

# The Health Related Behaviour data bank

John Balding

HEC Schools Health Education Unit

The Health Related Behaviour Questionnaire of the HEC Schools Health Education Unit has been used by secondary schools as an aid to curriculum planning since 1980. Since its inception, about 44,000 pupils have used it in some 250 schools. The map opposite shows how these schools are distributed regionally throughout the UK.

The main function of the Questionnaire service is to support good practice in schools. It has long been my view that health education cannot be separated from the cultural background and social context of pupils. The teacher may either ignore these implications, or make assumptions that could be far from the truth. Use of the Questionnaire makes possible a more realistic judgment of what is needed.

A by-product, but an increasingly significant one, is the accumulation of a data bank of health-related behaviours of pupils between the age of 11 and 16+. This data is already being used by researchers. This issue of *Education and Health* concentrates on the data bank, and gives examples of the way the information may be extracted, concentrating on the questions relating to the consumption of alcoholic drinks.

## SECTIONS

1. The service to schools, and the data bank	30
2. Alcohol-related behaviour: a national year-group picture .	32
3. Some 4th-year alcohol-related behaviours	34
4. Alcohol-related behaviour in 10 regional schools	38
5. Examining differences between regions .	42
6. Notes on the Questionnaire	43

# 1. The service to schools, and the data bank

The Health Related Behaviour Questionnaire is a document of 16 sides with 66 questions relating to a large range of activities in school, at home, and with friends. The principal areas covered are the following:

- Alcohol consumption
- Dental care
- Diet
- Homework
- Hygiene
- Jobs
- Medication
- Money
- Road use
- Self-esteem
- Sharing problems
- Smoking
- Social activities
- Sport
- Time to bed/ time up
- TV watching

The Questionnaire can be completed within the time-span of a single lesson, although some pupils at the lower end of the ability range may find it taxing. Where possible, a sample of 50 boys and 50 girls per year group, selected from across the ability levels, should be chosen. Many schools examine more than one year group, and some have used the Questionnaire through all the year groups, while a few have involved all the pupils. An exciting development is the repeated use of the Questionnaire within some schools, to begin to build up a longitudinal study.

Within all the data accumulated here at the Unit, the 4th year is the best represented, followed by the 3rd year.

## The Questionnaire study in a school

The breakdown of a Questionnaire operation within a school looks like this:

1. Receipt of master copy of Questionnaire, with explanatory documents.
2. Staff discussion; preparation of Questionnaire copies; decisions about administration.
3. Questionnaire administration.
4. Completed scripts returned to the HEC Schools Health Education Unit.
5. Scripts coded and prepared for the computer.
6. Coded answers punched into the computer as raw data.
7. Raw data analysed, and a table of responses to each question generated.
8. Printout of tables returned to the school, together with a guide to the interpretation of statistics.

The tables received by the school divide the responses to each question by age and by sex. A typical table is shown here. The question referred to is *How many hours did you spend doing homework yesterday?* and the answers are

		HOMEWORK							ROW TOTAL
		COUNT	PERCENT	UP TO 1 HOUR	UP TO 2 HOURS	UP TO 3 HOURS	UP TO 4 HOURS		
SEX		1.	11	25	12	0	1	49	
MALE			22.4	51.0	24.5	0.0	2.0	49.0	
		2.	6	31	9	5	0	51	
FEMALE			11.8	60.8	17.6	9.8	0.0	51.0	
COLUMN TOTAL			17	56	21	5	1	100	
TOTAL			17.0	56.0	21.0	5.0	1.0	100.0	

How data from the "Homework" question is presented to a school in the computer printout.

Table 1. How the data bank has amassed over four years. By the end of 1984, the total sample of pupils aged 11-16+ amounted to about 43,000.

Year	Year group						Total year groups	Total schools
	1st	2nd	3rd	4th	5th	6th		
1981	12	13	29	35	15	2	106	46
1982	14	10	24	31	15	4	98	49
1983	11	16	26	40	13	2	108	72
1984	15	15	30	39	14	3	116	66
Total	52	54	109	145	57	11	428	233

from the 4th-year group in the school. The upper row of rectangles or "cells" refers to the boys' answers, and the lower row to the girls. Within each cell, the upper figure is the number of pupils answering according to the heading (for example, 11 boys and 6 girls did no homework). These numbers are converted into a percentage of the total sample of boys and girls (22.4% and 11.8% respectively) in the lower figure. The right-hand figures of 49 and 51 indicate the number of pupils.

## The data bank

The results from a number of schools can be merged together and analysed in exactly the same way as for a single school. This issue seeks to show four ways in which the material within the data bank may be explored; more complex analyses are possible. It must be emphasised straight away that the identity of the schools whose raw data contributes to the bank is never revealed, and the individual questionnaires are completed anonymously.

There are, in fact, three data banks, corresponding to different editions of the Questionnaire. Version 7 was in use from the beginning of 1981 until late 1982. Version 8 was introduced at the beginning of 1982, and was phased out in the summer of 1984 by Version 10, the current Questionnaire. The Version 8 data bank, currently containing some 21,500 pupils altogether, is the one being used for this article. Table 1 shows the number of year groups, from the 1st to the 6th, and the number of schools,

which have used all versions of the Questionnaire during the years 1981-4.

The following pages feature four different analyses of the Version 8 data:

**National level - all year groups:** The responses by boys and girls to each question can be compared from one year group to the next. This is done on pages 32 and 33 for two alcohol-related questions.

**National level - one year group:** If a single year group is isolated, as the 4th-years have been on pages 34-37, it is possible to inter-relate different behaviours. Do "drinkers" do more or less homework than "non-drinkers", for example? Any two of the questions can be set against each other, and the results for boys and girls compared.

**School level:** In some parts of the UK there have been local initiatives, generated by an HEO or an LEA official, leading to a number of schools receiving financial support to run the Questionnaire. Analysing this local data bank produces fascinating similarities and differences between schools, as shown on pages 38-41.

**Regional level:** The data can be divided according to region, and then compared. On pages 42 and 43, the 4th-year groups in English Questionnaire schools in the North West, East Midlands, and the South West are tabulated side by side. However, in order to clarify the "regional" effect within the data, more information on the sample of schools within each region (urban/rural, school type, etc.) needs to be sought.

## 2. Alcohol-related behaviour: a national year-group picture

The Version 8 Questionnaire contains four main questions on alcohol-related behaviour:

*On how many days last week did you drink alcohol?*

*How much of the following alcoholic drinks did you drink last week? – (Shandy, beer/lager, cider, wine, fortified wine, spirits)*

*If you drank alcohol last week, where did you get it from? – (Supermarket, off-licence, pub, your home, friend's home, relation's home, disco/party)*

*How many times have you been in a pub or bar within the last two weeks?*

There is also a question which reveals money spent recently on alcoholic drink. Study of the results to these questions immediately raises further issues, which will become self-evident when they are discussed in staff-room or study; for example:

What do we mean by an alcoholic drink, since the term covers everything from shandy to scotch?

What levels of drinking are "acceptable", both in terms of quality and quantity?

What differences should we expect to find between sexes and years?

Two of the questions also involve aspects of legality.

### Frequency of drinking alcohol

Perhaps the most fundamental "alcohol" question is *On how many days last week did you drink alcohol?* It will reappear several times in the course of this article, and will henceforth be referred to by its abbreviation ALCFQ. Within the data bank, responses from over 18,000 pupils in the 1st to 5th years have been analysed, as shown in Table 2.

This table prompts the following comments:

1. Even at age 11, over half the boys and a third of the girls had an alcoholic drink on at least one day in the last week.
2. The percentage of "drinkers" increases from 56.5% to 71.8% for boys, and from 35.4% to 62.1% for girls, from 1st to 5th years in this cross-sectional sample.
3. In all age groups, the majority of "drinkers" had their drinks on only one or two days in the past week.
4. Overall, the frequency of drinking increases in the higher year groups. In Year 1, the average for the boys is 1.2 days per week, increasing to 1.9 days in Year 5; for girls the average frequency goes up from 0.6 of a day to 1.2 days.

### Sources of alcohol

Table 3 lists the percentage responses to the list of sources of alcohol, abbreviation WHERALC. Since many pupils declared more than one source of alcohol during the previous week, the total source percentages amount to more than the percentage who obtained alcohol at all during the week. Here are some comments on this table:

1. One's first reaction may be surprise at the wide range of sources used by young people right across the age groups. Of these, "Your home" consistently shows the largest percentage, but by the 5th year it is being very strongly challenged by the public house, regardless of the fact that young people of this age (15) are not permitted to consume alcohol on licenced premises!
2. Noticeable increases in the use of these sources by older age groups occur in

Table 2. Data-bank responses from 18,275 pupils in Years 1-5 to the question ALCFQ: "On how many days last week did you drink alcohol?" (Percentages.)

ALCFQ	Year 1		Year 2		Year 3		Year 4		Year 5	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
No days	43.5	64.6	34.3	54.6	31.2	46.2	24.6	36.1	28.2	37.9
1 day	26.7	20.3	29.8	28.6	29.4	29.7	27.9	30.1	20.9	28.9
2 days	13.6	8.7	18.8	9.8	20.1	14.4	20.8	18.7	22.5	18.7
3 days	7.6	2.8	6.7	3.6	8.9	5.8	12.8	7.4	12.1	6.2
4 days	3.5	1.1	4.1	1.4	4.7	2.0	6.0	3.4	6.3	4.7
5 days	1.8	0.7	2.5	0.8	1.9	0.8	2.5	1.9	4.3	1.7
6 days	1.2	1.0	1.0	0.2	0.8	0.2	2.0	0.9	1.6	0.6
7 days	2.0	0.8	2.7	1.1	2.8	0.9	3.5	1.5	4.1	1.2
Mean days per week	1.2	0.6	1.4	0.8	1.5	1.0	1.8	1.3	1.9	1.2
No. of pupils	1905		2221		4608		7380		2161	

Table 3. Data-bank responses from 18,229 pupils in Years 1-5 to the question WHERALC: "If you drank alcohol last week, where did you get it from?" The "All sources" row gives the percentage in each year group who drank alcohol at all. (Percentages.)

WHERALC	Year 1		Year 2		Year 3		Year 4		Year 5	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
All sources	56.5	35.4	65.7	45.4	68.8	53.8	75.4	63.9	71.8	62.1
Supermarket	8.9	4.8	9.5	5.2	8.0	5.3	7.9	4.1	7.1	3.5
Off-licence	8.7	2.4	8.9	5.1	12.4	6.8	19.0	10.7	21.0	8.8
Pub	8.1	2.2	6.6	6.0	10.7	6.8	18.9	16.0	31.6	25.6
Your home	27.3	16.9	32.5	22.2	36.7	29.2	38.0	30.9	34.7	28.2
Friend's home	5.4	4.2	8.0	4.7	9.8	7.5	14.1	12.1	16.0	11.2
Relation's home	6.4	3.9	8.0	4.6	8.2	7.1	8.5	6.5	6.5	5.2
Disco/party	8.4	6.8	8.5	8.4	11.1	12.6	14.4	17.0	17.3	18.0
Other	4.9	4.5	4.0	3.1	5.4	2.7	4.9	3.7	3.9	2.8
No. of pupils	1931		2214		4567		7380		2137	

all cases except for the supermarket, which is used slightly less frequently, and a relation's home (outings with parents?), which remains steady.

3. The use of the supermarket and off-licence for purchases must be expected to vary according to the community served by the school, and some districts will have neither.
4. The figures for "your home" begin at a substantial level, and do not rise relatively as much as some other sources. Clearly, the home back-ground

is critically important in forming attitudes to drinking.

5. It must again be emphasised that this information refers to sources and not to amounts. It does not follow that the home is the place where the *most* alcohol is consumed.

Having looked at these "national" tables, which represent only two out of the many sets of answers stored in the data bank, it is time to examine in more detail some 4th-year pupils' alcohol-related behaviour.

### 3. Some 4th-year alcohol-related behaviours

The table on page 33 gave a breakdown of ALCFQ responses from the different year groups within a sample of 18,275 pupils who have used the Version 8 Questionnaire. We shall now take the 4th-year group within this sample and study them in more detail, cross-tabulating ALCFQ with other behaviours to see what relationships, if any, there are between them. It will be noticed that the sample number in the tables changes slightly. This is because questions are sometimes passed over, or the response is not clear and cannot be coded; but nominally there are 7600 4th-year pupils (age 14-15 years) in this group.

Table 4 reproduces the ALCFQ information for these 4th-year pupils, already given in Table 2. It can be seen that three-quarters of the boys (75.4%) and almost two-thirds of the girls (63.9%) had drunk alcohol on at least one day during the past week, while 14.0% of the boys and 7.7% of the girls had at least one alcoholic drink on 4 or more days. The values for "7 days" are worth noting, since they reverse the previous trend of the table.

This table does not reveal anything about *amounts*, which are recorded elsewhere in the data. Other researches of the data bank have shown, however, that the boys tend to drink more heavily on average; for example, the mean weekly value for shandy consumption comes out at 0.54 of a pint for the 4th-year boys, and 0.30 of a pint for the 4th-year girls.

#### "Alcohol" and homework

Table 5 seeks to relate ALCFQ with the answers to the question coded HOMEWORK, which asks *How many hours did you spend doing homework yesterday?* (Note that "yesterday" is always a weekday, since the Questionnaire is not to be used on a Monday.) To simplify this table, the group recording from 4 to 7 days of drinking in the past week have been put together, as have those doing more than 2 hours of homework.

The "All pupils" column shows how the group as a whole responded to the HOMEWORK question. It indicates that 49.4% of the boys and 39.3% of the girls did no homework on the previous evening. Looking along the "None" row shows how the percentage of "No homework" pupils increases with increasing ALCFQ. Correspondingly, the percentage of "More than 2 hours" pupils decreases with increasing drinking frequency. The table therefore suggests that the more frequent drinkers are less likely to have done as much homework as those who have drunk seldom or not at all. This seems to be related to the fact shown in Table 7 that increasing drinking frequency involves more sources of alcohol outside the home - for example in the disco or pub. It should, however, be borne in mind that the table compares drinking frequency over one week with homework performance over one night.

SEX	ALCFQ								No. of pupils
	No days	1 day	2 days	3 days	4 days	5 days	6 days	7 days	
Boys	24.6	27.9	20.7	12.7	6.0	2.5	2.0	3.5	4142
Girls	36.1	30.1	18.7	7.4	3.4	1.9	0.9	1.5	3238

Table 4. Responses from 7380 4th-year pupils in the data bank to the question ALCFQ: "On how many days last week did you drink alcohol?" (Percentages.)

Table 5. A study of 7596 4th-year pupils in the data bank, showing the connection between the time spent on last night's homework (HOMEWORK) and the number of days on which alcohol was drunk last week (ALCFQ). (Percentages.)

HOMEWORK	ALCFQ											
	All pupils		No days		1 day		2 days		3 days		4+ days	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
None . . . . .	49.4	39.3	46.8	36.0	48.0	39.7	49.2	42.6	50.4	43.3	56.7	43.3
Up to 1 hour. . .	32.0	34.8	31.5	34.2	33.5	36.5	33.3	33.4	31.8	35.0	28.0	34.1
Up to 2 hours . .	13.8	17.8	14.7	20.7	14.2	15.2	13.3	18.1	14.7	15.0	11.4	15.1
More than 2 hours	4.7	8.1	7.0	9.1	4.3	8.6	4.1	5.8	3.2	6.6	3.8	7.5
No. of pupils . .	7596		2349		2168		1477		772		830	

Table 6. A study of 7166 4th-year pupils in the data bank, showing the connection between taking responsibility for self-medication (RESPILL) and the number of days on which alcohol was drunk last week (ALCFQ). (Percentages.)

RESPILL	ALCFQ											
	All pupils		No days		1 day		2 days		3 days		4+ days	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
You do . . . . .	44.7	49.2	36.2	39.9	41.9	48.8	49.1	59.5	47.3	59.6	56.6	62.7
Someone else does	55.3	50.8	63.8	60.1	58.1	51.2	50.9	40.5	52.7	40.4	43.4	37.3
No. of pupils . .	7166		2229		2024		1405		725		783	

#### "Alcohol" and decision-making

Table 6 considers the relationship between ALCFQ and the answers to question RESPILL: *When you take medicine or pills not prescribed by the doctor, who decides that you should take them?*

The "All pupils" values reveal that a slightly higher percentage of girls than boys (49.2% compared with 44.7%) generally made their own decision about self-medication. Both figures are a substantial percentage of the total.

What does this mean? Is this question asking only about approaches to medication, or does it probe other decision-making attitudes? Our experience suggests that responses to this question show a high correlation with others about independence and self-esteem.

The table shows a very clear positive relationship between drinking frequency and personal decision over the use of non-prescribed medicines. The "You do" values rise from 36.2% and 39.9% for

"non-drinking" boys and girls to 56.6% and 62.7% for boys and girls in the "4+ days" group. If the data for the "7-day drinkers" is examined, it is found that 61.0% of boys and 67.4% of girls say that they take their own decisions about medication. The extremely consistent nature of this relationship is remarkable, and surely emphasises the relevance of including decision-making skills within an alcohol education programme.

#### "Alcohol" and sources of alcoholic drink

In Table 7, answers to ALCFQ are set against answers to the question *If you drank alcohol last week, where did you get it from?* The respondent then makes a selection from the listed sources. The percentages in the columns may well total more than 100%, reflecting the fact that more than one source was used.

The table reflects the analysis presented in Table 3. The "All pupils"

Table 7. A study of 7380 4th-year pupils in the data bank, showing the connection between the sources of alcohol used (WHERALC) and the number of days on which alcohol was drunk last week (ALCFQ). (Percentages.)

WHERALC	All pupils		ALCFQ									
	Boys Girls		No days		1 day		2 days		3 days		4+ days	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Supermarket . .	7.9	4.1	0.0	0.0	8.5	5.4	9.4	8.7	11.5	3.3	13.7	7.7
Off-licence . . .	19.0	10.7	0.0	0.0	19.0	11.5	24.7	19.9	30.9	23.3	31.7	22.2
Pub . . . . .	18.9	16.0	0.0	0.0	15.9	16.8	25.6	25.1	29.9	41.2	36.5	41.1
Your home . . .	38.0	30.9	0.0	0.0	40.3	41.4	53.8	51.6	55.0	58.8	56.9	53.0
Friend's home . .	14.1	12.1	0.0	0.0	12.7	15.1	17.4	17.7	24.2	28.0	25.8	27.7
Relation's home	8.5	6.5	0.0	0.0	9.1	8.7	9.6	9.2	11.9	12.6	15.9	13.8
Disco/party . . .	14.4	17.0	0.0	0.0	12.1	19.9	18.2	28.5	21.6	35.8	30.3	36.9
Other . . . . .	4.9	3.7	0.0	0.0	6.8	4.9	3.7	5.0	5.7	8.8	9.9	7.7
No. of pupils . .	7380		2189		2130		1467		769		825	

column indicates that 38.0% of boys and 30.9% of girls named the home as one source, while the pub was named by 18.9% of boys and 16.0% of girls.

All the named sources show a noticeable increase in degree of use, with the exception of "Other" and the use of supermarkets by girls. This reflects a greater variety of sources being used by the more frequent drinkers. If each "consumer" had only one source, then the percentages in each column would total 100%. The "1 day" columns for boys and girls both total 124%, reflecting a very limited average range of sources, while for the "4+ days" drinkers the totals are 221% and 210% for boys and

girls respectively, which means that the average number of sources was two.

Some noteworthy increases in degree of use occur for the pub, friend's home, and disco, and for off-licences up to the "3 days" mark. "Your home" does not increase noticeably in degree of use after "2 days". Does this imply that the more frequent drinkers are seeking a change of scene and company, as well as alcohol? The boys show a large increase in the use of discos or parties as a source of alcohol between the "3 days" and "4+ days" levels, whereas the girls have made the largest jump between the "1 day" and "2 days" levels.

It is easy to see how this table, with

CIGHABIT	All pupils		ALCFQ									
	Boys Girls		No days		1 day		2 days		3 days		4+ days	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Never started . .	58.2	53.1	72.4	66.2	60.4	51.6	54.0	44.4	49.9	38.3	41.0	37.2
Given up . . . . .	20.9	22.5	16.5	20.2	20.5	24.1	22.3	25.7	23.1	19.2	25.7	30.9
Like to stop . . .	12.8	16.4	8.0	10.1	11.9	17.6	15.1	18.6	17.8	25.8	15.5	38.2
Don't want to stop	8.1	7.9	3.1	3.5	7.1	6.7	8.6	10.9	9.3	16.7	17.8	25.1
"Smokers" . . . .	20.9	24.3	11.1	13.6	19.0	24.3	23.7	29.6	27.0	42.5	33.3	63.4
No. of pupils . .	7516		2341		2171		1471		769		764	

Table 8. A study of 7516 4th-year pupils in the data bank, showing the connection between smoking behaviour (CIGHABIT) and the number of days on which alcohol was drunk last week (ALCFQ). (Percentages.)

its wealth of detail, could generate discussion amongst researchers, teachers, and the young people themselves.

### Drinking and smoking

The final "4th-year" analysis in this section looks at the relationship between ALCFQ and the type of smoker the respondent claims to be. This question, CIGHABIT, asks *Which of the following most nearly describes you?* and offers the following answers:

I have never taken up smoking

I have given up smoking

I smoke and would like to give it up

I do not want to give up smoking

In Table 8, the percentage of answers to each of these are set out, broken down by the ALCFQ categories. The "All pupils" column gives the percentage values for the whole group. This shows that 58.2% of the boys and 53.1% of the girls have "never started" smoking, and that 20.9% and 22.5% respectively have "given up". The other two responses represent the current smokers, and their values are combined in the "Smokers" row at the bottom of the table. Looking in the "All pupils" column reveals that 20.9% of the boys and 24.3% of the girls in this sample see themselves as smokers.

Clearly there is a very positive connection between drinking frequency and smoking habit. Of the "non-drinking" boys and girls, 11.1% and 13.6% respectively are smokers, compared with 33.3% and 63.3% for the "4+ days" group. These values change fairly regularly from one category to the next, but it is worth drawing attention to the far higher percentage of girls than boys in the "4+ days" group who would like to stop smoking.

The "Given up" group are of special interest. We have no information on the level of smoking before giving up, but the fact remains that a decision was made. If smoking goes with drinking, it might be expected that drinking frequency would also fall. The table shows instead that the more frequent drinkers contain a greater percentage of those who have given up smoking than do the abstainers or infre-

quent drinkers. Clearly the motivation to abandon smoking is not reflected in decisions about drinking frequency.

## FUTURE ISSUES

Among the articles planned for future issues of *Education and Health* are the following:

Sheila Vinson: How a "Hearty Eating" campaign was launched in a Stockport school, after a group of 4th-year students carried out a study of eating habits within the school. A "traffic-light" system of labelling canteen foods was proposed. The report concluded that "the school meals service in Stockport, and indeed in the whole country, needs to make a major review of the meals offered in schools".

Jean Roberts: A summary of the results of three surveys which investigated the views of teachers, lecturers in education institutions, and student teachers on health education. These surveys were part of the preliminary work in the "Health Education in Initial Teacher Education" project.

Cyril Simmons: "Life at 15". The writer administered a questionnaire enquiry into what young people think, feel, and believe about important aspects of their lives, to 820 15-year-olds in six schools (four comprehensive, one grammar, and one public school). "A number of basic joys and concerns surfaced."

A report on glue-sniffing, soon to be published by a Health Authority in southern England, may also be included in a future issue, together with a review of *Solvent Abuse*, a training pack for professional and voluntary workers, developed by the Leeds Health Education Service in conjunction with the HEC. Also, with the expected introduction into the market of equipment that will link with school micros and permit physiological measurements to be displayed and stored, we hope to initiate a discussion of the implication for schools, teachers, and pupils.

## 4. Alcohol-related behaviour in 10 regional schools

As mentioned on page 31, there have been some local studies in which a group of schools have used the Questionnaire more or less simultaneously. One of these initiatives took place in Nottingham in May 1983, under the supervision of the District Health Education Officer, Ian McCafferty. Ten comprehensive schools each gave the Questionnaire to about a hundred pupils in their 4th year. The responses were then tabulated side by side, and presented at a session at which all the school co-ordinators were present. Some of the "alcohol" tables are reproduced here.

Before the session began, co-ordinators were asked if they wished their school to remain anonymous. All agreed that this would be pointless, since knowledge of each school would add an important dimension. It was encouraging to note how "excessive" behaviours in certain school communities were endorsed by nods and comments from those to whom such revelations came as no surprise!

### Frequency of consumption

In Table 9, the percentages for ALCFQ are set out for ten schools, A to J. Before studying the individual results from the 458 boys and 469 girls in these schools, it will be worth relating the "All pupils" row in this table to the "Year 4" column in Table 2, page 33, where the national sample is shown. These Nottingham pupils are included in the national sample. It will be seen that 30.4% of the Nottingham boys, compared with the overall value of 24.6%, drank no alcohol during the previous week; the Nottingham girls' value of 39.7% compares with the overall value of 36.1%. The other values for "All pupils" also reflect this slightly lower Nottingham percentage of drinkers, and also reveal that the boys include a greater percentage of rather frequent drinkers than do the girls. The slight excess of girls in the "1 day" category is in fact further evidence that they drink less frequently than do the boys.

SCHOOL	ALCFQ											
	No days		1 day		2 days		3 days		4+ days		Mean days last week	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
A . . . . .	40	37	12	29	17	26	14	5	17	3	1.8	1.1
B . . . . .	31	48	18	30	26	11	6	3	18	8	1.8	1.0
C . . . . .	20	34	30	26	18	23	18	6	14	1	1.9	1.4
D . . . . .	32	56	28	20	19	16	6	4	15	4	1.5	0.8
E . . . . .	12	48	35	21	31	21	10	6	10	4	1.9	1.0
F . . . . .	20	20	22	29	32	24	12	8	14	8	1.9	2.0
G . . . . .	52	29	21	27	15	22	4	11	6	11	1.0	1.5
H . . . . .	30	30	30	30	21	22	6	8	12	11	1.6	1.5
I . . . . .	34	55	29	24	12	5	12	8	12	8	1.5	1.0
J . . . . .	34	40	22	27	9	27	22	4	12	2	1.6	1.0
All pupils . . . . .	30.4	39.7	24.9	26.2	20.4	19.7	10.9	5.3	13.2	8.1	1.7	

Table 9. Responses from 927 4th-year pupils in 10 Nottingham schools to the question ALCFQ: "On how many days last week did you drink alcohol?" (Percentages.)

Table 10. Responses from 927 4th-year pupils in 10 Nottingham schools to the question WHERALC: "If you drank alcohol last week, where did you get it from?" (Percentages.)

SCHOOL	WHERALC											
	Super-market		Off-licence		Pub		Your home		Other's home		Disco or party	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
A . . . . .	9	4	26	13	15	18	35	27	17	9	6	6
B . . . . .	8	3	20	5	12	14	36	30	28	10	8	6
C . . . . .	0	2	33	17	22	15	37	30	24	24	14	4
D . . . . .	11	2	2	2	17	11	28	22	20	6	4	3
E . . . . .	4	10	19	10	17	15	62	21	19	12	15	17
F . . . . .	10	8	28	4	32	19	40	49	20	33	14	17
G . . . . .	4	4	12	15	12	19	23	17	10	10	6	17
H . . . . .	6	3	6	8	24	16	33	46	18	8	9	
I . . . . .	0	2	23	5	5	18	29	18	20	18	11	8
J . . . . .	6	4	3	2	22	19	50	25	31	17	19	29
All pupils . . . . .	5.7	4.5	18.3	8.1	17.5	16.2	37.0	28.3	20.5	14.7	10.5	14.9

Looking at the values for individual schools, however, shows how much is concealed when the results for a number of schools are averaged. The boy "non-drinkers" range from 52% in School G to only 12% in School E, and for girls from 56% in School D down to 20% in School F. In defiance of the "means", we find that the girls in School G are on average drinking much more frequently than are the boys! In School J, totalling two columns shows that 34% of boys but only 6% of girls drank on three or more days in the past week, while in Schools F and H a similar percentage of boys and girls drank on at least one day, with a very similar pattern of drinking frequency for both sexes in School H. Exploring these similarities and differences with staff can prove most rewarding, and the frequent fulfilment of expectations through the tables projected on the screen was one kind of validation of the questionnaire method (see page 43).

### Sources of alcohol

Table 10 reveals the percentage of pupils using these different sources of alcohol, and the figures are for all 4th-year pupils, not just the "drinkers". The "All pupils" mean values may be compared with those

in Table 3, page 33. The choice "Other sources" has not been listed, but amounted to only a very few percent.

Again, there is a feast of information for different groups concerned with health education. Only the more obvious points will be referred to here.

**Supermarkets** Usage of this source varies considerably. The most obvious supposition might be that this variation reflects the convenient presence of a supermarket in the community served by a school. However, this does not readily explain why 11% of boys but only 2% of girls in School D, and 10% of girls but only 4% of boys in School E, recorded using one.

**Off-licences** There is a very large range of usage: for boys, from 2% to 33%; for girls, from 2% to 17%. School C records the heaviest usage by both sexes, and School D the lightest. Again, there can be rather large variations in the relative usage by boys and girls. In School F, seven times the percentage of boys as girls used an off-licence in the previous week, but a slightly greater percentage of girls than boys did so in School G.

**The pub** This column is always eagerly examined! The pub can be used both for the purchase and consumption of alcoholic drink, which sets it apart from the

supermarket and off-licence on the one hand, and the home on the other.

The mean values show that almost as great a percentage of girls as boys use the pub, and in only four schools is this not so – to a rather extreme degree in the case of School I, with 5% of boys and 18% of girls declaring the pub as a source of alcohol. This raises the conundrum: if at least one pub is accessible, why don't the boys use it? It is well known that girls habitually go out with older boys, and "look older" than boys of their own age, but this does not readily explain why this school should be so different from the others in the behaviour of its boys and girls. It is worth noting that the manager of the off-licence used by this community seems to have no objection to boys! Reference to Table 9 shows that the 4th-year pupils in this school drink less frequently than the average for the group; in fact, only 45% of the girls drank at all. Two-fifths of all the "drinking" girls in this school visited the pub at least once during the week, compared with fewer than one-tenth of the "drinking" boys.

**Your home** This could be considered the most interesting column of all, since it relates directly to home circumstances. Table 3 has already shown that the home is the most frequently-quoted source of alcohol for all the year groups studied. These Nottingham figures of 37.0% for boys and 28.3% for girls are near the data-bank average of 38.0% and 30.9% respectively. This level of drinking at home is always of interest, and, to some, quite surprising. Parents viewing these figures often defend the practice by pointing out that the introduction of alcoholic drinks at home in a controlled manner is the best way of promoting sensible attitudes. Study of these figures with the class they represent could be a most valuable exercise.

**Other's home** This column embraces the two categories of "Relation's home" and "Friend's home", and shows some noticeable differences between the years and between the sexes. In School F, the percentage of girls selecting "Your home"

and "Other's home" exceeds that of the boys. Part of this figure may derive from family visits to relatives, although the "relatives" category could also include people of their own age.

**Disco or party** The percentage of boys and girls using these as a source of alcohol is a little lower than the data-bank average of 14.4% and 17.0% respectively, but the greater use made by girls is still apparent, although Schools C and I present a reversed picture. It is important to recognise that the categories of answer to the question WHERALC refer only to the *previous week*, and it is possible that the pattern of visits to discos and parties is not the same as that of visits to pubs, or home drinking. A separate question on visits to discos or dances gives the following results for 7380 4th-year pupils in the data bank:

	% within last week	% within last month
BOYS	18.8	46.5
GIRLS	29.2	64.1

Comparing the "% within last week" values with the ones given in the "Disco or party" column in Table 10 shows that a very considerable proportion of those going to a disco or party in the previous week had an alcoholic drink there – some 75% of the boys and some 60% of the girls, if we assume that the Nottingham pupils conform to "data-bank" type. However, the number of 4th-year pupils seeing drinking alcohol as the *main* reason for going to a disco or party is small; our total sample finds only 7% of boys and 2% of girls in this category.

### Other potential for single-region studies

To organise a Questionnaire study in a region requires the active participation of a local official able and willing to encourage schools to take part, and preferably able to support the venture financially. Although the charge for processing the completed scripts (£5 per year group, regardless of the number of pupils) is a nominal one – some 90% of the cost being borne by the HEC –

producing a hundred Questionnaires can make inroads into paper and printing provision. Financial support can range from paying the processing charge to supplying the Questionnaires ready printed. More important, however, is the willingness to involve a group of schools (which means, initially, their health education co-ordinators) in a co-operative venture. Some initiatives have occurred as a result of training sessions for implementing the Schools Health Education Project (13-18) materials. Others have been promoted by District Health Education Officers and by LEA Advisers. An

example of a co-operative exercise of this type was described in *Education and Health*, March 1983.

Seeing one's own school profile and comparing it with expectations is a valuable experience in itself. Comparing it with the profiles of other school populations averaged in the data-bank adds an extra dimension; but to compare it with the profiles of other known schools, and to discuss the significance of each set of responses with staff members from these schools, is the most helpful and informative exercise of all.

56. If you have had any alcoholic drink since this last week, on how many days did you do so?

57. Since this time last week, how much of the following have you drunk? (Assume that one small can = half a pint.)

Shandy	..... pints	S		
Beer (including lager)	..... pints	B		
Cider	..... pints	C		
Wine	..... glasses	W		
Martini, Cinzano, vermouth, port, sherry	..... glasses	V		
Spirits (gin, whisky, vodka, brandy, Pernod, rum, Bacardi, etc.)	..... measures	S		
		BZ		

58. If you drank alcohol since this time last week, where did you get it from? (Please circle an answer on each line.)

	Yes	No
Supermarket	1	0
Off-licence	1	0
The pub (or bar)	1	0
Your home	1	0
Friend's home	1	0
Relation's home	1	0
Disco or party	1	0
Somewhere else (Please state where)	1	0

59a. Please say how many times you have visited a pub or bar within the last 2 weeks (even if you didn't drink anything) ..... times

59b. When you last went to a pub or bar, how did you go?

I have never been in a pub	0
Alone	1
With	2
With	3

Circ

The bank of "alcohol" questions in the current Version 10 Questionnaire.

## 5. Examining differences between regions

It is possible to group the schools in the data bank in many different ways – by LEA and by Health Authority seem, perhaps, the most obvious to the Unit, as these are the two authorities we serve the most. We can also create geographical regions in response to demand. In this section, we have selected schools in the “North West” (Cheshire and Wigan), the “East Midlands” (Northamptonshire and Nottinghamshire), and the “South West” (Avon, Cornwall, Devon, Gloucestershire, and Somerset).

Tables 11 and 12 present data from 3686 4th-year pupils, from 24 schools in the East Midlands, 12 schools in the South West, and 4 schools in the North West, together with the whole group of

7380 pupils in the data bank, of which these selected pupils form a part. For a reliable regional picture the sample under review must (a) be large enough and (b) be representative of the variation of the communities served by the schools using the survey method. Hence, both these points should be borne in mind when examining the data-bank regional summaries, before definite conclusions are drawn. As the data bank grows, and regions are more fully represented, so the reliability of the summaries will increase.

Both the East Midlands and South West samples are large, although the second is only half as large as the first, and the suggestion from the data in Table 11 is that there are appreciably more

REGION	ALCFQ						No. of pupils	
	No days		2 days		4+ days			Mean days last week
	Boys	Girls	Boys	Girls	Boys	Girls		
East Midlands . . .	1.7	1.3					2207	
South West . . .	1.9	1.2					971	
North West . . .	1.2	0.9					508	
DATA BANK . . .	1.8	1.3					7380	

Table 11. Responses from 3686 4th-year pupils in 40 schools in three UK regions to the question ALCFQ: “On how many days last week did you drink alcohol?” (Percentages.)

REGION	WHERALC										No. of pupils		
	Super-market		Off-licence		Pub		Your home		Other's home			Disco or party	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls		Boys	Girls
East Midlands . . .	5.9	4.4	17.4	8.6	20.3	18.4	38.0	30.0	21.9	18.6	12.5	18.2	2207
South West . . .	10.7	3.3	10.7	6.8	24.5	18.0	38.7	36.4	26.7	19.9	19.2	18.9	971
North West . . .	4.6	2.6	21.2	14.2	8.4	7.5	21.4	24.3	16.7	13.0	8.8	12.3	508
DATA BANK . . .	7.9	4.1	19.0	10.7	18.9	16.0	38.0	30.9	22.6	18.6	14.4	17.0	7380

Table 12. Responses from 3686 4th-year pupils in 40 schools in three UK regions to the question WHERALC: “If you drank alcohol last week, where did you get it from?” (Percentages.)

South West “drinkers” than East Midland “drinkers”. The small sample of North West 4-year pupils suggests a markedly lower percentage of “drinkers” in this region.

The wide variation of drinking behaviours amongst 14-year-old boys and girls in different communities, demonstrated in Part 4 of this report, should be taken into consideration here, and the “lower” drinking frequency in the North West

region in particular must be a suspect outcome of small sample size, pending the arrival of more data from that region. Similar precautions apply to the interpretation of the data in Table 12, which shows the range of sources of alcohol used.

The information from these samples is new, and further data-gathering in these and other regions will help clarify these suggested variations.

## 6. Notes on the Questionnaire

### Confidentiality

The main strength of the Questionnaire as an aid to schools in deriving reliable information is its confidentiality. Staff do not look at the scripts – a part of the vital introductory procedure is that they undertake not to. No name appears on any sheet, and it is made clear that all processing is done outside the school and that the scripts are destroyed after being processed.

It is also necessary to make clear to the pupils just how important it is to answer the questions honestly; that the point of the exercise is to make the curriculum more interesting and relevant through more informed planning; and that it will not be used to give aid to those “do-gooders” who would like to suppress excessive behaviours of whatever kind!

The fact that much of the information waiting to be gathered is extremely newsworthy can work both ways. Interest in the results is likely to be high, and the health education co-ordinator will have little difficulty in bringing some of the tables to the attention of colleagues. However, if the use of the local off-licence or pub becomes “news” outside the school, the staff could feel pressure not only from parents and residents, but also from the pupils – having been assured that their answers are confidential, they may now find that they are being used against them. To the best of our knowledge, this

has never happened; but the sensitivity of the data needs to be recognised, and to breach this “contract” publicly could well make the respondents reluctant to be so open again in any future questionnaire survey of whatever kind.

### Validity

One of the first questions asked by teachers, researchers, or the interested public studying Questionnaire results is *How do you know that they are answering truthfully?*

Since there is no simple answer to this question, it will be necessary to look a little closer at what constitutes “truth” in the context of the demands made by the Questionnaire on the respondent.

*Is the question clear?* The respondent may fail to understand the question, and either give no answer at all, or give one that expresses frustration. Such a response is usually obvious! More serious is *misunderstanding* the question, and giving a well-intentioned but misleading answer. Much time has gone into achieving the best phrasing and presentation of questions, to make them clear for pupils in the 11 to 16+ age range.

*Is an appropriate answer possible?* The most straightforward way of ensuring this is to allow a “free answer” to be written in. However, if the object of the exercise is to produce tables of grouped responses, these free answers must then



be sorted into categories. This is done with questions such as *What time did you get up this morning?* The respondent writes in the time, and the computer groups all the times into 30-minute blocks. Some information is, therefore, lost, since any time between, for example, 7.01 and 7.30 will be printed as "By 7.30".

Some questions offer answers already grouped into blocks, and this tactic can be helpful. In *How many hours did you spend doing homework yesterday?* it would probably be impossible to give a time to the nearest minute, and daunting even to try. By offering the answers "None", "Up to 1 hour", "Up to 2 hours", etc., the task is simplified. However, it may be argued that 1-hour periods are too long, and that ½-hour periods would be better.

Even more problematical are those questions which relate to habit; for example, *Do you wash your hands after visiting the lavatory?* A free-response answer would provide some interesting material, but might not be easy to code! Since coding is expensive, a minimum of decision-making at this stage provides for a more efficient (and consistent) service. Therefore, only the answers "Never", "Sometimes", and "Whenever possible" appear.

*Is the answer likely to be known?* Some questions require information of a factual kind, which the child may have forgotten. An example is the enquiry into inoculations received – many adults, as well as young people, are vague or ignorant on this topic. This does not necessarily invalidate the question, since this vagueness may be illuminating – but it turns it into a different kind of question.

*Is the respondent sincere?* Assuming that the question is so well written that its purpose is obvious, and that it is possible for the respondent to give a satisfactory answer, the validity of the response still depends upon the sincerity of the individual.

To examine the importance of this effect, Questionnaire studies have been run in selected schools in the normal way,

followed by interviews conducted by experienced interviewers independent of the Unit, and by Unit members. Some 40 individuals have been involved in this work, checking the comprehension of the questions and the validity of the answers. These studies have revealed a negligible degree of questionnaire "abuse".

Internal consistency between the answers to questions that are not necessarily close together in the Questionnaire has also been studied. For example, the questions on smoking habits and on spending money on different items (one being cigarettes) are consistent with and predictive of the answers to each other.

Although it is, perhaps, dangerous to find security in the fact that a table "looks right", it is nevertheless true that we do not find significant numbers of young people claiming, for example, to have drunk unlikely amounts of alcohol, or to have smoked an extraordinary number of cigarettes.

All these points, taken together, reinforce the view that if the enquiry instrument is administered properly, the overwhelming number of Questionnaire responses will be valid.

## Version 10

In June 1984, the Version 8 Questionnaire was replaced by the updated Version 10. This contains some extra questions (the number has increased from 52 to 66), while several of the established ones have been re-worded to improve their efficiency.

As an example of this change, the single Version 8 question on television watching has been replaced by three questions. The original one asked

*For how long did you watch television after school/college yesterday?*

This enquiry has been extended into the areas of video recordings and computer games:

*For how long did you watch television programmes (live or home-recorded) after school yesterday?*

*For how long did you watch video films (bought or borrowed) after school yesterday?*

*How long did you spend playing computer games after school yesterday?*

The need for this extended dimension has become clear in the course of reviewing the tables with teachers and researchers. Another example of an extended question is one on money received, which now subdivides the amount into pocket money or allowance, money earned from a regular job, and money received as a gift.

Some alterations are more in the nature of "fine-tuning". In the Version 8 Questionnaire, a question about the interval since the last visit to a doctor permitted answers ranging from "More than a year ago" down to "Within the last week", while the range for the last visit to a dentist was from "More than 2 years ago" to "Within the last 3 months". The distribution of responses made it clear that the 3-month interval could usefully be sub-divided, and the "dentist" scale has been changed to agree with that used for visits to the doctor.

The section on diet has been thoroughly revised. Version 8 asked the pupils to write in everything they could remember eating and drinking on the previous day.

Suspecting that items were being omitted, it was decided to create a checklist of dietary items to prompt memory.

Lunchtime diet is of particular interest to the school, and we have added a separate question on this meal, as well as a question about the kind of breakfast eaten that morning (see illustration.) Theories about "breakfast eaters" and "non-breakfast eaters" can arouse passionate debate!

The most noticeable addition is a bank of 10 questions on self-esteem. An example of these is *Are there lots of things about yourself you would like to change?* The question is coded 2 for "No", 1 for "Don't know", and 0 for "Yes"; 2 points represents the highest self-esteem, which is rated over the 10 questions by the "score" out of 20. Tabulations of "self-esteem" by other behaviours, type of school, catchment area, and even region, will introduce an intriguing new dimension into the work.

This development and refinement of the enquiry instrument, the maintenance of the service to schools, and perhaps the introduction of new, specialised questionnaires, is a major part of the Unit's work. We believe that the future holds exciting prospects for the use of the Questionnaire in curriculum planning and health-related behaviour research.

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Please do NOT write in the boxes

40. What sort of breakfast did you have this morning?  
(Please circle the closest answer.)

Nothing at all .....	0	
Just something to drink .....	1	
Cereal or bread/toast + drink .....	2	Circle ONE number only
Cereal and bread/toast + drink .....	3	
Just an egg + drink .....	4	
Cooked breakfast with cereal or bread/toast + drink .....	5	
Cooked breakfast with cereal and bread/toast + drink .....	6	

41a. Have you ever tried to lose weight or to avoid putting on weight?  
Yes .... 1 Circle ONE number only  
No .... 0

41b. If so, please describe what you did.  
.....  D