



Hand surgery as a working area of plastic surgeons

A cirurgia de mão como uma área de atuação dos cirurgiões plásticos

RAFAEL DENADAI ^{1,2*}
HUGO SAMARTINE JUNIOR ²
RODRIGO DENADAI ²
ANDRE SILVEIRA PINHO ^{1,2}
CASSIO EDUARDO RAPOSO-DO-
AMARAL ^{1,2,3}

■ ABSTRACT

Introduction: Previous studies have shown that the public has misconceptions about the work of plastic surgeons in hand surgery. However, no specific Brazilian data on this issue are available. The objective of this study was to evaluate the public perceptions about the role of plastic surgeons in the field of hand surgery in Brazil. **Methods:** Members of the Brazilian public chose one or two specialists whom they believed to be experts in eight scenarios related to hand surgery. The patterns of the responses were distributed into “plastic surgeons” or “non-plastic surgeons.” **Results:** Non-plastic surgeons were significantly ($p < 0.05$ for all comparisons) more recognized as experts than plastic surgeons in all scenarios related to hand surgery. **Conclusion:** The knowledge and perceptions of the Brazilian public about the work performed by plastic surgeons in the field of hand surgery are limited.

Keywords: Brazil; Surgery, Plastic; Hands; Social perception; Specialization.

■ RESUMO

Introdução: Estudos prévios têm revelado que o público tem conhecimentos equivocados sobre a atuação dos cirurgiões plásticos em cirurgia da mão. No entanto, não existem dados específicos na literatura científica brasileira. O objetivo deste estudo foi avaliar as percepções do público sobre o papel dos cirurgiões plásticos no campo de cirurgia da mão no Brasil. **Métodos:** Membros do público brasileiro escolheram um ou dois especialistas que eles acreditavam serem *experts* para oito cenários relacionados à cirurgia de mão. Os padrões de respostas foram distribuídos como “cirurgiões plásticos” ou “não cirurgiões plásticos”. **Resultados:** “Não cirurgiões plásticos” foram significativamente ($p < 0,05$ para todas as comparações) mais reconhecidos como *experts* que “cirurgiões plásticos” em todos os cenários relacionados à cirurgia de mão. **Conclusão:** Os conhecimentos e as percepções do público brasileiro sobre o trabalho realizado por cirurgiões plásticos no campo cirurgia da mão são limitados. **Descritores:** Brasil; Cirurgia plástica; Mâos; Percepção social; Especialização.

Institution: Instituto de Cirurgia Plástica Craniofacial do Hospital SOBRAPAR, Campinas, SP, Brazil.

Article received March 23, 2015.
Article accepted June 07, 2015.

DOI: 10.5935/2177-1235.2015RBCP0172

¹ Sociedade Brasileira de Cirurgia Plástica, São Paulo, SP, Brazil.

² Instituto de Cirurgia Plástica Craniofacial do Hospital SOBRAPAR, Campinas, SP, Brazil.

³ Universidade de São Paulo, São Paulo, SP, Brazil.

INTRODUCTION

In 2014, Brazil surpassed the United States and became world leader in cosmetic surgeries, according to the latest report published by the International Society of Aesthetic Plastic Surgery¹. Although plastic surgeons may choose to limit their practice to a particular area (e.g., based on aesthetics) or to act in the overall field of plastic surgery, plastic surgery as a specialty must be understood as a field of medicine that is in constant expansion and evolution, with surgical interventions that range from complex craniofacial reconstructions to aesthetic procedures².

In this context, attention of the entire community of plastic surgeons to the lack of knowledge, misunderstandings, and underestimation of medical and non-medical agents regarding the field of plastic surgery is of utmost importance, presented in a growing list of international studies³⁻¹². According to these studies³⁻¹², the field of hand surgery is among the areas less related to plastic surgeons. In addition, the perception of the public about the performance of plastic surgeons, particularly in the field of hand surgery, has not received due attention in the Brazilian scientific literature¹².

OBJECTIVE

The objective of this study was to assess the perception of the public on hand surgery as a working area of plastic surgeons.

METHODS

An anonymous survey was randomly presented to members of the public (> 18 years) in public places of Southeastern Brazil, between February and April 2014. All multiple-choice questions, including eight scenarios related to hand surgery, were adapted from previous studies³⁻¹². The respondents were asked to choose one or two medical specialists (general surgeon, dermatologist, orthopedic surgeon, ophthalmologist, vascular surgeon, plastic surgeon, otolaryngologist, head and neck surgeon, or neurosurgeon) whom they recognized to be experts (trained specialist) for each question. All questions and specialties were arranged randomly. The participants were not informed about the source of the study (plastic surgery) or on the purpose of the study, and none of them could access questions already answered. Demographic data were also collected. The present study was performed in accordance with the ethical standards of the Helsinki Declaration of 1964 and subsequent amendments. The completion of the questionnaire was understood as an implied consent of participation, and questionnaires with incomplete responses were excluded.

Response profiles were defined as “plastic surgeons” or “non-plastic surgeons”^{7,10,12}. For the descriptive analysis of data, metric variables were presented as the mean values; and categorical variables, as percentages. Different tests (analysis of variance, equality of two proportions, paired t test, and confidence interval for the mean) were applied in the statistical comparisons. The values were considered significant for a confidence interval of 95% ($p < 0.05$).

RESULTS

Of the participants, 300 answered the survey. We found significant prevalences ($p < 0.05$) of individuals between 18 and 30 years of age (53%) and those with high school (41%) or university schooling (39%), with no significant difference ($p > 0.05$) between the sexes.

The “plastic surgeons” were chosen by more than 70% of the respondents and by less than 30% in none (0%) and five (62.50%) scenarios related to hand surgery, respectively (Table 1). “Non-plastic surgeons” were significantly ($p < 0.05$ for all comparisons) more frequently identified as “experts” than as “plastic surgeons” in all scenarios related to hand surgery (Figure 1).

DISCUSSION

Although plastic surgeons have played a fundamental role in the creation and establishment of hand surgery^{2,13}, several studies³⁻¹² have revealed that outpatients, medical students, and physicians in primary care, among others, have misconceptions about the actuation of plastic surgeons in hand surgery. However, the perception of the general public is limited³⁻¹¹, and no similar data are available in the Brazilian plastic surgery literature, although resident physicians have been previously questioned¹².

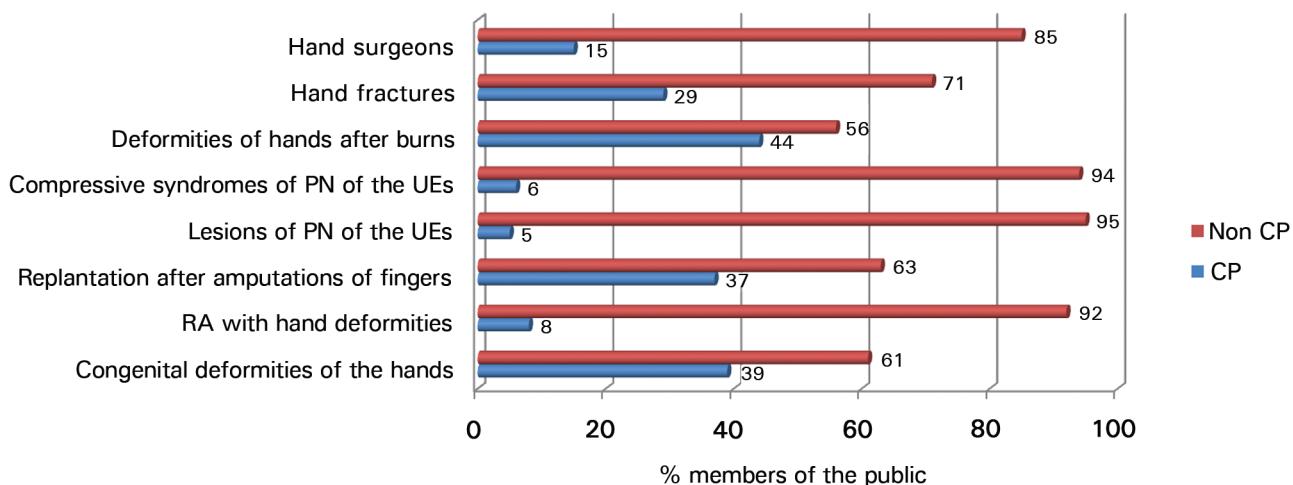
Therefore, we investigated a cross-sectional cohort of members of the population to assess their understanding and perception about the role of plastic surgeons in the field of hand surgery, particularly in Brazil. Although our data are mainly from a Brazilian perspective, as others^{10,12}, we believe that such data may guide the community of plastic surgeons toward a better education of the public on the role of this specialty in the context of hand surgery, besides helping preserve hand surgery as an integral part of the practice of plastic surgery.

We demonstrate that “plastic surgeons” were significantly less identified as specialists in interventions related to key hand surgeries for plastic surgery as a specialty, such as hand fractures, deformities in the hands after burns, nerve compression syndromes of the upper extremity, lesions of the peripheral nerves

Table 1. Scenarios related to hand surgery distributed in accordance with the regular (> 70%), rare (< 30%), or absent (0%) choice of plastic surgeons by the public.

Scenarios	Plastic Surgeons		
	Often selected		Rarely selected
	> 70%	< 30%	0%
Hand surgeons	†	+	†
Hand fractures	†	+	†
Deformities in the hands after burns*	†	†	†
Compressive syndromes of NP of the UEs	†	+	†
Lesions of PN of the UEs	†	+	†
Replantation after amputations of fingers*	†	†	†
RA with hand deformities	†	+	†
Congenital deformities of hands*	†	†	†
Total n (%)	0 (0)	5 (62.5)	0 (0)

PN: peripheral nerves; UE: upper extremities; RA: rheumatoid arthritis; †: absent; +: present; *: between 30% and 70%.

**Figure 1.** Percentages of responses patterns “plastic surgeons” (PS) and “non-plastic surgeons” (non-PS) distributed in accordance with the eight scenarios related to hand surgery. “Non-plastic surgeons” were significantly ($p < 0.05$ for all comparisons) more frequently chosen than “plastic surgeons” in all scenarios. RA, rheumatoid arthritis; PN: peripheral nerves; UE: upper extremities.

of the upper extremities, replantation after amputation of fingers, rheumatoid arthritis with hand deformities, and congenital deformities of the hands. These findings demonstrated that plastic surgeons are not recognized as experts in hand surgery among the Brazilian public, a trend that is also true in international studies³⁻¹¹. In Brazil, a study¹² with medical residents also revealed that plastic surgeons were significantly less chosen than all other response patterns in all scenarios related to hand surgery.

Several factors may have contributed to the non-recognition of plastic surgeons as experts in scenarios related to hand surgery. In addition to the numerous potential explanations (e.g., overlapping activities between the different medical specialties,

increased marketing, promotion and education of other specialties, and influence of mass media) discussed in similar studies³⁻¹², we believe that the peculiarities of Brazilian plastic surgery may also explain, in part, our results.

International studies³⁻¹¹ have revealed that plastic surgeons are recognized mainly as aesthetic surgeons. In Brazil, plastic surgery has become a mass phenomenon, with important implications for society and individuals, and physical appearance has been placed as an essential element for the construction of the Brazilian national identity^{14,15}. Thus, the philosophy of cosmetic surgery may overshadow the work of plastic surgeons in other fields of practice, including hand surgery.

In addition, reconstructive plastic surgery (including hand surgery) has historically received less attention in the events organized by the Brazilian Society of Plastic Surgery (SBPC). This particular behavior, which ignores the branch of reconstructive plastic surgery, certainly contributed to the spread of a selective impression of plastic surgery. In the international scenario, Menick¹⁶ recently stated that specialties other than plastic surgery have been more involved in the acquisition of skills related to facial reconstruction. Menick¹⁶ also emphasized that the organizations governing plastic surgery often respond that the emphasis on aesthetic surgery is essentially to satisfy the interest of plastic surgeons themselves. However, the lack of opportunities and educational incentives in reconstructive surgery leads to a lack of experience, frustrations, and fear of facial deformities, discouraging plastic surgeons to perform reconstructions and increasing the reference of patients historically treated with plastic surgery toward other specialists¹⁶. This potentially culminates in a vicious cycle. The spectrum of reconstructive interventions will be reduced to the extent that less-quality education is offered.

Finally, the configuration of hand surgery in Brazil can also explain our findings. As described in other countries¹⁷, the training of hand surgery in Brazil has many gaps. Few Brazilian medical residency programs in plastic surgery offer formal training in hand surgery¹⁸, and the number of residents who complete their training in plastic surgery and sought additional training in hand surgery is probably even lower than the rate of the United States¹⁹.

Based on our data and previous studies³⁻¹², there is active participation of the Brazilian community of plastic surgery (SBCP, all 84 programs of medical residency in plastic surgery accredited by the SBCP and Brazilian plastic surgeons) in education (e.g., through newsletters and high-quality websites with trusted content) of the public on the role of the plastic surgeon in the context of hand surgery. In addition, the next generation of plastic surgeons should be encouraged to practice the full scope of the specialty¹, including hand surgery^{1,13}. We believe that a Brazilian task force committed to improve and strengthen training in hand surgery within plastic surgery is necessary, following previously established models²⁰.

Some limitations of our study deserve to be addressed. As in previous studies^{3,6,10,12}, our data are susceptible to regional bias because only the public from a single geographic area were included. Despite these limitations, we believe that our data are relevant to Brazilian plastic surgery because they provide data for a further in-depth discussion on the importance of

hand surgery for our specialty. Future research should address our limitations and expand our findings for different groups (e.g., physicians in primary care).

CONCLUSION

The Brazilian public does not recognize hand surgery as a field of practice of plastic surgeons.

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Corresponding author:*Rafael Denadai**

Av. Adolpho Lutz, 100 - Cidade Universitária - Campinas, SP, Brazil
Zip Code 13083-880
E-mail: denadai.rafael@hotmail.com