophthalmology was their preferred specialty and indicated a willingness to choose the same career path again, reflecting strong alignment between initial career motivations and long-term professional fulfillment.

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References

1. Merritt JC. “Rolls Royce residencies”: the ophthalmology experience with minority medical students. J Natl Med Assoc. 1984;76:339–342. PMID: 6737488; PMCID: PMC2561692.
2. Pankratz MJ, Helveston EM. Ophthalmology: the resident's perspective. Arch Ophthalmol. 1992;110(1):37–39. doi:10.1001/archopht.1992.01080130039023.
3. Gameiro GR, Darcie ALF, Hazaki D, Gameiro GR, Carricondo PC. Why ophthalmology? Analysis of the motivating factors influencing the choice of ophthalmology as a career among different generations in Brazil. Clinics (Sao Paulo). 2019;74:e1101. doi:10.6061/clinics/2019/e1101.
4. Anderson D, Romanchuk K. Why choose ophthalmology? CMAJ. 2003;168(11):1396.
5. Cheung R, Yu B, Iordanous Y, Malvankar-Mehta MS. The prevalence of occupational burnout among ophthalmologists: a systematic review and meta-analysis. Psychol Rep. 2021;124(5):2139–2154. doi:10.1177/0033294120954135.
6. Zafar S, Bressler NM, Golnik KC, Srikumaran D, Ghous Z, Ip S. Fellowship match outcomes in the U.S. from 2010 to 2017: analysis of San Francisco Match. Am J Ophthalmol. 2020;218:261–267. doi:10.1016/j.ajo.2020.06.008.
7. Noble J, Schendel S, Daniel S, Baerlocher MO. Motivations and future trends: a survey of Canadian ophthalmology residents. Can J Ophthalmol. 2007;42(6):821–825. doi:10.3129/i07-156.
8. Scheffler RM, Herbst CH, Lemiere C, Campbell J, editors. Health labor market analyses in low- and middle-income countries: an evidence-based approach. Washington (DC): World Bank; 2016. doi:10.1596/978-1-4648-0931-6.
9. Jolley E, Jadoon Z, Khaliq Khan I, Gillani M, Buttan S, Schmidt E. Rapid assessment of avoidable blindness (RAAB) report, Pakistan. Haywards Heath (UK): Sightsavers; 2022.
10. Parija S, Mahajan P. Is pediatric ophthalmology a popular subspecialty in India? Indian J Ophthalmol. 2017;65(11):1187. doi:10.4103/ijo.ijo_548_17.
11. Solomon AM, Patel VR, Francis CE. Factors affecting ophthalmology resident choice to pursue neuro-ophthalmology fellowship training. J Neuroophthalmol. 2022;42(1):56–61. doi:10.1097/WNO.0000000000001239.
12. Gedde SJ, Budenz DL, Haft P, Lee Y, Quigley HA. Factors affecting the decision to pursue glaucoma fellowship training. J Glaucoma. 2007;16(1):81–87. doi:10.1097/01.ijg.0000243474.36213.08.

13. Lambert TW, Goldacre MJ, Bron AJ. Career choices for ophthalmology made by newly qualified doctors in the UK, 1974–2005. BMC Ophthalmol. 2008;8(1):3. doi:10.1186/1471-2415-8-3.
14. Liu EA, Wang SY, Rao RC. Sustaining independent careers in vision research: demographics and success in second R01 attainment among clinician-scientists. Transl Vis Sci Technol. 2020;9(12):32. doi:10.1167/tvst.9.12.32.
15. West CP, Dyrbye LN, Shanafelt TD. Physician burnout: contributors, consequences and solutions. J Intern Med. 2018;283:516–529. doi:10.1111/joim.12752.
16. American Academy of Ophthalmology. High career satisfaction rates among ophthalmologists [Internet]. San Francisco (CA): American Academy of Ophthalmology; 2017 Apr 20 [cited 2024 Jul 20]. Available from: https://www.aao.org/headline/high-career-satisfaction-rates-among-ophthalmologi
17. Tariq M, Asif M, Farrukh GM. Ophthalmology: a dwindling specialty in Pakistan. J Pak Med Assoc. 2023;73(12):2518. doi:10.47391/JPMA.7964.
18. Gedde SJ, Feuer WJ, Crane AM, Shi W. Factors influencing career decisions and satisfaction among newly practicing ophthalmologists. Am J Ophthalmol. 2022;234:285–296. doi:10.1016/j.ajo.2021.06.011.
19. Sabbaghi H, Kalantarion M, Yaseri M, Kheiri B, Rajavi Z, Safi S. Job satisfaction among ophthalmologists in Iran. J Ophthalmic Vis Res. 2022;17(4):543–550. doi:10.18502/jovr.v17i4.12315.
20. Mahsood YJ, Khalid F, Farooq S, Arif N, Rehman K. Subspeciality interests among ophthalmology residents: a mixed-methods study. J Coll Physicians Surg Pak. 2023;33(12):1433–1438. doi:10.29271/jcpsp.2023.12.1433.
21. Czyz CN, Kashyap R, Wayman LL. Factors influencing fellowship training among ophthalmology residents: a pilot study. HCA Healthc J Med. 2022;3(5):271–282. doi:10.36518/2689-0216.1382.
22. Steren BJ, Yee P, Rivera PA, Feng S, Pepple K, Kombo N. Gender distribution and trends of ophthalmology subspecialties, 1992–2020. Am J Ophthalmol. 2023;253:22–28. doi:10.1016/j.ajo.2023.04.012.