

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 This has now been replaced by Version 10, so that we are now in a position to study the results of all the Version 8 studies made — allowing for a few batches that may still come in to be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

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YEAR	Boys					Girls				
	1	2	3	4	5	1	2	3	4	5
Not at all	16	11	11	10	10	6	5	3	2	1
Once	35	39	40	40	40	31	31	28	23	23
Twice	41	43	42	43	43	51	54	58	58	61
More than twice	7	6	6	6	6	11	10	11	16	15
Mean (times)	1.38	1.43	1.42	1.44	1.44	1.66	1.69	1.77	1.87	1.90
Sample no.	1184	1366	2425	4519	1279	977	1161	2256	3525	1211

Percentage table of "How many times did you clean your teeth yesterday?" by year group

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.

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YEAR	Boys					Girls				
	1	2	3	4	5	1	2	3	4	5
2+ years	6	5	6	7	8	4	5	4	4	6
1+ year	8	7	8	8	10	7	7	6	6	7
6-12 months	18	18	16	17	17	17	15	15	16	17
3-6 months	31	30	32	32	31	30	34	33	35	35
Less than 3 months	36	38	37	34	33	40	40	40	38	35
Sample no.	1184	1366	2425	4519	1279	977	1161	2256	3525	1211

Percentage table of "When did you last visit the dentist?" by year group

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YEAR	Boys					Girls				
	1	2	3	4	5	1	2	3	4	5
Fillings	29	29	30	33	34	29	29	30	33	33
Extractions	16	13	10	10	7	14	10	9	6	6
Scaling & polishing	12	12	13	14	15	12	13	14	14	13
Brace	8	9	10	8	6	10	11	11	9	7
Other treatment	11	10	10	10	10	10	10	10	9	9
No treatment	39	37	39	39	39	38	39	39	43	42
Sample no.	1177	1358	2418	4517	1271	976	1159	2255	3589	1209

Percentage table of
"Last time you visited
the dentist, what treat-
ment did you have?"
by year group

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 acceptance. 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+?

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YEAR	Boys					Girls				
	1	2	3	4	5	1	2	3	4	5
Good looks	16	19	16	19	17	17	18	13	15	11
Keep own teeth	32	25	24	18	16	26	17	16	13	12
Clean breath	7	7	8	10	9	5	5	6	5	6
Avoid pain	24	27	27	24	25	24	25	27	22	24
Feel clean	16	17	22	25	28	25	31	35	42	44
Sample no.	1184	1366	2425	4519	1279	977	1161	2256	3525	1211

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

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	4th-year Boys					4th-year Girls				
	2+ years	1+ year	6-12 months	3-6 months	0-3 months	2+ years	1+ year	6-12 months	3-6 months	0-3 months
Not at all	23	15	10	9	7	3	2	3	1	2
Once	43	42	45	38	38	33	32	26	23	19
Twice	28	36	39	47	47	52	53	57	59	60
More than twice	5	5	6	5	8	11	14	14	16	19
Mean (times)	1.14	1.29	1.40	1.48	1.55	1.70	1.78	1.82	1.90	1.96
Sample no.	327	376	789	1483	1548	153	232	562	1241	1383

Percentage table of
"How many times did
you clean your teeth
yesterday?" by "When
did you last visit the
dentist?"

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.

Some "toothbrushing" - related behaviours

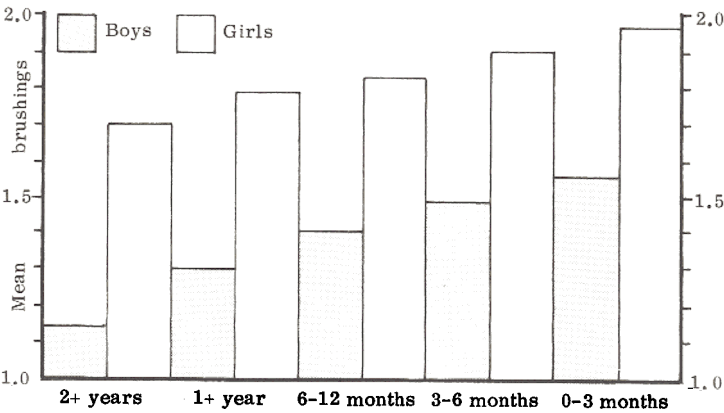
By combining the answers to two different questions, it is possible to study the way two behaviours are related to each other. For example, is more frequent toothbrushing associated with reduced need for fillings; or is there a relationship between toothbrushing and the interval between visits to the 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 and 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

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Graph showing "mean brushings" by "When did you last visit the dentist?"



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!

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	4th-year Boys		4th-year Girls	
	Fillings	No fillings	Fillings	No fillings
Not at all	13	9	2	1
Once	43	38	25	22
Twice	37	47	57	59
More than twice	6	6	15	17
Mean (times)	1.34	1.49	1.85	1.91
Sample no.	1495	2996	1187	2374
% of sample	33	67	33	67

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?"