



Profile of plastic surgeons in the state of Goiás, Brazil

Perfil do cirurgião plástico no Estado de Goiás, Brasil

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■ ABSTRACT

Introduction: Plastic surgery has become popular in the recent years for the access to procedures and exposure in the media. The current scenario brings difficulties in the job market because of competitiveness and reduced fees. This study describes the profile of the plastic surgeons working in the state of Goiás. **Methods:** The survey was conducted with plastic surgeons who work in the state of Goiás and are registered in local chapter of the Brazilian Society of Plastic Surgery in January 2015. Data were divided into socio-economic and demographic profile. Inclusion criteria were residence certified by the Brazilian Ministry of Education or by the Brazilian Society of Plastic Surgery, practice of plastic surgery in the state of Goiás. We excluded residents in plastic surgery, and those who not practice in plastic surgery area. **Results:** Rate of response was 70%. Most participants were younger than 40 years old, men, married, with 1-2 children, work in Goiás, had less than 10 years as a surgeon, had specialization in plastic surgery, work 40-60 hours weekly and main practice was in aesthetic and reconstructive area, the majority of them do not employ assistances in more than 50% of surgeries. **Conclusion:** The profile of plastic surgeon in state of Goiás is composed by young physicians, men, married, with no more than 2 children, and whom practice mainly in the state capital, most of them are specialists, work 40-60 hours per week, and their main practice is with aesthetic and reconstructive surgery.

Keywords: Surgery, plastic; Job market; Economics, medical; Brazil.

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■ RESUMO

Introdução: A Cirurgia Plástica tem sido popularizada nos últimos anos, por meio do acesso aos procedimentos e exposição nos meios de comunicação. O contexto atual relata dificuldades no mercado de trabalho devido à competitividade e diminuição de honorários. O objetivo deste estudo é relatar o perfil do cirurgião plástico que atua no Estado de Goiás.

Métodos: A pesquisa foi realizada com cirurgiões plásticos que atuam no estado de Goiás registrados na regional da Sociedade Brasileira de Cirurgia Plástica (SBCP) até janeiro de 2015. Os dados foram divididos em perfil socioeconômico e demográfico. Foram considerados como critérios de inclusão residência pelo Ministério da Educação ou pela SBCP e estar atuando em Cirurgia Plástica no estado de Goiás. Como critérios de exclusão ser médico residente em cirurgia plástica e não estar atuando na área de Cirurgia Plástica.

Resultados: Obteve-se o índice de resposta de 70%. A maioria tem menos de 40 anos, masculino, casado, com 1 a 2 filhos, atuando em Goiás, há menos de 10 anos, são especialistas, trabalhando de 40 a 60 horas semanais e atuam na área estética e reconstrutiva e a maioria não usa auxiliar em mais de 50% das cirurgias realizadas.

Conclusão: O perfil do cirurgião plástico do estado de Goiás é o de um médico jovem, do sexo masculino, casado, com até 2 filhos, que atua principalmente na capital, sendo a maioria especialista, que trabalha de 40 a 60 horas semanais, e atuando na cirurgia estética e reconstrutiva.

Descritores: Cirurgia plástica; Mercado de trabalho; Economia médica; Brasil.

INTRODUCTION

Plastic surgery has become popular in the recent years because of the ease access to procedures and exposure in the media¹.

The diffusion of knowledge by residency programs in plastic surgery allowed that after training, plastic surgeons can practice in regions that was previously had few professionals, however, metropolitan areas^{2,3} continue to be preferred location, either because there are better infrastructure and because these areas have more people looking for plastic surgery.

For this reason, early career surgeons and more experienced surgeons have reported increase in the difficulty to enter in the labor market due to decreased fees^{2,4,5}, lack of options to work in public hospitals and higher demand from patients^{6,7}.

OBJECTIVE

This study reports profile of the plastic surgeon who practice in the state of Goiás, Brazil.

METHODS

A survey was conducted using a socioeconomic form with data related to professional activities that was developed specifically for the data collection. The questionnaire included 17 multiple-choice questions. This study was approved by Ethics and Research Committee, and registered in Platform Brazil, CAAE number 37151714.9.000.5078. This paper is based on the final paper of a master degree in health sciences of the Federal University of Gois.

Variables evaluated were: age, marital status, type of graduate program, sex, local of practice of the plastic surgeon, number of children, time as a surgeon, medical office location, membership of Brazilian Society of Plastic Surgery (BSPS), membership category at BSPS, type of medical practice, on-duty shifts, weekly working hours, number of surgeries weekly, type of surgery, employment of an assistant, and monthly income. Data were divided into demographic and professional profile.

Initially, data were collected online using a standard form of Google forms among members of local

chapter of BPS in Goiás registered up to January 2015. The form was sent by e-mail with response deadline of 30 days. In last day of deadline we called participants by phone to confirm if they have responded the questionnaire. After this first approach, more data were collected at regional courses, at physicians' office or in hospitals in which the surgeon worked.

Inclusion criteria were residence certified by the Ministry of Education or by the Brazilian Society of Plastic Surgery, practice as in plastic surgery in the state of Goiás. We excluded residents in plastic surgery, and those who did not practice in plastic surgery area. All participants signed the consent form, and confidentiality of information was guaranteed.

RESULTS

The method of sending emails, contact over the phone, and personal approach collected 115 responses of 163 questionnaires initially sent. Of participants, 59.5% were younger than 40 years. Most of participants were man, married, with 1-2 children, working in state of Goiás and their gross salary was over R\$30,000.00 (Table 1).

Table 1. Distribution of sociodemographic data.

Sociodemographic data	Frequency	%
Sex		
Female	13	11.3
Male	102	88.7
Marital Status		
Married	87	75.7
Divorced	6	5.2
Single	22	19.1
Number of children		
More than two	14	12.2
None	44	38.3
One to two	57	49.6
Local of working		
Goiás and other states	16	13.9
Only in Goiás	99	86.1
Monthly income		
≤ R\$ 20 thousand	22	19.1
R\$ 21 to 30 thousand	27	23.5
R\$ 31 to 40 thousand	26	22.6
> R\$ 40 thousand	40	34.8

The main location of medical office was in Goiânia, most of them worked for less than 10 years as surgeons, were specialists certified by the BPS, did not have graduate degree, worked primarily with health

insurance plans and on private basis, worked 40-60 hours per week, and performed less than 3 surgeries weekly, did work in on-duty shifts, practice in aesthetic and reconstructive surgery area, and more than 50% of them did not employ an assistant in surgeries (Table 2).

Table 2. Distribution of frequencies of professional profile.

Professional profile	Frequency	%
Local of Medical Office		
Goiania	72	62.6
Goiania, countryside or other state	37	32.2
Only in the countryside	6	5.2
Time working as surgeon		
≤ 5 years	47	40.9
6 to 10 years	26	22.6
11 to 20 years	26	22.6
≥ 20 years	16	13.9
Member category at BPS		
Member	30	26.1
Associated member	28	24.3
Specialist	56	48.7
Non-member	1	0.9
Graduate		
Doctorate degree	2	1.7
MBA	3	2.6
Master degree	8	7.0
None	102	88.7
Type of medical practice		
Private insurance	70	60.9
Solo practice	29	25.2
SUS	16	13.9
On-duty physician		
Not on-duty physician	77	67.0
Plastic Surgery	3	2.6
Other areas	35	30.4
Weekly work hours		
≤ 40 hours	35	30.4
41 to 60 hours	58	50.4
> 60 hours	22	19.1
Number of surgeries		
≤ 3 weekly	61	53.0
≥ 4 weekly	54	47.0
Type of surgery		
Aesthetic	33	28.7
Aesthetic and reconstructive	82	71.3
Use of assistance in surgeries		
≤ 25%	36	31.3
26 to 50%	33	28.7
51 to 75%	27	23.5
> 75%	19	16.5

MBA = Master in Business Administration; BPS = Brazilian Society of Plastic Surgery; SUS = Brazilian Public Health System.

We also compared data related with monthly income with time working as a plastic surgeon (Table 3), weekly working hours (Table 4) and number of surgeries per week (Table 5).

Table 3. Monthly income x Time as surgeon.

Monthly income	Time as surgeon				p
	≤5 years	6 - 10 years	11 - 20 years	> 20 years	
≤ R\$ 20 thousand	20 (42.6) _b	1 (3.8) _a	1 (3.8) _a	0 (0.0) _a	< 0.001
R\$ 21 - 30 thousand	18 (38.3) _c	7 (26.9) _{b,c}	1 (3.8) _a	1 (6.3) _{a,b}	
R\$ 31 - 40 thousand	6 (12.8) _a	11 (42.3) _b	7 (26.9) _{a,b}	2 (12.5) _a	
> R\$ 40 thousand	3 (6.4) _c	7 (26.9) _b	17 (65.4) _a	13 (81.3)	

Table 4. Income x Weekly working hours.

Monthly income	Weekly working hours			p
	≤ 40 hours	41 - 60 hours	> 60 hours	
≤ R\$ 20 thousand	4 (11.4) _a	8 (13.8) _a	10 (45.5) _b	< 0.008
R\$ 21 - 30 thousand	12 (34.3) _a	12 (20.7) _a	3 (13.6) _a	
R\$ 31 - 40 thousand	8 (22.9) _{a,b}	17 (29.3) _a	1 (4.5) _b	
> R\$ 40 thousand	11 (31.4) _a	21 (36.2) _a	8 (36.4) _a	

Table 5. Income x Number of surgeries weekly.

Monthly income	Number of surgeries weekly		p
	≤ 3	4 - 10	
≤ R\$ 20 thousand	18 (29.5) _b	4 (7.4) _a	< 0.001
R\$ 21 - 30 thousand	22 (36.1) _b	5 (9.3) _a	
R\$ 31 - 40 thousand	14 (23.0) _a	12 (22.2) _a	
> R\$ 40 thousand	7 (11.5) _b	33 (61.3) _a	

DISCUSSION

Studies related to plastic surgery, economy and labor market^{8,9} are common especially in the United States and Canada. Brazil has few studies comparing this relationship.

In 2009, a study conducted by BPSPS reported only 10% of response in survey that addressed overall situation of plastic surgeons in our country. In 2010,

IBOPE (*Instituto Brasileiro de Opinião Pública e Estatística*—in Portuguese; Brazilian Institute of Public Opinion and Statistics) investigated plastic surgery market with a response rate of 8%³. In 2013, Araújo et al.² published a study in State of Parana with 40.5% of responses. Our study was obtained 70% responses of the plastic surgeon population in the State of Goiás. We believe that the initial work with a sample calculation previously established as the study objective, the study previous designed to obtain data enabled the achievement of a representative participation of plastic surgeons in the state of Goiás.

Most of this study population was composed by young plastic surgeons, man, specialists members of BPSPS and who worked for less than 10 years as a surgeon. Our findings differed from those reported by Araújo et al.² and IBOPE (Datafolha) in which sample was composed by surgeons who worked for more years as plastic surgeons. Because most participants were man, this datum clearly suggest the difficult of women to balance of private life and act as surgeons, which normally involves many hours in surgery.

In Datafolha study answers were given by experts were 65%, Paraná 68% and our study 48.7%. Surgeons from Parana carried out 35% of surgeries in SUS, and in our study 14% of surgeons performed surgeries in public health system.

A study published by Krieger and Lee¹⁰ in 2004 highlights a change in area of actuation of American plastic surgeons who now give priority to aesthetic surgeries compared with reconstructive surgeries because of reduction of the fees paid by the insurances companies¹⁰⁻¹³. The same change is clearly seen in our country that very low fees are offered by insurances companies and low wages paid by SUS. These facts end up influencing plastic surgeon's decision to finish residence and pursue a career in aesthetic surgery^{14,15}. In our study, about 30% of participants worked only with aesthetic surgery and the remaining worked with aesthetic and reconstructive surgery.

Paraná study reported that most surgeons had 10-20 years of experience. In our study, most surgeons had less than 10 years of experience. In Datafolha data 68% surgeons had less than 15 years of experience. Therefore, these data show that many young surgeons are entering in the specialty, and this clarifies the worsening of the market in terms of competitive and price.

Economic stabilization in the beginning of this century led to an increase of demand for aesthetic surgery that is associated with increase of plastic surgeons entering in the market, therefore justifying the competitiveness and reduction in fees¹², commodification of labor and the invasion of insurance

companies. Paraná study evaluated characteristics of the market and payment methods of local surgeons. Our study did not include this aspect.

In our study most surgeons worked 40 to 60 hours weekly, performed up to 10 surgeries a week, both aesthetic and reconstructive surgeries. A similar result was observed by Araujo et al.² study in which a significant part of surgeons performed 10-20 surgeries/monthly followed by those who performed 20-30 surgeries/monthly. Datafolha pool reported average of three cosmetic surgeries a week, therefore, data found are similar to those found in the national literature.

Other studies^{5,7,10,11,16-18} report that after 20 years of graduation, the number of surgeries performed monthly decrease because at this stage of the career the surgeon reduces number of surgeries for personal reasons or career circumstances. In our study we did not observe reduction of number of surgeries even after 20-year career.

When monthly income was compared with other variables we seen that after 10 years of professional experience, professionals monthly income improve and there is an increase in the number of surgeries, showing that as time goes by results of the work appear. No significant result was seen in relation to monthly income and weekly working hours. This can be justified because early career surgeon often need to work on-duty shifts and after many years of practice, an increased is seen in number of clients, surgeries and weekly working hours.

Of the sample, only 40% employed an assistant in more than 50% of surgeries. In Parana 52.8% of surgeons did not employ an assistant in surgeries, Except in cases in which of minor surgery and liposuction, larger surgeries should have the presence of another colleague in order to increase patient safety and allow early career physician to gain experience about the market, also learn techniques, as well pricing ethical and prevent these new professionals to put energy on-duty shifts at different areas than plastic surgery.

We observed that 30% of plastic surgeons work as on-duty physicians in other areas of medicine. This finding is a concern because shows that early career surgeons are having trouble to be successfully absorbed by the market, which force them to perform as on-duty to guarantee their family income. Experience surgeons should encourage participation of assistant surgeons to help early career surgeon to not waste energy in on-duty shifts in other areas. Such action would help to reduce surgical time, reduce time for anesthesia, and also lower surgical risk. In addition, composition of surgical team is in agreement with resolution 1490/98 of Brazilian Federal Medical Council¹⁹ establishing that surgery is the responsibility of primary surgeon and

that but an assistant surgeon may be necessary if the titular is unable to continue the procedure.

As stated by Araujo et al.², experienced plastic surgeon can help early career plastic surgeon to begin their careers in the right way, and certainly, safer way, so that avoiding preventing them to be seduced by third parties that main objective is to explore medical activity and increase their profits. Indirectly, experience plastic surgeons are putting value to their practice, mainly for all hard work need during their lives to get proper training and become a specialist.

Our study presented data on decrease in medical fees, increase of stressful situations posed by the media, presence of third parties seeking to explore medical workforce, and lack of collaboration among colleagues as factors that can worse the reality of plastic surgeons practice. Further studies are need to confirm these data and to be used as evidence in to seek changes to improve the profession.

CONCLUSIONS

Profile of plastic surgeon in state of Goiás is composed by young physicians, man, married, with no more than 2 children, and whom work mainly in the capital of the state. The majority of specialists worked 40-60 hours per week, and worked with aesthetic and reconstructive surgery.

COLABORATIONS

- | | |
|-------------|--|
| FCFA | Contributed to the analysis, interpretation of data, statistical analysis, approval of the final version to be published, conception and design of the study, surgeries and/or experiments, drafting the manuscript and critical review of content of the study. |
| PRP | Contributed to drafting the manuscript and critical review of content of the study. |
| CCP | Contributed to the analysis, interpretation of data, statistical analysis, approval of the final version to be published, surgeries and/or experiments, drafting the manuscript and critical review of content of the study. |

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