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Response consistency in young adolescents' drug use self-reports: a recanting rate analysis

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ABSTRACT

Aims: To assess the reliability of drug use reports by young respondents, this study examined the extent of recanting previous drug use reports within an ongoing longitudinal survey of adolescent drug use. Here, recanting was defined as a positive report of life-time drug use that was subsequently denied 1 year later. The covariates of recanting were also studied.

Design: An ongoing longitudinal survey of young adolescents (Belfast Youth Development Study) in Northern Ireland.

Setting: Pencil and paper questionnaires were administered to pupils within participating schools.

Measurements: Measures analysed included (a) recanting rates across 13 substances, (b) educational characteristics, (c) offending behaviour and (d) socioeconomic status.

Findings: High levels of drug use recanting were identified, ranging from 7% of past alcohol use to 87% of past magic mushroom use. Recanting increased with the social stigma of the substance used. Denying past alcohol use was associated with being male, attending a catholic school, having positive attitudes towards school, having negative education expectations and not reporting any offending behaviour. Recanting alcohol intoxication was associated with being male and not reporting serious offending behaviour. Cannabis recanting was associated with having negative education expectations, receiving drugs education and not reporting serious offending behaviour.

Conclusions: The high levels of recanting uncovered cast doubts on the reliability of drug use reports from young adolescents. Failure to address this response error may lead to biased prevalence estimates, particularly within school surveys and drug education evaluation trials.

KEYWORDS

Adolescents, measurement error, recanting, reliability, response consistency

INTRODUCTION

Estimates of the extent and nature of drug use among young people derived from social surveys are confounded by response error. Such error may arise from multiple sources, including the questions asked (format, sensitivity, order, wording and complexity), the interviewer (their characteristics, opinions, expectations and actions) and the respondent (their motivation to complete the task, their cognitive skills and abilities, and their interpretation of questions) (Moser & Kalton 1971; Rouse, Kozel & Richards 1985; Alwin 1989, 1991; Bjarnason 1995; Sudman, Bradburn & Schwarz 1996; Harrison & Hughes 1997; Krosnick 1999). In particular, the social stigma associated with drug use is assumed to provide a powerful disincentive for drug users to provide truthful self-reports. It is assumed that the respondent's wish not to be identified as a drug user may override their motivation to provide truthful answers to drug use questions.

In response to the need for accurate data on the extent and nature of drug use among adolescents, a range of methods have been developed to reduce response error within large-scale drug use surveys. In particular, attempts have been made to minimize the perceived costs associated with providing a positive drug use report, such as self-completion booklets (McAllister & Makkai 1991; Bjarnason 1995) and computer-assisted interviewing (Ramsay & Percy 1997; Beede *et al.* 1998; Wright, Aquilino & Supple 1998). However, it can be argued that procedures designed to reduce under-reporting of drug use may also contribute to the related, but less well understood phenomenon of over-reporting. Here, respondents who wish to inflate their drug use—for example to gain increased status with their peers—may be more willing to do so as a result of the efforts of the survey researcher to convince them of the confidentiality of all survey responses. Group-administered self-report questionnaires, a common procedure in school-based drug use surveys, may be particularly prone to over-reporting. Within such surveys respondents may be able to share drug use reports with their peers during the interview process. When this occurs the social benefits of providing an inflated drug use report may outweigh the costs of being identified as a drug user, particularly when the respondent is convinced that their confidentiality will be protected.

Analysing the consistency of drug use self-reports across multiple measures within cross-sectional (using parallel measures) or longitudinal research (using repeated measures) offers one possible method for assessing the reliability of drug use reports (see Bailey, Flewelling & Rachal 1992; Fendrich & Vaughn 1994; Johnston & O'Malley 1997; Fendrich & Mackesy-Amiti 2000; Fendrich & Kim 2001). This analysis is based on the assumption that once a report of 'life-time' use of a particular drug has been made, the respondent should answer in a similar manner to the same question if repeated at some future point. In other words, while a respondent within a longitudinal drugs survey can report a valid transition into life-time drug use, logically, once in that status, they cannot move out. Such consistency in reporting is not, however, always observed. Respondents do deny (or recant) previous drug use when asked repeatedly about life-time use. Such recanting always indicates response error. This can be the result of either under-reporting (i.e. valid positive first report and invalid negative second report) or over-reporting (i.e. invalid positive first report and valid negative second report). Recanting arising from under reporting may occur because the respondent may simply forget past contact with illicit drugs, or they may actively 'edit' their responses in relation to social desirability

effects (Embree & Whitehead 1993; Fendrich & Mackesy-Amiti 2000; Fendrich & Kim 2001). Also, there may be a developing rapport between researcher and respondents leading to decreasing perceptions of anonymity (Mensch & Kandel 1988; Fendrich & Vaughn 1994). Such under-reporting could also be a function of developing decision making skills where the young person, 1 year on, begins to realize the seriousness of being identified as a drug user within school. Recanting as a result of over-reporting inconsistencies may also occur due to recall problems. This time respondents may not remember their previous inaccurate report so may not be able to 'fake' in a consistent manner. Changes in the fieldwork procedure may also diminish consistent over-reporting. For example, reducing opportunities for respondent interaction during group data collection sessions may lessen the likelihood of any status rewards due to inflating drug use reports.

More generally, in survey research recanting appears to be higher among respondents for whom disclosure may have a higher social cost (e.g. black respondents, those with families, those working in the military or police, those living in small communities) (Fendrich & Vaughn 1994; Fendrich & Kim 2001). Kuha (2001) found higher rates of recanting cocaine use among pregnant women. Correlations have also been found between recanting rates and educational and socio-economic status, with respondents with lower incomes and educational qualifications more likely to recant (Fendrich & Vaughn 1994; Johnston & O'Malley 1997). Recanting rates may also be affected by aspects of the data collection process, such as interview mode and respondent characteristics (Adair *et al.* 1996; Fendrich & Kim 2001), and the frequency of reported prior use (Fendrich & Vaughn 1994; Fendrich & Mackesy-Amiti 2000).

To date the majority of recanting studies have examined the reporting behaviour of older adolescents or young adults (e.g. Mensch & Kandel 1988; Bailey *et al.* 1992; Fendrich & Vaughn 1994; Johnston & O'Malley 1997; Shillington & Clapp 2000; Fendrich & Kim 2001). However, school-based studies of younger adolescents are beginning to emerge (Siddiqui *et al.* 1999; Fendrich & Mackesy-Amiti 2000; Fendrich & Rosenbaum 2003).

This paper examines recanting rates among young adolescents participating in an ongoing longitudinal study in Northern Ireland. It adds to the developing knowledge base of response errors within school-based drug surveys by examining the extent and nature of the recanting phenomenon outside a US context, an acknowledged gap in the existing recanting research (Fendrich & Rosenbaum 2003). Factors associated with recanting behaviours are also examined. This should provide insights into the reasons underlying adolescent denials of previous reported drug use. The paper also considers the implications of these findings for the study of drug use behaviours among this younger population.

METHODS

This paper uses data collected from the 2001 and 2002 sweeps of the Belfast Youth Development Study (BYDS). Thirty-nine post-primary schools, across three locations—Belfast, Ballymena and Downpatrick—participated in the study. These schools comprise 74% of all eligible schools within the areas.

Sample

All pupils who were registered as year 8 pupils (first year of post-primary education) in the autumn of 2000 within participating schools were eligible for inclusion within the study. A total of 3843 pupils completed a questionnaire in 2001 (87% of the eligible pupils). Non-response was due to parental non-consent (5%) and absenteeism (7%). Of this original cohort, 3336 (87%) completed a questionnaire in 2002, when they were in year 9. Again, absenteeism (9%) and parental non-consent (2%) were the principal reasons for the loss of cases. A further 2% of the cohort moved to a non-participating school during the 12 months between sweeps.

The current analysis is limited to those pupils who completed a questionnaire in both 2001 and 2002. Of this sample, 55% were males and 45% were females. The mean age of the sample at the completion of fieldwork in 2001 was 12.5. Over half the sample (58%) reported living with both biological parents in 2001. A further 11% lived with only one parent and 4% lived in a reconstituted family (with step-parent/partner). The remaining 27% lived in other family arrangements (e.g. with grandparents or foster parents) or could not be classified.

Data collection

Data were collected via a self-completion booklet that was administered to pupils in either a large group, up to and including the whole year group, or in individual classes. All fieldwork took place within participating schools during the normal school day. The questionnaire took between 30 and 80 minutes to complete. Fieldwork for each sweep was undertaken during the second and third school terms (January–May). Members of the research team administered all questionnaires. Teachers, while present in some sessions, were not asked to participate in the data collection processes. Respondents with low reading ability were provided with help and support from the research team present during the session.

Measures

Drug use and drug use recanting (2001/2002)

Ever and last year use of 12 substances (tobacco, alcohol, solvents, cannabis, magic mushrooms, ecstasy, speed, LSD, cocaine, heroin, poppers and ‘other pills’). A further distinction was made between the use of alcohol and the consumption of alcohol to intoxication (being drunk). Recanting was defined as providing a positive ‘ever use’ drug report in 2001 followed by a negative ‘ever use’ report in 2002. It should be noted that respondents who provided consistent negative drug use reports (i.e. who did not report any drug use within a particular drug type) or who only provided their first positive drug report in 2002 (i.e. drug use onset occurred after the first survey sweep) were excluded from the recanting analysis.

Frequency of previous drug use (2001)

Respondents who report last year drug use are asked a supplementary question on the frequency of use, which was coded as a five-category variable (used once/used between two and five times/about once a month/about once a week/used to take but not now). For alcohol use the corresponding categories were 'used once/about once a month/about once a week/more than once a week/used to take but not now use'.

School religion (2002)

The majority of schools within Northern Ireland are segregated on religious grounds. Pupils were classified as attending either (a) a Protestant school or (b) a Catholic school.

Educational attitudes and aspirations (2002)

Respondents were asked 13 questions concerning their current attitudes towards education. Each item was rated on a five-point Likert scale from 'never true' to 'always true'. Exploratory factors analysis (maximum likelihood extraction with direct oblimin rotation) was used to identify three subscales, 'attitudes to school' (example item: I think going to school is a waste of time), 'positive school behaviour' (example item: I am always willing to help the teacher) and 'educational aspirations' (example item: I would like to go to university after school). The attitude subscale consisted of four items ($\alpha = 0.6780$). The positive school behaviour scale also consisted of four items ($\alpha = 0.7328$), while the educational aspiration subscale consisted of five items ($\alpha = 0.88$). The corresponding item scores were summed across each scale.

Whether the pupil had received any education or information about drugs in 2001 or again in 2002. Responses across the two variables were recoded into a single three-category item (no drugs education in either 2001 or 2002/drugs education in 2001/drugs education in 2002 only).

Socio-economic status of family (2002)

Respondents were allocated to one of five socio-economic groups on the basis of their scores on a range of financial self-report measures including: (a) parental employment status; (b) free school meals uptake; (c) number of family cars; (d) number of family holidays in last year; and (e) house type (flat, terraced, semidetached or detached). Latent class analysis was employed to identify the number of socio-economic groups and to allocate the respondents to the various groups (a five-class model with local dependence between free school meal uptake and parental employment provided the best fit: Akaike Information Criterion (AIC) = - 3911.1, $df = 2979$). Individual assignment to the various latent classes was undertaken on the basis of a modal rule. In general, class 1 corresponds to lower socio-economic indicators and class 5 to higher socio-economic indicators.

Offending behaviour (2002)

Whether they had committed any of 13 separate offences within the last 12 months. These offences were grouped into minor offences (not paying the fare on public transport, behaving badly in a public place, theft from home/ school, assault, shoplifting, carrying a weapon, property damage, graffiti) and major offences (robbery, arson, theft from car, theft of car, burglary). If a young person reported both minor and major offences priority was given to the major offences. Respondents who did not report any offences or who were missing on these indicators were coded as non-offenders.

RESULTS

In 2001, there were 4729 separate reports of ever use across 13 drug categories. In 2002, 3940 (83%) of these reports were reconfirmed (i.e. a consistent ever use report in both years), while the remaining 789 (17%) of these positive reports were recanted, that is to say the respondent denied that they had ever used the drug.

Table 1 presents the frequency of consistent and recanted reports of drug use over the two years. The consistency of positive life-time reporting was highest for alcohol (93%), tobacco (90%), cannabis (83%) alcohol intoxication (81%) and poppers (63%). For all other drugs, more young people recanted than verified their earlier use. For six of the 13 drugs over two-thirds of those who reported previously having used them recanted their earlier use 1 year later. Those drugs with the highest level of recanted responses were magic mushrooms (87%), heroin (85%) and cocaine (82%). For heroin in particular, it can be seen that only four pupils who reported having ever tried/used heroin in the first sweep of data collection did not change their reporting in the second sweep. In general, as the social stigma of the drug increased so, too, did the proportion of previous reports that were recanted.

Recanting was endemic in a small number of schools. In two schools, for example, all previous positive reports of ever use across seven of the 13 drug measures were recanted. In a further two schools all positive reports on six of the drug measures were recanted. Again, this total recanting within schools is related to the perceived seriousness of the drug. For example, there were 14 schools in which all previous reports of cocaine use were recanted. In contrast, there were only two where all previous reports of cannabis use were denied and none where there was a 100% recanting rate of alcohol use.

To examine the covariates of recanting behaviour a series of logistic regressions were undertaken. Regressions were undertaken in Mplus (Muthén & Muthén 1998–2004). A ‘sandwich estimator’ in TYPE = COMPLEX was used to estimate parameters and standard errors to take account of the non-independence of the respondents due to clustering at the school level within the sample. Separate models were run for alcohol recanting, alcohol intoxication recanting and cannabis recanting. Table 2 presents the odds ratios and confidence interval for those covariates included within the models. The likelihood of recanting alcohol use was higher among pupils who were male, attended catholic schools, had a positive attitude to education and had lower education aspirations. Also, as the seriousness of reported delinquent behaviour increased the odds of recanting alcohol use declined. Similarly, more frequent drinkers were also less likely

to recant alcohol use than less frequent drinkers. Male respondents and respondents who did not report offending were also more likely to recant previous alcohol intoxication.

Table 1 Reporting behaviour of respondents in 2002 who reported ‘ever use’ in 2001.

Drug type	Confirmed use in 2002		Recanted use in 2002	
	%	n	%	n
Tobacco	90	1095	10	116
Alcohol	93	2070	7	149
Intoxication	81	350	19	84
Solvents	47	91	53	102
Cannabis	83	204	17	43
Magic mushrooms	13	7	87	48
Ecstasy	45	21	55	26
Speed	26	12	75	35
LSD	29	11	71	27
Cocaine	18	8	82	36
Heroin	15	4	85	23
Poppers	63	44	37	26
Other pill/s	24	23	76	74

The odds of recanting cannabis use declined with increasing educational expectations, with reported serious offending and frequent cannabis use (more than once a week). Increased likelihood of recanting cannabis in 2002 was associated with claiming to be a past cannabis user in 2001 (used to use, but not now) and with receiving drugs education in either 2001 or 2002. Drugs education was not associated with increased recanting of either alcohol use or alcohol intoxication.

Table 2 Predictors associated with recanting: logistic regression.

	<i>Alcohol (n= 1878)</i>			<i>Alcohol intoxication (n = 361)</i>			<i>Cannabis (n = 187)</i>		
	<i>OR</i>	<i>95% C.I.</i>	<i>Sig</i>	<i>OR</i>	<i>95% C.I.</i>	<i>Sig</i>	<i>OR</i>	<i>95% C.I.</i>	<i>Sig</i>
Gender									
Female	0.43	0.29, 0.64	**	0.30	0.12, 0.73	**	1.75	0.41, 7.44	
Male	1.00	–		1.00	–		1.00	–	
School religion									
Catholic	1.82	1.26, 2.64	**	1.35	0.80, 2.28		0.37	0.11, 1.17	
Protestant	1.00	–		1.00	–		1.00	–	
Attitude to education	1.11	1.02, 1.20	*	1.03	0.95, 1.11		1.05	0.92, 1.20	
School behaviour	1.07	1.00, 1.14		1.06	0.96, 1.16		0.91	0.81, 1.03	
Educational expectations	0.96	0.93, 0.99	*	1.02	0.98, 1.08		0.94	0.88, 0.99	*
Socio-economic status									
Class 5	0.81	0.32, 2.04		1.64	0.58, 4.61		2.35	0.48, 11.65	
Class 4	0.78	0.28, 1.80		1.20	0.38, 3.78		0.69	0.11, 4.15	
Class 3	1.01	0.42, 2.44		1.53	0.53, 4.42		0.66	0.11, 3.73	
Class 2	1.18	0.52, 2.72		1.74	0.83, 3.62		0.65	0.16, 2.70	
Class 1	1.00	–		1.00	–		1.00	–	
Delinquency									
Serious offences	0.04	0.01, 0.15	**	0.05	0.01, 0.24	**	0.05	< 0.01 ¹ , 0.45	*
Minor offences	0.23	0.15, 0.35	**	0.28	0.06, 1.26		0.45	0.07, 2.97	
None	1.00	–		1.00	–		1.00	–	
Drugs education									
Received in 2002	0.77	0.42, 1.41		2.05	0.62, 4.86		12.86	2.57, 64.40	**
Received in 2001	0.97	0.54, 1.73		1.72	0.59, 4.86		17.76	2.96, 106.74	**
Not received	1.00	–		1.00	–		1.00	–	
Frequency of prior drug use									
More than once week	<0.01 ¹	<0.01 ¹ , <0.01 ¹	**	–	–		–	–	
Once a week	<0.01 ¹	<0.01 ¹ , <0.01 ¹	**	–	–		<0.01 ¹	<0.01 ¹ , <0.01 ¹	**
Once a month	0.38	0.10, 1.42		–	–		1.46	0.32, 6.69	
Two to five times	–	–		–	–		1.01	0.33, 3.14	
Used to, but not now	0.92	0.32, 2.70		–	–		2.80	1.31, 5.98	**
Used once	1.00	–		–	–		1.00	–	

An OR below 0.01. * $P < 0.05$; ** $P < 0.01$.

DISCUSSION

The key finding from the study was the relatively high level of drug use recanting among the young adolescents interviewed. Notwithstanding the fact that response error may have occurred at either of the two data collection points (i.e. over-reporting in 2001 or under-reporting in 2002), the level of recanting found does represent a considerable reporting bias associated with the life-time prevalence estimates derived from any single year's data. This is particularly true for more 'serious' forms of drug use, although recanting is still a prominent feature of non-illicit consumption.

Given that for most drug use (excluding alcohol, tobacco, cannabis and poppers) the level of recanting exceeded half of all previous reports, the findings cast serious doubts on the reliability of young adolescents' self-reports of most forms of drug use. While longitudinal surveys benefit from multiple measures of drug use, permitting the examination and identification of such reporting biases, most cross-sectional surveys do not. Therefore, this sizeable bias remains largely unidentified and uncontrolled. The implication of this is that many existing survey estimates of the prevalence of young adolescent drug use may be inaccurate due to undetected reporting error.

Substantive levels of recanting were found across all subgroups examined; however, some significant group differences were detected. Much of the previous research on this topic has concluded that recanting rates are increased among respondents who may have more to lose as a result of being identified as a drug user (e.g. Johnston & O'Malley 1997; Fendrich & Mackesy-Amiti 2000; Kuha 2001). However, as much of this research was undertaken on respondents older than those participating in this study, there is limited evidence on the extent to which this social cost process transfers across age groups. Our results are rather mixed on this issue. If social cost were a key determinant of willingness to recant, we would expect that rates would be higher among adolescents with higher investment in education, where the consequences of being identified as a drug user may have considerable impact on educational progression. However, this is not the case. While positive attitudes to education were associated with increased recanting of alcohol use, higher educational expectations were associated with decreased recanting of both alcohol and cannabis. It is difficult to interpret these contradictory findings. One possibility is that they represent two distinct processes. The first relates to the perceived social cost of reporting valid drug use, while the second relates to the young person's engagement in school work in general and in research work undertaken in schools in particular. Young people who are not engaged in the survey process may be less motivated to provide consistent valid answers.

It is possible to look for the influence of perceived social cost in other areas. Respondents who report serious offences were less likely to recant all three selected drugs. The social cost of reporting additional drug use for respondents who have committed and reported serious offences may be sufficiently low that recanting is less of a concern. For those who have not committed other antisocial behaviours, their drug use may represent the most serious offence committed. Its disclosure therefore may represent a greater social cost to them compared with more serious offenders.

The higher recanting rates among those who reported low frequency use found by Fendrich & Vaughn (1994) was also detected in this study. Recanting was also high among young people who reported that they were past but not current users of cannabis on the 2001 frequency of use question. Recanting here may reflect young people redefining themselves as complete non-drug users even though they may have used in the past.

In contrast to the analysis of the drug abuse resistance education (DARE) programme evaluation data (Fendrich & Rosenbaum 2003), this study found that drug education was associated with increased recanting. What is of particular interest is that the effect of drugs education was apparent only for cannabis use. The odds of recanting alcohol or alcohol intoxication did not vary across those who had received drugs education and those who reported they had not. While care should be exercised in extrapolating from a single study, one interpretation of this is that information about illicit drugs, such as the possible social, health and legal implications, may increase the perceived cost of being identified as a drug user, and hence increased under-reporting at follow-up. Alternatively, it is also possible that the provision of accurate drugs information to young people may correct existing mistaken assumptions or misunderstandings surrounding illicit drug use, allowing respondents to correct previous invalid drug use reports (i.e. correct a previous over-report).

The lack of agreement between this and the DARE study may also be due in part to differences in the operationalization of 'receiving drugs education'. Within the Fendrich & Rosenbaum study, the drugs education effect was examined by comparing schools that were part of the DARE programme with schools within the control arm, irrespective of the young person's participation in or engagement with the education programme. Here, respondents were asked if they had received any information or education about drugs, independent of their school's provision in this area. It may be the case that it is only where drugs education has had a personal impact on the young person, sufficient for them to respond positively to a subsequent survey question about it, that the odds of recanting previous reports of illicit drug use are increased.

The possibility of drugs education biasing drug use reporting, via increased recanting independent of actual behaviour change, may have substantive implications for the evaluation of drugs education itself. It could be argued that evaluation studies showing a positive effect for drugs education (i.e. a decline in reported drug use in an intervention group relative to a control group) may in fact be reporting differences in the willingness of young people to give truthful answers to the drug use questions rather than changes in willingness to use illicit substances.

A question that remains unresolved within this study is how recanting behaviour varies with age. Fendrich & Rosenbaum (2003) found that recanting levels were highest in the survey sweep immediately following the first drug use report. One interpretation of this is that recanting is a function of the age of first report rather than of age *per se*. The age of peak recanting therefore would be the age of peak reported first use, stabilizing thereafter. Following this interpretation we would expect levels of recanting to be near their maximum level for alcohol use within this study, but will continue to rise for

cannabis use as the cohort ages. This does not discount the possibility that maturity (or age) also plays a role in determining the extent of drug recanting, with older respondents able and willing to provide more valid answers than younger respondents. Future data from the BYDS could be used to test these assumptions.

In addition to gaps within our understanding of the processes underlying recanting behaviour, further work is needed both in regards to the methods for minimising this form of response error within longitudinal and cross-sectional research, and the procedures for handling recanting within existing studies. Developments in this area will be complicated by the fact that response error may arise from both over-reporting and under-reporting (Gfroerer, Wright & Kopstein 1997). As a result, traditional survey techniques aimed at reducing underreporting may also increase the likelihood of over-reporting as young people realize that exaggerated claims will result in few repercussions.

Where possible, attempts should be made to introduce multiple parallel measures of drug use within cross-sectional drug use prevalence survey of children and adolescents. This would permit the identification of some reporting errors. Also, follow-up interviews with a selected sample of respondents would permit the estimation of the extent of recanting within the sample. Statistical methods that will facilitate the adjustment of prevalence estimates for identified reporting errors should also be incorporated within future analysis. Here, latent class analysis shows some promise (Beimer & Weisnen 2002). Within longitudinal studies, where recanting is a recognized problem, protocols will need to be developed for editing response patterns that show recanting. Given the difficulties of determining whether an observed inconsistency has arisen from an initial overreport or a later under-report, the development of robust editing protocols may prove a considerable challenge. However, with the high levels of recanting uncovered by this and other studies, reporting inconsistencies can no longer be ignored.

Clearly, there are a number of limitations associated with this study. First, the study has narrow age and geographical restrictions. The analysis of subsequent sweeps of the BYDS will address the first of these. However, the second will still remain. Secondly, the analysis presented here is a by-product of an ongoing longitudinal study of adolescent drug use and not of a study designed specifically to test response errors in adolescent drug use reports. As a result, many important determinants of recanting behaviour may not have been observed. In particular, subtle variations in the social context of data collection sessions (how close together the young people sat, the level of talking within sessions) were not recorded. It may be the case that recanting is in part a product of how the group data collection sessions were conducted. This requires further study. Finally, by relying upon only 2 years' data, the study was not able to differentiate recanting due to over-reporting from that due to underreporting. This is an important next step if methods are to be devised to reduce this reporting bias. However, this may be a far from simple task.

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