

Perception of Plastic & Reconstructive Surgery among healthcare professionals in South Punjab, Pakistan

JAVARRIA MAHMOOD¹, AKASHAH AMBAR², FARHAT UL AIN TAYABA³, UZMA NASEER⁴, GUL E RANA⁵, SALIHA ZAFER⁶

¹SR Plastic Surgery, Multan Burn Unit, Multan

^{2,4,5}SR Plastic and Reconstructive Surgery Unit Bahawalpur

³Assistant Professor Plastic and Reconstructive Unit Bahawalpur

⁶Assistant Professor Pathology Department QAMC Bahawalpur

Correspondence to Dr. Javarría Mahmood Email: dr.javarría@gmail.com, Cell: 0302-7416651

ABSTRACT

Aim: To understand the level of perception & attitude of health care professionals towards Plastic Surgery & its influence on referral rate.

Material: A questionnaire based survey was performed in Bahawal Victoria Hospital (tertiary care hospital) of South Punjab region of Pakistan in 2021. This survey was conducted among interns and residents of all specialties excluding dermatology, orthopaedic surgery and plastic surgery. Questionnaire was based on two parts, one for evaluation of general perception regarding the specialty and second was to evaluate their knowledge regarding different medical conditions dealt by the respective fields. Data was analyzed for each question.

Results: Total of 150 junior doctors participated in this analysis. Only 44% had appropriate understanding of this specialty. 36% had unrealistic expectations of the outcomes. 75% of them had good understanding of cosmetic and reconstructive aspects of this specialty. Regarding specific ailments, there was a confusion among the participants as to whom will be a preferred treating specialist.

Conclusion: This confusion existed where Plastic Surgery overlaps with other modalities such as limb surgeries, head and neck tumors and trauma, nerve injuries, congenital defects and urogenital conditions.

Keywords: Health care professional, reconstructive surgery, attitude

INTRODUCTION

We are living in an era where people are more health conscious & aware of different medical specialties by seeking information from broadcast media and internet.

Although field of plastic surgery has advanced enormously, yet, health care professionals appear to be having elite knowledge about spectrum of this specialty. Plastic & reconstructive surgery covers a broad spectrum of health conditions including all anatomical site, age groups & genders. It would not be wrong to consider it as a last bastion of surgery. Due to versatility of this specialty and its potential for innovation and evolvability, it's creating confusion in the minds of public as well as health professionals.

As media is only advertising the cosmetic aspect of this specialty, the other large spectrum we cater goes largely unnoticed. Even health care providers don't have comprehensive knowledge about the entire scope of plastic surgery. Therefore it's influencing the referral rate of concerned problems and hence management output due to delays or suboptimal approach elsewhere.

We designed our study to evaluate the perception and awareness of plastic surgery among health care professionals in tertiary care hospitals in South Punjab region of Pakistan. This perception among our colleagues is important in developing strategies to initiate proper awareness that would influence the referral.

MATERIALS AND METHODS

After permission from Ethical Review Committee, we conducted our study among health care professionals of a remote teaching hospital in South Punjab region of Pakistan, in Bahawal Victoria Hospital which is a 1400+ bedded hospital with a huge referral rate of patients from the corresponding district and surroundings as well and remains 100% occupied throughout the year. This was performed in 2021, through a questionnaire based evaluation which was distributed among residents and interns of all specialties excluding senior faculty and those from entities that overlap with the plastic surgery specialty (such as orthopedic surgery and dermatology). Teaching faculty of affiliated medical college was not included in our study. Total number of participants was 150. The questionnaire comprised of two parts, one containing the questions regarding general concept about plastic surgery and was based on multiple choice questions to be marked,

(Questionnaire.1) whereas the second part contained a list of ailments and participants were supposed to choose the specialty that would be the best and appropriate for treating that medical situation. (Questionnaire.2)

The ailments covered the whole spectrum of plastic surgery related conditions including trauma, infections, congenital and acquired deformities/defects, tumors, cosmetic and functional problems. The options of treating specialties included general surgeons, orthopedics, maxillofacial, plastic surgeons, ENT surgeons, ophthalmologists, dermatologists, urologists, neurosurgeons, pediatric surgeons and cardiothoracic surgeons.

General Questions:

- 1. What comes in your mind after hearing the word "Plastic Surgery"?**
 - (a) It uses "Plastic" in surgery
 - (b) Person becomes flawless like a shiny plastic
 - (c) I don't know
 - (d) Other(specify)
- 2. Plastic surgery deals with which body tissue?**
 - (a) Skin only
 - (b) Skin & soft tissue
 - (c) Skin, soft tissue, nerve, vessels, tendon, bones
 - (d) I don't know
- 3. Is there any difference between reconstructive plastic surgery and cosmetic plastic surgery?**
 - (a) Yes
 - (b) No
 - (c) I don't know
 - (d) Other (Specify)
- 4. How does a plastic surgery operation affect a scar?**
 - (a) It absolutely vanishes it.
 - (b) It improves the appearance & quality of the scar.
 - (c) I don't know.
- 5. Do you think that Plastic Surgery is not cost effective & afforded only be famous or rich people?**
 - (a) Yes
 - (b) No
 - (c) I don't know

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Sr	Ailment	General surgeon	Plastic Surgeon	ENT surgeon	Neuro surgeon	Urologist	Orthopedic surgeon	Ophthalmic surgeon	Paed-iatric Surgeon	MXF-surgeon	Cardio-thoracic Surgeon	Derma-tologist	Others
1	Acute burn(all forms)												
2	Burn sequelae												
3	Scar abnormalities												
4	Wound coverage of upper and lower extremities												
5	Bed sores												
6	Diabetic foot wounds												
7	Soft tissue injuries of hand (skin, soft tissues, tendons, nerves, vessel)												
8	Chronic wounds over legs												
9	Congenital & acquired deformities of eyelids, ear, nose												
10	Congenital & acquired deformities of lip & palate & other craniofacial anomalies												
11	Head & Neck tumors (benign/malignant)												
12	Facial Fractures												
13	Nose job/Nose reconstruction												
14	Hair transplantation (scalp/facial)												
15	Replantation of digits/hands/feet & other soft tissue												
16	Congenital & acquired problems of hand												
17	Anti-aging procedures (surgical/non-surgical)												
17	Breast enlargement/reduction												
18	Breast reconstruction												
19	Congenital and male breast problems												
20	Tummy tuck & body contouring												
21	Gender transformation surgery												
22	Congenital/Acquired defects of male genitalia												
23	Nerve surgeries, facial palsy												

RESULTS

The analysis of this questionnaire is given in table 1 and 2. This study included 150 participants, of which 65(43%) were males and 85(57%) were females. Of those, 67(45%) were interns whereas 83(55%) were residents. Part 1 of our questionnaire (general section with MCQ) showed that 44% of the participants gave different responses with the most relevant answer considering this specialty as a fine surgical skill based on sculpting and remodeling of tissues. 36% felt that skin becomes flawless after getting plastic surgery hence the name. 14% didn't know about it whereas 6% said that perhaps plastic was used during surgery as some prosthesis. About 47% of respondents thought it to be dealing with all body tissues whereas 45% favored it to be dealing with skin and soft tissues and other 6% favored skin only. 2% didn't know the answer. 75% considered reconstructive surgery different from cosmetic plastic surgery, 14% considered both entities as one, 10% responded indifferent, not knowing the answer. While evaluating their perception about scars after plastic surgery, it showed that 88% felt improvement in quality and appearance of scars, 9% agreed with absolute disappearance of scars, 3% didn't know about the actual outcomes. Regarding cost-effectiveness and affordability, 47% response was in favor of non-affordability and deemed it fitting for the wealthy population only. 43% considered it affordable for everyone.

In part 2 of the questionnaire, we analyzed that 62% of the respondents preferred a general surgeon and other 27% preferred plastic surgeon to treat acute burn injuries. For burn sequelae, 76% were in favor of plastic surgeon. Regarding scar abnormalities, 82% preferred plastic surgeons and 9% preferred dermatologists for it. 64% preferred plastic surgeons for coverage of extremity wounds, 20% voted for general surgeons and 16% for orthopedic surgeons.

76% responded for the bedsores to be treated by general surgeons and only 22% favored plastic surgeons. 74% considered diabetic wounds to be treated by general surgeons and only 19% preferred plastic surgeons for its treatment. For congenital craniofacial and lip and palate deformities, 41% of respondents preferred pediatric surgeon, other 26% considered maxillofacial surgeon appropriate to deal with these conditions, 15% preferred plastic surgeon for treating this situation. Many of the respondents opted ENT surgeons(42%) as their option for treating tumors of head & neck region while other 28% preferred general surgeons as their option and only 12% chose plastic surgeons. Detailed analysis is given in the table 2. The situation in our institution might not be very different from other regions of many of developing countries and many of our colleagues are still not fully

aware of the extent of work we are doing, especially in cases where certain conditions overlapped, the results were disappointing. Even more so, it was implied that no particular domain was exclusive to the plastic surgery field and it slightly gave an impression as if this specialty still needs more recognition as a separate entity as well its importance in primary care of the patients.

Table 1:

What comes in your mind after hearing the word "Plastic Surgery"?		
Sr.	Question	Reply (n=150)
(a)	It uses "Plastic" in surgery	11
(b)	Person becomes flawless like a shiny plastic	52
(c)	I don't know	21
(d)	Other(specify)	64

Plastic surgery deals with which body tissue?		
Sr.	Question	Reply(n=150)
(a)	Skin only	09
(b)	Skin & soft tissue	68
(c)	Skin, soft tissue, nerve, vessels, tendons, bones	70
(d)	I don't know	03

Is there any difference between reconstructive plastic surgery and cosmetic surgery?		
Sr.	Question	Reply (n=150)
(a)	Yes	113
(b)	No	21
(c)	I don't know	0
(d)	Other(specify)	16

How does a plastic surgery operation affect a scar?		
Sr.	Question	Reply(n=150)
(a)	It absolutely vanishes it	13
(b)	It improves the appearance & quality of the scar	133
(c)	I don't know	04

Do you think that plastic surgery is not cost-effective & afforded only by famous or rich people?		
Sr.	Question	Reply (n=150)
(a)	Yes	72
(b)	No	63
(c)	I don't know	15

Table 2

Sr	Ailment	General surgeon	Plastic Surgeon	ENT surgeon	Neuro surgeon	Urologist	Orthopedic surgeon	Ophthalmic surgeon	Paed-iatric Surgeon	MXF-surgeon	Cardio-thoracic Surgeon	Derma-tologist	Others
1	Acute burn(all forms)	98	41						9			2	
2	Burn sequelae	31	114				1					3	
3	Scar abnormalities	12	124									14	
4	Wound coverage of upper and lower extremities	31	97				22						
5	Bed sores	115	33									2	
6	Diabetic foot wounds	112	29				9						
7	Soft tissue injuries of hand (skin, soft tissues, tendons, nerves, vessel)	51	78				21						
8	Chronic wounds over legs	80	52				19						
9	Congenital & acquired deformities of eyelids, ear, nose		69	37				28		16			
10	Congenital & acquired deformities of lip & palate & other craniofacial anomalies	6	23	20					62	39			
11	Head & Neck tumors (benign/malignant)	42	18	63	11					16			
12	Facial Fractures	3	27	34			5			81			
13	Nose job/Nose reconstruction		92	50						8			
14	Hair transplantation (scalp/facial)	6	133									11	
15	Replantation of digits/hands/feet & other soft tissue	12	52				86						
16	Congenital & acquired problems of hand		34				67		49				
17	Anti-aging procedures (surgical/non-surgical)		97									53	
17	Breast enlargement/reduction		128									22	
18	Breast reconstruction	3	147										
19	Congenital and male breast problems	135	15										
20	Tummy tuck & body contouring	9	131									10	
21	Gender transformation surgery		24			126							
22	Congenital/Acquired defects of male genitalia	12	45			93							
23	Nerve surgeries, facial palsy	11			122				17				

Chart 1

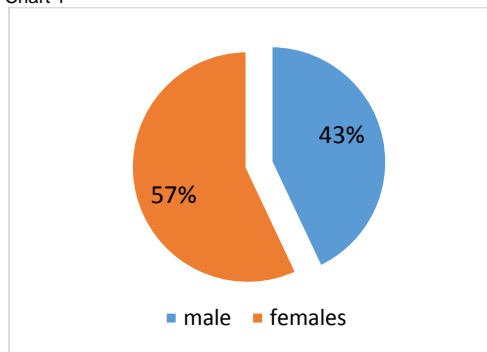


Chart.4

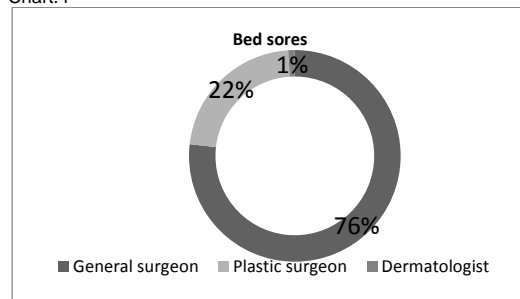


Chart.2

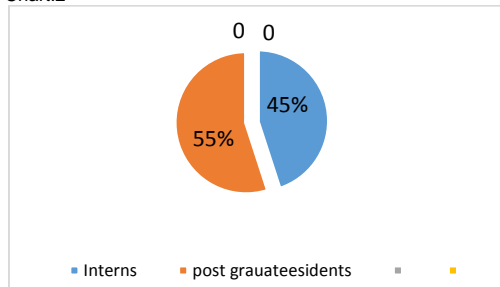


Chart.5

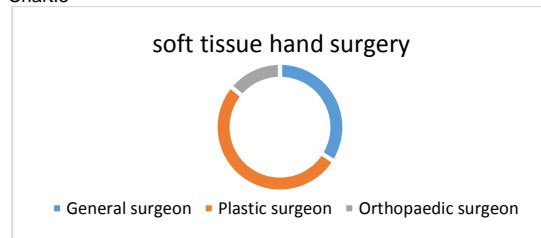


Chart.3

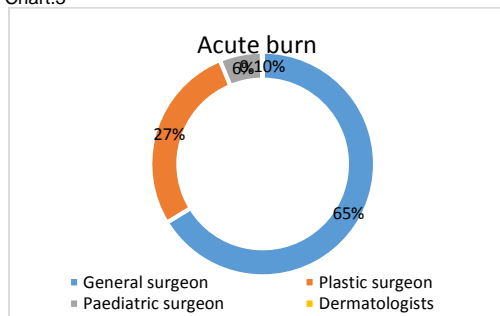


Chart.6

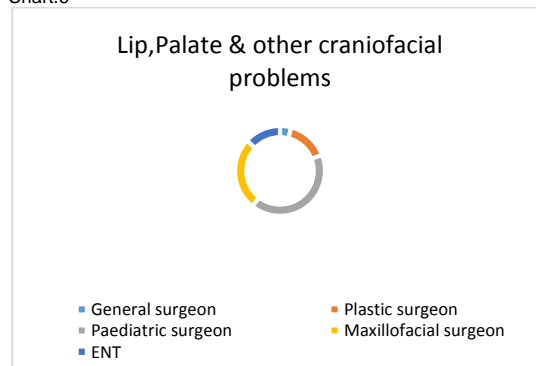
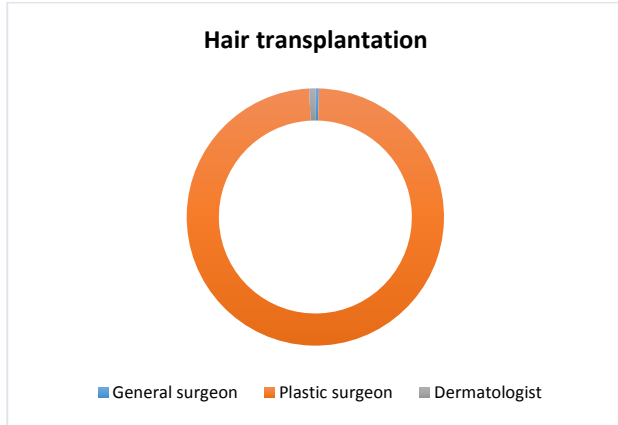


Chart 7



DISCUSSION

Plastic surgery is one of those specialties that is evolving exponentially but unfortunately its impression towards society is not conveyed appropriately. Even among health care professionals, the true understanding of this specialty is lacking because it is inherently diverse and is not limited by anatomical boundaries, organ systems or age groups.¹ Our society strongly associates plastic surgeons with cosmetic surgery and the reconstructive spectrum is largely ignored because media and entertaining entities are featuring plastic surgery as beauty business.

The name of this specialty is deceiving itself, causing confusion in the minds of general public as well as health care professionals who consider it as something artificial and have unrealistic expectations. Many studies have been performed previously that suggested a change in the name of the specialty but no name actually can define the specialty in its true form and can create further confusions. This specialty actually entails creating, remodeling and keeping the function and aesthetics altogether. The training program of plastic surgeon is highly demanding and extensive but despite of all these credentials, board certification and technical skills, many of us are poor in marketing our expertise, hence results in poor perception of the community.

In our country, only a couple of studies have been performed previously that only focused on general population but our survey was conducted among junior health care professionals as many of them will serve at basic health facilities from where we receive most of our referrals, therefore their perception of specialty is of profound importance as it directly affects our definitive management and avoidance of complications. Global Aesthetic Survey in 2016 published results that, there was 9% overall increase in surgical and nonsurgical procedures as conducted by the International Society of Aesthetic Plastic Surgery⁶.

Our survey results regarding the definition of plastic surgery, its cost effectiveness, outcome apprehension, knowledge of the spectrum of health problems were alarming as these health care professionals are required to be more aware. It shows lack of strategies in our undergraduate curriculum and lack of inclusion of this specialty in career counselling of medical students. Plastic surgeons have been developing more advanced treatment modalities for extremely complex surgical problem yet they are not called as primary surgeon for those conditions, such as diabetic foot, pressure sores and chronic wounds. Hand or extremity surgery is still perceived primarily as a domain of orthopaedic surgery or congenital problems still considered to be

treated primarily by paediatric surgeons. All these hindrances can be overcome and the specialty can be given its deserved place in medical society by spreading awareness through local seminars, print media, radio and television broadcast, free camps and frequent educational activities.

Our study is limited by group of people included in our survey and it represents single geographical area and this leads to underestimation of true extent of misconception and unawareness.

CONCLUSION

Despite the progress in the field of plastic surgery, there is still a deficiency in the knowledge of health care professionals regarding this field and if we are to provide best treatment to the patients, it is imperative to educate our health care professionals from undergraduate level and so on and we need to eliminate the cosmetic-only label from our specialty and make strategies that would directly interact with this subgroup of people.

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