

A LONGITUDINAL STUDY OF THE KNOWLEDGE AND ATTITUDE OF MEDICAL STUDENTS TO PLASTIC SURGERY

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ABSTRACT

Plastic surgery is becoming popular in developing countries. The scope however, is not yet fully recognised by medical personnel. Thus, 57 first year clinical students of the College of Medicine of University of Ibadan, were studied to assess their knowledge of and attitude to plastic surgery both before and after exposure to the subject. The tool used for assessment was a questionnaire which comprised three parts designed to measure: general attitude to plastic surgery, 13 items; attitude to specific cosmetic procedures, 10 items; and the knowledge of students of the scope of plastic surgery, 20 items. The respondents' attitude to plastic surgery was positive in consideration of all the 13 general attitudinal items. Exposure produced significant improvement of the attitude of the medical students and their knowledge of plastic surgery within the short period of rotation through the unit. The low preference for this specialty among medical students in Nigeria can be remedied by understanding better the students' attitude and knowledge with a view to improving the specialty's appeal to medical students.

KEY WORDS: *Attitude, Knowledge, Medical Students, Plastic Surgery, Clerkship.*

INTRODUCTION

Plastic surgery is becoming popular in developing countries. The scope however, is not yet fully recognised by medical personnel. It was customary to think in terms of cosmetic surgery when plastic surgery was mentioned. The general public likewise, often equated plastic surgery to the use of "plastic" or prosthesis in repair. This trend of the thought of cosmetic surgery or the use of plastics is however diminishing.

An important group that will help in the spread of the knowledge of plastic surgery are medical students. The curriculum in most medical schools unfortunately includes only a very short instruction in plastic surgery. It is pertinent to know whether or not a short instruction like this will improve the knowledge and attitude of such medical students.

SUBJECTS AND METHODS

Two out of the four groups of first year clinical students, that is, half of 1997 clinical intake of the College of Medicine of University of Ibadan were studied to assess their knowledge of and attitude to plastic surgery. They consisted of students who were in their surgery II posting. They had passed through a first surgical posting (surgery I) which was an instruction in the basics of surgery in general. The second surgical posting (surgery II) is a period of seven week rotation through six surgical specialties which included plastic surgery. The students were further subdivided into six subgroups each of which rotated through the six specialties in turn. Each subgroup received instructions through clinics, ward rounds, operating

theatre sessions and tutorials during their brief period of stay in the unit. The whole group in addition received six lectures covering different areas of plastic surgery viz, wounds, and pathology and complications of wound healing; management of wounds including skin grafting and flap transfers; burns; hand and microsurgery; plastic surgery of head, neck and cosmetic and skin tumours.

Tool

The tool used for assessment was a questionnaire designed by the author. It comprised three parts designed to measure: general attitude to plastic surgery, 13 items, attitude to specific cosmetic procedures, 10 items; and the knowledge of students of the scope of plastic surgery, 20 items. While the general attitude section was a modification of an earlier study in psychiatry¹, the knowledge aspect of the study was a modification of a study of perception of the scope of oral and maxillofacial surgery in the United States². In this, students were to choose which of five specialists – otorhinolaryngologist, maxillofacial, plastic, orthopaedic, or general surgeon – will usually manage each of 20 different surgical conditions.

The attitudinal items measured on a five point scale had responses fashioned from 1-5 as 1 = strongly agree, 2 = agree, 3 = no opinion, 4 = disagree, 5 = strongly disagree. In the section of general attitude, statements posed included:

1. Plastic surgeons are not artistic.
2. Plastic surgeons are more dogmatic than other doctors
3. Plastic surgeons are unrealistic and many times agree to patient's unrealistic demands.
4. Plastic surgeons often throw off their conscience to attend to patient's demands

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5. Plastic surgery patients tend to make less emotional demands on their doctors than other patients.
6. Plastic surgery is an art but lacks a proper scientific basis.
7. Plastic surgery is scarcely technologically based.
8. Plastic surgery does not have much to offer humanity
9. Plastic surgery is not a highly intellectual field of medicine
10. Plastic surgery operations are less expensive than other operations.
11. Plastic surgery is not relevant in developing countries.
12. Plastic surgery is only meant for the affluent.
13. Care of clients; desiring cosmetic surgery is an economic waste.

The questionnaire was pretested for clarity.

PROCEDURE

The students that were present at the commencement of the first plastic surgery lecture held during the first week of the surgery II posting, with the exception of those in the subgroup that had already been received in plastic surgery a few days prior to this lecture, were included in the survey. The aim was explained to them and they were informed that the questionnaires were designed to be anonymous and that the responses would not form part of their continuous assessment. They were also asked to take down the code number on their questionnaire so that they could record same at the end of their posting when they would be expected to fill another copy of the same questionnaire.

On the day of their last plastic surgery lecture, only 49 of the initial 57 students who filled the questionnaire were available to fill again. Since it was not possible to follow up individual responses because only 33 students recorded their code numbers, collective responses were analysed.

METHOD OF DATA ANALYSIS

Attitude

Mean (S.D.) response of the students to the 13 general questions was calculated. The response to each of the 13 items at the commencement and towards the end of the posting was compared using student's test. Total score of the attitude of each student was calculated. Since the items were framed in the negative, higher attitudinal scores indicated more positive response. The maximum obtainable score was $5 \times 23 = 115$. The mean of the total attitude score at the commencement was compared to that obtained at the end of the posting using student's test.

Knowledge

Knowledge of the scope of plastic surgery was taken as the total number of correct options scored by each student. The correct options were secured by knowledge of "who does what" based on the authors experience both locally and in other parts of the world. Maximum score obtainable was 13, that is, 13 out of the 20 cases will more usually be managed by plastic surgeon instead of by other specialists.

RESULT

Fifty-seven questionnaires were returned at the commencement of the posting. Of these, 21 were by males and 36 by females. The mean age of the respondents was 22.6 (2.0) years. Forty-nine of these students were available to fill the questionnaires again after their exposure.

The respondent's attitude to plastic surgery was positive in consideration of all the 13 general attitudinal items. These responses became significantly more positive after clerkship in items (1,3,4) and 6 (Table 1). The total attitudinal score increased significantly from 86.6(10.7) preclerkship to 91.9(11.3), postclerkship, $p=0.014$ (Table 2).

The knowledge score was 6.3(2.5) out of 13 before clerkship. This however improved significantly to 9.6(2.1), p value being $<10^{-6}$.

Table 1: Medical Students' general attitude to plastic surgery before and after exposure to the subject.

Item (see tool under subjects and method)	Mean		T value	p value
	Before exposure	After exposure		
1	3.96	4.40	2.38	0.019 *
2	3.31	3.47	1.01	0.31
3	3.46	4.02	3.15	0.002 *
4	3.14	3.82	3.57	0.0005 *
5	3.79	3.84	0.31	0.76
6	4.04	4.41	2.43	0.02*
7	4.07	4.25	1.14	0.26
8	4.51	4.56	0.45	0.66
9	4.26	4.33	0.39	0.69
10	4.04	4.16	0.71	0.48
11	4.30	4.45	1.13	0.26
12	4.11	4.22	0.66	0.51
13	4.05	4.08	0.15	0.88

*significant difference

Table 2: Medical Students' attitude and Knowledge of plastic surgery before and after exposure to the subject.

	Age(years)	Attitude	Knowledge
Before exposure	22.6 (2.0)	86.6 (10.7)	6.3 (2.5)
After exposure	22.7 (2.5)	91.9 (11.3)	9.6 (2.1)
T value	0.27	2.51	7.32
p value	0.79	0.014 *	$<10^{-6}$ *

*significant difference

DISCUSSION

Plastic surgical input into undergraduate and postgraduate training in surgery has been said to be rather limited³. This is partly because of the inadequate time

available for teaching the subject within the tightly packed schedule of surgery and its specialties. It is not surprising therefore that the rotation through plastic surgery at Ibadan has been traditionally restricted to a period of six hours of lecture with eight days of contact with patients at ward rounds, outpatient clinics, and theatre. To benefit reasonably therefore, the medical student has to secure the optimum use of the limited time available.

Exposure produced significant improvement of the attitude of the medical students and their knowledge of plastic surgery within the short period of rotation through the unit. This is the usual trend, although, confirmation with further studies of other students at the same level of career is required. Similarly, it will be pertinent to find out whether this improvement in attitude and knowledge is sustained or short lived by studying this same group of medical students later on in their clinical years.

The arrangement of the options in the attitudinal aspect of this study, coupled with the way the items or questions were framed suggested that a 50% mark in response is indicative of a midway position. Thus for total attitudinal score, values that were greater than 50% that is, 58 and above can be said to denote positive attitude. Although attitudes were positive both before and after exposure, few students end up pursuing a career in this specialty. This is similar to the trend noted in Psychiatry⁴. The quality of medical school education is said to be the prime factor that influences the career choice of medical students⁵. This quality may be improved by an

increased exposure to the subject of plastic surgery. The low preference for this specialty among medical student in Nigeria can be remedied by understanding better the students attitude and knowledge with a view to improving the specialty's appeal to medical students.

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