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Do you use dihydrate?

[e.g. diehards, dynamite, dino dust]

Even if you've never heard of it, you might say you have used it — just to impress.

A problem with all questionnaire surveys is: *How do you know if they are telling the truth?* Our annual *Young People* reports always include a substantial section on validity, and discuss possible sources of error in the respondents' replies (which could include 'showing



procedures — like the famous 'bogus pipeline', in which the experimenters declared they had an infallible attitude-detector, so that false answers would be immediately detected! These 'dishonest' procedures raise all sorts of difficulties, ethical and interpretative, but may be justified in terms of the search for scientific understanding.

Since we are always concerned about the reliability of our data, particularly where sensitive or legal issues are involved, we were recently persuaded to make a temporary alteration to the drugs section of the Health Related Behaviour Questionnaire and include a dummy drug called 'dihydrate' (Figure 1). This was done for one particular group survey, involving 20 secondary schools, to see if we could detect over-reporting about real drugs. The logic was that anyone claiming to have used this drug might well be making false claims about the use of other drugs too.

Choosing the name

We had some deliberation about the choice of name. Certainly 'dihydrate' is a common enough chemical term, so respondents may well think that they have at least heard of it. Also, there are substances with 'dihydrate' in their formal chemical names that can be used as drugs. However, these are not common, and it was thought that although 'dihydrate' may have disadvantages, no name would be perfect. As far as we knew, our street names for 'dihydrate' did not apply to any other drug.

D13 What do you know about these drugs?

This list gives their real names and some street names.

Please choose the nearest answer

0 = I have never heard of them

1 = I have heard of them but I don't know anything about them

2 = I think they are safe if used properly

3 = I think they are always unsafe

- | | | | | | |
|---|--|---|---|---|---|
| A | Amphetamines (e.g., speed, sulphates, sulph, whizz, uppers) | 0 | 1 | 2 | 3 |
| B | Barbiturates (e.g., downers, barbies, sleepers) | 0 | 1 | 2 | 3 |
| C | Cannabis [leaf and/or oil] (e.g., hash, grass, pot, dope, marijuana) | 0 | 1 | 2 | 3 |
| D | Dihydrate (e.g. diehards, dynamite, dino dust) | 0 | 1 | 2 | 3 |
| E | Ecstasy (e.g. MDMA, XTC, E, Doves) | 0 | 1 | 2 | 3 |
| F | Cocaine (e.g., snow, coke) | 0 | 1 | 2 | 3 |
| G | Crack (e.g., rock) | 0 | 1 | 2 | 3 |
| H | Hallucinogens: natural (e.g., magic mushrooms) | 0 | 1 | 2 | 3 |
| I | Hallucinogens: synthetic (e.g., acid, angel dust, LSD) | 0 | 1 | 2 | 3 |
| J | Heroin (e.g., H, junk, skag, smack, brown) | 0 | 1 | 2 | 3 |
| K | Solvents used as drugs (e.g., glue, gas refills, cleansing fluid) | 0 | 1 | 2 | 3 |
| L | Tranquillisers (e.g., Librium, Valium, Temazepam, Prozac) | 0 | 1 | 2 | 3 |
| M | Poppers (e.g. Liquid Gold, Flush, TNT) | 0 | 1 | 2 | 3 |
| N | Other illegal drugs (Please name)..... | 0 | 1 | 2 | 3 |

Never heard of them
Know nothing about them
Safe if used properly
Always unsafe

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Fig. 1. The drugs checklist as it appeared in the experimental question. It includes the dummy drug 'dihydrate'.

off' or 'sending up'), as well as ways of detecting them. One checking method that we have never tried before is described here. It asks the pupils to respond to a drug that does not exist.

There are several research techniques that set out to deceive the subject. They may involve disguising or falsely describing the purpose of an experiment, or making false claims about

Drug D: Dihydrate

Please note

The item 'dihydrate' in the list of illegal drugs is included as a decoy. There is no drug, so far as we know, called simply 'dihydrate', or one that is known by any of the fictitious slang names we supplied.

Rationale

If we found high numbers of respondents indicating that they had heard of, been offered or had taken the drug, this would indicate some problem with the validity of the answers to these questions - perhaps suggesting that the levels of positive responses to the other drugs listed were over-estimates. The importance of carrying out this minor deception is high, because it helps our understanding of the question. We also feel that disclosing this deception is important. We do not wish to disturb the relationship between researchers, schools and their pupils. Moreover, we do not wish to create a demand for information about this drug.

Fig. 2. The statement sent to schools that used the experimental question in their survey.

A totally new name may sound so different as to sound odd, and there would still be no guarantee that it would not sound like a name of which some young people have heard. (One we saw recently was not only the trade name of a herbicide, but also a Greek word used throughout the Bible.)

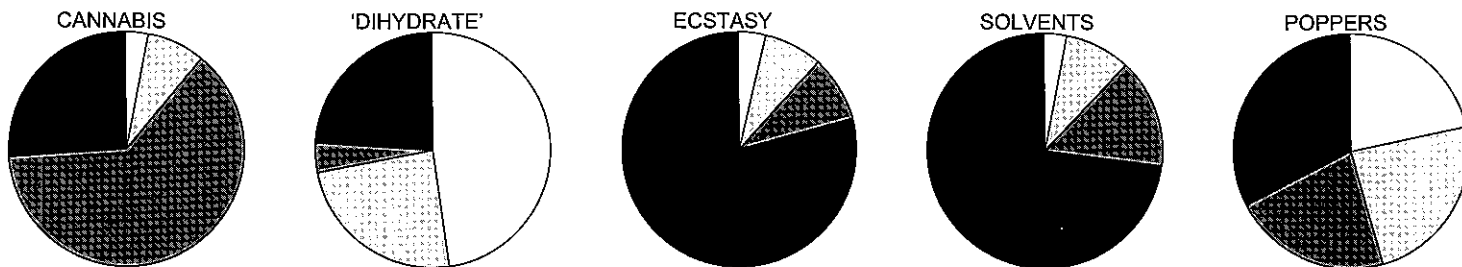
The decoy drug and the survey schools

In addition to the guidance sent to all schools taking part in a questionnaire survey, the participating schools received the statement reproduced in the box (Figure 2).

About 2500 pupils in the 20 schools were involved in this particular survey, and the staff of all the schools were asked if they had any comments, or wished to object to the exercise. Half of them responded. These responses were approving, affirming their confidence in the Health Related Behaviour survey as a whole and the inclusion of 'dihydrate' in particular.

Fig. 3. The way Year 10 boys and girls (combined) assessed four real drugs and the dummy drug 'dihydrate'.

- Never heard of it
- Know nothing about it
- Safe if used properly
- Always unsafe



Drugs are different

For one school it emphasised the need to distinguish between individual drugs. The member of staff felt that the pupils responding that dihydrate was 'always unsafe' might feel that that all drugs were automatically unsafe, whether or not they had heard of them. They would now adapt their drugs programme accordingly. We were interested to hear of a course that attempted to differentiate between the safety of different drugs.

Information is preparation

Staff were unanimous that it was fair to include the decoy drug. There were no disapproving comments. As one colleague wrote: *We feel confident our pupils will not be misled by this inclusion and will understand the reasons for including it.* Another teacher wrote: *The pupils answered honestly and they are informed as to what is on the market. The better informed they are, the more prepared they are.*

The invitation to respond to the inclusion of 'dihydrate' came very soon after the schools had received their data, and so the pupils' responses to the results were not yet available. It is hoped that when they are put in the picture with respect to 'dihydrate' their reaction will be as positive as to that of their teachers.

The results

We look first at what the respondents think they know about 'dihydrate'. The pie charts (Figure 3) show the responses for cannabis, 'dihydrate', ecstasy, solvents and poppers, averaged for the Year 10 boys and girls (whose results were in most cases very similar).

It is seen that about half the pupils record that they have never heard of 'dihydrate' (white), and a quarter know nothing about it (light grey). The inference is that the 'light greys' believe that they have heard of it. Most of the 30% or so who venture an opinion about it believe that it is

Drug	Offered		Tried		Taken regularly	
	B	G	B	G	B	G
C Cannabis	42	42	25	25	10	8
D Dihydrate	1	1	0	0	0	0
E Ecstasy	6	9	2	1	0	0
K Solvents	4	7	2	4	0	0
M Poppers	11	10	7	7	1	1

Table 1. Year 10 boys' and girls' experience of several drugs, including the dummy drug 'dihydrate'. (Percentage values)

In general, the exercise reassured us that pupils will do their best to be accurate if the atmosphere is supportive.

'always unsafe' (black). However if a young person believes that all drugs are bad and responds accordingly, the categories 'never heard of it' and 'always unsafe' cease to be mutually exclusive. A teacher's comment on this appears above.

The proportion that have never heard of 'dihydrate', or know nothing about it, is clearly much greater than for any of the other drugs shown here, and indeed for all the others in the list.

Table 1 (experience of drugs) shows the percentage responses for the Year 10 pupils that took part in the 'dihydrate' experiment, together with the responses for the other listed drugs shown in the pie charts.

The very small proportion that claim to have been offered or encouraged to use 'dihydrate' will be noted, and this reassures us about the low possibility of false claims for the other items.

A hoped-for result

Overall, these results are what we had hoped for, although this exercise tells us only about the rate of false positive responses for a drug about which pupils could not have any definite information, and nothing about false positives for drugs they already know about. However, since more than half these Year 10 pupils are largely ignorant about some real drugs listed in the questionnaire, this finding is by no means irrelevant. In general terms it supports our view that pupils will complete even sensitive questions in

the HRBQ as accurately as they can, provided they are confident that the answers are non-attributable and they feel that the exercise will be of some benefit to them.