

Changes in Psychometric Test Results Following Cosmetic Nasal Operations

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INTRODUCTION

It has frequently been argued that requests for cosmetic rhinoplasty, particularly in patients with minimal disfigurements, may be indicative of psychological disturbance. Authors such as Meerloo (1956) and Roubichek (1960) have further argued that corrective operations in these minimally disfigured patients are contra-indicated, as the patients are always dissatisfied by surgery, sometimes demanding restoration to the original state.

However, not all workers have felt that such surgery carries a gloomy prognosis. Hill and Silver (1950) felt that the recognition and use of cosmetic measures by psychiatrists had been relatively neglected, and Edgerton, Jacobson and Meyer (1960-61) reported specifically on the minimally disfigured, and accepted every patient for operation where the desired change appeared to be technically feasible. At the time of publication their follow-up showed excellent immediate results.

One of the present authors (Hay, 1970) has similarly argued that the degree of deformity is not of major importance when coming to a decision with regard to an operation, and that in fact surgery may be strikingly beneficial in those with minor disfigurements.

This divergence of opinion can only be settled by a careful follow-up study of a group of rhinoplasty patients, including those with differing degrees of deformity. The present paper reports the findings in

regard to psychological testing in a group of such patients.

METHOD AND CASE MATERIAL

Seventeen patients requesting a cosmetic rhinoplasty were assessed before operation and completed a battery of psychological tests. These included the Hysteroid-Obsessoid Questionnaire, the five Punitive Scales and the Personal Illness Scale of the Symptom Sign Inventory (Foulds, 1965). Their photographs were then rated for degree of deformity (for details see Hay, 1970). The psychological tests were repeated after operation; the mean interval between surgery and the follow-up interview was two years, but no patient was seen less than six months after operation. Of the 17 patients, 12 were female and 5 male. The mean age was 23.4 years (S.D. = 9.05).

RESULTS

Thirteen of the patients reported that the operation had been an unqualified success and they were satisfied in every way with the result. Three still had some complaints, though they admitted they had been helped by surgery. Only one patient felt that surgery had produced no change, but her operation was admittedly a technical failure and possibly in her case a further procedure might be carried out.

In Table I are shown means and standard deviations of four test measures taken before and after surgery.

TABLE I
Mean and standard deviations of four test measures before and after cosmetic rhinoplasty

	Hysteroid Obsessoid Score (HOQ)		General Hostility (E+I)		Direction of Hostility (I-E)		Personal Illness Scale (P. I.)	
	Pre-op.	Post-op.	Pre-op.	Post-op.	Pre-op.	Post-op.	Pre-op.	Post-op.
Mean	19.41	25.24	22.65	18.24	+4.24	+0.76	6.00	4.18
S.D.	4.83	4.08	6.39	5.20	5.58	3.55	3.55	3.88
P	< .01		< .01		< .05		< .10	

As shown in Table I, a comparison of pre- and post-operative scores reveals significant changes on three of the four test measures (Wilcoxon Matched Pairs Signed—Ranks Test, all tests two-tailed). If the single patient who reported no change as a result of surgery is eliminated from the analysis, the change in the Personal Illness measure also becomes significant (Wilcoxon, $P < .05$), while not affecting the degree of statistical significance of changes in the other test measures.

Correlation co-efficients (Spearman's ρ s) were calculated amongst changes in test measures and between these changes and the objective rating of deformity. The changes in symptom measures were significantly intercorrelated, but there were no significant correlations between the objective ratings of deformity and changes in any test measure. (Further details available on request.) There is therefore no evidence that improvements in psychological functioning following rhinoplasty are related to the initial degree of disfigurement. This finding is supported by the fact that when patients were divided into three groups, according to objectively rated degree of deformity (see Hay, 1970) no significant differences were observed between these groups in changes on any test measure (Kruskal-Wallis One-Way Analysis of Variance by Ranks).

No significant differences were found between sexes for changes on any test measure (Mann-Whitney 'U'). However, the small number of men in this sample ($N = 5$) did not permit an adequate investigation of possible sex differences.

DISCUSSION

Of the 17 patients, therefore, 16 felt they had been helped by surgery, and the psychometric test results showed that after operation there was a significant group reduction in the 'symptom' measures (General Hostility and Personal Illness). There was also a significant change in the attitude measure (in the direction of being more extra-punitive) and the personality measure (the patients becoming more hysteroid). The improvement in symptoms and

change in attitude was perhaps expected following surgery. However, the change in the personality measure was surprising, particularly in view of 'Foulds' (1965) definition of it as measuring 'a relatively enduring' trait. We do not know, of course, whether this change is merely in test-taking attitudes, or whether it reflects real changes in behaviour, though from the patients' reports the latter seems more likely. If this is the case it would seem necessary to postulate radical alterations in the self-concept to account for personality changes of this magnitude. This possibility can be further investigated using Repertory Grid techniques, and this will form the basis of a further communication.

In regard to the degree of pre-operative deformity, the results of this investigation show that those patients with minimal disfigurements did as well following surgery as those with more marked defects, both subjectively and as regards changes in their psychological test results. This finding, therefore, supports the argument that the degree of deformity is not of major importance when coming to a decision in regard to surgery.

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