

## Original Research Article

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## Evaluation of awareness and perception of plastic surgery among general public at a suburban teaching hospital

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### ABSTRACT

**Background:** The general public is usually unaware of the available services of a plastic surgeon. Thus, we are trying to identify the perceptions of the public towards plastic surgery in a setting of a suburban tertiary teaching hospital by means of a questionnaire and the results were analyzed.

**Methods:** 250 people took part in this study of varying ages, socioeconomic backgrounds, education levels and of either sex. These people were those visiting the different outpatient departments of our hospital. A short and simple questionnaire was devised in three languages of English, Tamil and Hindi. The questionnaires were analyzed and tabulated and the results were inferred.

**Results:** 60.4% of the public think plastic surgery and cosmetic surgery are the same. 69.6% of the public think that plastic is used in plastic surgery. 90% of them think that there will be no scars following plastic surgery and that plastic surgery is only for the rich and famous. 39.6% of them think that plastic surgery is a risky operation whereas 30.4% feel that there is no risk involved. 80% of the population voted that a common procedure like rhinoplasty is done by a plastic surgeon. 70% of the public think that getting plastic surgery is good. All the public have heard the term plastic surgery, while 84.4% of them think that plastic surgery is only cosmetic surgery. 79.6% of the population has heard of plastic surgery from radio and television.

**Conclusions:** There has been a sudden surge of plastic surgery performed over the recent years but the public are not much aware regarding these procedures and we must educate them for the speciality to progress.

**Keywords:** Awareness, General public, Plastic surgery

### INTRODUCTION

The speciality of plastic surgery is enormous which includes reconstructive as well as cosmetic surgery. Furthermore, there are different subspecialties including hand surgery, faciomaxillary surgery, microsurgery and so on. The general public is not aware of these vast areas encompassed under plastic surgery. There are misconceptions by the general public regarding the role of a plastic surgeon in patient care.<sup>1</sup> One of the factors for

this is media propagating plastic surgery as only cosmetic surgery, in which many reality television programs portray and therefore due to this telemarketing, cosmetic surgery has been the main income generating speciality at many hospitals.<sup>2,3</sup> The other factor is the many subspecializations of plastic surgery which confuses the public and hence is a deterrent to clinical practice. Finally, many other specialities like oral maxillofacial surgery, dermatology and orthopaedic surgery, have procedures that overlap with plastic surgery and this

makes these clinical areas appear to be beyond the scope of a plastic surgeon. Plastic surgery has been described as the last bastion of general surgery.<sup>4</sup>

### Aim

This study is done to assess the perception of people regarding plastic surgery and how the fraternity can improve upon the results.

### METHODS

Two hundred and fifty people took part in this prospective study of varying ages, socioeconomic

backgrounds, education levels and of either sex. These people were those visiting the different outpatient departments of our hospital, Saveetha Medical College & Hospital for a period of 1 month from February 2019 to March 2019. The people who took part in the study were chosen at random. A short and simple questionnaire was devised in three languages of English, Tamil and Hindi. All the questionnaires were in layman terms to suit the general public. The questionnaires were analyzed and tabulated and the results were inferred.

A total of 250 surveys were taken into account and the data analyzed. A sample questionnaire is shown in Figure 1.

Name	Age / Sex
Address	Occupation
Education (Highest Completed) – Uneducated / Did not finish high school / High School / College Degree / Masters / PhD or other Doctorate	
1) Do you feel both plastic surgery and cosmetic surgery are same?	
<p>a) Yes</p> <p>b) No</p> <p>c) Cosmetic surgery is a part of plastic surgery.</p> <p>d) Don't know</p>	
2) Why do you think plastic surgery is called PLASTIC surgery?	
<p>a) It involves use of plastic in surgery</p> <p>b) After surgery the face looks shiny like plastic</p> <p>c) Don't know</p> <p>d) Any other reason</p>	
3) Do you think that after a plastic surgery operation, there are scars left over face?	
<p>a) Yes, there would be scars</p> <p>b) No, there wouldn't be any scars</p> <p>c) Don't know</p>	
4) Do you think that plastic surgery is very expensive and meant for only rich and famous?	
<p>a) Yes</p> <p>b) No</p> <p>c) Don't know</p>	
5) Do you think plastic surgery and cosmetic surgery are very risky?	
<p>a) They are very risky</p> <p>b) The risk is similar to the risk involved in any other surgery</p>	
c) Doesn't involve any risk	
d) Don't know	
6) Which surgeon would perform a rhinoplasty?	
<p>a) General surgeon</p> <p>b) ENT surgeon</p> <p>c) Plastic surgeon</p> <p>d) Oral and maxillofacial surgeon</p>	
7) Do you think that getting a plastic surgery is good?	
<p>a) Yes</p> <p>b) No</p> <p>c) Don't know</p>	
8) Have you ever heard of plastic surgery?	
<p>a) Yes</p> <p>b) No</p> <p>c) Don't know</p>	
9) Do you think plastic surgery only involves cosmetic surgery?	
<p>a) Yes</p> <p>b) No</p>	
10) What is your source of information? How did you come to know about plastic surgery.	
<p>a) Television/ radio</p> <p>b) Work place</p> <p>c) Relatives</p>	

**Figure 1: Sample questionnaire.**

### RESULTS

Total 250 subjects were included in the study. The mean age of the subjects was  $30.8 \pm 0.67$  years. 133 (53.2%) of the subjects were male and 117 (46.8%) were female. 114

(45.6%) of the subjects had college level education, 111 (44.4%) had high school education, 29 (0.8%) did not complete high school, 23 (9.2%) were not educated.

#### Questionnaire and responses

**Table 1: Whether the public feel both plastic surgery and cosmetic surgery are same?**

	Yes	No	Cosmetic surgery is a part of plastic surgery	Don't know	Total
<b>College</b>	67	35	12	0	114
<b>High school</b>	66	34	11	0	111
<b>Didn't finish HS</b>	2	0	0	0	2
<b>Uneducated</b>	16	5	2	0	23
<b>Total</b>	151	74	25	0	250
<b>Percentage (%)</b>	60.4	29.6	10	0	

The chi-square statistic is 1.6207. The p value is 0.805071. The result is not significant at  $p < 0.05$ . There is no significant association between level of education and answer.

**Table 2: Why do you think plastic surgery is called plastic surgery?**

	It involves use of plastic in surgery	After surgery the face looks shiny like plastic	Don't know	Any other reason	Total
<b>College</b>	81	27	6	0	114
<b>High school</b>	71	21	19	0	111
<b>Didn't finish HS</b>	2	0	0	0	2
<b>Uneducated</b>	20	3	0	0	23
<b>Total</b>	174	51	25	0	250
<b>Percentage (%)</b>	69.6	20.4	10	0	

The chi-square statistic is 11.9318. The p value is 0.017866. The result is significant at p<0.05. There is a significant association between level of education and answer.

**Table 3: Do you think that after a plastic surgery operation, there are scars left over face?**

	Yes, there would be scars	No, there wouldn't be any scars	Don't know	Total
<b>College</b>	10	104	0	114
<b>High school</b>	12	99	0	111
<b>Didn't finish HS</b>	0	2	0	2
<b>Uneducated</b>	3	20	0	23
<b>Total</b>	25	225	0	250
<b>Percentage (%)</b>	10	90	0	

The chi-square statistic is 0.3832. The p value is 0.825627. The result is not significant at p<0.05. There is no significant association between level of education and answer.

**Table 4: Whether the public think that plastic surgery is very expensive and meant for only rich and famous?**

	Yes	No	Don't know	Total
<b>College</b>	101	13	0	114
<b>High school</b>	101	10	0	111
<b>Didn't finish HS</b>	2	0	0	2
<b>Uneducated</b>	21	2	0	23
<b>Total</b>	225	25	0	250
<b>Percentage (%)</b>	90	10	0	

The chi-square statistic is 0.4817. The p value is 0.785942. The result is not significant at p<0.05. There is no significant association between level of education and answer.

**Table 5: Whether plastic surgery and cosmetic surgery are very risky?**

	They are very risky	The risk is similar to the risk involved in any other surgery	Doesn't involve any risk	Don't know	Total
<b>College</b>	49	11	31	23	114
<b>High school</b>	39	10	38	24	111
<b>Didn't finish HS</b>	2	0	0	0	2
<b>Uneducated</b>	9	4	7	3	23
<b>Total</b>	99	25	76	50	250
<b>Percentage (%)</b>	39.6	10	30.4	20	

The chi-square statistic is 3.951. The p value is 0.683313. The result is not significant at p<0.05. There is no significant association between level of education and answer.

**Table 6: Who should perform a rhinoplasty?**

	General surgeon	ENT surgeon	Plastic surgeon	Oral and maxillofacial surgeon	Total
<b>College</b>	0	21	93	0	114
<b>High school</b>	0	22	89	0	111
<b>Didn't finish HS</b>	0	0	2	0	2
<b>Uneducated</b>	0	7	16	0	23
<b>Total</b>	0	50	200	0	250
<b>Percentage (%)</b>	0	20	80	0	

The chi-square statistic is 1.1799. The p value is 0.554359. The result is not significant at p<0.05. There is no significant association between level of education and answer.

**Table 7: Do you think that getting a plastic surgery is good?**

	Yes	No	Don't know	Total
<b>College</b>	81	21	12	114
<b>High school</b>	78	23	10	111
<b>Didn't finish HS</b>	1	0	1	2
<b>Uneducated</b>	15	6	2	23
<b>Total</b>	175	50	25	250
<b>Percentage (%)</b>	70	20	10	

The chi-square statistic is 0.7593. The p value is 0.94382. The result is not significant at p<0.05. There is no significant association between level of education and answer.

**Table 8: Have you ever heard of plastic surgery?**

	Yes	No	Don't know	Total
<b>College</b>	250	0	0	250
<b>High school</b>	0	0	0	0
<b>Didn't finish HS</b>	0	0	0	0
<b>Uneducated</b>	0	0	0	0
<b>Total</b>	250	0	0	250
<b>Percentage (%)</b>	100	0	0	

**Table 9: Do you think plastic surgery only involves cosmetic surgery?**

	Yes	No	Total
<b>College</b>	91	23	114
<b>High school</b>	99	12	111
<b>Didn't finish HS</b>	2	0	2
<b>Uneducated</b>	19	4	23
<b>Total</b>	211	39	250
<b>Percentage (%)</b>	84.4	15.6	

The chi-square statistic is 3.7493. The p value is 0.153408. The result is not significant at p<0.05. There is no significant association between level of education and answer.

**Table 10: What is your source of information and how did you come to know about plastic surgery?**

	Television/ radio	Work place	Relatives	Total
<b>College</b>	92	6	16	114
<b>High school</b>	88	6	17	111
<b>Didn't finish HS</b>	2	0	0	2
<b>Uneducated</b>	17	1	5	23
<b>Total</b>	199	13	38	250
<b>Percentage (%)</b>	79.6	5.2	15.2	

The chi-square statistic is 0.6203. The p value is 0.960778. The result is not significant at p<0.05. There is no significant association between level of education and answer.

60.4% of the public think plastic surgery and cosmetic surgery are the same. 69.6% of the public think that plastic is used in plastic surgery. 90% of them think that there will be no scars following plastic surgery. 90% of the public think that plastic surgery is only for the rich and famous. 39.6% of them think that plastic surgery is a risky operation whereas 30.4% feel that there is no risk involved. 80% of the population voted that a common procedure like rhinoplasty is done by a plastic surgeon. 70% of the public think that getting plastic surgery is good. All the public have heard the term plastic surgery, while 84.4% of them think that plastic surgery is only

cosmetic surgery. 79.6% of the population has heard of plastic surgery from radio and television.

## DISCUSSION

There is a vast misconception in people's minds regarding the perception of plastic surgery. The aim of this study was to assess and analyze the knowledge of the general public of plastic surgeons and their scope as there is a paucity of published articles in the Indian scenario. This in turn causes delay in referrals and treatment and thus in morbidity. The field of plastic surgery is growing

leaps and bounds, but unfortunately, the impact has not filtered down to the society at large. Plastic surgeons have been honing their skills with extensive surgical training, but they are more often recognized as performing only cosmetic surgery. This is mainly due to the media and entertainment industries featuring plastic surgery as cosmetic surgery and the under representation of other subspecialties like hand and microsurgery.<sup>3</sup> The media plays an important role in educating the public but at the same time they have portrayed plastic surgeons, that cater only to the rich and that it is a money spinning enterprise.<sup>3</sup>

The inherent diversity of our speciality have in fact lead to this misperception, and that the absence of any law governing which physician can perform plastic surgery has lead to anyone from the medical including the dental stream to perform various procedures of plastic surgery. A few authors also suggested that because plastic means something artificial and disposable, it leads to confusion in the minds of public.<sup>6,7</sup> They have, thus proposed to change the name of the specialty, but this would not improve the situation since no name alone can ever be completely descriptive and there is a concern that some other specialty of medicine might take over the name that we let go.<sup>6-8</sup> Usually, the members of the general public are not so well educated in plastic surgery. Only a few members of the public did associate plastic surgery with trauma and congenital anomalies like cleft lip and palate and burns. None of them even thought of cancer and reconstruction. Plastic surgeons were strongly associated with cosmetic surgery by the public, who rated it as the most common procedure performed by them.

Many years of training are spent in becoming a plastic surgeon, but there are very few activities concerning the community. Many plastic surgeons do not know to market themselves and hence patient's perception of us has very little to do with our credentials, board certification and technical skills.<sup>9</sup> Many earlier studies from other countries have shown that the public are poorly informed about plastic surgery.<sup>10-14</sup> There is one study from our subcontinent showing that a large population is still unaware of the field of plastic surgery.<sup>15</sup> We conducted this study to provide much needed Indian data. This survey suggests that the perception of plastic surgery in our society too is limited and underestimates the versatility of the specialty. Plastic surgeons are not usually called on as primary surgeons for the procedures which are in their fundamental right. It is also recommended to include plastic surgery in the undergraduate curriculum and also institute public awareness programs.<sup>16,17</sup> Public awareness programs should be instituted through the local print media, radio and on television with regular frequency to have a profound impact. The public also need to be educated that they do not have any unrealistic expectations of plastic surgery. One limitation of our study is that the groups may not be representative since they were obtained from a single geographical area and of a similar socioeconomic

strata and this may lead to underestimation of the true degree of misperception in Indian society.

## CONCLUSION

Even though there has been a boom in the progress of plastic surgery in the recent years, a large portion of the population is still unaware of the specialty. Plastic surgeons were identified by many as cosmetic surgeons, but their reconstructive ability has not been greatly understood. If the speciality has to progress and patients are to receive the best treatment available, it is imperative to market ourselves properly and to educate the public on the availability of the different subspecialties, and their role within the healthcare system. There is a dearth of literature regarding evidence about the public perception of plastic surgery and this study attempts to fill this void.

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