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Dental beliefs, patients' specific attitudes towards dentists and dental hygienists: a comparative study

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Abstract: Interpersonal relationships are important for communication, oral health education and patients' satisfaction with dental care. To assess patients' attitudes towards dental caregivers, a Swedish version of the revised Dental Belief Survey (DBS-R) and a comparable and partly new instrument the Dental Hygienist Belief Survey (DHBS) have been evaluated. The aim of the present study was to investigate if patients' attitudes towards dental hygienists (DH) and dentists (D) differ with regard to the separate items in DBS-R and DHBS. The study was a comparative cross-sectional study with 364 patients (students, general patients and patients with periodontal disease). All patients completed the DBS-R and DHBS surveys. The overall pattern in the results showed that participants in general had a less negative attitude towards DH when compared with that towards D. This was most pronounced among students and least pronounced among patients with periodontal disease. No statistically significant difference could be found in items with regard to feelings of shame and guilt in dental care situations, indicating that these items were rated on a more negative level also for DH. The conclusion is that participants had a less negative attitude towards DH with the exception of situations which may give rise to feelings of shame and guilt, an important finding for future dental hygiene care.

Key words: dental hygienist beliefs survey; dental beliefs survey; dental hygienist–patient relationship; dentist–patient relationship

Introduction

Oral health and oral diseases depend, to a great extent, on people's self-care such as oral hygiene, eating and smoking

habits. The care providers' responsibility is to promote a healthy lifestyle, provide oral health education and to support patients in developing effective self-care habits. In addition, preventive measures and necessary treatment for existing diseases need to be provided (1, 2).

The emphasis on the scope of practice of dental hygienists (DH) and dentists (D) differ. DH have a main focus of providing educational, preventive and general health promotion services, while D focus largely on the treatment of dental diseases. There is also a commonality in their scope of practice as DH also provide treatment services which are more invasive, and more similar to treatments provided by D. However, many dental hygiene patient experiences do not include the invasive therapy. In Sweden, DH are licensed by the National Board of Health and Welfare. They have the competence to and are responsible to perform intra-oral assessments and diagnosis. DH also prevent and treat periodontal disease and dental caries, which includes such procedures as scaling sub- and supragingivally, fluoride treatment and when necessary administer local anaesthetic (3–5). Nevertheless, the DH's work is focused on communication and health education to support desirable oral health-related behaviour. There are approximately two D per DH in Sweden and the two professions work in close collaboration (4, 5).

Patients' adherence to health education and their experiences of invasive oral treatments may vary, and subsequently their attitudes towards DH compared with that towards D may also differ (6). Ben-Sira discussed the difference between patients' perceptions of 'instrumental' versus 'affective' components of the providers' behaviour in health care, where 'instrumental' refers to technical aspects and 'affective' represent the providers' attitude towards the patient (7, 8). This has been further elucidated in a review by Mataki (2000) on patient–dentist relationship, where the author emphasizes that patients will rely on their perception of the providers' affective behaviour to evaluate technical competence and quality of care (9). It is consequently important to investigate interpersonal relationships to improve the communication, oral health education and patients' satisfaction with dental care. The exploration of interpersonal relationships is also of great importance for the undergraduate education of dental personnel to achieve depth of understanding of the broad spectrum of care.

To assess patients' attitudes towards dental caregivers, a Swedish version of the revised Dental Belief Survey (DBS-R) and a comparable and partly new instrument the Dental Hygienist Belief Survey (DHBS) have been evaluated (10, 11). The questionnaires contain a total of 28 items describing a variety of specific attitudes towards the dental care provider and the care they provide. The specific aim of the present study was to investigate if patients' attitudes towards DH and D differ with regard to the separate items in DBS-R and DHBS.

Materials and methods

Design

The present study is a part of a broader project performed to evaluate the Swedish version of the DBS-R (10) and the DHBS (11) in different age and patient groups. The study was a comparative cross-sectional survey conducted during 2004 in Göteborg and Falun, Sweden. Göteborg is the second largest city in Sweden, with approximately 460 000 inhabitants. Falun is a small city with approximately 55 000 inhabitants.

Participants

A total of 710 adults were invited to participate in the study (students, general patients, patients with periodontal disease and patients on a waiting list for dental fear treatment) and 550 (77%) returned the questionnaires. Among these, there were 404 (73%) who had received care from both DH and D. The group of severe dental fear patients was excluded given that only a few individuals reported treatment experiences from both DH and D ($n = 30$). Ten patients were excluded due to internal drop-outs. Hence, the final present sample consisted of 364 patients (Table 1). Students were significantly younger than those of the other patient groups. There was no statistically significant difference with regard to gender distribution between the groups.

Table 1. **Description of participants with regard to subgroup, gender, age and mean item scores of DBS-R and DHBS**

	Students	General patients	Periodontal patients	*P*-value
Female (%)	91 (70)	91 (63)	55 (61)	ns
Male (%)	39 (30)	53 (37)	35 (39)	ns
Total	130	144	90	
Age mean (SD)	29.8 (8.8)	53.2 (14.6)	56.8 (11.1)	<0.000
Mean item score DBS-R (SD)	1.7 (0.6)	1.5 (0.5)	1.7 (0.8)	<0.000
Mean item score DHBS (SD)	1.5 (0.6)	1.3 (0.5)	1.5 (0.6)	<0.000

Instrument

Dental beliefs were assessed with the revised Dental Belief Survey (DBS-R) and the comparable Dental Hygienist Belief Survey (DHBS) exploring patients' attitudes towards D and DH (10–14). Both instruments are 28-item questionnaires with the response rate on a five-point Likert scale from not negative at all = 1 to highly negative = 5. The questionnaires are basically the same with the difference between the words D and DH (11). Normative data on DBS-R and DHBS has recently been published (10, 11, 15). Dental fear was assessed with Dental Anxiety Scale (DAS) presented elsewhere (10, 11).

Procedures

The questionnaires were combined into one starting with the DBS-R and ending with the DAS. It was then handed out at a lecture (for students) or at a regular visit at the clinic (for general dental care patients and periodontal patients) or by mail (for patients with dental fear). Respondents returned them directly in a sealed envelope or by mail in a stamped envelope. The questionnaire was anonymous and no reminder was sent.

Ethical considerations

All individuals received information about the study and informed consent was obtained. The study was approved by the regional ethical review board at Göteborg and Dalarna University (D no. R123-99).

Statistical analyses

Data were analysed with descriptive statistics. An estimated individual mean value was calculated to replace missing values if two or fewer answers were missing in each instrument. For comparison between groups, chi-squared analyses were used with regard to gender, and a one-way ANOVA followed by the *post hoc* Tukey test with regard to age. Paired *t*-test was used for comparison of patients' attitudes towards DH and D. Depending on the large amount of pair-wise analyses, a P value of < 0.01 was regarded as statistically significant. Data analyses were conducted using the SPSS statistical package (16).

Results

The total sample

In 23 of the items (82%), the participants had a significantly less negative attitude towards DH than towards D (Table 2). Item 19: *I am concerned that D/DH will embarrass me over the condition of my teeth* was the only item where the attitude was more negative towards DH [1.6 (SD 1.0)] than towards D [1.5 (SD 0.8)] ($t = -2.27$; $P = 0.024$). No significant difference in attitudes could be found regarding item 11: *I'm concerned that D/DH might not be skilled enough to deal with my fears or dental problems*, item15: *The D/DH says things to make me feel guilty about the way I care for my teeth*, and item 17: *I am concerned that the D/DH will put me down (make light of my fears*). The statement in item 28 was identical in the two instruments and the responses were similar for D/DH in the total sample as well as in the subgroups respectively.

The frequency distribution of the responses with regard to attitude towards DH showed that in all of the items there were more than 50% who totally disagreed with the statements, indicating the least negative attitude (Fig. 1). This was in contrast to the responses with regard to attitude towards D; in six items (items: 8, 10, 13, 21, 22, 23), there were less than 50% who totally disagreed (Fig. 2).

The least negative rating with regard to attitude towards DH was on item 7: *I've had DH seem reluctant to correct work unsatisfactory to me*, and with regard to attitude towards D item 17: *I am concerned that D will put me down (make light of my fears)*, while the most negative rating towards both DH and D was item 23: *Once I am in the D/DH chair I feel helpless (that things are out of my control)* (Figs 1 and 2).

Students

The subgroup of students had a significantly less negative attitude towards DH than towards D in 20 of the items (71%) (Table 2). In the remaining eight items, no significant difference could be found. Five of them were the same as for the total sample (items: 11, 15, 17, 19 and 28). The additional items were item 14: *I feel uncomfortable asking questions*, item 16: *I am concerned that D/DH will not take my worries (fears) about dentistry seriously* and item 18: *I am concerned that D/DH do not like it when a patient makes request*. In both item 15 and 19 related to shame and guilt the mean value of the responses was more negative with regard to attitude towards DH than towards D.

There were three items (items: 8, 21 and 23) in which less than 50% totally disagreed in the responses with regard to attitude towards DH (Fig. 3), the corresponding figures with regard to attitude towards D were eight items (items: 6, 8, 10, 13, 21, 22, 23 and 26) (Fig. 4) indicating a less negative attitude towards DH than D.

Table 2. **Item mean scores (SD) of DBS-R and DHBS in total and subgroups of students, general patients and periodontal patients**

Statement		Total	Students (N = 130)	General patients (N = 144)	Periodontal patients (N = 90)
1. I am concerned that D/DH recommend work that is not really needed	DBS-R	1.6 (1.0)	1.8 (1.1)	1.4 (0.7)	1.7 (1.1)
	DHBS	1.4 (0.8)***	1.4 (0.8)***	1.3 (0.7) ns	1.5 (0.9) ns
2. I believe D/DH say/do things to withhold information from me	DBS-R	1.3 (0.6)	1.3 (0.6)	1.2 (0.5)	1.4 (0.7)
	DHBS	1.2 (0.5)**	1.2 (0.5)**	1.1 (0.5) ns	1.2 (0.5) ns
3. I worry if the D/DH is competent and is doing quality work	DBS-R	1.6 (1.0)	1.7 (0.9)	1.5 (0.8)	1.7 (1.1)
	DHBS	1.4 (0.8)***	1.4 (0.9)**	1.4 (0.8) ns	1.5 (1.0) ns
4. I have had D/DH say one thing and do another	DBS-R	1.4 (0.9)	1.5 (1.0)	1.2 (0.6)	1.5 (1.1)
	DHBS	1.2 (0.7)**	1.2 (0.6)***	1.2 (0.5) ns	1.4 (0.9) ns
5. I am concerned that D/DH provide all the information I need to make good decisions	DBS-R	1.6 (0.9)	1.6 (0.9)	1.5 (0.8)	1.7 (1.1)
	DHBS	1.4 (0.8)***	1.3 (0.7)**	1.3 (0.7)**	1.5 (1.0) ns
6. D/DH don't seem to care that patients sometimes need a rest	DBS-R	1.8 (1.0)	1.9 (1.0)	1.6 (0.9)	1.8 (1.0)
	DHBS	1.5 (0.8)***	1.5 (0.8)***	1.4 (0.7)***	1.5 (0.9)**
7. I've had D/DH seem reluctant to correct work unsatisfactory to me	DBS-R	1.5 (1.0)	1.5 (1.1)	1.4 (0.8)	1.5 (1.0)
	DHBS	1.2 (0.6)***	1.2 (0.7)**	1.1 (0.3)***	1.2 (0.7)**
8. When a D/DH seems in a hurry I worry that I'm not getting good care	DBS-R	2.2 (1.2)	2.5 (1.2)	1.9 (1.0)	2.0 (1.2)
	DHBS	1.7 (0.9)***	1.9 (0.9)***	1.6 (0.8)***	1.7 (1.0)***
9. I am concerned that the D/DH is not really looking out for my best interests	DBS-R	1.6 (0.9)	1.6 (0.9)	1.5 (0.7)	1.6 (1.0)
	DHBS	1.4 (0.8)***	1.4 (0.8)**	1.3 (0.7)***	1.4 (0.9) ns
10. D/DH focus too much on getting the job done and not enough on the patient's comfort	DBS-R	1.8 (0.9)	2.0 (0.9)	1.5 (0.8)	1.8 (1.0)
	DHBS	1.5 (0.8)***	1.5 (0.8)***	1.3 (0.7)***	1.6 (0.9) ns
11. I'm concerned that D/DH might not be skilled enough to deal with my fears or dental problems	DBS-R	1.6 (1.0)	1.6 (1.0)	1.5 (0.9)	1.7 (1.2)
	DHBS	1.5 (1.0) ns	1.5 (0.9) ns	1.4 (0.9) ns	1.6 (1.1) ns
12. I feel D/DH do not provide clear explanations	DBS-R	1.6 (0.9)	1.7 (0.9)	1.5 (0.8)	1.6 (1.0)
	DHBS	1.3 (0.7)***	1.4 (0.7)***	1.3 (0.7)**	1.3 (0.6)***
13. I am concerned that D/DH do not like to take the time to really talk to patients	DBS-R	1.8 (0.9)	2.0 (0.9)	1.6 (0.8)	1.8 (1.0)
	DHBS	1.3 (0.7)***	1.4 (0.7)***	1.3 (0.7)***	1.4 (0.7)***
14. I feel uncomfortable asking questions	DBS-R	1.4 (0.8)	1.5 (0.9)	1.4 (0.7)	1.5 (0.8)
	DHBS	1.3 (0.7)***	1.3 (0.7) ns	1.2 (0.6)**	1.3 (0.7) ns
15. D/DH say things to make me feel guilty about the way I care for my teeth	DBS-R	1.6 (0.9)	1.7 (1.0)	1.5 (0.8)	1.7 (1.0)
	DHBS	1.6 (1.0) ns	1.8 (1.2) ns	1.6 (0.8) ns	1.5 (0.9)**
16. I am concerned that D/DH will not take my worries (fears) about dentistry seriously	DBS-R	1.6 (1.0)	1.5 (0.9)	1.5 (0.9)	1.7 (1.2)
	DHBS	1.4 (0.8)***	1.4 (0.8) ns	1.3 (0.8)***	1.5 (1.0)**
17. I am concerned that D/DH will put me down (make light of my fears)	DBS-R	1.2 (0.7)	1.3 (0.7)	1.1 (0.5)	1.4 (1.0)
	DHBS	1.2 (0.7) ns	1.3 (0.8) ns	1.2 (0.6) ns	1.2 (0.8) ns
18. I am concerned that D/DH do not like it when a patient makes request	DBS-R	1.6 (0.9)	1.6 (1.0)	1.4 (0.8)	1.6 (1.0)
	DHBS	1.4 (0.8)***	1.4 (0.8) ns	1.3 (0.7) ns	1.3 (0.7)***
19. I am concerned that D/DH will embarrass me over the condition of my teeth	DBS-R	1.5 (0.8)	1.6 (0.9)	1.4 (0.7)	1.5 (0.9)
	DHBS	1.6 (1.0) ns	1.7 (1.1) ns	1.5 (0.9) ns	1.5 (0.9) ns
20. I believe that D/DH don't have enough empathy for what it is really like to be a patient	DBS-R	1.6 (0.9)	1.7 (0.9)	1.5 (0.9)	1.6 (1.0)
	DHBS	1.4 (0.8)***	1.5 (0.8)***	1.4 (0.8) ns	1.5 (0.8) ns
21. When I am in the chair I don't feel like I can stop the appointment for a rest if I feel the need	DBS-R	2.1 (1.1)	2.4 (1.2)	1.8 (1.0)	2.0 (1.2)
	DHBS	1.7 (0.9)***	1.8 (0.9)***	1.5 (0.9)***	1.6 (0.9)***
22. D/DH don't seem to notice that patients sometimes need a rest	DBS-R	1.9 (1.0)	2.1 (1.0)	1.7 (0.9)	2.0 (1.0)
	DHBS	1.6 (0.8)***	1.6 (0.8)***	1.5 (0.8)***	1.6 (0.9)***
23. Once I am in the D/DH chair I feel helpless (that things are out of my control)	DBS-R	2.2 (1.3)	2.5 (1.3)	2.1 (1.2)	2.2 (1.3)
	DHBS	1.8 (1.2)***	2.0 (1.1)***	1.7 (1.1)***	2.0 (1.2)***
24. If I were to indicate that it hurts, I think that the D/DH would be reluctant to stop and try to correct the problem	DBS-R	1.5 (0.9)	1.6 (1.0)	1.4 (0.7)	1.5 (1.0)
	DHBS	1.4 (0.8)***	1.4 (0.8)***	1.3 (0.7) ns	1.4 (0.9) ns
25. I have had D/DH not believe me when I said I felt pain	DBS-R	1.4 (0.9)	1.6 (1.1)	1.3 (0.7)	1.4 (1.0)
	DHBS	1.3 (0.7)***	1.3 (0.8)**	1.2 (0.6) ns	1.3 (0.8) ns
26. D/DH often seem in a hurry, so I feel rushed	DBS-R	1.6 (0.8)	1.7 (0.8)	1.5 (0.8)	1.5 (1.0)
	DHBS	1.4 (0.8)***	1.5 (0.8)**	1.3 (0.6)***	1.4 (0.8) ns
27. I am concerned that the D/DH will do what they want and not really listen to me while I'm in the chair	DBS-R	1.5 (0.9)	1.6 (1.0)	1.4 (0.7)	1.6 (0.9)
	DHBS	1.4 (0.8)***	1.4 (0.8)**	1.3 (0.7) ns	1.4 (0.9) ns
28. Being overwhelmed by the amount of work needed (all the bad news) could be enough to keep me from beginning or completing treatment	DBS-R	1.4 (0.9)	1.6 (1.1)	1.2 (0.5)	1.6 (1.1)
	DHBS	1.4 (1.0) ns	1.6 (1.1) ns	1.2 (0.6) ns	1.6 (1.1) ns

**P < 0.01, ***P < 0.001.

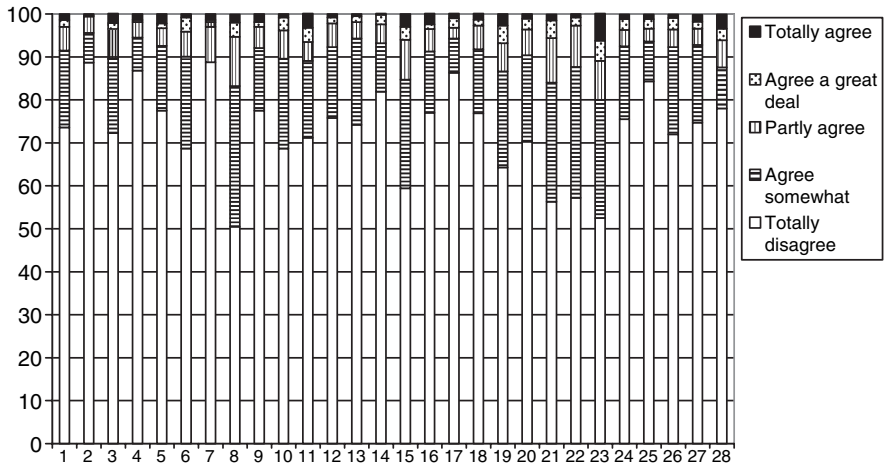

Fig. 1. Distribution of responses to separate items of DHBS for all participants.

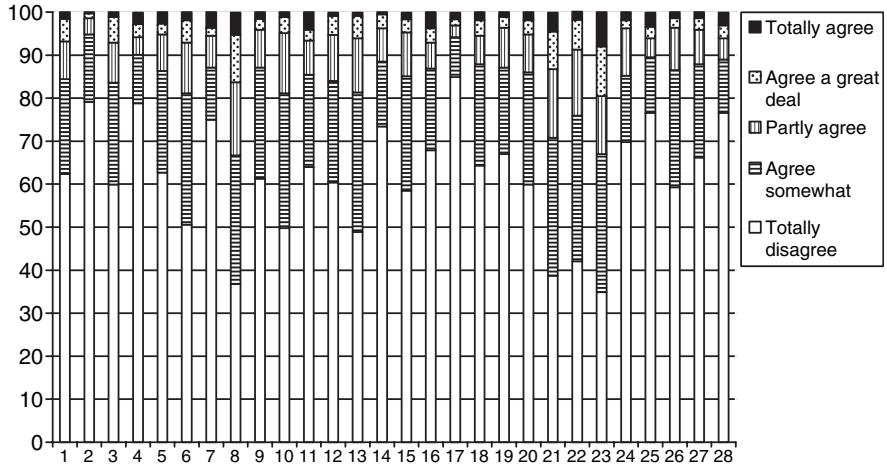

Fig. 2. Distribution of responses to separate items of DBS-R for all participants.

The least negative rating with regard to attitude towards DH was on item 4: *I have had DH say one thing and do another*, and with regard to attitude towards D item 17: *I am concerned that D will put me down (make light of my fears)*, while the most negative rating towards both DH and D was item 23: *Once I am in the D/DH chair I feel helpless (that things are out of my control)* (Figs 3 and 4).

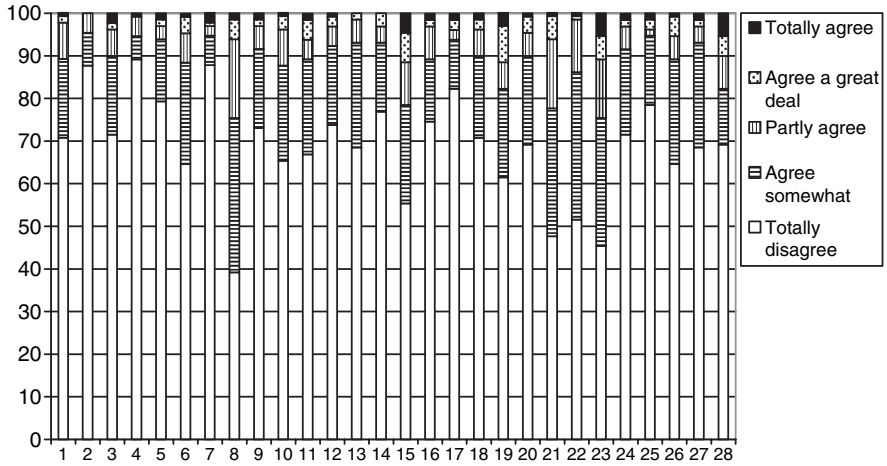

Fig. 3. Distribution of responses to separate items of DHBS for students.

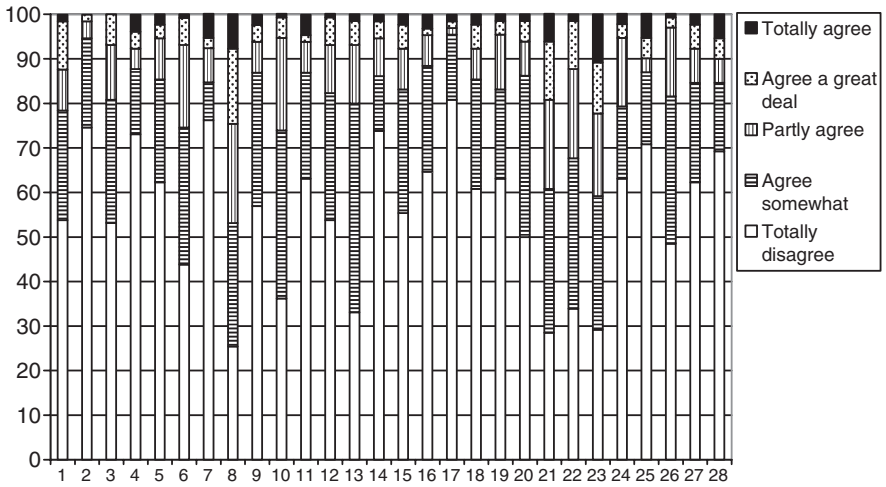

Fig. 4. Distribution of responses to separate items of DBS-R for students.

General patients

The subgroup of general patients had a significantly less negative attitude towards DH than towards D in 14 of the items (50%) (Table 2). In the remaining 14 items, no significant difference could be found; five of them were identical with the responses from the total sample (items: 11, 15, 17, 19 and 28) and one additional item (item 18) was identical with the students' responses. In items 15, 17 and 19, the response mean values were higher with regard to attitude towards DH than towards D; in item 19, the mean value was 1.5 (SD 0.9) vs 1.4 (SD 0.7) ($t = -2.09$; d.f. = 143; $P = 0.038$) respectively.

The frequency distribution of the responses with regard to attitude towards DH showed that in all of the items there were more than 50% who totally disagreed (Fig. 5), while in the responses with regard to attitude towards D, there were three items (items: 8, 21 and 23) where less than 50% totally disagreed (Fig. 6), once again an indication of a less negative attitude towards DH.

The least negative rating with regard to attitude towards DH was on item 7: *I've had D/DH seem reluctant to correct work unsatisfactory to me*, and with regard to attitude towards D item 17: *I am concerned that D will put me down (make light of my fears)*, while the most negative rating towards both DH and D was item 23 (Figs 5 and 6).

Periodontal patients

The subgroup of periodontal patients showed a different pattern in their responses; in 11 of the items (39%), there was a less negative attitude towards DH than towards D (Table 2). In the remaining 17 items, no significant differences could be found and in none of the items was the mean value higher with regard to attitude towards DH than towards D. A total of four items were identical with the total sample and the other subgroups (items: 11, 17, 19 and 28); one item (item: 14) was identical with the students and eight items identical were with general patients (items: 1, 2, 3, 4, 20, 24, 25 and 27). A notable difference compared with the other subgroups was on item 15:

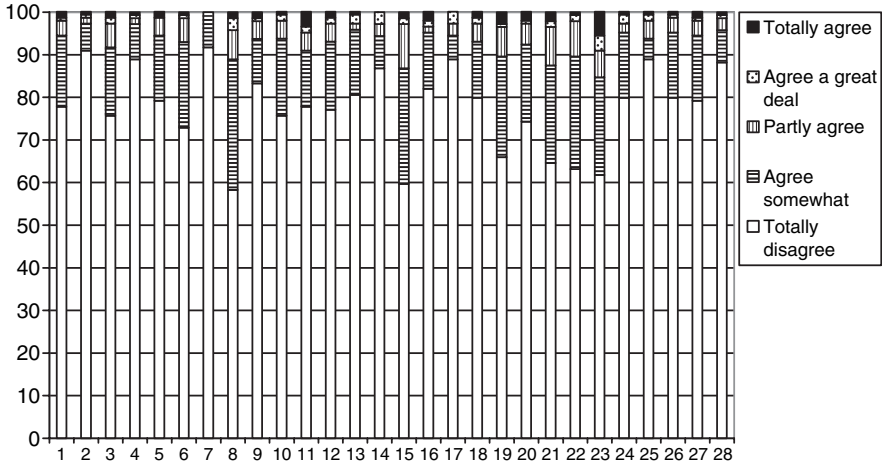

Fig. 5. Distribution of responses to separate items of DHBS for general patients.

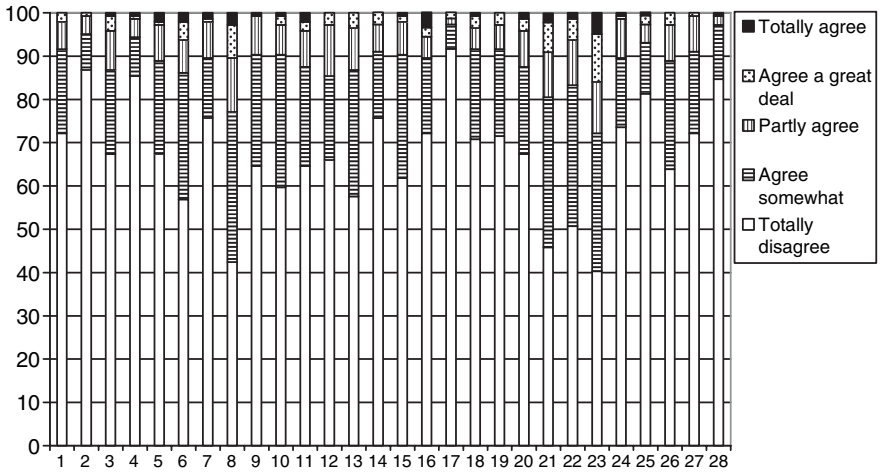

Fig. 6. Distribution of responses to separate items of DBS-R for general patients.

D/DH say things to make me feel guilty about the way I care for my teeth, where the attitude towards DH [1.5 (SD 0.9)] was significantly less negative than towards D [1.7 (SD 1.0)] (t = 3.0; d.f. = 89; P = 0.004).

The frequency distribution of the responses with regard to attitude towards DH showed that in all of the items, except item 23, there were more than 50% who totally disagreed (Fig. 7), while in the responses with regard to attitude towards D there were four items (items: 8, 21, 22 and 23) in which the respondents totally disagreed to less than 50%. Also among patients with periodontal disease, the attitude towards DH was less negative than towards D (Fig. 8).

The least negative for both DH and D was item 17: *I am concerned that D/DH will put me down (make light of my fears)* and the most negative rating for both groups was on item 23 (Figs 7 and 8).

Discussion

The objective was to investigate if patients' specific attitudes towards D and DH differed with regard to the separate items in DBS-R and DHBS. The overall pattern in the results showed that participants in general were less negative towards DH compared with that towards D. However, the analyses of the subgroups of patients indicated that there was a slight difference in the attitudes among the subgroups. The largest difference in attitude was shown among students, who probably have the best oral health and consequently the least need for treatment given their younger age (17). This group of individuals most probably visits DH for prevention and oral health promotion rather than for more complicated treatments when compared with patients with periodontal conditions. However, students were more negative towards both DH and D than general and periodontal patients. This may be explained by

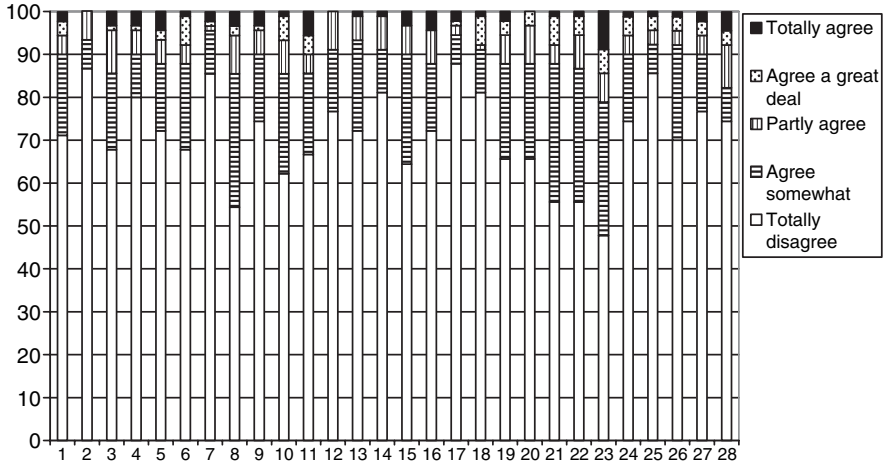

Fig. 7. Distribution of responses to separate items of DHBS for periodontal patients.

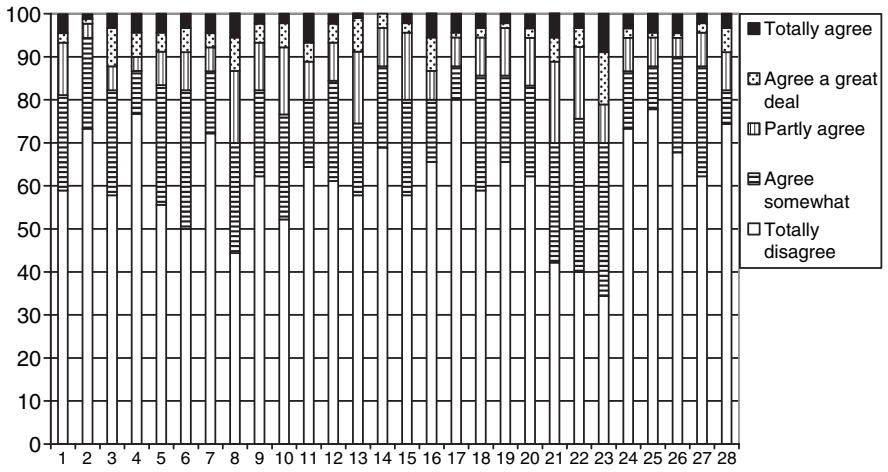

Fig. 8. Distribution of responses to separate items of DBS-R for periodontal patients.

the fact that students were significantly younger, and possibly more demanding. Young people of this modern age tend to be more critical and demanding with regard to service and care than older age groups (18, 19).

The major concern for all groups was that they felt helpless in the dental care situation and that 'the caregiver does not seem to notice that patients sometimes need a rest and make a stop when the treatment hurts', and also their fear that they should 'not get a good care when the provider is in a hurry'. This may be related to ignorance of not being attentive to the patients' needs, an important aspect to take into consideration in clinical practice as well as in undergraduate education. An interesting difference in patients' attitudes towards D versus DH is shown on item 15: *D/DH say things to make me feel guilty about the way I care for my teeth*, where both students and general patients rated the attitude towards DH more negative than towards D in numbers, even though it did not reach a statistically significant difference. Probably these subgroups have received health education from DH to a greater extent than from D, because they have a relatively good oral health and no advanced treatment needs. Studies have shown that tooth brushing and interdental cleaning is not performed as often as recommended (17). The need to improve the oral hygiene habits emphasized by DH may very well have created feelings of guilt resulting in a more negative attitude towards DH. However, periodontal patients rated the attitude totally the opposite with a significantly more negative attitude towards D than towards DH regarding guilt and shame as described in item 15. This was somewhat surprising as it could be assumed that periodontal patients to a greater extent than the other patient groups would have been exposed to DH' care with high demands on self-care regiments. The results may depend on the reality that D generally provide health education more often to patients who have periodontal disease than they do to general patients and consequently the possibility to make patients feel guilty presents to a greater extent. However, the results may also reflect the fact that the group of periodontal patients in this study was referred for periodontal treatment and answered the questionnaires in relation to their first visit with the specialist team. As Abrahmasson *et al.* found (20), chronic periodontitis is a severe oral disease and may be related to feelings of shame and guilt in the afflicted individual.

There were mainly three items where no significant difference could be found between the groups: item number 11, 17 and 19. Both items 17 and 19 concern feelings of shame and guilt. It is of interest to notice that item 19 in numbers were rated more negatively towards DH than towards D among the total sample and general patients, even though it did not reach a significant level set at $P < 0.01$. DH major work is to promote oral health by promoting good oral hygiene, eating habits and smoking cessation counselling, i.e. factors related to lifestyle, which may give rise to feelings of shame and guilt. It is important to establish a confident relationship with the patients to discuss lifestyle and achieve adherence. This is a major concern for DH and obviously an area necessary to improve. If a relationship without shame and guilt cannot be created, it will be difficult to achieve adherence.

The DBS-R is a well-known instrument, validated and tested for its psychometric properties in different cultures and patient groups (10, 14, 15). The DHBS is a partly new instrument and tested for the first time in a Swedish population (11). However, the DHBS follows closely with the DBS-R, and the fact that patients responded identically on item 28 in both instruments strengthens the validity and reliability of the instrument. The subgroups consisted of convenience samples, but were collected from large and medium size cities in

different areas of Sweden, which may be a reasonable representative sample for the study population. Thus, we argue that the results are representative of Swedish patient groups.

The conclusion is that the patients in this study had a less negative attitude towards DH when compared with that towards D. This was more pronounced among students and general patients than among periodontal patients. However, by contrast, there was no significant difference in patient attitudes to issues with regard to feelings of shame and guilt, which consequently was rated on a more negative level also for DH. Such aspects must be taken into consideration in clinical practice and be emphasized in the curriculum and education programme for dental health professionals.

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