Some dental health-related behaviour findings

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This article summarises the responses of 20,136 pupils between the ages of 11+ and 15+ to the “dental” questions in the Health Related Behaviour Questionnaire. These pupils were in 123 secondary schools in all parts of the British Isles, and their responses date from the beginning of 1982 to the current term.

The total number of pupils in the HEC Schools Health Education Unit's archive now exceeds 42,000, collected since 1980, but the ones analysed here completed Version 8 of the Questionnaire, which has been in use for the past three years. This has now been replaced by Version 10, so that we are now in a position to study the results of all the Version 8 studies made — allowing for a few batches that may still come in to be processed.

The four questions to do directly with dental care are the following:

Question 10: How many times did you clean your teeth yesterday?

Question 20: When did you last visit the dentist?

Question 21: Last time you visited the dentist, what treatment did you have?

Question 22: What is your main reason for looking after your teeth?

The answers to each question are displayed as percentages of the total sample, divided into boys and girls within each year group.

Frequency of brushing

The table supports the expected conclusion that girls are more conscientious “tooth-brushers” than boys. Calculating the mean number of brushings on the previous day (which will always be a weekday, since the Questionnaire is not to be administered on a Monday), gives 1.38 for the 1st-year boys in the sample, and 1.44 for the 5th-year boys, whereas for the girls the means rise from 1.66 to 1.90 between the 1st and 5th years.

The differences between the results for the separate year groups are even more interesting. Looking at the boys, it will be seen that the pattern of tooth-brushing frequency changes very little over the year groups, the only noticeable jump being from 16% of Not at all responses in the 1st-year group to 10% or 11% in subsequent years. However, the girls' results show a clear fall in the Not at all and Once responses, matched by a steady rise in the Twice and More than twice groups.

Last visit to the dentist

With both sexes there is a tendency for the interval since the last visit to increase with age, although this is not very marked. Between 64% and 70% of boys, and between 70% and 74% of girls, had visited the dentist within the last 6 months.

A question like this does make demands upon the memory, and one concern during the Questionnaire's field trials was the extent to which recall over long periods of time can be relied on. The evidence indicated that pupils can recall dental visits quite reliably. The substantial number of pupils (over one-third) who had been to the dentist within the last three months has prompted two new subdivisions in Questionnaire Version 10, as follows: Less than 1 month and Less than 2 weeks.

Treatment at the last visit

This question attempts to classify the various treatments that are likely during a visit to the dentist. It should be noted that the percentage totals within each year group add up to between 110% and 115%, indicating that in some cases two or more different treatments took place during the same visit.

Fillings The percentage of boys and girls having had one or more fillings during their previous visit is virtually identical, rising from 29% in the 1st year to about 33% in the 5th year.

Extractions Both sexes show a decreasing frequency of extractions at the previous visit, the boys falling from 16% in the 1st year to 7% in the 5th; the girls' results are from 14% down to 6%. Therefore, the rate of decline is very similar.

Scaling and polishing The frequency rises slightly for the boys, from 12% to 15%, but is virtually constant at 15% for the girls.
Brace fitted or checked A very slightly higher percentage of girls than boys had brace treatment at their last visit. In both cases there is a noticeable fall in the 5th year, and a slight maximum in years 2 and 3. Other regional analyses have revealed large variations between schools and areas in the degree of brace treatment.

Other treatment and No treatment The original intention was that pupils would include check-ups under No treatment, but it is suspected that some are calling check-ups Other treatment. To clarify this, Questionnaire Version 10 has a Check-up answer to replace No treatment. Both these responses are very similar for the two sexes, the girls showing a small increase from 38% to 42% in the No Treatment category.

Main reason for teeth care
One suspects that it would be interesting to study the answers to this question over the past twenty years or so. The emphasis in toothpaste advertising has undergone a considerable change. In the sixties, gleaming teeth and sweet-smelling breath were seen as passports to social acceptability. Today, the message is much more clinical.

Good looks For the boys, this reason comes first for about 17% of all year groups, whereas for the girls it drops from 17% in the 1st year to 11% in the 5th year. Keeping one's own teeth The responses using this answer show a most interesting decline, from 32% to 16% for the boys, and from 26% to 12% for the girls. Is this a reflection of the dental messages being absorbed at different ages? Does the threat of having to wear false teeth have different connotations at 11+ and 15+?

Clean breath This is the lowest-scoring response of all, and shows little change between the year groups. It is significant that manufacturers have also turned away from this aspect. On the other hand, the rating for Feel clean rises significantly (see below).

Avoiding toothache This reason attracts a very similar response from all year groups and sexes - between 22% and 27% in all cases.

Clean mouth and teeth In the case of the boys, this reason appears rather low down in the order of preference in the 1st year, but is the most important in the 5th year, with 28% voting for it. It is always very important for the girls, but rises to a massive 44% vote in the 5th year.

Percentage table of “What is your main reason for looking after your teeth?” by year group

Some “toothbrushing”-related behaviours
By combining the answers to two different questions, it is possible to study the way two behaviours are related to each other. For example, is more frequent toothbrushing associated with reduced need for fillings; or is there a relationship between brushing and the interval between visits to the dentist? Both these sets of behaviours are examined in the tables here, for some 8,052 boys and girls in the 4th year only.

Toothbrushing end visits to the dentist.
The connection between these two behaviours is well marked. Of the boys who have not been to the dentist for two years...
or more, 23% did not brush their teeth at all on the previous day, compared with 7% of "non-brushers" who had visited the dentist within the previous three months. On the other hand, 55% of the second group had brushed their teeth twice or more, compared with 33% of the first group. The "mean brushings", shown in the graph, confirm the relationship between these two behaviours.

Toothbrushing and tooth decay. The last table combines How many times did you brush your teeth yesterday? with Did you have any fillings done when you last visited the dentist? From a previous table it will be remembered that 33% of all 4th-year pupils (both boys and girls) had had fillings on their previous visit. The table compares this group with the 67% who did not have any fillings, and tries to help answer the question Does increased frequency of toothbrushing reduce dental decay? The following points can be made:

1. The girls brushed their teeth more frequently than did the boys (as shown in a previous table).
2. There is very little difference between the toothbrushing frequency of those girls who did and did not have fillings at their last visit to the dentist.
3. On the other hand, there is a detectable difference between the boys who did and did not have fillings. Of those who did, 37% brushed their teeth twice on the previous day; of those who did not, the figure was 47%.
4. The boys with no fillings brushed their teeth considerably less often than the girls who had fillings!

Points 1, 3, and 4 all strengthen the view, supported by "Natural Nashers", that toothbrushing by itself may have little effect upon dental decay. It seems to justify the opinion of 42% of the girls in this age-group, whose prime reason for brushing their teeth so frequently is to make their mouth feel clean.

<table>
<thead>
<tr>
<th></th>
<th>4th-year Boys</th>
<th>4th-year Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fillings</td>
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<td>Fillings</td>
</tr>
<tr>
<td>Not at all</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>Once</td>
<td>43</td>
<td>38</td>
</tr>
<tr>
<td>Twice</td>
<td>37</td>
<td>47</td>
</tr>
<tr>
<td>More than</td>
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<td>6</td>
</tr>
<tr>
<td>twice</td>
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<tr>
<td>Mean (times)</td>
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<td>1.49</td>
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<tr>
<td>Sample size</td>
<td>1495</td>
<td>2996</td>
</tr>
<tr>
<td>% of sample</td>
<td>33</td>
<td>67</td>
</tr>
</tbody>
</table>

Percentage table of "How many times did you clean your teeth yesterday?" by "Did you have any fillings done when you last visited the dentist?"