Social variables and patient acceptance of complete dentures

A study of patients attending a dental school

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It has been suggested that the social conditions under which patients live may influence their acceptance of dentures. In this paper a sample of 74 complete-denture wearers has been interviewed with regard to several social variables. These variables include the patients' marital status, occupation, interests, social activities, economy, housing conditions, relationship to neighbors, and other people's opinion of their new dentures. The last factor appeared to influence denture acceptance strongly. The other social variables tested showed no significant or only minimal effects in this respect. □ *Interview; prosthetics; regression analysis*

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In dentistry, social factors have been related to caries, periodontal disease, and dentofacial anomalies. For a review of this literature, see Richards & Barmes (1). Moreover, some research has related social factors to removable prosthodontics. Studies of socioeconomic aspects show that the frequency of edentulousness and, consequently, complete dentures is inversely related to income, social class, and level of education (2–8).

Social factors have also been related to patient acceptance of dentures in general (4, 9). However, only a small number of such variables have been tested specifically for their ability to predict patient acceptance of new complete dentures (10, 11). Little is therefore known about the interaction between social variables and patient acceptance of new complete dentures. The purpose of this study was to attempt to widen this knowledge by studying a larger selection of social variables.

Materials and methods

In this experiment 74 edentulous patients participated, all with previous experience with complete dentures in both jaws. The 48 women and 26 men in the patient sample had a mean age of 66.3 years (range, 38–87 years; SD, 9.4 years) and included all patients of this kind who had new dentures constructed by dental students at the Department of Prosthodontics, Faculty of Dentistry, University of Bergen, in the period September 1977 to May 1978. The expressed motives for renewing the dentures were mainly functional (12). All dentures had to meet departmental standards. The patients were given a structured interview, based on the results of a pilot study by a clinical psychologist (R. Ingebretsen).

Before the insertion of the new dentures questions were asked concerning 1) the patients' marital status and whether or not 2) they were working, 3) had any special interests or hobbies, 4) were members of an organization or a club, 5) felt pressed for time, and 6) (if pensioners) had any income in addition to their pensions.

With the exception of marital status, the answers to these questions were all dichotomous. With regard to marital status, the

Table 1. Social variables recorded before the insertion of new dentures

Variable	Categories	*n*	%
Q.7: Do you have problems making ends meet or are you satisfied with your economy?	Very well satisfied	13	19
	Well satisfied	41	60
	Fairly satisfied	10	15
	Dissatisfied	4	6
Q.8: How often do you go to meetings?	More than once a week	13	19
	Once a week	7	10
	1–3 times a month	14	20
	Rarely	8	11
	Never	28	40
Q.9: Are you satisfied with your housing conditions?	Very well satisfied	34	49
	Well satisfied	17	24
	Fairly satisfied	13	19
	Dissatisfied	3	4
	Very dissatisfied	3	4
Q.10: Would you say that you have a good relationship with your neighbors?	Very good	48	69
	Good	19	27
	Fair	2	3
	Poor	1	1
Q.11: Do neighbors help each other with minor things?	Yes	49	70
	Sometimes	7	10
	No	14	20

The results of additional six variables are reported in the results.

various categories are reported in the results. In the statistical analyses, however, this variable was also dichotomized into the categories 'married' (with spouse still alive) and 'single' (including widows/widowers) because any further subdivision would result in an insufficient number of patients in some of the categories for such analyses.

Furthermore, the patients were asked how they viewed their economy, if and how often they went to meetings, how they viewed their housing conditions, what kind of relationship they had to their neighbors, and whether neighbors helped each other in any way (questions 7 to 11, Table 1).

The patients were reinterviewed after an

Table 2. Social variables recorded after the insertion of new dentures

Variable		*n*	%
Q.12: Did you receive many comments from your friends and relatives about the new dentures?	Many	13	18
	Some	46	64
	No	13	18
Q.13: What kind of comments did you get?	Positive	40	68
	Positive and negative	11	19
	Negative	8	14
Q.14: How did you react towards these comments?	Happy	33	60
	Indifferent	14	25
	Disappointed	8	15

initial period of adaptation, normally 2 to 4 weeks after the insertion of the dentures. At this time all necessary corrections of the tissue fitting surfaces had been done. The patients were then asked about the number and nature of the comments that they had received from their friends and family concerning their new dentures and also about their own reactions to these comments (questions 12 to 14, Table 2). The criteria for these non-dichotomous variables are shown in the respective tables.

The patients' overall degree of satisfaction with their new dentures was also recorded after the initial period of adaptation. Their responses in this respect were grouped into the predetermined categories very satisfied, fairly satisfied, not quite satisfied, and dissatisfied. For further details, see Berg (13). The interviews were performed by the first author.

Sometimes patients refused to answer questions, and sometimes they were unable to make up their minds. In these cases the data were regarded as missing. Accordingly, the number of responses may be less than the total number of patients.

The statistical techniques used in this paper were univariate descriptive statistics, product moment correlation, and the chi-square test.

Results

Marital status and occupation

Most of the patients in this study (60%) were married, with their spouse alive, 10% were unmarried, 7% divorced, and 24% were widows or widowers. Seventy-eight per cent of the patients had no paid work. Included in this category were housewives, old-age pensioners, and patients who for other reasons were without paid work. The rest of the patients (22%) were either self-employed or employed by others.

Interests and social activities

Seventy-one per cent of the patients claimed to have a hobby or a special interest, and 50% were members of a club or an organization. Although 51% of the patients rarely or never went to meetings, the residual 49% claimed to be fairly active in this respect (question 8, Table 1).

Thirty per cent of the patients felt that they were so busy that they had insufficient time for their activities. The rest did not feel pressed for time. Not surprisingly, proportionately more than $4\frac{1}{2}$ times as many of the working patients felt pressed for time as those who were not working. This difference was highly significant (chi-square (1) = 20.45; $P < 0.0001$).

Economy

Almost 80% of the patients were well or even very well satisfied with their economy (question 7, Table 1). Fifty-five per cent of the old-age pensioners had an income in addition to their basic (minimum) old-age pension.

Housing conditions and relationship to neighbors

The great majority of the patients were to various extents satisfied with their housing conditions (question 9, Table 1). Men tended to be significantly more satisfied with their housing than women (chi-square (1) = 7.21; $P < 0.01$). Almost without exception, the patients claimed to have a reasonably good relationship to their neighbors (question 10, Table 1), and 70% stated that neighbors were usually willing to help each other with minor problems (question 11, Table 1).

Opinion of other people

More than 80% of the patients received comments from their friends or family after the insertion of their dentures (question 12, Table 2). The comments were mainly positive (68%), but a considerable proportion of the patients also received some negative comments (question 13, Table 2). The patients' reactions to these remarks is shown in Table 2 (question 14).

Correlations

The correlations between patients' sat-

Table 3. Correlations between general patient satisfaction with new dentures and some social variables (absolute values)

Variables	Correlations	*n*
Recorded before insertion		
Marital status (Q.1)	0.09	72
Occupation (Q.2)	0.15	72
Interests, hobbies (Q.3)	0.26*	70
Member of club (Q.4)	0.07	70
Pressed/not pressed for time (Q.5)	0.24*	71
Income in addition to pension (Q.6)	0.12	47
Evaluation of economy (Q.7)	0.22	68
Frequency of meetings (Q.8)	0.10	70
Housing conditions (Q.9)	0.09	70
Relationship with neighbors (Q.10)	0.06	70
Helpfulness of neighbors (Q.11)	0.10	70
Recorded after insertion		
Quantity of comments (Q.12)	0.04	72
Nature of comments (Q.13)	0.51***	60
Reactions to comments (Q.14)	0.56***	55

Significance: $*P < 0.05$; $***P < 0.001$.

isfaction with the new dentures and the variables mentioned above are shown in Table 3. The ability to predict patient acceptance of new dentures was generally low for the variables recorded before the insertion. There may be a weak tendency indicating that patients with special hobbies or interests accept their dentures more easily than those without. A similar weak tendency towards a better denture acceptance was found among persons who did not feel pressed for time.

The nature of the comments that patients received after the insertion of the new dentures showed a highly significant correlation with denture acceptance. Patient reaction towards these comments was also highly correlated with their degree of satisfaction with the new dentures.

Discussion

Most of the social variables tested seemed to be almost completely without influence on patient acceptance of dentures (Table 3). This is in accordance with most reports that have been published on this subject (4, 9, 10).

Silverman et al. (11), on the other hand, using the frequency of return visits by the patients as a criterion for recording patient satisfaction with dentures, found that employed patients tended to return less frequently than those without work. However, employed patients often feel pressed for time and accordingly may be expected to have less opportunity to return for adjustments of dentures than those unemployed. The same authors (11) found that patients who perceived their standard of living to be better than their contemporaries tended to accept their dentures better than those who did not. However, because of the special manner in which patient satisfaction with dentures is recorded by Silverman et al. (11), no direct comparison with present results is possible.

The patients' degree of social activity has previously been recorded as the degree of participation in community life and adjustment to roommates (10) or whether they were active members or officers on the board of any organization (9). However, regardless of how the patients' social activity has been recorded, no clinically significant effect of this factor on patient acceptance of dentures has been demonstrated.

Patients who had some special interests or hobbies or who did not feel pressed for time showed a weak tendency towards a better denture acceptance than those who ex-

pressed the opposite (Table 3). These tendencies are so weak that no definite conclusions can be drawn, but the results should encourage further research as to how patients manage their lives, what interests them, and whether they feel stressed or bored with life.

The only factor that seemed to have a clinically important influence on denture acceptance was related to other people's opinion about the new dentures. The significance of this factor has previously been indicated by Carlsson et al. (9).

Esthetics is the only criterion for denture success that can be evaluated by an outsider. The questions concerning other people's opinion of the new dentures and the patients' reactions towards their comments were recorded after the insertion of the dentures. At this time, alterations of the esthetic result would be difficult and costly to perform. If there is some degree of uncertainty about the suggested esthetics of the new dentures at the trial stage, the patient might profitably be invited to bring along a person whose judgement he or she trusts. That way adjustments can be carried out with a minimum of effort, and post-insertion problems might be reduced.

In conclusion, it should be noted that even if the present social variables were of limited value in predicting denture acceptance by patients attending a dental school, other social variables or sets of variables might prove to be more useful in this respect.

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