

# Patient motives and fulfillment of motives in renewal of complete dentures

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Seventy-four edentulous patients were interviewed concerning their opinion of their old dentures, motives for renewing them, and requirements for new ones. After an initial period of adaptation they were asked questions relating to their experience with the new dentures. More than 80% of the patients claimed to have functional motives for renewing their old dentures. A similar proportion had functional requirements with regard to the new ones. Less than 30% claimed to have any esthetic motives. Examination of the data, however, suggests that the esthetic factor may be underrecorded. The patient motives, as recorded, were only weakly correlated to the overall acceptance of new dentures. More than 90% found their new dentures as expected or better than expected. □ *Interview; patient acceptance of health care; prosthesis; psychology; regression analysis*

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The concept of motivation occupies a central position in psychological research. For the purposes of this paper it is sufficient to define motivation as a need or desire coupled with the intention to attain a goal (1). For a precise definition of this concept, see Eysenck & Arnold (2), and for a further review, see Madsen (3).

In the dental literature the importance of understanding what motivates patients to renew their dentures has frequently been discussed (4–6), but little research has been attempted. It is, however, well documented that edentulous individuals commonly over-adapt to dentures even though they may be grossly defective (7–9). To some extent this may be due to their limited ability to evaluate the quality of their own dentures (10–15). Nevertheless, most denture wearers do renew their dentures. In this paper an attempt has been made to study their motives for a renewal and also to what extent these motives were fulfilled.

## Materials and methods

New dentures were made for 74 patients with previous complete dentures. Before inser-

tion of the new dentures the patients were asked two open-ended questions: 1) 'what made you decide to renew your dentures?', and 2) 'what special requirements do you have for your new dentures?' The responses were grouped into the categories shown in Tables 1 and 2. At the same time patients were asked to express their degree of overall satisfaction with the present dentures and their opinions regarding comfort, retention, occurrence of pain, fit, esthetics, mastication, and speech. The responses to all questions except speech were grouped into one of four categories (very satisfied, fairly satisfied, not quite satisfied, and dissatisfied). Speech was grouped into three categories (no problems, some problems, and definite problems). Further details about these variables have been published in a previous report (16).

Comfort, retention, occurrence of pain and fit reflect different aspects of comfort in relation to the wearing of dentures. These variables were therefore combined into two comfort indices, for the mandibular and maxillary dentures, respectively. Similarly, questions relating to the esthetics of the maxillary and mandibular dentures were combined into an esthetic index. The index

Table 1. What made you decide to renew your dentures?

Categories	n	%
1. Functional	46	66
2. Functional and esthetic	15	21
3. Esthetic	4	6
4. Recommended by dentist	4	6
5. Other motives	1	1
No. of respondents	70	

values were calculated by adding the scores of variables. A positive index was defined as having a sum of scores smaller than a cutoff point placed half way between the theoretical minimum and maximum score values.

After an initial period of adaptation to and, if indicated, correction of the new dentures, all patients were reinterviewed. The same question was asked about their overall degree of satisfaction, this time with the new dentures. The patients were also asked to compare their experience with the new dentures with what they had expected. The latter responses were grouped into one of four predetermined categories (the criteria are shown in Table 3). A final, open-ended question was asked concerning the patients' reason for being satisfied or dissatisfied. Only the most important reason in the opinion of the patient was recorded. The responses were grouped into the categories shown in Table 4.

If patients were occasionally unable to answer the questions for some reason, the observations were recorded as missing. For this reason the number of observations may be less than the number of patients.

The statistical methods used were univariate descriptive statistics, chi-square, and product moment correlations. In the regression analyses the recorded patient motives

Table 2. What special requirements do you have for your new dentures?

Categories	n	%
1. Functional	30	41
2. Functional and esthetic	30	41
3. Esthetic	11	15
4. Other reasons	2	3
No. of respondents	73	

Table 3. How are your new dentures compared with what you expected?

Categories	n	%
Much better than expected	8	11
Better than expected	26	36
As expected	33	45
Worse than expected	6	8
No. of respondents	73	

for renewing their dentures were dichotomized into patients who claimed to have functional motives only (category 1, Table 1) and those who mentioned esthetics as a motive at all (categories 2 and 3, Table 1). Categories 4 and 5 (Table 1) were not included in the analyses.

## Results

### *Variables indicating patient motives for renewing their dentures*

Sixty-six per cent of the patients claimed to have purely functional motives for renewing their dentures (Table 1, category 1). Esthetics was mentioned as a motive by 27% (categories 2 and 3). Only a few of these had esthetics as their only motive (category 3).

With regard to the functional motives, 28 patients complained about poor retention, 13 about poor mastication, 12 about pain, and 7 about poor fit. Five patients were motivated to renew their dentures because they were in a poor state of repair, and three because of pain in the region of the temporomandibular joint. With regard to the esthetic motives, 17 patients were generally

Table 4. What is your most important reason for being satisfied/dissatisfied?

	Responses	n	%
Positive responses	High technical quality	13	24
	Good function	12	22
	Good esthetics	4	7
	Better than old ones	9	17
	Patient's positive attitude	2	4
Negative responses	Other reasons	7	13
	Poor function	6	11
	Poor esthetics	1	2
No. of respondents		54	

Table 5. Correlations between patient motives for the renewal of old dentures and some variables associated with their opinion of these dentures

Variable	Correlations	n
Comfort I. max. denture	-0.10	63
Comfort I. mand. denture	-0.26*	63
Esthetics max. denture	0.43**	64
Esthetics mand. dentures	0.24	63
Mastication	-0.23	65
Speech	0.09	65

\* Significant at  $p < 0.05$ .

\*\* Significant at  $p < 0.01$ .

dissatisfied and 2 were specifically dissatisfied with the esthetics of the mandibular dentures. Each patient might have one or more motives for wanting new dentures. The number of patients quoted therefore exceeds the total number of respondents for this variable.

Even though all the present patients attended the prosthodontic department to have new dentures made, 25 were still generally satisfied with their old dentures. Twelve of these even claimed to be very satisfied. One of the very satisfied patients did not answer the question on motivation, and one had been recommended new dentures by a dentist. However, the remaining 10 had themselves realized their need for new dentures; 4 had purely functional and 6 esthetic motives. Of the 13 patients who were fairly satisfied with their old dentures, 9 had purely functional motives, 3 had esthetic motives, and 1 patient did not answer the question on motivation.

As could be expected, patients who were dissatisfied with the esthetics of their old dentures (negative esthetic index) tended to be more likely to state esthetics as a motive for renewing these dentures than those who were satisfied (positive esthetic index) (chi-square (1) = 6.93,  $p < 0.01$ ). Nevertheless, 44% of patients with a negative esthetic index claimed to have no esthetic motives for the renewal of their old dentures.

Table 2 shows the patients' special requirements with regard to their new dentures. Whereas only 19 patients appeared to have esthetic motives for renewing their old dentures (categories 2 and 3, Table 1), more

than twice as many (41) had esthetic requirements for their new ones (categories 2 and 3, Table 2).

Those who had stated that they did not have any esthetic motives for renewing their old dentures were less inclined to have esthetic requirements concerning the new ones than those who did have such motives (chi-square (1) = 6.56,  $p < 0.01$ ). Nevertheless, 48% of those who claimed to have no esthetic motives for renewing their old dentures still had esthetic requirements for the new ones.

The correlations between the different motives and the six variables associated with patient opinion of the old dentures are shown in Table 5. Only the esthetics of the maxillary and the comfort of the mandibular dentures showed significant correlations.

There was a significant but weak tendency for patients with a purely functional motive for renewal of their dentures to be less likely to be satisfied with their new dentures than those with an esthetic motive ( $r(68) = -0.26$ ,  $p < 0.05$ ).

*Variables indicating the extent to which patient motives had been fulfilled*

Eighty-five per cent of the patients were very or fairly satisfied with their new dentures. Of the nine dissatisfied patients who answered the question on motivation, eight had expressed a purely functional motive for renewing their old dentures.

The extent to which patients' expectations with regard to their new dentures had been fulfilled is shown in Table 3. More than 90% found that their new dentures were as expected or better. It should be noted that four patients with a negative view of their new dentures still found them to be as expected.

Table 4 shows the patients' main reason for being satisfied or dissatisfied. This question appeared to be a difficult one, as 20 patients were unable to answer it. A high technical quality and a good function of the new dentures were the commonest reasons for being satisfied. These two categories represented almost 50% of all the responses.

All the above-mentioned variables were tested for age and sex differences. No significant differences were found.

## Discussion

Human motivations are usually of a complex nature. Consequently, one might expect that at least some patients would want to renew their dentures for reasons not directly related to dental matters. In order that such motives could be expressed and recorded, the question on motivation was open-ended and could therefore be answered without restrictions. Even though motives of this nature undoubtedly existed among the patients of this study, with one exception they were not expressed (Table 1).

With regard to the recorded responses to the question on motivation, examination of the data indicates that esthetic motives for renewing the dentures might be under-recorded. This conclusion is mainly based on three findings. First, it seems reasonable to assume that those who were dissatisfied with the esthetics of the old dentures would also have esthetic motives for renewing them. Even though such a statistically significant relationship was found, 44% of the patients with a negative esthetic index nevertheless expressed no such motives.

Second, it seems equally reasonable to assume that if patients had no esthetic motives for a renewal of their dentures, they would be less likely to specify esthetic requirements for their new ones. The results confirm this assumption. However, 48% of the patients who claimed to have no esthetic motives at all still had esthetic requirements for their new dentures.

Finally, the patients' motives for renewing their dentures were mainly related to their opinion of the esthetics of the old maxillary dentures (Table 5). In this connection it should be noted that in a regression analysis the prediction value of a variable is unaffected by a possible systematic underrecording of this variable.

Even if these findings all tend to indicate that esthetic motives may be underrecorded,

no conclusions can be drawn concerning the extent of underrecording.

There are several possible explanations for the lack of validity concerning the stated motives for renewing dentures. In a study such as this, one is limited to what the patients tell about their motives. Patients may try to hide their true motive from the interviewer and sometimes even from themselves. For many patients it might conceivably be difficult to give an esthetic motive, because this could be regarded as an expression of vanity, which is not a fully accepted sentiment in our society in general. In the elderly, like the present patient group, (mean age, 66) it may be accepted to an even lesser extent, particularly in men.

For these reasons patients may claim to have purely functional motives, hiding the fact that they have esthetic ones as well. The responses to a question on motives for renewing their dentures may also be influenced by the attitudes of other people such as relatives, friends, and, to some extent, even the dentist.

In evaluating the significance of the present findings about motives for the renewal of dentures a final reservation must be made. A motive may change in time. A patient experiencing pain and discomfort with the old dentures is likely to give a functional motive for a renewal. However, when fitted with new dentures without functional defects, the esthetic requirements may well increase. If such requirements are unfulfilled, they may cause great treatment problems. Most patients will try to show consistent behavior. Accordingly, they may give functional reasons for being dissatisfied even though their dissatisfaction is caused by esthetic factors.

The recorded categories of patient motives for the renewal of dentures were significantly related to their opinion of the esthetics of the old maxillary dentures and, to a lesser extent, to the comfort of the mandibular dentures (Table 5). However, their effects were modest, indicating that no simple and direct relationship exists between these variables.

This is further illustrated by the fact that one third of the patients were generally sat-

ified with their old dentures even though they all attended the dental clinic because they wanted new ones made. In this connection it may be of equal interest to note that variables concerning the old dentures such as mastication, comfort of the maxillary dentures, and speech had no significant influence on the recorded patient motives for renewing these dentures (Table 5).

Knowledge about what motivates patients to renew their dentures has been claimed to be important for the prediction of success or failure of these dentures (6). This hypothesis is not fully supported by the present results, although a significant but weak correlation was found. It is conceivable, however, that the doubtful validity of the recorded motives for renewal of dentures might mask a possible effect on denture satisfaction.

The patients' motives for renewing their dentures appeared to be largely fulfilled. Only 15% had negative views about the new dentures, and an even smaller proportion of patients (8%) found them to be worse than expected. However, four patients who were dissatisfied with their dentures still found them to be as they had expected. These patients might have some understanding of the shortcomings of dentures compared with the natural dentition, even if they were unwilling to accept them.

However, no conclusions can be drawn from the latter findings. The interviews were performed by a dentist. Even though he had not made the dentures, his presence might influence the responses. The patients might feel obliged to attribute the good result to the dentist and his skill rather than to their own efforts to master the dentures.

Of patients who were dissatisfied with the new dentures, almost 90% had stated purely functional motives for renewing the old ones. Because there is reason to believe that esthetic motivation is underrecorded and functional motivation overrecorded, this proportion is probably too high.

In conclusion, these findings indicate that denture wearers will generally adapt themselves to and tolerate some functional deficiencies in their dentures without being motivated to renew them. When they do decide to renew them, most patients do so

mainly for esthetic reasons, though apparently showing little willingness to be frank about it. The degree of satisfaction with new dentures is only weakly related to what denture patients claim to be their motives for renewing their old ones. However, the true motives of denture wearers for renewing their dentures cannot be established on the basis of a simple interview such as the one used here.

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