Accessing research participants in schools: a case study of a UK adolescent sexual health survey

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Abstract

While methods and results of school-based studies have been reported widely in the literature, little published information exists on the practical aspects of recruiting schools and students into a study. This paper reflects on the experiences of a UK-based sexual health survey among 3007 students aged 15–18 years. The survey explored beliefs, attitudes and behaviours in relation to sexual health. This case study highlights significant aspects of planning and conducting successful large-scale research in schools, focusing on the process of conducting the research rather than outcomes. As such, the paper will benefit those intending to sample a school-based population. The key features of effective and feasible research in schools are outlined in four areas: (i) adopting suitable research tools, (ii) selecting and contacting schools, (iii) selecting students within schools and (iv) the importance of fieldworkers. On-site and post-data collection feedback from teachers are incorporated into the discussion of good practice in partnership working with schools and students in research. We conclude by discussing fieldwork experiences and outlining key recommendations for researchers across disciplines engaging in school-based studies.

Introduction

School-based studies are an effective and resource-efficient method of conducting research among young people, where school enrolment is compulsory or high among the age group of interest. Accessing young people in schools for research studies is one of the most resource-efficient methods, and as such has been widely adopted in health research in many countries \cite{1-5}. Moreover, given that the vast majority of young people attend school, at least in developed country settings such as the United Kingdom, it is a valuable opportunity to recruit a sample which is broadly representative of the wider youth population. While methods and outcomes of school-based studies have been reported widely in the literature, little published information exists on the practical aspects of recruiting schools and students into a study. Where such information is reported, it tends to be found among the grey literature \cite{6} or embedded in lengthy final reports which are often inaccessible to a wide readership. Indeed, a recent search of the published literature, in preparation for our own fieldwork, yielded no specific practical information on experiences recruiting school students (databases searched include BIDS: Ingenta and PsychINFO, PubMed, Web of Science).

Effective strategies for conducting school-based studies are of considerable interest since they are a commonplace methodology. Reflecting on the experiences of accessing 3007 students aged 15–18 years, this case study highlights the time and resources required for school-based research, and the vital issues required for school-based research, and the vital issues to take into account in the planning stages [although schools are the main focus of this...]

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paper, 5% (n = 147) of the sample were recruited from colleges]. This paper offers practical recommendations and strategies for gaining access to a school population, and with little evidence of an equivalent peer-reviewed paper, we believe it will benefit researchers across disciplines planning to recruit a school-based sample.

Background to study

Naz Project London (NPL) is a leading sexual health and human immunodeficiency virus (HIV) service provider among Black and Minority Ethnic (BME) communities in London, UK. As part of its youth focus, NPL conducts school-based sex and relationships education (SRE) in schools among a predominantly BME population. To support work among these populations, NPL approached the Trust for the Study of Adolescence (TSA) to help identify the specific sexual health needs of BME students. Specifically, this investigation aimed to identify the beliefs, attitudes and behaviours of students in relation to sexual health, and SRE preferences, by ethnicity [7].

As a result, a quantitative school-based survey methodology was adopted in order to access a large number of students, and enable male and female groups to be compared across ethnic groups. A 28-page self-completion questionnaire was designed focusing on (i) background characteristics, (ii) sexual health knowledge and attitudes (pregnancy, sexually transmitted infections, HIV), (iii) sexual behaviour and (iv) learning about sex. Students were provided with unmarked envelopes in which to submit completed questionnaires to maintain confidentiality.

It has been demonstrated that self-completion questionnaires are preferable to face-to-face interviews in terms of reducing reporting bias both across a large number of sensitive topics, including alcohol and illicit drug use, HIV risk factors and sexual behaviour [8], and specifically among young people [9, 10]. As a result, a self-completion questionnaire was selected for this study in order to (i) eliminate potential interviewer and non-response biases associated with collecting sensitive information face to face, (ii) collect information in a standardized format to enable reliable and consistent comparisons between groups and (iii) enable data from a large number of respondents to be collected in a time- and resource-efficient manner. While the results of this survey are published elsewhere [7], this programme paper will focus on the following four key aspects of the recruitment process:

(i) Adopting suitable research tools
(ii) Selecting and contacting schools
(iii) Selecting students within schools
(iv) Importance of fieldworkers

Adopting suitable research tools

To ensure valid responses and a positive reception from young people, it was essential to fully pilot the self-completion questionnaire, which was conducted in two stages. Firstly, a focus group discussion was conducted among three male and four female students from a variety of ethnic and religious backgrounds, reflecting the nature of the target sample. The principal investigator (PI) declared that the purpose of the discussion was to elicit participants’ comprehension and interpretations of questions, rather than a conventional pretest [11]. The group reviewed and commented on the questionnaire in terms of item content, item sequence, item validity, wording, response formats, appearance and layout and skip format instructions [12]. The acceptability of the questionnaire among students from diverse cultural and religious backgrounds was explored, in order to ensure a high response rate by reducing the risk of embarrassing or offending respondents, particularly on sensitive sexual behaviour questions. Following minor revisions based on this focus group discussion, the second stage of the pilot involved the questionnaire being completed by 29 students at a college not participating in the study. Consistent and plausible responses during the pilot test led to this version being adopted as the final format.

The piloting process confirmed that the shortest and longest times to complete the questionnaire
were approximately 25 and 35 minutes. Assurance of this timing was instrumental in gaining support from the schools to participate, since the questionnaire could be administered entirely within a routine timetabled class. This also minimized disruption to classes, while ensuring adequate completion time since classes typically lasted 45–60 minutes. Since the questionnaire contained a number of filter questions where students skipped inapplicable questions, the pilot test indicated a variation in completion times. For early completers, a wordsearch was included at the end of the booklet to further occupy their time and interest, thereby reducing the likelihood of communicating with or distracting other students, or indicating their level of sexual experience. Additionally, we felt it was crucial to provide a health and personal information sheet detailing young people’s organizations, websites and helplines for those who wished to explore sexual health issues further. The detachable information sheet was enclosed in the questionnaire for students to keep. Finally, the design and layout of the questionnaire included a bold and eye-catching front cover, with diverse images of popular youth culture, and was two-colour printed throughout. The design, generating positive responses and enthusiasm to complete the questionnaire, was universally well-received by students.

Selecting and contacting schools
For inclusion into the sample, schools were required to be located within Greater London, to include students aged 15–18 years and for at least two-thirds of students to be from BME backgrounds. In addition, it was desirable that the schools selected would provide a relatively even geographical spread across London. Based upon these eligibility criteria, 30 schools were purposively selected for inclusion into the study. Of these 30, 16 (53%) schools participated in the study, which covered 10 of the 32 London boroughs and all five Strategic Health Authorities. Of the 14 schools that did not participate, eight (57%) were lost to follow-up, four (29%) were prevented from participating due to a timetable clash and two (14%) did not participate due to perceived religious sensitivity of teachers, parents or students.

Other studies recruiting schools have reported much lower response rates. For example, 15 (11%) of the 140 English schools approached about a study on smoking eventually participated [3]. Our higher response rate when selecting schools, in what is a highly sensitive research topic, was attributed to two factors. Firstly, contacting the key teacher who would ultimately coordinate within the school, and secondly, the importance of face-to-face planning meetings with the key teacher.

Contacting key teachers in schools
Personal, Social and Health Education (PSHE) teachers, who coordinate SRE, in eligible schools were approached and invited to join the study. The PSHE teacher was contacted directly to gauge support from the person who the fieldworkers would most closely work with. This was considered preferable to the head teacher potentially agreeing to the study, and delegating to a teacher who was not sufficiently committed. Contact was made initially by telephone, and letters were sent when a teacher could not be contacted by telephone within 2 weeks. The majority of PSHE teachers expressed an interest in participating on the telephone. This initial contact was followed up with an information pack sent out providing more detail about the study, including

(i) research objectives summary
(ii) data collection timetable
(iii) parental or carer consent pro forma
(iv) TSA’s ethics guidelines
(v) TSA’s complaints procedure
(vi) student questionnaire and
(vii) student health information sheet.

An understanding of the administrative structure of schools is essential when sampling students across school years. In the case of London schools, lower (compulsory education covering 15- to 16-year olds in this sample) and upper school (elective education covering 16- to 18-year olds in this sample) administrations operated relatively independently. As a
result, recruitment and data collection were separate for the lower and upper schools. While it was more likely for a teacher to agree where a colleague at the same school was already involved in the study, all other aspects of planning and data collection workload had to be replicated. This had the effect of doubling the recruitment workload and lengthening the period of data collection within a school.

**Face-to-face meetings**

The dispatch of the information packs was followed by a face-to-face meeting at each school with the PI, during which any queries or concerns in relation to participation were addressed. These discussions dealt with mandatory issues, in terms of research aims, conducting research and dissemination [13]. These meetings also provided a valuable opportunity to highlight the benefits to the schools in terms of having school-specific information on the students’ sexual health knowledge, attitudes and behaviours for SRE curricula development. Furthermore, the complete final report would be provided in addition to presenting findings verbally to staff, students, parents and governors at a later date, if the school wished.

The practical aspects of data collection were also discussed at the meetings with the key teacher, including the role of fieldworkers during data collection, location for administration (hall, gym or individual classrooms), number of fieldworkers required depending on the school size and location of administration, linguistic needs of students and suitable dates and timetabling. As a result of these meetings, a number of specific requirements were identified including linguistic needs in some schools, which resulted in the production of Amharic, Bengali, Somali, Spanish and Turkish language glossaries for students whose first language was not English. Furthermore, this information was used to match fieldworkers to schools and classes with particular language needs where possible. As a result, few students were excluded from participating based on limited English language proficiency. In view of the fact that 14 of the 16 schools participated in the study after a meeting, this was a key means of recruiting schools and research planning. One teacher summed up the importance of meetings as follows:

‘Going to the effort of meeting shows commitment, reinforces professionalism and makes the research meaningful and well-run.’

Finally, the time period between contacting a teacher and completing data collection ranged from 1 to 6 months, depending on the number of visits required, examination periods, holidays and other school commitments. Ultimately, if a teacher was convinced of the benefits of participation, they would designate a window of time to complete data collection. Teachers’ motivation to participate was particularly important since all 3-year groups we sampled were taking national examinations during the year.

**Selecting students within schools**

All students attending a school that had agreed to participate in the study were informed about the research by the PI or a fieldworker during a designated assembly. Previous research on methods of gaining consent suggests that personal communication with researchers has a positive effect on students’ willingness to participate [14]. The sexual health focus of the study was introduced with humour and candour, in addition to outlining: (i) the research objectives, (ii) the voluntary and confidential nature of participation, (iii) how data would be used, (iv) questionnaire administration details and (v) the support from fieldworkers. If a school opted to seek parental or carer consent, *pro forma* letters were distributed at this time. The assemblies were particularly useful in highlighting the value of participation by enabling students to ‘have their say’. In addition, the conditions of confidentiality maintained by independent fieldworkers, rather than teachers, were highlighted. Overall, inviting the students in this way offered an opportunity to communicate the value of each individual’s views and experiences, and conveyed a sense of importance in participating. In addition to persuading students to participate, the assembly conveyed a sense of professionalism to school staff,
encouraging further support for the research and fieldworkers. In the majority of cases, the assembly was conducted within the week preceding data collection. No financial or in-kind incentive was offered to students to complete questionnaires.

Eligible students were sampled on a ‘take-all’ basis on the day of data collection. In contrast to selecting individual students or sampling particular tutor or class groups, the take-all approach was less complicated than sub-sampling, which would have resulted in students being singled out for inclusion or exclusion. In addition to excluding students from the study, sub-sampling would have entailed more planning and provision of separate administration areas, which would have made participation by some schools unfeasible. The take-all approach was also considered more efficient since fewer schools were required to achieve the desired sample size.

An opt-out participation strategy was implemented whereby all students took part unless they or their parent or carer refused. The rationale for using passive consent was two-fold. Firstly, research in the United States among an ethnically diverse school population suggested passive parental consent procedures recruit more boys, African Americans, students with poor grades and smokers, than active written parental consent [15]. This study highlights selection bias in the recruitment procedure based on ethnicity and behaviours associated with poor sexual health, such as smoking, which are reported in other studies [14, 16–18]. Due to our focus on ethnicity, in addition to recent data indicating significant differences in sexual behaviour between adult ethnic groups in the United Kingdom [19], the potential for recruitment by active written parental consent to under-represent BME communities led us to favour recruitment through passive parental consent. Secondly, passive parental consent was simpler to administer and increased the likelihood of schools participating. In the United Kingdom, active permission can be given by the school in loco parentis [20] and, in tandem with passive consent of parents, carers and/or students opting out of the study, was considered the most appropriate approach. While we established that the passive parental consent strategy was both preferable and feasible in this study, it is worth acknowledging that conducting surveys ‘without’ parental consent is an option where permitted by local legislation, policies and research guidelines. Accessing students without parental consent may be a practical method of boosting participation rates in some settings.

None of the upper schools comprising years 12 and 13, where students are aged 16–18 years, opted to seek parental or carer consent for students, since attendance is elective and students are of legal age to consent to sexual intercourse. Eight (73%) of the 11 lower schools opted to seek parental or carer consent for students aged 15–16 years, using the consent pro forma provided and distributed in the assembly. This pro forma outlined the research objectives, topics included in the questionnaire and the option to withdraw their son or daughter from the research. Parents or carers of five students chose to withdraw their son or daughter. Ultimately, and in addition to parent or carer consent, the decision to complete the questionnaire rested with the individual students. The fieldworkers, immediately prior to distributing the questionnaires, reminded students that they had the option to withdraw, and this was mentioned again on page one of the questionnaire. Withdrawn students completed private study during questionnaire administration. Of the 3026 students in schools and colleges on the data collection days, who had not been withdrawn by a parent or carer, 3007 (99%) agreed to participate. Our response rate compares favourably with other studies conducted among a similar age group. A self-completion health survey conducted in East London [5] reported an 84% response rate, which included returning to schools with response rates less than 75%.

Our response rate was derived from the proportion of students who completed the questionnaire among all students who were present on the day of questionnaire administration. Schools were not revisited to capture students absent due to illness, exclusion (temporary or permanent), school trips, day release to vocational courses as well as those not required to attend daily.

Only 60% (n = 3007) of the estimated enrolled population of 5051 eligible students completed the
study. With a 99% student-response rate, based on those present in school on the day of data collection, refusals contributed minimally to this discrepancy. Absentees were generally fewer among lower schools, which is likely a reflection of compulsory daily attendance at these schools. While it was not possible to ascertain the precise reason for non-attendance among students, anecdotally truancy or exclusion tended to be the dominant reasons in lower school settings. In upper schools and colleges, absenteeism was mainly attributable to non-compulsory attendance. The college recruitment in this study (5% of the final sample) was discontinued since non-compulsory attendance rendered colleges an ineffective and unfeasible use of resources given the large target sample. As a result of the discrepancy between the number of enrolled students and those present at data collection, it was necessary to sample more schools than was first intended in order to reach the desired sample size, which had the effect of extending the data collection timetable. This highlighted the need to factor in attendance issues at the research planning stages since devising the sampling frame, deploying the fieldwork team and contacting schools are contingent on student attendance.

The ideal model for questionnaire administration was in the school hall or gym. Data collection in a single room was advantageous since students were located at separate desks, increasing privacy, and required fewer fieldworkers. However, using gyms and halls was often problematic due to the time and staff required to set up desks and relocate large numbers of students, in addition to timetable clashes with sporting and other activities. Where it was unfeasible to administer the questionnaires in one room, a fieldworker would be accompanied by a tutor in each of the students’ regular classrooms. Tutor group administration required as many fieldworkers as classes, and this required up to nine fieldworkers simultaneously since the majority of schools ran PSHE classes concurrently. Overall, classroom administration was preferred by teachers since it caused the least disruption, and 12 (75%) schools opted for this administration method.

**The importance of fieldworkers**

While it is common for researchers to request teachers to administer questionnaires, this was inappropriate for our study for the following reasons: (i) fieldworkers provided assurance of confidentiality of sensitive data; (ii) fieldworkers ensured consistency and repeatability of conditions between classes and schools, improving quality control and reducing reporting bias and (iii) fieldworkers increased the likelihood of participation as school staff were not solely responsible for administration.

In total, 14 sexual health practitioners and postgraduate public health students were recruited as fieldworkers by the PI, and had no prior or ongoing connection with the schools. Since the team comprised mainly part-time workers and students with flexible working hours, they were available for administration during school hours. Each fieldworker was required to attend a half-day’s training prior to administering the questionnaires. The training focused on (i) the study objectives, (ii) ethics guidelines, (iii) data collection (preparation, completion and administration), (iv) dealing with students’ queries and (v) contingency measures. Members of the fieldwork team spoke Arabic, Ebo, French, Hausa, Hindi, Portuguese, Punjabi, Spanish, Somali, Swahili and Yoruba. This linguistic diversity was significant at times in assisting some students for whom English was a second language.

On their first data collection visit to a school, fieldworkers were always partnered or supervised by the PI. After data collection, the fieldwork team documented information including sex and religion of students withdrawing from the study, questions arising, challenging behaviour and so on. During data collection in a single room, a ratio of one fieldworker to 30 students was observed, and one fieldworker per classroom. Teachers were present while fieldworkers administered questionnaires, intervening only if there were discipline issues. Fieldworkers were under strict instructions to count questionnaires distributed and returned while students remained seated. This was particularly important in halls or gyms where there may be opportunities for a student to pick up another
person’s envelope, or take their own and show it to other students who were yet to complete the questionnaire.

Once envelopes were collected, fieldworkers would meet in a separate room from teachers and students. Envelopes were opened and administration information including school name, fieldworker overseeing administration, date and questionnaire number were completed. Fieldworkers took a cursory look over questionnaires to ensure responses were answered consistently and plausibly. Questionnaires were counted, recounted, boxed and sealed. Information on refusals was collated and an up-to-date total of the sample size and response rate was calculated.

The fieldworkers were essential in ensuring the smooth administration of questionnaires and responding to students’ difficulties, such as translating questions and explaining queries arising from the questionnaire. Although the fieldworkers were arguably more important to this study given the BME focus, and occasional associated language needs, taking the lead in the administration was universally welcomed by the teachers. The role of the fieldworkers in this regard was summarized by one teacher reporting they were:

‘... ideal for both teachers and students. They made the project look more professional and added weight and credence. To be pragmatic, they (fieldworkers) took the strain off the teachers, as it can be difficult to get teachers on board.’

Questionnaire data provided further evidence that the fieldworkers were instrumental in ensuring data quality. The accuracy of the postcode data was a good indication of students feeling reassured information would remain confidential. In the first school, 110 students completed questionnaires, 96 questionnaires were administered by a fieldworker and 14 questionnaires by a teacher, with no fieldworker present. The proportion of students reporting correct postcodes where fieldworkers were present totalled 92% \((n = 88)\), compared with 57% \((n = 8)\) in the teacher-only class. With the overall proportion of students reporting a correct postcode in the study totalling 86% \((n = 2591)\), the poorer level of reporting in the teacher-only setting may well indicate a lack of trust reporting personal information without a fieldworker present. Compared with other studies, the accuracy of the postcode data as a proxy for assurance of confidentiality indicates the important role of the fieldworkers. Following the findings from this first school, all assemblies and introductions to questionnaire completion made specific reference to postcode data being used to determine socio-economic status, rather than to identify individuals. In addition, respondents were invited to a face-to-face sexual health interview, and 16% \((n = 475)\) of students volunteered and included their contact details. This further underscores the trust elicited by the fieldworkers, as reported by one teacher:

‘The students were 100% more likely to be honest because fieldworkers assured confidentiality.’

With teachers administering only 14 of 110 questionnaires in the above example, we are mindful that our assertions are by no means conclusive. Nonetheless, we recommend using fieldworkers to administer surveys in schools whenever possible. Identifying and resourcing fieldworker administration at the planning stages of a study can ensure that time, budget and logistic resources are available. In this study, where schools were limited to one city, fieldworker administration was both feasible and resourced, though this may prove challenging for studies covering a wide geographical area.

Discussion

Schools offer a cost- and time-effective means of accessing a large and relatively representative sample of young people. As such, efficient recruitment in school settings is vital to the management and ultimate success of the research. Despite the extensive use of school-based research, there appears to be little explicit information on recruitment best practice among the peer-reviewed literature. Experiences recruiting 3007 students from 16 London schools have highlighted a number of key recommendations in terms of (i) planning
school-based research, (ii) engaging schools and (iii) engaging students (see Box 1).

It is evident that in addition to a number of our recommendations being standard procedure in survey-based research in schools, we have implemented innovative strategies that contributed significantly to gaining support and cooperation for our research from both schools and students. Specifically, we consider recruiting schools and students through face-to-face invitations, the questionnaire wordsearch task for early completers and the use of fieldworkers, the most significant strategies contributing to the successful completion of this fieldwork. In terms of planning, recognizing the large discrepancy between the school enrolment and students present in school on the day of data collection was unquestionably the most important lesson learnt.

Given the challenges of collecting sexual health data among adolescents, the high participation level in this study is particularly noteworthy, indicating that this model was effective in recruiting both schools and students. We recommend the approach outlined here to researchers across disciplines who intend to conduct school-based studies.

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