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Original article

The understanding of plastic and reconstructive surgery amongst Queensland medical students

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ABSTRACT

The field of plastic and reconstructive surgery is a unique and poorly understood surgical subspeciality. There is a misunderstanding about the scope of the speciality amongst both the public and professionals. Medical schools provide a unique opportunity to educate future medical practitioners on the role of surgical subspecialities.

Medical students at the Griffith University in Queensland, Australia, were invited to participate in a 30-question electronic survey to analyse their understanding of the surgical subspecialities. The students were asked to choose which surgical subspeciality would be most likely to treat the surgical condition. The five key areas of plastic and reconstructive surgery were included.

The survey involved 234 medical students. In total, 115 (49%) students were in their clinical years, with 23 students having completed a rotation in plastic surgery. Of the hand, maxillofacial and reconstructive operations, the chances of a student selecting a plastic surgeon as the primary operator significantly improved if they had plastic surgery experience. Students were more likely to associate plastic surgeons with cosmetic procedures.

This study has highlighted the gap between a medical student's perception and reality of the scope of Plastic and Reconstructive Surgery. It has emphasised the need for greater exposure and education in this surgical subspeciality if future medical

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practitioners are to better match the requirements of their patients to the skills of the specialist. If plastic surgeons wish to continue to be recognised as specialists in hand, craniofacial and reconstructive surgery, this gap between perception and reality needs to be addressed.

Introduction

The field of plastic and reconstructive surgery is a unique and poorly understood surgical subspeciality. In contrast to other subspecialities, it is not restricted by patient, pathology or anatomical site. Rather, it is driven by surgical technique, challenging surgeons to be malleable to each new clinical situation. Although this versatility is a defining feature of the speciality, it also leads to confusion. There is a misunderstanding surrounding the scope of plastic and reconstructive surgery amongst both the public[1] and professionals.[2,3] This misperception extends to medical students in both the United States (US) and the United Kingdom (UK).[4,5]

Medical student awareness of plastic and reconstructive surgery has multiple implications. Poor awareness has repercussions for both future surgical and non-surgical trainees. The latter is likely more significant as they will form a significant section of a plastic surgeon referral base. In addition, an improved understanding would expedite the referral process, reducing the cost to both patients and the healthcare system. With the increasingly tense economic climate in healthcare, improving the efficiency of the system has never been more important.

Previous evidence suggests that exposure to plastic surgery significantly increases students' knowledge of the speciality, including specialist topics such as cleft surgery.[7] However, the number of medical schools including plastic surgery as an independent part of the curriculum is declining.[6] Medical schools provide a unique opportunity to educate future medical practitioners on the scope of surgical subspecialities. With these benefits in mind, we sought to determine the understanding of plastic and reconstructive surgery among Australian medical students, with a particular focus on the influence of a rotation in the subspeciality. We hypothesise that medical students do not understand the full scope of plastic surgery; however, this improves with subspeciality exposure.

Methods

An email was sent to all medical students ($n = 590$) at the Griffith University in Queensland, Australia, inviting them to participate in a 30-question electronic survey to analyse their understanding of the surgical subspecialities (see Table 2). The students were presented with 25 different surgical scenarios and asked to choose which surgical subspeciality would be most likely to treat the surgical condition, out of the eleven surgical subspecialities listed (see Table 1). For cases potentially requiring multidisciplinary care, students were asked to select the primary operator only. Among the presented scenarios, 20 outlined a condition/operation routinely managed by a plastic and reconstructive surgeon. The scenarios were not exhaustive but attempted to cover the full scope of plastic surgery (see Figure 1). Five of the presented scenarios outlined a procedure/operation routinely managed by another subspeciality (e.g., appendicectomy) to blind the students to the plastic surgery focus of the survey.

All statistical analyses were performed using the IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp. Univariate frequency differences, odds ratios, 95% confidence intervals, *p*-values were calculated by chi-squared analysis.