

Profile and professional career of graduates from the Alagoas State Ophthalmology residency program

Perfil e trajetória profissional dos egressos da residência médica em Oftalmologia do Estado de Alagoas

Renata Leonel Freire Mendes¹ <https://orcid.org/0000-0002-5032-1350>
Andrea Maria Cavalcante Santos² <https://orcid.org/0000-0003-3236-0660>
Alex Mendes Leonel Freire³ <https://orcid.org/0000-0001-8557-2515>

ABSTRACT

Objective: To characterize the profile of graduates of Medical Residency Programs in Ophthalmology in the state of Alagoas, regarding their training and professional practice. **Methods:** Retrospective descriptive study developed from a self-administered questionnaire sent to doctors who graduated from the Ophthalmology residency program at the Professor Alberto Antunes University Hospital (HUPAA / UFAL) who completed their residency in the last 10 years. **Results:** Of the 28 former residents, 27 responded to the questionnaire. They are predominantly women (70.4%), young (average 35.92 ± 4.05 years), born in the State of Alagoas (51.8%), graduated from public institutions (81.5%). Most settled in Maceió and the metropolitan region (51.8%) and work in private outpatient clinics (92.6%), with little experience in management (14.8%) and teaching (7.4%). More than half do not have a specialist degree from the Brazilian Council of Ophthalmology (59.3%) and carried out a specialized fellowship complementation program (74%). Only 7.4% carry out research activities and 3.7% have a master's degree. In general, the studied graduates are satisfied with the exercise of the specialty (100%) and with their training at the institution (86.3%), suggesting an improvement in surgical care and theoretical teaching (29.7%). **Conclusion:** The evaluation of the reality and professional performance of the graduates and their perceptions was able to raise the profile of professional choices and conditions of insertion and professional satisfaction. It also allowed complementary external evaluation of the training institution, providing subsidies for improving the quality of ophthalmology medical residency programs.

Keywords: Ophthalmology/education; Tutorship; Education; Internship and Residency; Hospitals, teaching

RESUMO

Objetivo: Caracterizar o perfil dos egressos de Programas de Residência Médica em Oftalmologia no Estado de Alagoas, quanto à sua formação e prática profissional. **Métodos:** Estudo descritivo, retrospectivo, de paradigma quantitativo, desenvolvido a partir de questionário autoaplicável enviado aos médicos egressos do programa de residência em Oftalmologia do Hospital Universitário Professor Alberto Antunes (HUPAA/UFAL) que finalizaram a residência nos últimos 10 anos. **Resultados:** Dos 28 ex-residentes, 27 responderam ao questionário. Foram predominantemente mulheres (70,4%), jovens (média $35,92 \pm 4,05$ anos), de naturalidade alagoana (51,8%), com graduação em instituições públicas (81,5%). A maioria se fixou em Maceió e região metropolitana (51,8%) e trabalha em ambulatórios privados (92,6%), com pouca atuação na gestão (14,8%) e docência (7,4%). Mais da metade não possui titulação de especialista pelo Conselho Brasileiro de Oftalmologia (59,3%) e realizou programa de complementação especializada tipo “fellowship” (74%). Apenas 7,4% realiza atividades em pesquisa e 3,7% possui mestrado. No geral, os egressos estudados estão satisfeitos com o exercício da especialidade (100%) e com sua formação na instituição (86,3%), sugerindo melhora na assistência cirúrgica e ensino teórico (29,7%). **Conclusão:** A avaliação da realidade e atuação profissional dos egressos e de suas percepções foi capaz de levantar o perfil de escolhas profissionais e condições de inserção e satisfação profissional. Também permitiu avaliação externa complementar da instituição formadora, fornecendo subsídios para melhoria da qualidade dos programas de residência médica em Oftalmologia.

Descritores: Oftalmologia/educação; Ensino; Educação; Internato e Residência; Hospitais de ensino

¹Ophthalmology Residency Program, Professor Alberto Antunes University Hospital, Federal University of Alagoas, Maceió City, AL, Brazil.

²Ophthalmology Department, Professor Alberto Antunes University Hospital, Federal University of Alagoas, Maceió City, AL, Brazil.

³Ophthalmology Residency Program, São Paulo State University “Júlio de Mesquita Filho”, Botucatu City, SP, Brazil.

Study developed at the Ophthalmology Department of Professor Alberto Antunes University Hospital, Federal University of Alagoas (HUPAA/UFAL), Maceió City, AL, Brazil.

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INTRODUCTION

Medical residency is acknowledged as the ideal post-graduate course modality to train specialists. It is featured by in-service training of medical graduates in health institutions, be them academic or not, under permanent supervision of medical professionals with high ethical and professional qualification⁽¹⁾. This modality lies between specialization and master's degree; it is based on full-time study schedule, requires exclusive dedication and has minimum duration of two years⁽²⁾. Its main aim is to transform physicians into professionals with specific skills, who are able to effectively meet the needs of the community⁽²⁾.

The ophthalmology medical residency program at Professor Alberto Antunes University Hospital (HUPAA), Federal University of Alagoas (UFAL), is accredited by the Ministry of Education (MEC) and certified by the Brazilian Council of Ophthalmology (CBO - Conselho Brasileiro de Oftalmologia). Nowadays, the program has three-year duration and comprises nine residents, three from each year (R1, R2 and R3). It trains three professionals per year and represents all state's ophthalmology residency positions.

The contribution of these medical residents is of paramount importance for the healthcare provided to users of the Brazilian Unified Health System (SUS - Sistema Único de Saúde), since these professionals provide assistance in clinical ophthalmology, diagnosis and full surgery procedures. Residents' learning process evolves in a progressive way; thus, responsibilities assigned and allowed to them, both at outpatient and surgical procedure levels, are defined based on skills acquired by each resident throughout the training years. Based on a rotation system, and always under faculty supervision, resident teams participate in outpatient specialty clinics, carry out complementary exams, as well as surgical and ocular tissue capture/preservation procedures. There is no rotation system for urgent and emergency care, although some cases of patients under follow-up in, or referred by, other healthcare services are received throughout the elective care period. There is also a program comprising theoretical classes divided by knowledge field.

Professionals' insertion in the labor market is a multifactorial process; however, it is necessary questioning to what extent training institutions are responsible for their graduates' success. In addition, despite the existence of several active medical residency programs in Brazil, the regular and systematic monitoring of graduates is not a common practice among institutions focused on training health professionals. Data about this topic are scarce, since the literature only presents few studies about the profile of medical residency graduates and their professional performance, and absolutely no study about medical residency in Ophthalmology. Evaluating residency projects developed by training institutions, and how their graduates practice the selected expertise, is a way to get information to find the means of making them active agents in changing processes, as well as to determine the needs of permanent education.

Thus, the aim of the current study was to feature the profile of graduates from Medical Residency Programs in Ophthalmology in Alagoas State, by taking into consideration their training and professional practice in the last ten years. In addition, the study describes their motivation for choosing their specialty, their satisfaction with their performance and training in the institution, and their suggestions to improve the training institution.

METHODS

Descriptive, retrospective study based on the quantitative

paradigm. It was developed based on a self-administered questionnaire sent to graduate physicians from the Ophthalmology Residency Program at Professor Alberto Antunes University Hospital (HUPAA / UFAL), who finished their residency between 2010 and 2020. The reference population investigated in the current study was selected from records of the Medical Residency Commission (COREME - Comissão de Residência Médica). Individuals received the invitation to participate in the research by email, letter, phone call or social networks, depending on the contact type available. Each invitation was sent along with an explanatory letter and the link to access the survey questionnaire, as well as the informed consent form (IFC), which provided information about the research, its aims and possible risks. Participants who agreed in participating in the study have voluntarily signed the ICF.

The project was in compliance with the ethical principles of CNS Resolution N. 466/2012. It was approved by the Research Ethics Committee of Federal University of Alagoas before its implementation, under Certificate of Presentation for Ethical Appreciation N. 15096119.8.0000.5013.

Data collection was carried out through the application of a semi-structured questionnaire adapted from Rodrigues,⁽³⁾ which comprised demographic and personal variables (age, sex, race, marital status, number of children, place of birth and origin), institution where they got their major in Medicine, professional practice (practice field, activities developed in public and private services, performance in teaching and management processes, implementation of scientific research) and activities associated with training in Ophthalmology (specialist certificate by CBO, Stricto Sensu degree, fellowship program).

In addition, participants' level of satisfaction with their expertise and with the training at Professor Alberto Antunes University Hospital was evaluated based on scores, which ranged from 1 to 10 at linear scale: scores 1 and 2 corresponded to dissatisfaction; 3 and 4 corresponded to little satisfaction; 5 and 6, to indifference; 7 and 8, to satisfaction; and 9 and 10, to great satisfaction. Motivation for choosing the expertise and suggestions to improve the service were requested through open questions.

Quantitative variables were described through minimum and maximum values, means and standard deviations, whereas categorical variables were described through frequencies and percentages. The open questions (texts) were subjected to discourse analysis and grouped based on common topics.

RESULTS

Twenty-seven (27) of the 28 former residents answered the survey questionnaire; 70.4% (n = 19) of them were women and 29.6% (n = 8) were men. Their mean age was 35.92 years (standard deviation of 4.05) and 50% of participants were up to 36 years old. Sixty-three percent (63%; n = 17) of participants were married and 37% (n = 10) were single; 48.1% (n = 13) did not have children, 29.6% (n = 8) had one child and 22.2% (n = 6) had two, or more, children (Table 1).

All participants were Brazilian citizens born in the following states: Alagoas (51.8%, n = 14), Bahia (11.1%, n = 3), Paraíba (7.4%, n = 2), São Paulo (7.4%, n = 2), Pará (7.4%, n = 2), Sergipe (3.7%, n = 1), Ceará (3.7%, n = 1), Rio Grande do Norte (3.7%, n = 1) and Pernambuco (3.7%, n = 1). In total, 51.8% (n = 14) of graduates settled in the state where they attended medical residency. With respect to medical training, most graduates came

Table 1
Sociodemographic features of medical residency graduates in Ophthalmology at HUPAA-UFAL

Sociodemographic features						
Sex	Male		Female		Total	
	N	%	N	%	N	%
Mean age (standard deviation)	8	29,6	19	70,4	27	100
	37,5 (-2,99)		35,3 (-3,95)			
Marital status						
Single	2	7,4	8	29,6	10	37
Married	6	22,2	11	40,7	17	63
Children						
None	2	7,4	11	40,7	13	48,1
One	3	11,1	5	18,5	8	29,6
Two or more	3	11,1	3	11,1	6	22,2
Place of birth						
Alagoas	6	22,2	8	29,6	14	51,8
Other	2	7,4	11	40,7	13	48,1
Origin						
Alagoas	7	25,9	13	48,1	20	74
Other	1	3,7	6	22,2	7	25,9
Current State						
Alagoas	5	18,5	10	37	15	55,5
Other	3	11,1	9	33,3	12	44,4
Undergraduate Institution						
UFAL	5	18,5	8	29,6	13	48,1
Other public institutions	2	7,4	7	25,9	9	33,3
Other private institutions	1	3,7	4	14,8	5	18,5

UFAL: Universidade Federal de Alagoas (Federal University of Alagoas)

from Federal University of Alagoas (48.1%, n = 13) and this institution was followed by Alagoas State University of Health Sciences (14.8%, n = 4). In addition, 81.5% (n = 22) of training institutions were public and 8.5% (n = 5) were private (Table 1).

More than half of participants (59.3%, n = 16) did not have specialist certificate by CBO. Twenty (20) of them (n = 74%) had finished, or were attending, at least one specialized fellowship complementary program; two (7.4%) were involved in research activities and one was a master's degree student (3.7%); none of them had doctorate degree (Table 2). All participants were active Ophthalmologists, who mainly worked in fields such as general ophthalmology (22.2%, n = 6), cornea and contact lenses (18.5%, n = 5), pediatric ophthalmology and strabismus (14.8%, n = 4), glaucoma (14.8%, n = 4), retina (11.1%, n = 3), cataract (11.1%, n = 3), oculoplastic surgery (3.7%, n = 1) and neuro-ophthalmology (3.7%, n = 1). Most of them performed their professional activities in private outpatient services (92.6%, n = 25); five worked in public outpatient services (18.5%); two (7.4%) worked in urgent and emergency ophthalmological services; two additionally worked in teaching (7.4%) and four (14.8%), in management processes (Table 3).

Moreover, 29.6% (n = 8) of graduates have chosen Ophthalmology due to affinity with the specialty; 11.1% (n = 3), due to the quality of life provided by this professional field; and 25.9% (n = 7), due to its broad action field (clinical, surgical and propaedeutic). Three participants (n = 11.1%) did not answer this question. Based on a scale from 1 to 10, 37% (n = 10) of ophthalmologists attributed score 10 to their degree of satisfaction with their professional choice; 33.3% (n = 9) attributed score 9; and 18.5% (n = 5), score 8 (Figure 1). The remaining 11.1% (n = 3) attributed scores 6 and 7 (Figure 1).

On the other hand, with respect to their satisfaction with

Table 2
Academic path of medical residency graduates in Ophthalmology at HUPAA-UFAL

	N	%
Licensed by the Brazilian Council of Ophthalmology		
Yes	11	40,7
No	16	59,3
Participation in fellowship programs		
Yes	20	74
No	7	26
Stricto sensu postgraduate studies		
Master's degree	1	3,7
Doctorate degree	0	0

Table 3
Professional practice of medical residency graduates in Ophthalmology at HUPAA-UFAL

	N	%
Private outpatient services	25	92,6
Public outpatient services	5	18,5
Urgent and emergency services	2	7,4
Hospital management	4	14,8
Teaching	2	7,4

the Ophthalmology training at HUPAA-UFAL, 70.3% (n = 19) of former residents were fully and very satisfied with it (scores 8, 9 and 10), 25.9% (n = 7) of them were satisfied (score 7) and 3.7% (n = 1) were indifferent to it (score 5), as shown in Figure 2.

Table 4
Suggestions by Ophthalmology graduates to improve the medical residency program at HUPAA-UFAL

	N	%
Intensifying the demand and surgical assistance	7	25,9
Improving the theoretical teaching (classes and case discussions)	7	25,9
Encouraging research	3	11,1
Implementing internship in urgent and emergency ophthalmological care	2	7,4
Other	4	14,8
Participants did not answer the question	4	14,8

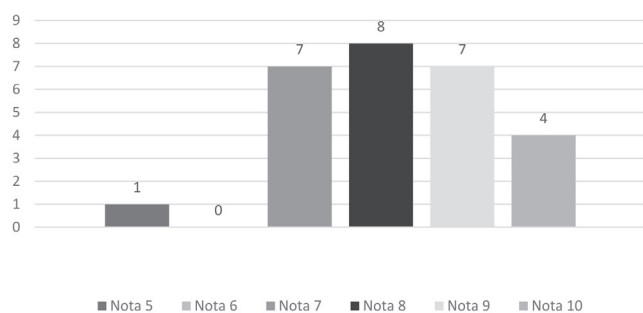


Figure 1: Satisfaction with professional choice (score 1 to 10) among HUPAA-UFAL medical residency graduates.

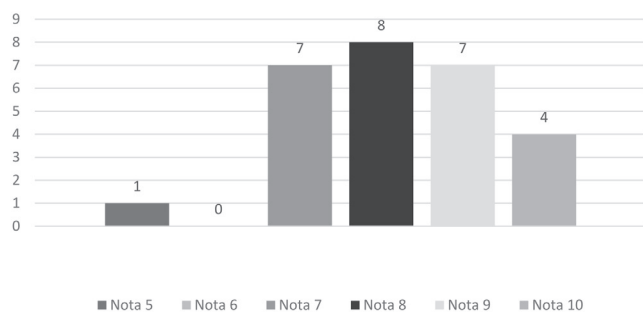


Figure 2: Satisfaction with Ophthalmology training (score 1 to 10) among HUPAA-UFAL medical residency graduates .

Among suggestions to improve the service, one finds the need of intensifying both demand and surgical assistance (25.9%, $n = 7$), as well as of improving theoretical teaching through reinforcement classes and case discussions (25.9%, $n = 7$), and of encouraging research (11.1%, $n = 3$) and implementing an internship in urgent and emergency ophthalmological care (7.4%, $n = 2$). Other suggestions included the implementation of monthly evaluations focused on preparing residents for examinations required to get the degree (3.7%, $n = 1$); the implementation of fellowship programs (3.7%, $n = 1$); the diversification of the education process through access to private services in order to enable medical approaches based on more modern exams and treatments (3.7%, $n = 1$); and the organization of internships in subspecialties (3.7%, $n = 1$). Four⁽⁴⁾ participants (14.8%) did not answer this question (Table 4).

DISCUSSION

Female graduates prevailed in the current study (70.4% against 29.6% of males). This outcome corroborates findings in the literature, which point towards increased number of women in medical courses, as well as in residency selection processes held in the ophthalmology field⁽⁴⁾. Participants' mean age (35.92 ± 4.05) has shown that the program was sought-after by young adults who mostly (81.5%) came from public institutions.

The implementation of medical residency programs helps concentrating physicians in a given place. Studies have shown that physicians tend to stay in the place where they attended medical residency, regardless of their place of birth⁽⁵⁾. For example, virtually 100% of graduates who were not born in other states, but who have finished their residency in Gynecology and Obstetrics, Family and Community Medicine, and Pediatrics in Acre and Roraima states, have settled in these states⁽⁶⁾. Unlike studies available in the literature, the current study has found that ophthalmologists born in Alagoas State were the only ones who settled in Maceió City and in its metropolitan region. Taking-up residence in the state capital and in neighboring regions follows the global trend of physicians to live in urban and economic centers - places presenting higher concentration of health facilities and, consequently, greater labor supply^(7,8).

Only 40.7% ($n = 11$) of former residents had specialist certificate by CBO. This certificate is important for trainees' qualification and for their introduction in the labor market since it is required for professionals' accreditation in health insurance plans and hiring in some services. This phenomenon can be explained by residence accreditation by MEC, which assures the Specialist Qualification Record (RQE - Registro de Qualificação de Especialista) - a formality that allows physicians to disclose their specialty after registration in the Regional Council of Medicine belonging to their jurisdiction. Other hypotheses comprise the educational deficiency of the service and lack of priority strategies aimed at students' approval in society exams.

Complementary studies and training in different areas of expertise - which are carried out through fellowship programs in the Ophthalmology field - are increasingly sought-after in a highly-competitive market; they were attended by most graduates in the present study (74 %). The insertion of professionals with specialized training in these programs helps improving graduates' education and increasing their skills⁽⁹⁾.

Only two participants (7.4%) were involved in research activities and only one (3.7%) had master's degree. Few ophthalmologists in Brazil show interest in attending strictu sensu postgraduate courses after finishing their medical residency⁽¹⁰⁾. Such lack in scientific production leads to lesser data than those observed in countries such as the United States of America (USA), Canada, England, Italy, France, Spain, Germany, Russia, China and Japan (11). Low investments in, and incentives to, research, structural difficulties faced by health services, lack of interest by residents, lack of faculty training to encourage and guide studies, as well as emphasis on medical assistance to the detriment of teaching and research, are some factors involved in the scarcity of scientific production. It is necessary valuing and encouraging scientific production by creating research sectors and didactic programs in healthcare services, as well as by inserting residents in scientific protocols⁽¹⁰⁾. These practices would not only favor teaching institutions, but the scientific community, as well.

With respect to employment relationships, most graduates worked in outpatient services in private hospitals or clinics

(92.6%, n = 25). Simultaneous employment relationships were mentioned by 100% of participants; these data were similar to the ones observed in other studies that have reported medical professionals with simultaneous jobs⁽¹²⁾. On the other hand, the health service management field did not appear to be attractive to ophthalmologists, since only four participants in the study have reported to perform this activity.

Recent studies have shown that medical students have a hard time choosing their expertise due to conditions such as personal preferences, quality of life, remuneration, social acknowledgment and professors' influence^(13,14). The main justification for choosing Ophthalmology in the present study lied on individuals' affinity with this field, which corresponded to 29.6% (n = 8) of the responses. The preference for expertises covering surgical procedures was associated with 25.9% (n = 7) of graduates' responses. Quality of life, in its turn, was mentioned by 11.1% (n = 3) of participants - this aspect was primarily taken into consideration by recently graduated individuals in Brazil and abroad at the time to choose their expertise^(13,14). Overall, graduates were satisfied with their expertise practice (88.9% of them have indicated satisfaction scores 8, 9 and 10).

The human, technical and professional dimensions of the training provided by the investigated institution were evaluated as satisfactory by most graduates. Some of them (25.9%, n = 7) have emphasized the need of intensifying demand and surgical assistance. The literature in this field has reported high satisfaction levels among recently graduated ophthalmologists in the USA and Canada. Some studies have evaluated residency programs in Canada and recorded 85% satisfaction among 40 participants⁽¹⁵⁾. Other studies conducted under this perspective have evaluated the opinion of 269 American ophthalmologists and found that 86% of them felt very well or extremely well prepared, although almost half of them would like to have additional surgical or outpatient training⁽¹⁶⁾.

Several suggestions made by former residents have been put in place, although partly, over the years. Among them, one finds reinforcement classes and case discussions, as well as periodic evaluations and the organization of internships in different subspecialties. The program content and scientific activities mentioned by 25.9% (n = 7) of participants are critical points of medical residency programs in surgical and non-surgical fields⁽¹⁶⁾. Theoretical background plays an essential role in the qualification of practices and in updating health professionals about diagnoses, propedeutics, treatments, techniques and surgical approaches⁽¹⁶⁾.

CONCLUSION

Ophthalmologists who have graduated at HUPAA-UFAL in the past ten years were mainly young, women and individuals living in Maceió City and in its metropolitan region, who showed trend to settle outside Alagoas State. Most of them did not have specialist certificate by CBO and attended specialized complementary fellowship programs. Overall, study participants were active professionals who were satisfied with their expertise practice (mainly in private services) and with their training at the institution. Most of them reported to not work in research and health management fields.

Results in the current study helped featuring the profile of professional choices, work field perspectives and professional insertion and satisfaction conditions. They also enabled the complementary external evaluation of the institution's commitment

to the education of these professionals. Thus, it is imperative evaluating the reality and professional performance of these graduates and their perceptions, on a regular basis, in order to develop and implement actions aimed at improving the quality of medical residency programs in Ophthalmology, as well as to provide qualified training to medical residents so they can enter an increasingly competitive and demanding labor market.

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Corresponding author:

Renata Leonel Freire Mendes
 , Av. Sandoval Arroxelas, 112/303-a, Maceió, AL, Brasil.
 CEP: 57035-230. E-mail: renataleonelfm@gmail.com