



The Portuguese Public Perception about the Role and Spectrum of Plastic Surgeons

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Abstract

Background: Public perception of plastic surgery is strongly influenced by the media and may not reflect the broad scope of work within the specialty. The authors sought to identify public perceptions of plastic surgery in the Portuguese population.

Methods: A short, anonymous, survey was distributed to the public in two Portuguese cities. Respondents were asked to choose the specialty they believed were experts in 15 specific clinical procedures and to grade those same specialties by relative importance for the national health system.

Results: A total of 166 surveys were collected. The percent of respondents who chose plastic surgeons as experts in the following procedures included: Skin graft for burn (31%), finger reimplantation (68%), hand tendon repair (31%), abdominoplasty (82%), breast augmentation (94%), rhinoplasty (49%), excision of facial tumor (29%), facial wound repair (34%), mandible fracture (16%) and breast reconstruction (87%). Plastic surgery was correctly identified as the specialty to carry out only five of the ten listed plastic surgery procedures. Plastic surgery also ranked the lowest in terms of relative importance.

Conclusion: Many procedures considered to be the core of plastic surgery are increasingly associated with other specialties. Plastic surgeons are mostly viewed as aesthetic surgeons and as such rank lower in terms of relative importance, compared with the other surgical specialties.

Keywords: Public perception; Plastic surgery; Aesthetic surgery; Media; Portuguese population

Introduction

The scope of work undertaken by Plastic surgeons is broad and technical demanding. The specialty is unique in that it has not an area of expertise like Ear Nose Throat (ENT) nor a specific tissue like orthopedics and it extends across all anatomical areas of the body and all types of tissue. This makes it incredibly diverse but results in an increasing crossover of procedures between plastic surgery and other specialties including Orthopedic surgery, ENT, General surgery, Dermatology, Ophthalmology and Maxillofacial surgery. Such diversity can create confusion for those outside the specialty regarding the role of plastic surgeons within the health service [1].

Almost twenty years ago, Dunkin et al. [2] demonstrated limited understanding of the scope of plastic surgical practice amongst the UK public. Since this study was carried out, both reconstructive and aesthetic procedures have attracted significant publicity. In the cosmetic field there's an ever-increasing number of TV shows and podcasts reporting to the wonders of cosmetic surgery that also contributes to making aesthetic surgery more accepted than it was 30 years ago. Events including the first face transplant in 2005 and the PIP implant scandal in 2009 reflect both the diversity of the specialty and its attractiveness to the media. Similarly, social media is increasingly becoming a platform for interaction between physicians and potential patients. Some physicians have taken this opportunity to better educate patients, while allowing patients to learn more about their surgeons online, but then again, it's biased towards the role of plastic surgeons as cosmetic surgeons [3].

While patients have direct access to aesthetic surgical practice, the tertiary care nature of reconstructive work means that their understanding of this aspect of the profession may be lacking. Furthermore, it has recently been shown that misconceptions of plastic surgery exist amongst general practitioners, who often direct patients' entry in to tertiary care [4,5].

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Table 1: Demographic details of participants.

Total	166
Gender	
Male	90
Female	76
Age	
<21	26
21-40	62
40-59	52
>60	26
Education	
Secondary school	82
University	54
Postgraduate degree	30

The media and the general public continue to use the terms plastic, aesthetic and cosmetic interchangeably however [6]. Even among family doctors there's a misunderstanding of the role of plastic surgeons in the national health system and, more recently, a confusion between plastic surgeons and aesthetic doctors. As a result, patients entering the system for the first time, especially for a reconstructive surgery, may be confused or even hesitant to be cared for by plastic surgeons.

Nowadays, healthcare reform and resource allocation are increasingly influenced by politics and public opinion. In this context, misconceptions about the specialty's importance in delivering care to reconstructive and trauma patients may have significant impact on the future development of Plastic Surgery Services [1]. It's not uncommon in a hospital that hand trauma and facial trauma be treated exclusively by plastic surgeons. More commonly than not, the patients are unaware of it until they need our care.

The role that plastic surgeons are perceived to play amongst the general public must be assessed to further clarify common misconceptions. It is imperative to address these issues now so as to prevent the specialty from becoming marginalized and compartmentalized [7].

The aim of this study was to provide a contemporary assessment of the general public's perception of the work carried out by plastic surgeons and to report the perceived importance of plastic surgery relative to other specialties in the national health system.

Materials and Methods

A cross-sectional study was conducted where the population was members of the general public that were interviewed in public spaces in two different cities of Portugal. A questionnaire was designed with closed-ended questions, which were phrased in simple language. The questionnaire was anonymous and encompassed some basic demographic information - age, gender and education. The second section listed seven different surgical specialties (Ear, Nose & Throat, General, Oral & Maxillofacial, Orthopedic, Plastic Surgery and Dermatology) and asked respondents to select which one was likely to perform 15 different procedures. We also made available the option 'don't know'. We included some surgeries that are clearly done by plastic surgeons in our country and a couple that are not in order to blind the focus of the study. We also included a scale of

Table 2: Most commonly selected surgical specialty for each plastic surgery procedure.

Procedure	Most commonly selected surgical specialty	% of answers
Skin graft for burn	Dermatology	43
Finger reimplantation	Plastic Surgery	68
Hand tendon repair	Orthopedics	34
Rhinoplasty	Plastic Surgery	49
Abdominoplasty	Plastic Surgery	82
Breast Augmentation	Plastic Surgery	94
Breast reconstruction	Plastic Surgery	87
Face tumor excision	Dermatology	34
Facial wound repair	Maxillo-facial Surgery	36
Mandible fracture	Maxillo-facial Surgery	49

relative importance where we asked the public to rate the importance of different medical specialties for the Portuguese National Health System (1 - Not important and 5 - Extremely Important).

We excluded from analysis the questionnaires that weren't completely answered or had always the same answer (randomly filled).

Descriptive statistics were calculated to describe demographics and the specialty chosen for each procedure listed. One-way ANOVA was conducted to determine if the difference in level of importance between plastic surgery and other specialties was significant. All statistical analysis was performed using SPSS software (IBM Corp. IBM SPSS Statistics for Macintosh, Version 26.0. Armonk, NY).

Results

One hundred and sixty-six people completely filled our questionnaire. The average age of respondent was 30.1. Further demographic details are summarized in Table 1.

Plastic surgery was correctly identified as the specialty to carry out 5 of the 10 listed plastic surgery procedures (Table 2). The other 5 procedures that weren't related with plastic surgery were correctly attributed to their correct specialty in almost 100% of the cases and aren't included in the table (e.g., arm fracture for Orthopedics; tonsillectomy for ENT).

The frequencies of specialty selection for aesthetic and reconstructive procedures are detailed in Figure 1.

When asked about the level of importance of clinical specialties plastic surgery scored a mean of 4.30, which was the lowest score of any specialty (Figure 2). One-way ANOVA demonstrated that the perceived level of specialty importance was statistically significantly different between clinical specialties. Post-hoc analysis revealed that the difference in score between Plastic Surgery and all other specialties except for CMF was statistically significant.

Discussion

In this study we sought to characterize the general public's perception of plastic surgery. Plastic surgery is perhaps the most diverse of surgical specialties but the way we are perceived by the public is important in terms of patient confidence, referral patterns and resource allocation.

A number of studies in recent years have been published that



Figure 1 (A-J): Frequency of responses to surgeon most likely to perform each of the procedures listed in the questionnaire.



Figure 2: Perceived level of importance scored by each specialty. Each specialty was ranked using a Likert scale: 1 - Not important, 2 - Somewhat important, 3 - Quite important, 4 - Very important and 5 – Extremely important.

describe the misperceptions of health care practitioners including primary care physicians, residents, medical students, and nurses with regards to the field of plastic surgery [1,2,4-11].

Although the majority of publications regarding the scope of plastic surgery are largely focused on health care providers' opinions, recent studies from Australia, United Kingdom, United States and Ireland looked at the general public's views on the subject. Gill et al. [12] performed a cross-sectional telephone survey of 213 individuals. The authors found that overall, the public's understanding of plastic surgery is poor. For excision of a skin cancer of the face, 47% of those surveyed would choose a dermatologist to excise the lesion, whereas only 24% would choose a plastic surgeon. In addition, only 10% of individuals polled would see a plastic surgeon for hand surgery. Similarly, Dunkin et al. [2] polled 1,004 individuals and found that the vast majority did not believe plastic surgeons were hand surgeons; they were more believed as aesthetic surgeons. De Blacam et al. [1] showed that there was a poor understanding of the role of plastic surgeons in hand surgery, with only 4.7% of respondents attributing tendon repair to plastic surgeons and that plastic surgery ranked lowest of 30 specialties in terms of importance in providing care for patients within the hospital. More recently, Sinno et al. [7] showed, across 1,000 surveys, that only 12% of those inquired thought that plastic surgeons were experts in mandible fractures and 15% in open leg wounds, in contrast with 96% that thought that plastic surgeons were the most suited for breast augmentation.

To our knowledge, this is the first study that has examined the public perceptions of plastic surgery in Portugal. Our study has similar findings to those reported in other countries, clearly indicating that the general public is inadequately educated regarding the scope of plastic and reconstructive surgery. Plastic surgery was the most selected specialty in only 5 of the 10 procedures that are performed by plastic surgeons. Although community members routinely identified plastic surgeons as the experts in esthetic surgery procedures, their capacity to identify plastic surgeons as experts in reconstructive procedures varied widely. All procedures involving bone surgery were clearly associated with other specialties, even though maxillofacial and hand fractures are core procedures of our specialty. Interestingly, a finger reimplantation was associated in 68% of the cases with plastic surgery, perhaps due to the media attention it gets.

Maxillofacial was the most selected answer for facial wounds

(36%) and mandible fractures (49%). Oddly enough, only 16% of individuals believed that plastic surgeons were experts in mandibular fractures, less than the 27% who believed orthopedic surgeons were experts in this surgery. As Sinno et al. pointed, perhaps this is because many believed that a plastic surgeon only pertains to "soft tissues" and not "bone surgery." And the fact that more than one fourth of respondents felt orthopedic surgeons were experts in an operation, they rarely if ever perform calls to question the need for better educational efforts [7]. There was a strong appreciation for the role of plastic surgeons in aesthetic procedures. Abdominoplasty, rhinoplasty, and breast augmentation were all definitively attributed to plastic surgeons (82%, 49% and 94% respectively). This is in agreement with all the other studies previously reported and easily explained by the misconception that plastic surgeons are cosmetic surgeons. In contrast to other studies, only 31% chose plastic surgeons as experts in skin grafting for burns, with the majority, 43%, choosing dermatologists. In most studies, the three core fields that are still undoubtedly associated with plastic surgeons are: Aesthetic surgery, breast reconstruction and burns [8]. We believe that, by including the word "skin" in the procedure, we led some people to choose dermatology. Our data also demonstrated an appreciation for the overlap between specialties in carrying out certain procedures. For example, Ear, Nose and Throat surgery came a close second to plastic surgery for the specialty of choice for performing rhinoplasty (49% for Plastic Surgery vs. 33% for ENT) and plastic surgery came a close second to maxillofacial for facial wound repair (36% vs. 34%). Dermatology, maxillofacial and plastic all had similar results for excision of a face tumor (34% vs. 29% vs. 29%, respectively). In the current study, general surgeons were not recognized as carrying out breast reconstruction, with only 8% of respondents attributing the procedure to them, versus 87% for plastic surgeons.

Plastic surgery was ranked below all other specialties in the hospital in terms of importance in delivering care to patients. As our survey demonstrated, the general public strongly equates the title of plastic surgeon with cosmetic surgery. In a US study, Hamilton et al. showed that 'cosmetic' surgery was perceived to be more temporary and less technically difficult than 'plastic' or 'reconstructive' surgery [6]. Respondents also thought that cosmetic surgeons required significantly less training than plastic or reconstructive surgeons. This finding corroborates our observation that the public did not perceive the role of plastic surgeons as being as important as that of other

specialties in delivering care in a public hospital setting. General surgery and Orthopedics were perceived as the most important specialties in the hospital, which reflects the emphasis placed by the general public on the management of critical illness and trauma.

Now more than ever, the TV shows and media influence the public opinion on plastic surgeons. In their 1998 study, Park et al. concluded that the general public obtains its knowledge of plastic surgery through the media [8]. More recently, Hardwicke et al. confirmed that 49% of outpatients had an interest in television programs about plastic surgery [13]. With the majority of these shows being about aesthetic surgery, it's easy to understand that a big part of the population thinks they're the same.

The commonplace titles 'plastic', 'cosmetic' and 'aesthetic' fail to convey the scope of work carried out by our specialty. As a result, the general public comes to us with preconceived ideas about our skill set and significance.

There are potential limitations to our study. Firstly, we did not ask if respondents had any previous interaction with plastic surgeons. Exposure to plastic surgery through clinical encounters may have resulted in greater understanding of the field. However, we felt that it was more important to ensure that respondents were unaware of the plastic surgery nature of the questionnaire and therefore chose to blind the study in this way. Secondly, the list of surgical specialties offered as potential choices for the listed procedures was not exhaustive. For example, only the term 'general surgeon' was included, rather than 'breast surgeon' and 'colorectal surgeon'. In order to maintain the brevity of the survey, only seven specialties were included. This approach has been shown to maximize response rates and is consistent with the methodology applied in a previous study on this subject.

There are many ways to address increasing public awareness about the scope of plastic surgery. Increasing awareness through advertising campaigns would reach large numbers of individuals. Educating our colleagues in other general and subspecialized areas of medicine is critically important. This process should start way before years into practice, ideally during medical school. Medical school plastic surgery interest groups should be aimed at not only recruiting plastic surgery residents but also informing future doctors about the breadth of our specialty. In turn, these physicians will educate their patients about our expertise. Ultimately, it is our responsibility as plastic surgeons on the front line to educate our own patients who may come to us for one procedure that we have a large scope of practice as a specialty, and they should have confidence in a certified plastic surgeon's ability to execute a variety of procedures.

Conclusion

Without surprise, the general public strongly equates the title of plastic surgeon with cosmetic surgery. Most of the cosmetic

surgeries are clearly associated with plastic surgery but there's a lack of association of the reconstructive surgery with the specialty. That reflects in the relative importance of the specialty because plastic surgeons are perceived as fulfilling a less valuable role in providing care to patients than other specialists.

Having its origins in trauma and war surgery, it's important that we keep informing through the mediums available that plastic surgeons also have an important role in the hospital setting and that reconstructive surgery remains a core of our training and scope.

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