

Assessing tobacco use in multi-ethnic communities

Report of the PATH funded project – Use of tobacco and related substances by ethnic minorities: the development of a culturally valid measure

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1 Summary

Introduction

Data about tobacco use in a range of ethnic groups are usually collected by questionnaire, either by self-completion or face-to face interview. Recent research has shown that surveys of the use of tobacco and related substances by members of ethnic minority groups in the UK have given insufficient attention to translation procedures, comprehensiveness, appropriateness and cultural sensitivity.

Aims & Objectives

The main aim was to develop cross-culturally valid questionnaires that can be used in multi-ethnic surveys to collect high quality data on the use of tobacco and related substances.

Methods

The groups chosen were the four largest ethnic minority groups in Scotland, that is Chinese Cantonese speakers, Indian Sikh Punjabi speakers, Pakistani Urdu speakers and Bangladeshi Sylheti speakers.

Nine key categories of questions were identified: the smoking of cigarettes, bidis, cigars, pipes and hookahs, smoking cessation, dependence, context of smoking and the use of smokeless tobacco. A questionnaire was compiled in English containing key questions on these categories of tobacco use. The Health Survey for England 1999 was used as the primary source of questions and their translations. Other surveys were used when a question was not available. Where a question had not been translated by any previous surveys, our bilingual co-workers were asked to translate.

Four bilingual co-workers were recruited, each of whom recruited a panel of ten lay people from their community to be consulted about the translated questionnaire and related issues during the project. Individual interviews with each member of the panel assessed the cultural and linguistic appropriateness of each tobacco-related question for use in the participant's community. Discussion groups were carried out with male and female subgroups of the Punjabi, Urdu and Cantonese panels and one with Sylheti men. These reviewed the translations for each question to achieve consensus. A questionnaire was developed using the modified questions and was field tested by administering it to a sample of up to 20 respondents from each language group. To ascertain cross-cultural equivalence and comparability of each language version with each other, a final discussion took place between members of the research team (LH, SH, RSB) and three co-workers. Then the research team met to review the questionnaire structure and format.

Results

Co-workers had difficulty in conveying successfully to the panel the nature of the task. Some panel members found the interview task somewhat long, repetitive and confusing. Punjabi and Urdu speakers rarely used a single language in the interviews, discussion group and field-testing.

The Chinese community did not use bidis, hookahs or smokeless tobacco. These categories were excluded from the Chinese questionnaire. It was unacceptable for Punjabi Sikh people to use tobacco. For Urdu speaking Pakistanis there was no outright taboo on tobacco, particularly for men, but it was not encouraged as people were aware of its negative effects. Smoking was not wholly acceptable within the Bangladeshi community, particularly among women. It was acceptable to use paan and this was common amongst women as well as men. Panel members thought that people from these communities would answer questions about smoking and tobacco use fairly truthfully if the purpose was medical research and the results were kept completely confidential.

Many changes to the original translations of the questionnaires were necessary. These included re-phrasing of sentences, change of expression, substitution of more easily understood words, addition

of words to clarify meaning and modifications to ensure cultural appropriateness. After team discussion the majority of questionnaire items were deemed comparable and equivalent across language groups. A further question was added to the final questionnaire to allow current smokers of cigarettes or bidis to specify regularity of smoking: '*Do you smoke [cigarettes/ bidis] regularly, or do you smoke them only occasionally?*'.

Outcomes

All the original aims and objectives have been wholly or partially met and the project has:

- shown that changes were necessary in existing translations of key tobacco-related questions, including those prepared nationally
- developed new translations of questions
- compiled a set of core questions developed in each language, including some culture-specific questions
- constructed a tobacco-related questionnaire which has been tested for understandability, linguistic and cultural appropriateness and face validity for use with Urdu, Punjabi, Cantonese and Sylheti speakers
- produced Cantonese and Sylheti questionnaires in an innovative way which allows standardisation of questionnaire administration - the oral Cantonese is written using the standard Chinese script, and the Sylheti is written phonetically using Roman script
- demonstrated the practical and organisational challenges of carrying out research with several different ethnic groups in the community
- made some recommendations for future work developing this field of inquiry.

2 Introduction

There are major barriers to the accumulation of reliable information on ethnic minority groups, particularly newer and older immigrants and refugees who may have little or no competency in English. Approximately 23% of immigrants to Britain born in China, Bangladesh, India and Pakistan have no functional skill in English and 70% cannot function fully in an English-speaking social environment.[1] There has been insufficient acknowledgement of the issues this raises in relation to epidemiological studies and surveys. In the health domain self report data are gathered for several purposes using a variety of methods ranging in precision from casual questioning through unstructured or semi-structured qualitative interviews, to standardised interview schedules and self completed questionnaires. These are produced with varying degrees of refinement. Some undergo extensive testing for validity, responsiveness and reliability, others little or none.

Measurement error results from four major sources. First, latent variables are not shared across languages. This might be the case with descriptions of mental well-being for example.[2] Second, from the original selection of questions and response constraints, with respect to ambiguous wording, lack of clarity, awkward or inappropriate categories and the order and context in which the items are presented. Third, from the respondents themselves, in relation to lack of understanding, misinterpretation or confusion, lack of motivation and/or the perceived social desirability of certain answers. Fourth, from researchers not being informed about the populations to be sampled, for example not being familiar with cultural norms and conventions and failing to consult translators about the appropriateness of questions.

In the health research and health care fields translation/adaptation of interview schedules and questionnaires from English into other languages has suffered from faults in relation to cultural hegemony, failure to ensure that the phenomenon of interest is present in all target groups, lack of salience of content, the non-equivalence of concepts, assumptions about willingness to disclose certain types of information and the use of levels of language not easily comprehensible to the less well-educated.[3]

Currently data about tobacco use in a range of ethnic groups are collected by means of survey instruments, either questionnaires or face-to face interviews, based upon self-report. These were originally designed for native English speakers and, over time, have been translated directly into languages spoken by ethnic minority groups. Self report data may assess some phenomenon within a particular group, say, satisfaction with care and, sometimes, be used to monitor changes over time. This requires only that the measure used is salient to and appropriate for the group concerned and is valid and reliable. However, if the data are to be used to make comparisons between groups as in clinical trials and most epidemiological studies, then the questions must be conceptually and functionally equivalent and salient for all the groups compared.

There is evidence to show that surveys of the use of tobacco and related substances by members of ethnic minority groups in the UK have been seriously flawed in relation to translation procedures, comprehensiveness, appropriateness and a lack of cultural sensitivity. Previous research carried out in this department reviewed national and local surveys of tobacco and alcohol use and found that only minimal methodological requirements for the cross-cultural adaptation of questionnaires had been met.[4] These limitations may have been partly responsible for the large differences over short time frames in the prevalence of smoking recorded in national surveys. In addition, a pilot study with lay members of the Bengali-speaking community identified a number of cultural and linguistic errors in existing Bengali questionnaires on tobacco and alcohol use.[5] Thus, it has been shown that it is vital that lay people, preferably monolingual, are involved in the development of questionnaires and interview schedules in order to achieve cultural and linguistic appropriateness.

3 Aims & Objectives

Missing phrase? Eg The aim of this project was to develop, through qualitative research with Punjabi, Urdu, Bengali and Cantonese speakers, a cross-culturally valid instrument that can be used in Scottish surveys to collect high quality data on the use of tobacco and related substances.

The specific objectives were:

- To ascertain which are the key questions in existing survey instruments concerning the range of tobacco and related substances consumed in the four language groups.
- To assess cultural acceptability and sensitivity of the questions.
- To test the conceptual equivalence of the questions in each of the selected languages.
- To modify the questions in each language as necessary.
- To develop supplementary questions as required.
- To ascertain the optimal mode of administration of questions.
- To deduce general principles concerning modes of enquiry into lifestyle factors with ethnic minority groups.

4 Target Market

Accurate and reliable data on the use of tobacco and related substances (such as paan) is essential for the development and evaluation of programmes aimed at the reduction and prevention of the use of these substances in ethnic minority groups. This project aimed to take steps towards increasing the validity of tobacco-related data gathered from the Pakistani, Chinese, Indian Sikh and Bangladeshi communities and so to contribute to initiatives and programmes aimed at prevention and intervention.

In addition, the principles of good practice developed through this project will provide a sound basis for other surveys.

5 Project Management

The project was carried out within the department of Community Health Sciences, Public Health Sciences section. Professor Raj Bhopal was the principal investigator, and he and Dr Sonja Hunt were the project grantholders. Dr. Amanda Amos was involved in the initial development of the research but her collaboration ceased when her team was appointed to provide external evaluation of PATH-funded projects. Lisa Hanna was employed as research associate on the project and was responsible for day-to-day project management and administration. Regular project meetings took place between the research associate and grantholders to review progress and discuss project development. The University of Edinburgh Finance Department provided finance monitoring and support. Professor Bhopal's secretary, Tori Hastie, worked with Lisa Hanna to maintain the project's budget and financial transaction records.

6 Methods

6.1 Selecton of ethnic/ language groups to be studied

We decided to attempt to develop cross-culturally valid tobacco questionnaires in a multicultural sample consisting of four language groups. The four groups chosen were the four largest ethnic minority groups in Scotland and were as follows:

Pakistani Urdu speakers
Chinese Cantonese speakers
Indian Sikh Punjabi speakers
Bangladeshi Sylheti speakers

We decided to concentrate on ascertaining the face and content validity of verbally administered questionnaires rather than self-completed questionnaires, as literacy amongst certain ethnic minority groups who require non-English language versions of a questionnaire can be low.

6.2 Ethical approval

As this project recruited volunteers from the community to participate in the research, it was unlikely that formal ethical approval from Lothian Research Ethics Committee was necessary. Nevertheless, the proposal was submitted to the Chairman of the committee in order to inform him of the study and confirm ethical approval was not required. Departmental ethical guidelines developed by the Social Processes, Society and Health Inter-disciplinary Group based in Public Health Sciences (entitled "Ethnic standards for social research involving human participants: code of practice") were adhered to. Participants and bilingual co-workers were also informed that data might be made available to the project's evaluators (anonymised in the case of research participants).

6.3 Literature review and question identification

An existing literature review on the development of cross-culturally valid measurement of tobacco and related substances in ethnic minority groups was updated via the following methods:

Databases/ web-based information sources searched:

- MEDLINE
EMBASE
- CINAHL
- Web of Knowledge: ISI Science citation index
- ISI proceedings
- BIDS: International Bibliography of Social Sciences
- PsycInfo
- Cochrane Library
- Data-archive.co.uk
- Department of Health/ Minority Ethnic Communities and Health website
- Kings Fund- reports funded by the NHS Ethnic Health Unit
- ASH Scotland
- Scottish Ethnic Minority Research Unit
- Centre for Research on Ethnic Relations at Warwick
- Ethnichealth-northwest.net
- Office of National Statistics
- General Registry of Scotland

Some keywords used:

Tobacco, smok*, bidi, biri, cigar*.ethnic*, minorit*, Pakistan*, India*, Bangladesh*, Chinese, China, Urdu, Punjabi, Sylheti, Cantonese, valid*, cross cultural, questionnaire.

Key national tobacco-related surveys designed for use in either the general population or minority ethnic populations were obtained to identify key questions for inclusion in a questionnaire on tobacco use. Surveys examined were as follows:

Health Survey for England 1999 (HSE '99) [6]
Black and Minority Ethnic Groups In England (first and second lifestyle surveys) (BMEG 1 & 2) [7] [8]
Fourth National Survey of Ethnic Minorities [9]
Health and Lifestyles of the Chinese population in England [10]
General Household Survey [11]
Scottish Health Survey [12]

Staff at the National Centre for Research, responsible for the forthcoming Health Survey for England 2004, were contacted to query whether their tobacco-related questions differed from those used in the 1999 survey. The same question set was being used and so no more up-to-date questions or translations were available for inclusion in this study.

In order to produce a questionnaire of limited length that could feasibly be developed and cross-culturally validated in the time available we decided to focus on tobacco-related behaviour. Hence, a number of question categories were excluded, such as questions on alcohol use; questions relating to attitudes and knowledge about tobacco use and smoking cessation; and questions on demographic characteristics.

Nine categories of key questions were identified as follows:

- Cigarette smoking
- Bidi smoking
- Cigar smoking
- Pipe smoking
- Hookah smoking
- Cigarette smoking cessation
- Dependence on cigarettes
- Context of cigarette smoking
- Smokeless tobacco (paan, chewing tobacco) use

A questionnaire was compiled in English containing key questions from each of these nine categories of tobacco use. Where these questions had been previously translated into Punjabi, Urdu or Chinese for use in national ethnic minority surveys, the translated items were collated. Our previous research had found that, of the national surveys, the Health Survey for England had used the most sophisticated methodology for ensuring translation quality. Therefore, the Health Survey for England was used as the primary source of translations. Where a chosen question had not been translated by the Health Survey for England, the other national surveys were used as a source of translations, followed by local surveys where appropriate. Where a question had not been translated by any previous surveys, bilingual co-workers were asked to make a translation of the question for assessment and discussion by research participants.

6.4 Bilingual co-workers

Four bilingual co-workers were recruited and appointed by advertising through a range of community groups, places of worship, job centres, Lothian Health Board and relevant organisations. Bilingual staff employed on a previous project carried out by the researcher were also contacted and invited to apply for the post. The following table shows the numbers of applicants for each post:

Post	Number of applicants (men/ women)	Number shortlisted applicants interviewed for post (men/ women)
Cantonese/ English	6 (2/4)	3 (1/2)
Punjabi/ English	2 (0/2)	1 (0/1)
Urdu/ English	7 (1/6)	3 (0/3)
Sylheti/ English	1 (1/0)	1 (1/0)

Appointed bilingual staff were employed on an ad-hoc (i.e. casual staff, non-salaried) basis and their rate of pay was slightly more than the rate paid by the City of Edinburgh Council to its interpreters and translators. (A flat rate was paid for each completed interview to cover recruitment time). Appointees were fluent in English and either Urdu/ Punjabi/ Sylheti Bengali or Cantonese. The bilingual co-workers were given a thorough training, over three two hour sessions, on the background and rationale of the study, field work and interviewing skills (See Appendices for selected training materials). Our Bangladeshi appointee failed to attend training and was subsequently non-contactable for some time. The appointee had been the sole applicant for the post. Recruiting people with the requisite skills in the spoken Sylheti dialect and written Bengali, with the time and inclination to carry out research work, was difficult. After several months we recruited another Sylheti-speaking bilingual project worker. The Urdu-speaking appointee withdrew from the study after completing three interviews and another project worker was appointed from the pool of interviewed candidates. Recruitment, training and retention issues were more challenging than expected.

6.5 Interviews with lay panel

The co-workers recruited a panel of ten lay participants to be consulted throughout the project. Equal numbers of men and women were recruited and selected to ensure a wide range of ages were represented. In order to access the views of people who would require a non-English version of a tobacco-related survey questionnaire, participants were selected, where possible, on the basis of the language in question being their only spoken language or their main language. Information sheets and consent forms (see Appendices) were developed in accordance with PATH's and our department's guidelines and translated into Punjabi, Urdu, Bengali and Chinese by a professional translating service.

Individual interviews were designed to assess cultural and linguistic appropriateness of each tobacco-related question for use in the participant's community. Participants were asked to give their opinion on the understandability of each question, to explain the meaning of particular words or phrases, and to suggest preferable ways of asking the question. In addition, they were asked whether they felt that respondents from their community would give truthful answers. Some background information about community attitudes towards, and acceptability of, smoking and tobacco use was also gathered. It was not necessary to query every question on the questionnaire as many items were repetitive and varied only in the type of tobacco product (e.g. cigarettes, cigars, bidis) at issue. Where a questionnaire item differed from a previous item only in the word used to refer to the tobacco substance being consumed, that particular sentence construction was queried only on the first occasion of its use. Once finalised via interviews and discussion groups, the question wording was transferred to the other similar items by substituting, for example, the word 'cigar' for 'cigarettes'. Interviews lasted between approximately 20 minutes and 90 minutes, excluding introduction and explanation. Approximate average interview time, including introduction and explanation, was less than one hour. Interviews took place either in the participant's own home or at community group premises. Interviews were audiotaped for reference.

Initially co-workers made notes throughout the interview following a topic guide. When the new Urdu-speaking co-worker and Sylheti-speaking co-worker were appointed, insights had been gained into a better way of carrying out the interviews. A new interview proforma was developed in which co-workers wrote the interviewee's responses in designated spaces in the interview schedule. Interview findings were fed back to the English-speaking researcher (LH) and discussed after every two interviews. Another team member, RSB, also listened independently to the Punjabi and Urdu tapes and provided extensive notes and comments. Interview data were further recorded and collated by the researcher.

Age and gender of Cantonese interview sample

	Men	Women
25-34	2	1
35-44	---	1
45-54	1	1
55-64	1	1
65 & over	1	1

Age and gender of Punjabi interview sample

This table indicates that we were not able to recruit participants over the age of 65 years.

	Men	Women
25-34	1	1
35-44		2
45-54	2	1
55-64	2	1
65 & over		

Age and gender of Urdu interview sample

This table indicates a lack of men in the middle-aged category.

	Men	Women
20-34	2	2
35-44	2	1
45-54		
55-64	1	2
65 & over	1	

Age and gender of Sylheti interview sample

	Men	Women
25-34	1	1
35-44	2	1
45-54	1	
55-64		2
65 & over	1	1

6.6 Discussion groups

Two discussion groups were carried out with each of the Punjabi, Urdu and Cantonese participants and one with Sylheti men. For the South Asian groups, separate discussion groups took place for men and women. Gender separation was thought to be less important by the Cantonese co-worker but groups were separated into younger and older participants. Due to time constraints it was not possible to carry out the female discussion group with the Bangladeshi Sylheti-speaking participants. The discussion groups took place at a variety of locations. Both Chinese discussion groups took place at the co-workers' home, at her suggestion; she felt this would make participants more comfortable. The female Punjabi discussion took place at a local Sikh community group; the male Punjabi discussion took place after the weekly religious ceremony and meal at the local Sikh Gurdwara. Urdu and Sylheti discussion groups took place in the Department of Public Health Sciences. At all locations, participants were offered light refreshments. Each discussion lasted two hours. The following table shows the attendance of the participants at the discussion groups.

Language group	Number of participants attending	
	<i>Discussion group 1</i>	<i>Discussion group 2</i>
Cantonese	4 (2 men, 2 women)	6 (3 men, 3 women)
Punjabi	3 men	4 women
Urdu	5 men	5 women
Sylheti	2 men	----

In addition, the researcher (LH) and the relevant co-worker were present. RSB attended the Punjabi, Urdu and Sylheti men's groups. The discussion groups reviewed the suggested translations for each question and attempted to achieve consensus on the best way of asking each question, incorporating individual's comments from the interviews.

After attending interviews and discussion groups, participants were paid for their involvement with the study. The Chinese co-worker produced a Chinese thank-you card using her home computer; the other language groups received a thank you card in English to acknowledge the team's gratitude for their participation.

6.7 Question modification

After assessing the cultural acceptability and sensitivity of the questions through individual interview and group discussion with each lay panel, questions were modified, where appropriate, in accordance with the comments by the lay panel. Bilingual co-workers produced handwritten versions of the modified questions. One co-worker requested that another person fluent in her language proof-read the questionnaire. This was carried out and a number of spelling and grammatical errors noted, which were subsequently rectified by the co-worker.

6.8 Field testing of modified questionnaire

A questionnaire was developed using the handwritten questions produced by the co-workers. Handwritten questions were photocopied, cut and pasted into a questionnaire format with appropriate instructions. After each question a table was inserted into the questionnaire in order that the co-worker could provide written feedback on an individual's response to a particular questionnaire item (see Appendix for field testing questionnaire).

The questionnaire was field tested by administering it to a sample of up to 20 respondents from each language group. Co-workers recruited the field testing sample via community groups, personal contacts and community events. In addition to noting the answers given by respondents the co-workers were asked to note any instances of hesitation, puzzlement or requests for clarification. Co-workers were paid per completed field testing questionnaire and respondents were paid for their participation. Respondents signed a consent form which also acknowledged receipt of the payment. The Chinese consent form was translated by the co-worker; the Urdu and Punjabi co-workers said that most people would prefer an English version of the form, and if any respondents were not literate in English the co-worker would provide a verbal translation. It was not possible due to time constraints to carry out field testing for the Sylheti questionnaire. Overall, the respondents did not have any problems understanding the questions. The following tables show the characteristics of the field testing sample:

Cantonese field testing sample (n= 20):

	Men (Age range)	Women (Age range)
Ever smoked cigarette	13 (26-79 years)	3 (43- 83 years)
Never smoked cigarette	0	4 (38-85 years)
Ever smoked cigar	4 (71-78 years)	0
Ever smoked pipe	2 (71-78 years)	0

Urdu field testing sample (n= 20):

	Men (Age range)	Women (Age range)
Ever smoked cigarette	13 (24- 68 years)	2 (24-31 years)
Never smoked cigarette	2 (29-33 years)	3 (21-67 years)
Ever smoked bidi	3 (31-63 years)	0
Ever smoked cigar	4 (30-63 years)	0
Ever smoked pipe	2 (31-34 years)	0
Ever smoked hookah	4 (31-66 years)	0
Ever used paan with tobacco	0	0
Ever used paan without tobacco/ paan masala	2 (31-34 years)	0
Ever used chewing tobacco	0	0

Punjabi field testing sample (n= 10):

	Men (Age range)	Women (Age range)
Ever smoked cigarette	4 (24-55 years)	1 (35-44 years)
Never smoked cigarette	3 (25-37 years)	2 (19-52 years)
Ever smoked bidi	2 (46-48 years)	0
Ever smoked cigar	2 (46-48 years)	0
Ever smoked pipe	2 (46-55 years)	0
Ever used paan with tobacco	0	0
Ever used paan without tobacco/ paan masala	1 (46-55 years)	1 (45-54 years)
Ever used chewing tobacco	1 (40-49 years)	0

6.9 Final team discussion

To ascertain cross-cultural equivalence and comparability of each language version with each other, a final discussion took place; members of the research team were present (LH, SH, RSB) and three co-workers. The Urdu-speaking co-worker was unable to attend. For each questionnaire item, the bilingual co-worker read out the question in their language and provided a literal back-translation into English. In this way, each question was checked for equivalence and comparability to each

other and to the English, and changes made to ensure comparability where necessary. The co-workers also provided some commentary on their experience of the project.

6.10 Questionnaire modification

After the final team discussion, the research team met to review the questionnaire structure and format. Where additions or modifications were decided upon, bilingual project workers provided further handwritten questionnaire items for inclusion in the questionnaire.

6.11 Production of final questionnaire

Handwritten questionnaire items in each language were cut and pasted into a comprehensive dual-language format (English and the ethnic minority language) questionnaire. Ideally, we would have preferred to produce typed electronic documents for each language version. However, this would have required more time, expertise and funding than was available.

6.12 Dissemination

Throughout the project, opportunities were taken to disseminate progress. For example, a seminar was given at the ASH Scotland's researchers' group meeting, and a paper presented at an international conference for European Migrant Health in Rotterdam (23-25th June 2004). Further papers and presentations are planned.

7 Outcomes

7.1 Methodological and administrative issues

Originally we had intended to test the language ability of applicants for the post of bilingual co-worker, by means of a language test administered by an external institution. We decided that applicants would be asked at interview if they would be prepared to take a language test if necessary and, if no formal evidence of language ability was present, applicants would be subsequently tested. In practice, language tests were not carried out as each of the appointees appeared by their CV to demonstrate sufficient language skills.

Two of the four initially appointed co-workers completed the project. One project worker failed to attend training and a replacement was found after several months. One project worker was unable to continue in post after completing three interviews and a previously shortlisted candidate completed the project.

At interview, applicants had been asked whether it would be appropriate for them to interview people of the opposite gender from their community. All applicants had said that this would be acceptable; however, one co-worker's husband did accompany her to some of the interviews with men.

The post for work with the Bangladeshi community had been advertised as requiring reading and writing skills in formal Bengali and oral skills in the Sylheti dialect. Consultations with Bangladeshi people and contacts indicated that people who can read and write Bengali and can also speak fluent Sylheti may be difficult to find. The option of carrying out the study in Glasgow had been considered, but a review of population statistics showed that Glasgow has a smaller Bangladeshi population than Edinburgh and it was decided it would therefore not be advantageous to relocate the Bangladeshi arm of the study to Glasgow. In addition, it was found that interpreting services in Edinburgh and Glasgow had few or no Sylheti speakers in their employ. After some time, a local Bangladeshi linkworker, who was not a native Sylheti speaker but who had good

Bengali and Sylheti skills, was appointed to the post. The questions were translated by the co-worker into Sylheti, recorded using an audio-recording and written down phonetically using the English script.

Whilst translations into Cantonese of a number of our questions had been made by previous national surveys, such as the Fourth National Survey and Health & Lifestyles of the Chinese, these questions had been recorded in formal written Chinese using a simplified script. However, there are differences between oral and written Cantonese. Simplified Chinese script is more appropriately read by Mandarin speakers than Cantonese speakers (information supplied by Cantonese-speaking co-worker). Initially, the co-worker converted the simplified script into a more appropriate form of written Chinese and used these questions as probes throughout the interviews. After the first few interviews, this misunderstanding was identified and it was emphasised that the co-worker should take comments on the existing translations. For few interviews, the co-worker then used the existing written questions as probes, rather than the oral form of these questions. Several interviewees did not comprehend the questions, or had laughed at them as they sounded so formal and unfamiliar, since they did not reflect the normal way people speak. This situation arose because of a misunderstanding by the research team about the form of the original items. This issue was resolved by the co-worker making her own translations of the English items into oral Cantonese for assessment during the final interviews and the discussion groups as there were no existing recordings of oral questions.

Co-workers varied in their ability to complete the tasks as itemised on the task checklist given to them during training (see Appendix). There was variation in the efficiency of completing consent forms and interview details forms and in labelling interview tapes.

At the beginning of the research using the interview topic guide, some co-workers reported that participants found the interview schedule uncomfortably repetitive and long, so the researcher worked with the co-workers to minimise repetition and length. However, it is possible that this led to reduced interview quality. There was some disparity between the estimates of length of time of the interviews made by some of the co-workers and the length of time indicated by the tape recordings. When interviews were much shorter than the recommended time of 60-75 minutes, the researcher produced an amended interview schedule that re-introduced some of the depth. However, certain co-workers found that this was also too repetitive in practice.

Initially co-workers were given an interview topic guide and asked to take notes throughout the interview. In subsequent interviews (7 Urdu and 10 Sylheti), however, a interview proforma was developed which standardised the questions the co-worker needed to ask and allowed space for the answers or notes to be recorded on the form in order to increase the quality and consistency of data recording.

Co-workers reported having to repeatedly telephone participants to explain the study and arrange interview times, and cancellation occurred in a few instances. Similarly, discussion groups were sometimes difficult to arrange, and rates of attendance varied. In addition, some co-workers' availability for feedback sessions with the researcher was less frequent than anticipated. It was also difficult to maintain contact with two co-workers, one who had been appointed but who did not attend for training, and another who left the country but still held participants' information.

Overall, co-workers reported after the first interviews that the probes designed to query acceptability of questionnaire items were repetitive and, prior to the production of an interview proforma to standardise interviews, co-workers limited the use of probes for each item. Co-workers reported that repeating the cultural acceptability probes after each question felt awkward to them and 'seemed silly' to participants. Co-workers also reported that participants tended to answer the questions, rather than comment on their linguistic or cultural appropriateness, and that they

required repeated explanation of the assessment task. Co-workers often struggled to remind participants of the nature of the task and found participants' inability to understand frustrating. Participants often found the interview schedule long, complicated and confusing. In addition, the Cantonese speaking co-worker reported that participants who could read Chinese found it difficult to respond to the verbal questions alone and wanted to look at the written Chinese script, interpreting the task as a test of their memory otherwise.

When a structured system of probing each question was adhered to, it was found that participants often stated initially that they did understand a question, when subsequent probing indicated that their understanding may vary from the intended meaning of the question.

Field testing with Punjabi Sikhs was truncated after 10 questionnaires due to the difficulty in finding Sikhs who smoked. Two Punjabi smokers from outside Edinburgh were recruited by the research team and the co-worker's personal contacts and responded to the field testing questionnaire over the telephone.

In all groups, co-workers felt that the £5 offered to field testing respondents was not a major factor in influencing motivation to take part.

Co-workers varied in their ability to follow the field testing questionnaire and provide written feedback as requested.

For the Punjabi and Urdu-speaking groups, it was found throughout the interviews, discussion group and field testing that participants and respondents rarely used a single language. Whilst a minority of participants and respondents were monolingual in Punjabi or Urdu, the majority spoke some English and would often use both languages when responding to probes in the interviews and discussion groups and to questions during the field-testing phase of the questionnaire.

Feedback was obtained from the co-workers at each stage of the research process and summarised in the final team discussion. Co-workers reported enjoying taking part in the project and that they had developed new skills. They also felt that participants had enjoyed their role in the research, and that the discussion groups had been particularly productive as individuals had become accustomed to the unfamiliar task of commenting on question acceptability throughout the one-to-one interviews. Co-workers reported that community members were pleased to have an opportunity to voice their opinions, be listened to and contribute to research. Co-workers felt that the design of the project had, in general, been good; individual interviews followed by discussion groups seemed to work well with these communities and were the best way of investigating cultural and linguistic acceptability of questionnaires. However, as stated earlier, some participants had found the interview task somewhat long, repetitive and initially confusing.

7.2 Linguistic/ cultural findings

Interview and discussion group results will be presented for each language group separately; final team discussion results encompass all language groups.

7.2.1 Cantonese group

As outlined above, the final couple of interviews and the discussion group assessed the acceptability of the bilingual co-worker's translations of questionnaire items into oral Cantonese. The following results were obtained:

- Do you smoke cigarettes at all nowadays?*
 Participants felt that the inclusion of the phrase 'at all' (*choi soon hai sik sui sui*) was unnecessary as the phrase was cumbersome and might confuse respondents. The researchers requested that the phrase be included in order to maintain strict comparability to the English. However, as will be seen in the next section, the phrase was removed eventually, as 'at all' was also difficult to translate in other languages and its omission was not considered to alter significantly the meaning of the question.
- Which brand of cigarette do you usually smoke?*
 The co-worker discussed the translation of 'brand' with the research team and confirmed that it was acceptable to translate the term as the more colloquial 'which kind' (*pin ya chek yin*). Participants confirmed that this was acceptable.
- About how many cigarettes a day do you usually smoke on weekdays? About how many cigarettes a day do you usually smoke on weekends?*
 Rather than the Cantonese translation for 'weekdays' and 'weekends' in the above questions it was thought preferable to replace these terms with the terms 'working days' (*fan cone yan*) and 'holidays' (*ka kay* or the more colloquial *tau kuen*) as the majority of Chinese people are employed in the catering sector and the division of the week into weekdays and weekends is not applicable to them. However, after subsequent discussions between the co-worker and the research team it was decided that these questions would not be applicable to retired or unemployed people and that a single simplified question "About how many cigarettes do you smoke a day?" should be asked instead. The word 'usually' (*tung sheung*) was omitted; participants felt the sentence was less confusing without it due to the slight overlap in meaning with the translation for 'about' (*tai yuk*).
- Here is a list of things some people have used to give up smoking. Could you tell me please which, if any, you have used? On your own/ help from friends and family/ advice and help from the health services/ pharmaceutical means (nicotine replacement therapy, Zyban)/ alternative therapies/ Other*
 It was agreed that the word 'here' (*yee ha lit*) could be omitted from the question as it was not necessary and the sentence would be simpler without it. The final response option 'other' (*kay tai*) was thought to be confusing and participants agreed it should be replaced with 'what other methods' (*chung yao mo kay ta fong fa*).
- Did you smoke regularly, that is at least one cigarette a day, or did you smoke them only occasionally? And for how many years did you smoke cigarettes regularly?*
 It was decided to use the term *zap kuan sing* as a translation for 'regularly' in both of the above questions. The phrase *sing yan* is a slightly more accurate translation of 'regularly' but cannot be used within the second question's sentence structure, and so for reasons of consistency and to avoid confusing respondents it was decided to use *zap kuan sing* (more like 'habit') in both items. Some participants felt the first question was too long and that it should be split into two questions, but the research team decided that in the interests of comparability to the English and other languages, it should remain as a single question.
- And for approximately how many years did you smoke cigarettes regularly?*
 The inclusion of the translation for 'approximately' was thought by the participants and co-worker to be somewhat cumbersome and the research team confirmed after the discussion groups that it could be excluded without altering significantly the meaning of the question.

Questions on cigar use

- The co-worker had used the translation for 'cigar' that was present in the existing written question in simplified Chinese from the Health & Lifestyles of the Chinese survey: *su ka yin*. Participants felt that the word *yin* should be omitted as *su ka* was more appropriate for Cantonese speakers. The co-worker explained that *su ka yin* would be preferable for Mandarin or Taiwanese speakers.

Questions on pipe use

- *Do you smoke a pipe regularly, that is at least one bowl of tobacco a day?*
The word 'bowl' had been translated as *wuin*. Participants interpreted *wuin* as a bowl of the type used to contain rice. It was agreed that substituting the word *tok*, 'pipe', was more appropriate.
- *How many ounces of pipe tobacco do you smoke a day?*
Whilst there was some discussion around the acceptability of using the word 'ounces' (*on si*), participants agreed that this was the best alternative. It was considered that asking how many pipes (*tok*) of tobacco was smoked might lead to some confusion amongst the elderly as *tok* may be interpreted as a different Chinese weight unit.
- *Do you inhale the smoke (take it into your lungs)?*
Participants felt it was particularly important to include the word 'smoke' (*yin*) in the question less respondents interpret the item as meaning swallowing the whole pipe into their lungs. After the discussion group, the co-worker also added the word 'pipe' to the phrase 'smoke' as some participants were interpreting the smoke as cigarette smoke.

Other forms of tobacco use

Interviews and discussion groups showed that the Chinese community in Scotland do not use bidis, hookahs or smokeless tobacco. An expert in tobacco was consulted to ask if there was an equivalent to bidis used by Chinese people, and replied that there was not. Therefore these three categories were excluded from the Chinese questionnaire prior to field testing.

A range of opinions was expressed about overall attitudes to smoking. During the interviews, most participants agreed that smoking was particularly taboo for women, especially older or more traditional women within the Cantonese community, who would therefore be more likely to conceal smoking behaviour if asked about it via a questionnaire. Men were seen as likely to admit to smoking. However, during discussion groups the consensus opinion was that women too would give truthful answers during an interview or questionnaire provided their anonymity was assured. Young people would be likely to deny smoking to their parents or relatives, but more likely to admit smoking in a confidential questionnaire.

Field testing results

After discussion with the Chinese co-worker, it was decided that she would write the questions in oral Cantonese using the Chinese script. Initially, the co-worker stated that it would be unacceptable to write the oral form using the Chinese script, as it 'looked funny, bad' as written Chinese is commonly more formal; however, for purposes of reproducibility of the verbal Cantonese questions, the co-worker agreed to write them as spoken for interviewers to read out exactly as printed.

Overall, field testing respondents found the questionnaire simple and straightforward. A few minor modifications were necessary. Firstly, it was discovered that the co-worker's translation of a smoking cessation methods question was not equivalent to the English. The English response was "Pharmaceutical means (nicotine replacement therapy, Zyban)"; the co-worker's translation in Cantonese was similar to "Pharmaceutical means (nicotine, chewing gum, patches)". After

explanation to the co-worker that nicotine replacement therapy meant chewing gum and patches, the Cantonese translation was modified appropriately and the word 'Zyban' added to the response option.

The co-worker noted that there had been some hesitation on behalf of respondents before certain questions but that it had signified their thinking about the answer- for example, attempting recall of how long they had been smoking. In addition, some of the more elderly respondents had hearing difficulties and this necessitated repetition of the question and occasionally breaking down the question into shorter components.

Four male respondents had answered the question "Have you ever smoked cigars?" with an explanation that they had tried it once or twice. The co-worker had ticked the 'no' option for these questions rather than 'yes'. Similarly, two men had answered that they had tried a pipe once or twice and the co-worker had ticked 'no' in response to the question 'Have you ever smoked a pipe?'. Field testing the questionnaire took approximately 15 minutes.

Punjabi group

Due to the cultural taboo against smoking in the Sikh community, some participants repeatedly assured the co-worker that they had never smoked cigarettes or used tobacco. Knowledge about different types of cigarettes and other forms of tobacco varied greatly. Those who did not understand the translations for particular forms of tobacco (such as 'filter-tipped cigarettes' etc) were more likely to be non-smokers or women who had never been exposed to the varying types of tobacco.

After the interviews and discussion groups, the following changes were agreed upon:

Questions on cigarette use

- *Do you smoke cigarettes at all nowadays? (translation taken from HSE '99)*
The word *ajkal* was suggested as a preferable translation for 'nowadays'. The existing translation rendered the question as "Do you smoke cigarettes now (*hon*)?".
- *About how many cigarettes a day do you usually smoke at weekends? (translation taken from HSE '99)*
The phrase 'Saturday to Sunday' in Punjabi (*shumivaar ethvaar tak*) was recommended to replace the English word 'weekend' in the existing HSE translation. There was no translation of 'a day' in the existing translations and so this was inserted into the question (*ek din*).
- *Did you smoke cigarettes regularly, that is at least one cigarette a day, or do you smoke them only occasionally? (translation taken from HSE '99)*
The word *bakaidah* was used in existing translations of a number of questions on the questionnaire. This word, supposed to mean 'regularly', was not understood by the majority of participants and it was recommended that this was replaced with the word *lagatar* which participants agreed was a more understandable translation of 'regularly'. *Bakaidah* was more likely to be a word used by modern Indians, where the Punjabi has more Hindi and Urdu influences. The Punjabi spoken by Scottish Sikhs is more traditional.
- *About how many cigarettes did you smoke in a day? (translation taken from HSE '99)*
The word *bakaidah* was also included in the existing translation this question despite there being no word 'regularly' in this sentence. It was recommended that *bakaidah* be removed.

Questions on bidi use

Cigarettes and *bidis* were terms used interchangeably by the Scottish Sikh community to refer to cigarettes. It was therefore necessary to change the term *bidi* to *desi bidi* in order to denote the more traditional *bidis* common in India.

Questions on pipe use

- *Do you smoke a pipe regularly, that is, at least one bowl of tobacco a day? (translation taken from Williams et al 1993) [13]*

The existing translation did not include the word 'regularly', translating the question as "Do you smoke a bowl of tobacco every day?" and so the word *lagatar* (regularly) was inserted into the question.

Questions on hookah use

Hookah use was not perceived by participants to be relevant to the Scottish Sikh community and so the section was omitted.

Questions on smokeless tobacco use

- *Which, if any, do you use nowadays? (translation taken from HSE '99)*
The word *savan* for 'use' was perceived as a Hindi word and was replaced with '*vurtheo*'.
- *Other tobacco substances (translation taken from HSE '99)*
The word *cheez* (things) rather than *sheay* was recommended as it was less formal.
- *How many paan a day do you chew? (translation made by bilingual co-worker)*
The word *khandeo* [eat] was preferable to the word *chabdeho* [chew].
- *How long is the paan kept in your mouth? (translation made by co-worker)*
The existing translation for 'how long', *suma*, was replaced by *dir*. *Suma* can pertain to a very long time whilst *dir* relates to a shorter time span.

Some further grammatical/ spelling modifications were made to the questions after consultation with a second Punjabi-speaker.

Overall, participants agreed that it was highly unacceptable for people to smoke in the Sikh community, but that some members of the community still did so. No forms of tobacco consumption were seen as acceptable, but chewing sweet paan without tobacco was not prohibited behaviour. The reason for the strong cultural taboo against smoking is religious; there is a clear tobacco prohibition in the Sikh codes of behaviour. Participants were also aware of the negative health effects of smoking. It was perceived that smoking in women was even more taboo than in men. Female participants commented that women's roles as mothers meant that it was even more important that they safeguarded the health of their children, both during pregnancy and by setting a good lifestyle example to their offspring. Despite the strong cultural taboo against smoking, participants in general felt that Sikh people would not be offended if asked these questions if the aim of the questionnaire was clearly explained, and if it was stressed that accurate information was important for the community's health and that of their children. It was considered extremely important to emphasise anonymity and confidentiality if administering a tobacco-related questionnaire in the Sikh community in order to maximise truthfulness in answering, although participants acknowledged that if an individual did not want anyone to know they were a smoker they might not answer the questions truthfully. Overall it was considered that people from the community would be prepared to answer a health-related questionnaire.

No additional questionnaire items were suggested by participants but it was agreed during one discussion group that respondents should be thanked for their time in addition, as aforementioned, to receiving a proper introduction to the questionnaire.

Field testing

Only ten respondents completed the field testing questionnaire due to the difficulty in recruiting smokers from this community, given the cultural taboo on smoking amongst Sikhs. The co-worker reported that she had deliberately recruited people she knew to be smokers but that they often denied smoking when asked the questionnaire items. As mentioned previously, respondents often chose to answer the questions in English and the co-worker reported asking the questions in English after beginning the questionnaire in Punjabi.

During field testing it was found that the change recommended after the discussion groups, that *bidi* should be changed to *desi bidi*, had not been made, and therefore some participants continued to interpret 'cigarettes' and *bidis* as referring to the same thing. In the final questionnaire, the phrase *desi bidis* was inserted to emphasise the difference between *bidis* and cigarettes. It was also found that it was important to specify in the instructions for interviewers the units of response- for example, in answer to the question "How soon after waking do you smoke your first cigarette of the day?" a respondent had answered "first thing in the morning".

Urdu group

Following the interviews and discussion groups, the following changes were agreed upon:

Questions on cigarette use

- *Do you smoke cigarettes at all nowadays? Do you smoke bidis at all nowadays? (translations taken from HSE '99)*

The word *ghabee* was removed from the question. It was reported that the inclusion of this word, meaning approximately 'ever, sometimes', did not make sense in conjunction with the translation for 'nowadays', *ajkul*.

- *Filter-tipped cigarettes/ Plain or untipped cigarettes/ Hand-rolled cigarettes (translations taken from HSE '99)*

'Filter-tipped cigarettes' were thought to be better translated by the phrase *filter wallay cigarettes*. 'Plain' had been translated as *mamuli* (not as good, ordinary) and a preferable alternative was *begar filter wali* (without filter) and the additional *siri begar* (without end). 'Hand-rolled' had been translated literally and was thought to be more understandable if translated as 'made with hands': *hath say bnaigar*.

- *About how many cigarettes a day do you smoke on weekdays? How about how many cigarettes a day do you smoke on weekends? (translations taken from HSE '99)*

The existing translation of 'weekdays' was *hafta*. *Hafta* was thought to mean seven days, a full week from Monday to Sunday. It was suggested that the phrase 'Monday to Friday' (*pir say juma taq*) be used instead and the sentence worded as "*Aam tor pur pir say juma taq rozana kitney cigarette peetay?*". Participants recommended that the translation for 'weekends' (*haftey ikthiam*- literally 'end of weekdays') should be changed to the English word 'weekends', followed by the Urdu phrase *haftey itwar* (Saturday and Sunday) in brackets.

- *How easy or difficult would you find it to go without smoking for a whole day? Would you find it...very easy/ fairly easy/ fairly difficult/ very difficult (translation made by the first co-worker)*

A preferable way of asking the question was agreed upon which involved changing the order of the words in the original translated sentence: '*Apkay liay saradin cigarette kay beghey'r guzarna kitna mushkil ya assan ho ga?*' Participants felt that this way of asking the question

was more understandable. The co-worker making this translation explained that it was difficult to translate 'fairly' and so she had translated only 'easy' and 'difficult'.

- *How soon after waking do you smoke your first cigarette of the day? (translation made by first co-worker)*
This question was re-worded to: “*Aap subah uthnay kai kitni dair baad apnee pehli cigarette peetay hai?*”. This sentence was seen as more precise and polite than the original translation. The word *uthnay* (getting up) was thought by participants to be preferable to the more formal word *jaagnay* (waking) used, whilst replacing the original *peetay ho* with *peetay hai* was more respectful.
- *Where do you smoke? (translation made by original bilingual co-worker)*
A preferable, more colloquial way of asking the question was agreed upon: “*Ap cigarette kahah peetay hai?*”. The co-worker's translation had used the more formal '*cigarette noshi*' for 'smoke cigarettes' and '*khartay hai*' (where).
- *Have you ever tried to give up smoking? (translation taken from BMEG 2) How many times have you tried to give up? (translation taken from BMEG 1)*
The bilingual co-worker had translated 'give up smoking' as *tobacco turk noshi*. Participants recommended that the word *turk* (give up) was replaced with *chornay*, and that the word 'cigarette' be used rather than the more formal *tobacco noshi*.
- *Here is a list of things people have used to give up smoking. Can you tell me please which, if any, you have used? (translation taken from BMEG 1)*
The word 'please' was used in the English written in the Urdu script. This was replaced with *mihrbani khar kay* (please) in Urdu. As for the cessation questions above, the words *tobacco noshi* were removed as they were too formal.
- *About how many cigarettes did you smoke in a day? (translation from HSE 1999)*
The word 'about' was not included in this question and was not thought to be necessary. The word *tagreeban* could be added if necessary to denote 'about' but was not thought by participants to alter the meaning of the question, and the shorter question was favoured.
- *How long ago did you stop smoking cigarettes? (translation from HSE 1999)*
The agreed best way to phrase this question was “*Ap nai kitnay ursah pehlay say cigarette peena chore diayay?*” Participants felt that the sentence structure of the original HSE-translated question should be changed. The phrase *peena bund* had been used in the original translation to mean 'stop smoking', and this was replaced by the phrase *peena chore*. *Chore* is another translation for 'stop'- as used above in *chornay*- that participants felt was more appropriate. The co-worker explained that *bund* can be used to mean stop but also in other contexts, such as closing a door, and that *chore* is less ambiguous. The word *guzara* ('how long has passed') was also removed from the original translation as participants felt it made the question too complicated; instead, *ap nai kitnay ursah pehlay say* was used, meaning 'how long ago has it been'.
- *Six months, but less than one year (translation taken from HSE 1999)*
A better way of phrasing this response option was suggested to clarify the meaning: the item was changed to 'more than six months, or less than one year' by adding the phrase 'more than' *say zyada* and replacing 'but' *lagan* with 'or' *and*.

Questions on bidi use

- *Have you ever smoked bidis? (translation taken from Fourth National Survey)*
The word *zindagy* (in life) was in the existing translation and it was considered preferable if it was removed. By removal of this unnecessary word, the question wording was the same as that agreed was acceptable for the similar question about current cigarette smoking "Have you ever smoked cigarettes?".

Questions on pipe use

- *Do you smoke a pipe regularly, that is, at least one bowl of tobacco a day? (translation made by the first co-worker)*
It was suggested that it was not appropriate to use the word *chilm* to translate 'bowl', *chilm* being more appropriate for hookah. A preferable way of asking the question was decided upon that included the alternative phrase 'do you fill it up once per day?': "*Kya aap pipe bagedgi sai peetay hai yaani kai din main kamazkam eik bar burh kar?*".
- *How many ounces of pipe tobacco do you smoke in a week? (translation made by the first co-worker)*
It was decided that the phrase *peetay ho* (do you smoke- literally 'drink') in the original translation should be changed to the more polite version *peetay hai*.
- *Do you inhale the smoke (take it into your lungs?) (translation made by the first co-worker)*
A better way of asking the question was suggested: "*Kya aap duah under lay jatay hein?*". This version replaced the original *nigaltay* (inhale) with the more understandable *duah under lay jatay hein*, meaning 'take the smoke inside'.

Questions on smokeless tobacco use

- *Which, if any, do you use nowadays? (translation taken from HSE 1999)*
A preferable way of asking the question was agreed upon: "*Een mai sai ajkul ap kya istimal kur rahay hai?*" ("What are you using from these things nowadays?") Participants felt that the word *durjeyzeel*, meaning 'currently', was a very professional, formal word and should be removed and that the word *kism* (type) was also unnecessary. The alternative wording was less complex and the words used simpler and more understandable.
- *Paan with jorda (translation taken from HSE 1999)*
During the interviews, the word *jorda*, meaning processed tobacco, was heard by one participant as *zarda* or sweet rice. During the discussion groups it was agreed that, as some people did not understand the word *jorda*, it would better to translate this response item as *tobacco wallah paan*.
- *Chewing tobacco/ How many paan a day do you chew?/ How many years have you been chewing paan/ How many times a day do you chew chewing tobacco? (translations taken from HSE 1999)*
The word *khatay/ khanay* (eat) was preferable to the word: *chabatay* (chew).
- *Other tobacco substances (translation taken from HSE 1999)*
It was suggested that this item, originally translated as *degar tobacco wali cheezai* (things that have the tobacco drug) be rephrased as the more simple: *Doosri tobacco walian cheezai* (other tobacco things/substances)

- *How long is the paan kept in your mouth? (translation by the first co-worker)*
The original had been translated as “How long does one paan stay in your mouth for?” and participants felt that a better way of asking the question would be “How long do you keep the paan in your mouth?”: “*Ap paan kitni dair tuk apnay muh mai rhaktay hai?*”

All other questionnaire items were agreed by participants to be satisfactory in the original form in which they had been presented.

Overall, participants agreed that, whilst there was no strong taboo against smoking, particularly for men in the Pakistani community, it was not encouraged as everyone was aware of the negative effects on health and the high costs of smoking. It was also stated that people from the Pakistani community should not smoke for religious reasons. However, participants were aware that people from the community did smoke and reported that smoking was becoming more socially acceptable amongst young people, but that it was disrespectful to smoke for younger people to smoke in front of their elders. It was also seen as much more unacceptable for women to smoke, due to their role as mothers and role models to their children. Participants felt that women would be more likely to conceal their smoking behaviour from others. Hookahs were seen as more acceptable for elderly women to smoke, and the use of sweet paan (not including tobacco) by women was not taboo.

In general, participants did not think that people from the Pakistani community would be offended if asked questions about smoking behaviour or tobacco use, although it was acknowledged that there might be some variation in truthfulness of answering. In order to encourage people to give truthful answers, participants suggested emphasising the importance of such research for health, and reassuring respondents about confidentiality.

Participants did not identify any additional questions relevant to their community that should have been included in the questionnaire.

Field testing

It was found that both respondents and the co-worker had been confused about the meaning of the questions "How many cigarettes a day do you smoke on weekends?" and "How many cigarettes a day do you smoke on weekdays?" Despite the translation specifying “How many cigarettes A DAY...”, respondents answered the number of cigarettes they smoked over the five days of the week and two days of the weekend, and this misinterpretation remained uncorrected by the co-worker. It is unclear why this was the case; it may be that the co-worker was not reading the question correctly. As mentioned previously, many respondents spoke both Urdu and English, and even elderly respondents would sometimes use English words when giving an answer to an Urdu question. The co-worker reported that Urdu-speaking people who had lived in Britain for some time and may not have had a formal education in Urdu may be more familiar with certain words or phrases in English, such as the days of the week. A dual language format questionnaire should ensure that standardised questions are present in both English and Urdu.

It was also found, during field testing, that there was no option for people who reported being current smokers to specify whether they smoke regularly or occasionally (this specification was present only for ex-smokers). It was felt that this may be an important item to include, particularly in this ethnic group, where people may be more likely to smoke only occasionally at social gatherings or under stress. Similarly, the question posed to current smokers as "At what age did you start smoking cigarettes [or bidis/ cigars] regularly?" assumed regularity of smoking, and certain respondents felt that the word 'regularly' should not be present.

It was found that one respondent mixed up his answers to two questions, and the co-worker felt this was not because the respondent didn't understand the translations but simply because certain respondents don't listen to questions particularly carefully before giving their answer.

Answers to the question on smoking dependency: "How soon after waking do you smoke your first cigarette of the day?" were felt by the co-worker to be culturally specific; smokers often reported waiting two or more hours before their first cigarette of the day, but this was due to circumstantial and not dependency-related factors: they felt that it was disrespectful or forbidden to smoke at home.

Otherwise, there were no problems with the questionnaire.

The changes as suggested by field testing were made to the questionnaire.

Sylheti group

During the discussion group, the following versions of the Sylheti questions were agreed upon after discussion of various alternatives suggested during individual interviews. Note that the Sylheti-speaking co-worker had modified the questions used during the interviews as interviews progressed to take into consideration preferable ways of asking the question as given by interview participants. As the Sylheti questions were recorded in phonetic form using Roman script they are reproduced in full here:

- *Do you smoke cigarettes at all nowadays?*
Whilst the suggestion *e khano* (till this time) was discussed as an alternative to the word *ajkail* (nowadays), it was decided that the translation using *ajkail* was preferable: "*Apne kitna ajkail cigarette khain-ni?*".
- *Do you smoke...filter-tipped cigarettes/ plain or untipped cigarettes/ hand-rolled cigarettes?*
The phrase 'Do you smoke' was thought to be best translated as "*Apne ki rakam cigarette khain?*" (literally "What type of cigarette do you smoke?"). The words *ki rakam* (type) were considered preferable to other ways of saying 'type', such as *kundharaner*. Rather than the co-worker's translation of 'filter-tipped cigarette', *filter lagail cigarette*, discussion group participants decided that the more commonly used term, *gula lagail cigarette*, would be preferable. It was agreed that the terms *sadharan ba faltar na lagail cigarette* and *hathe bola cigarette*, referring to 'plain or untipped cigarettes' and 'hand-rolled cigarettes' respectively, were appropriate and understandable.
- *Which brand of cigarettes do you usually smoke?*
The co-worker had decided upon the word *kunjati* for 'brand', but the discussion group participants decided that the term *kijat* was more common and understandable to Sylheti-speakers: "*Apne sadharanatha cigarette khain?*"
- *About how many cigarettes a day do you usually smoke on weekdays? About how many cigarettes do you usually smoke on weekends?*
After some discussion, the co-worker had translated 'weekdays' as 'days you are working' and 'weekends' as 'days off' due to the high prevalence of catering sector jobs in the Bangladeshi community that may render a weekday/ weekend division inapplicable. However, during the discussion group it was decided by participants that a more accurate and preferable way of translating the question would be to use the Sylheti translations of 'Monday to Friday' for 'weekdays' and 'Saturday and Sunday' for 'weekends':
- *How old were you when you started to smoke cigarettes regularly?*
Participants agreed that the translation '*Apne kotho bachar thaki niyamito cigarette khawa arambho korchain?*' was appropriate and understandable.

- *Did you smoke cigarettes regularly, that is at least one cigarette a day, or did you smoke them only occasionally?*
 Participants agreed that the question should be translated as suggested by the co-worker: "*Apne kita hakal somoy cigarette khaita ni, tarmane kompokke dino ekta, na akta akta khaita?*". It was noted that the words *hakal somoy* were used in this question to translate the term 'regularly', as opposed to *niyomito* used in the previous question. *Hakal somoy* is a more local, colloquial Sylheti term, whereas *niyomito* is a more formal, standard term. It was agreed that *hakal somoy* is more appropriate within this sentence structure and that *niyomito* was more appropriate within the previous question.
- *About how many cigarettes do you smoke in a day?*
 Participants agreed that the co-worker's translation ("*Apne ekdino kotota cigarette khaita?*") was acceptable and appropriate to people.
- *And for approximately how many years did you smoke cigarettes regularly?*
 The discussion group participants agreed that the co-worker's translation ("*Apne koto bochor apne niyomitobbabe cigarette khaichuin?*") was acceptable and appropriate. There was some discussion around whether the term *anumanik* (approximately, roughly) or *andaj moto* (as suggested throughout the interviews) was more appropriate and it was decided that *anumanik* was preferable.
- *How long ago did you stop smoking cigarettes?*
 Discussion group participants agreed that the best translation was "*Apne koto din age cigarette khawa bondo korchuin?*".
- *How many months ago was that? Less than six months ago/ six months, but less than one year*
 Whilst there had been a few alternative suggestions made during the interviews, participants agreed that the co-worker's translation of the question was preferable: "*Ekta koto mas age?*" but after discussion with the co-worker and members of the research team the translation for the response option 'six months, but less than one year' (*choi mas, kintu ek bachar thaki kom*) was amended to 'more than six months, but less than one year': '*Choi mas thaki beshi, kintu ek bachar thaki kom*'.
- *Have you ever smoked bidis? Do you smoke bidis at all nowadays?*
 Discussion group participants agreed that the co-worker's translations of the questions (*Apne konodin bidi khaichuin ni? Apne ajkail bidi khain ni?*) were understandable, acceptable and appropriate. Bidis were agreed to be different from cigarettes and that the two would not be confused by Bangladeshi people and particularly not by smokers.
- *Have you ever smoked cigars?*
 Participants confirmed that the suggested translation "*Apne konodin cigar khaichuin ni?*" was acceptable. It was agreed in the discussion group that Bangladeshi people may not be familiar with cigars and that there was no word for 'cigar' in Sylheti other than the English word. Participants agreed that showing a photograph of a cigar whilst asking the initial question might be a good way to ensure respondents understand the question.
- *Have you ever smoked a pipe (not a hookah?)*
 The suggested translation (*Apne konodin pipe khaichuin ni (hukkah na)?*) was agreed to be acceptable and no alternatives suggested or discussed. Some interview participants had said they understood what a pipe was but others had suggested that pipes were not commonly used

by Bangladeshi people and that a further explanation may be required. However, during the discussion group it was agreed that the question as worded was sufficient.

- *Do you smoke a pipe regularly, that is, at least one bowl of tobacco a day?*
Whilst some interview participants were uncertain about this question, it was agreed during the discussion group that pipe smokers should be able to understand the translation suggested: "*Apne hakal somoy pipe khain ni, tarmane, apne dino kita kompokke bhora ek chilim khain ni?*". One discussion group participant confirmed that the word *chilim* referred to the bowl of the pipe.
- *How many ounces of pipe tobacco do you smoke in a week?*
The co-worker had translated this question as "*Apne kotokhani suga ek saptat khain?*" (How much tobacco do you smoke in a week?". During the interviews, one suggestion was to replace *kotokhani* (how much) with the word *poriman*, also meaning 'how much'. Discussion group participants agreed that *poriman* was preferable. This was because *poriman* is a more accurate way of translating 'how much' in terms of quantity.
- *Do you inhale the smoke (take it into your lungs)?*
The co-worker had translated this question as "*Apne kita dhuma giloyyni (fufuser bhitare newa)?*". Discussion group participants felt that the word *giloyyni* (literally 'swallow') was the best way to word this item, but agreed that the word *fufuser* (lungs) should be omitted as Sylheti-speakers may not understand the term.
- *Have you ever smoked tobacco in a hookah?*
This question had been translated as "*Apne konodin hukkat tamak bharia khaichuin ni?*". Participants confirmed that this question was acceptable and understandable and that hookahs were commonly used in their community, particularly in Bangladesh.
- *Have you ever tried to give up smoking? How many times have you tried to give up smoking?*
The co-worker had translated these questions as "*Apne konodin chest korchuin ni cigarette khawa bondo korta?*" and "*Apne kotobar chest korchuin cigarette charta?*". Some interview participant had suggested the word *charta* (give up) was preferable to *bondo korta* (also 'give up') and discussion group participants confirmed that *charta* was a better word to use: "*Apne konodin chesta korchuin ni cigarette khawa charta?*" and "*Apne kotobar chest korchuin cigarette khawa charta?*". According to the Sylheti-speaking co-worker, the word '*khawa*' is optional.
- *Here is a list of things some people have used to give up smoking. Could you tell me please which, if any, you have used?*
During the discussion group, it was decided that the best way to pose this question was "*Ekhan ekta list ache, kuno kuno manuse cigarette khawa charbarlagia byabaha korchil. Itar majhe apne jodi konota byabaha kariya thakain thaila kunta?*". Neither interviewees nor discussion group participants were able to provide many cessation methods in Sylheti or in English. A couple of interview participants suggested *nijar iccha upar* (willpower) or 'taking a vow (*pratigga*)', but the discussion group participants were unable to list any further cessation methods.
- *How easy or difficult would you find it to go without smoking for a whole day? Would you find it... Very easy/ fairly easy/ fairly difficult/ very difficult?*
The co-worker's translation of this question prior to the discussion group was: "*Ekdin cigarette apne jodi na khaiya thakain te apne kono kosta painni, na kosto pain-na?*". Discussion group participants agreed that it was preferable to use the word *saradin* (whole day) rather than *ekdin*

(one day), and that the word used in the sentence, *kosta* (difficult) was preferable to an interview participant's suggestion, *cothin* (difficult). The response options were agreed to be acceptable and understandable.

- *How soon after waking do you smoke your first cigarette of the day?*
Discussion group participants confirmed that the translation was appropriate: "*Apne gum thaki uthar kotho somoy bado dinar poila cigarette khain?*".
- *Where do you smoke? In your own home/ in other people's homes/ at work or college/ when socialising/ other*
Discussion group participants confirmed that the translation was appropriate: "*Apne kun gagath cigarette khain?*". A range of response options were suggested in addition to those suggested above by the research team, and from these discussion group participants identified *baire* (outside), *hatar somoy* (walking), *gharith* (in the car) and *rasta ghate* (in the street) as most relevant to their community.
- *Have you ever used....[list of smokeless tobacco products]*
The discussion group confirmed that the co-worker's translation of this sentence, "*Apne ki konodin byabahaar korsuinni?*" was acceptable.
- *Paan with jorda*
The co-worker had translated this response option as *paan loge jorda athoba sadha* (paan with jorda or tobacco). Participants confirmed this was acceptable and understandable.
- *Paan without jorda*
Participants agreed that the translation *jorda chara paan* was appropriate.
- *Paan masala (pan parag, pan bahar)*
No translation was necessary for these items. Discussion group participants understood that these items were paan with added spices and flavours.
- *Chewing tobacco*
The discussion group participants felt that this should be translated as *sadah khain* (literally 'eating tobacco') rather than *sadah chibain* (literally 'chewing tobacco'). However, their opinion was that this was not a common practice in the Bangladeshi community, and that chewing tobacco may have been used a long time ago in Bangladesh for medicinal purposes. The co-worker's view was that this was not a relevant item for the current Bangladeshi community in Scotland.
- *Other tobacco substances / none of these*
Participants agreed that the translations "*Anya kono jatar sadah jatiyh jinish*" and "*Egular madhye kunato na*" were appropriate.
- *Which, if any, do you use nowadays?*
Participants agreed that the co-workers' translation, "*Egular maje ajkal jodi apne konota byabahaar kaira thakuin, thaile kunta?*", was acceptable and appropriate.
- *How many paan a day do you chew?*
The co-worker's translation for this question had been "*Apne dino kotota paan khain?*". Discussion group participants reviewed suggestions made during the interviews and agreed that the word *koybar* (how many times) made more sense in this question than the word *kotota* (how

many), and so the item should be reworded to "*Apne dino koybar paan khain?*". Participants agreed that *khain* (literally 'eat') should be used rather than *chibain* (literally 'chew').

- *How long is the paan kept in your mouth?*
Discussion group participants agreed that the co-worker's translation, "*Apne koto somoy paan mukhor majhe rakhuin?*" was appropriate and preferable to an alternative wording suggested by an interview participant, "*Mukhar bhitar koto somoy rakho?*".
- *How many years have you been chewing paan?*
Participants agreed that the co-workers translation of this question, "*Apen kotho bachar dhori paan khaira?*" was acceptable and understandable.
- *How many times a day do you chew chewing tobacco?*
The co-worker had translated this question as "*Apne ekdine kotobar sadah chibain/ khain?*". Whilst discussion group participants agreed, as before, that the word *khain* (literally 'eat') was preferable to the word *chibain* (literally 'chew'), they added that nobody in the Bangladeshi community chews tobacco by itself, only in paan.

Overall, discussion group participants felt that smoking was not viewed as acceptable within the Bangladeshi community, although a range of opinions had been expressed throughout the interviews. This view was justified by saying that smoking was not good for health, and was also financially detrimental and had side-effects such as bad breath. Participants also mentioned that smoking was inadvisable from a religious perspective, as the Koran clearly states that Muslims should not become addicted to a substance. However, they agreed that smoking was a habit amongst some Muslims. During the interviews, some participants had reported that smoking was less acceptable in women than men, and the male participants in the discussion group confirmed this view, stating that it was perceived as a shameful thing for a woman to smoke. Discussion group participants did not feel that there were any forms of smoking tobacco that were acceptable. Smoking tobacco in a hookah may have been more acceptable in the past, but hookah use was uncommon currently in Scotland, perhaps due to the lack of sun and the necessity to dry the tobacco for the hookah by exposing it to the sun's heat. Whilst there were a range of views expressed during the individual interviews regarding the acceptability of paan use, discussion group participants did agree that it was more acceptable to use paan; for example, whilst it would be unacceptable to smoke in front of elderly people, paan chewing was tolerated. It was known that paan use (including tobacco in the paan) was common amongst women as well as men, and that this was a socially acceptable behaviour. It was stated that some parents would allow their children to chew paan, but it was not seen as acceptable to put tobacco in the paan that children would use.

As was the case during individual interviews, discussion group participants felt that most people from the Bangladeshi community would answer these questions about smoking and tobacco use truthfully, if asked through an independent survey or by a doctor or researcher, but might not give truthful answers if asked by someone from their community or a member of their family.

Overall, participants felt that the questionnaire items were acceptable and good, and did not identify any relevant questions or types of tobacco use that were missing from the existing questionnaire.

Field testing

Due to time constraints it was not possible to carry out a field testing procedure on the developed Sylheti questionnaire.

All groups

Final team discussion results: comparability and equivalence of questionnaire

The Urdu-speaking co-worker was not able to attend the final team discussion to compare all different language versions of the questionnaires. However the results were discussed with the co-worker after the event and changes made to other versions ensure simplicity or comparability were also made, where applicable, to the Urdu questionnaire.

The majority of questionnaire items were deemed to be comparable and equivalent across language groups. Questions which were not exactly equivalent and required modification, or for which there were comments to be noted, are outlined below:

Questions on cigarette use

- *Have you ever smoked cigarettes?*

It was noted that the translation for 'smoke' in Cantonese was meaningless by itself, and needed to be coupled with the word 'cigarettes' in a sentence to be meaningful. The literal translation for 'smoke' in Punjabi (and Urdu) is 'drink' and in Sylheti is 'eat'. All questions were equivalent in meaning and comparable.

- *Do you smoke cigarettes at all nowadays?*

The phrase 'at all' had not been translated into Punjabi or Sylheti (or Urdu) as it was difficult to translate. It was decided to remove the phrase 'at all' from the Cantonese and English questions in order to, first, make them comparable to the other languages and, second, to make the Cantonese sentence less clumsy.

- *About how many cigarettes a day do you smoke on weekdays?"/ "About how many cigarettes a day do you smoke on weekends?*

In the Cantonese version, the above two questions had been merged into a single question "How many cigarettes a day do you smoke?" due to the dubious relevance of weekdays and weekends to some Chinese people working in the catering sector, and the difficulty in applying an alternative translation ('working days' and 'days off') to other respondents who were retired or unemployed. To ensure comparability, these two questions were merged in the Punjabi and Sylheti questionnaires also, where many of the same issues around the cultural relevance of the division of the week into weekends and weekdays apply. The previously developed questions in Punjabi and Sylheti (which translated weekdays as 'Monday- Friday' and weekends as 'Saturday and Sunday') were banked for use if necessary. The word 'usually' was not present in the Cantonese (or Urdu) and was removed from the Punjabi and Sylheti versions for comparability.

- *Do you smoke...filter-tipped cigarettes/ plain or untipped cigarettes/ hand-rolled cigarettes?*

The Sylheti and Punjabi questions ask "What kind of cigarettes do you smoke [eat/drink]". The Cantonese translation was more similar to the English in that it asked "Do you smoke....?" Despite the differences, everyone agreed that the questions were comparable.

- *Where do you smoke?*

There were difficulties with the question in English and also with its comparability across language versions. In the Cantonese, 'when socialising' had been translated as 'public place'. The co-worker said that this would often be referring to restaurants, or cinema. As comparability was limited across language versions, it was decided that the question might work better more as an open question "Where do you smoke?".

- *How easy or difficult would you find it to go without smoking for a whole day?*

This question was not translated in the Punjabi (the co-worker had insufficient time to probe in the interviews). The other versions were comparable.

- *How soon after waking do you usually smoke your first cigarette of the day?*

The word 'usually' was not present in any language version other than English as it made the questions clumsier. However, it was noted that the inclusion of the word 'usually' would not make much difference to the meaning or interpretation of the question. In order to increase comparability, it was decided to remove the word 'usually' from the English question. Otherwise, all versions were comparable and equivalent.

- *Have you ever tried to give up smoking?*
The Punjabi version of this question included the words 'cigarettes or bidis'.
- *About how many times have you tried to give up smoking?*
This question was not present in the Punjabi version of the questionnaire.
- *Here is a list of things some people have used to give up smoking- could you tell me please which, if any, you have used?*
This question was not present in the Punjabi version of the questionnaire.
- *Did you smoke cigarettes regularly, that is at least one cigarette a day, or did you smoke them only occasionally?*
The questions were equivalent but it was noted that there were no Sylheti translations of the response options and that these should be added.
- *About how many cigarettes did you smoke in a day?*
The Sylheti and Punjabi and Urdu versions did not include the word 'about'.
- *For approximately how many years did you smoke cigarettes regularly?*
The Cantonese version had no translation of 'approximately'; the Punjabi and Sylheti (and Urdu) did include 'approximately'. It was decided that this difference is unlikely to affect comparability of response across these groups.
- *How long ago did you stop smoking cigarettes?*
The Sylheti version was back-translated as 'how many days ago'. The co-worker explained that in Sylheti one couldn't say 'how long' but needed to specify 'how many days' or 'how many years' or 'how many months' etc. If translated as 'How much time ago', this would refer to the very immediate past, for example yesterday. If the question 'When did you give up smoking?' would be asked the co-worker explained that the word '*konodin*', literally meaning 'which day', would be used and could elicit a response in years if appropriate. It was agreed that '*konodin*' (how many days) would therefore be used and that this would be comparable to the Cantonese and Punjabi questions.
- *How many months ago was that?*
The response options were changed in the Punjabi and Cantonese to read 'more than six months, but less than a year' (the Sylheti (and Urdu) already read 'more than six months').

Questions on bidi use

Questions on bidis were not asked in the Cantonese. Apart from the use of the term '*bidi*' rather than 'cigarette', the questions were worded in precisely the same way as those items pertaining to cigarette smoking and so were not checked for equivalence.

Questions on cigar use

It was noted that the English word 'cigar' was used in the Punjabi, Sylheti and Urdu questionnaires. The same question wording was used as in the cigarette section so was not checked further for equivalence.

Questions on pipe use

- *Have you ever smoked a pipe (not a hookah)?*
The phrase (not a hookah) was not included in the Cantonese version as the section on hookah use was omitted in this questionnaire due to lack of cultural relevance. The word 'pipe' was translated as 'pipe' in Sylheti, Punjabi and Urdu.
- *Do you smoke a pipe regularly, that is at least one bowl of tobacco a day?*
Both Punjabi and Sylheti used a variation of the word *chilm* for 'bowl', but the Cantonese used the word *tok* (pipe). The questions were considered equivalent. (The Urdu participants had felt that the word 'chilm' was appropriate only in relation to a hookah, so this question had been re-translated as "Do you smoke a pipe regularly, that is you fill it up at least once a day?")
- *How many ounces of pipe tobacco do you smoke in a week?*
As Sylheti-speaking participants had advised that people in the Bangladeshi community would not understand 'ounces', it had been removed from the Sylheti question and the item translated instead as 'you how much tobacco one week eat'. The Punjabi was 'you weekly in pipe how many ounce tobacco drink?' using the English word 'ounce'. The Cantonese and Urdu also included the English word 'ounces'. The Sylheti question was therefore not comparable to the other language versions. The inclusion of the word 'pipe' was not consistent across groups but, where absent, it was considered to be implied given the context of the question.
- *Do you inhale the smoke (take it into your lungs)?*
There was some variation in the literal translation of this question. For example, as Sylheti-speakers may not understand the formal translation for 'lungs', they had agreed that the best translation was "Do you swallow the smoke (take inside)?". In comparison, the Punjabi version had been translated as: 'Do you inhale so that smoke goes to lungs?' and the Cantonese version specified 'pipe smoke'. However, the questions in all language versions were thought to be equivalent in meaning and would be interpreted in the same way.

Questions on hookah use

The section on hookah use was present only in the Sylheti (and Urdu) versions of the questionnaire and not in the Punjabi and Cantonese versions. The Sylheti version was judged equivalent and comparable to the English items.

Questions on smokeless tobacco use

The smokeless tobacco section was not present in the Cantonese version.

- *Have you ever used...?*
The Punjabi version back-translated as 'Have you from these things any of these used?'; the Sylheti version was back-translated as 'Have you ever used?'. It was decided that despite these differences the phrases were comparable in meaning.
- *Which, if any, do you use nowadays?*
The Sylheti literal back-translation was 'This among nowadays if you any have used then which one?'; the Punjabi literal back-translation was "Do you nowadays from these things use any?" and the Urdu literal back-translation was "Have you ever these things used?". These questions were thought to be comparable despite small differences in back-translation.
- *Paan with jorda/ Paan without jorda/ Paan masala/ Other tobacco substances/ None of these*

The Sylheti, Punjabi and Urdu were comparable and equivalent to each other and to the English.

- *Chewing tobacco*

The Bangladeshi participants were not familiar with chewing tobacco but the item was included for comprehensiveness.

It was concluded that, with various provisos, the questionnaires were comparable overall. After the final team discussion the researcher met separately with the Urdu-speaking co-worker to review comparability and equivalence of the Urdu questionnaire.

Production of the final questionnaire

The research team reviewed the final questionnaire and decided to add a further question to allow current smokers of cigarettes or bidis to specify regularity of smoking: '*Do you smoke [cigarettes/bidis] regularly, or do you smoke them only occasionally?*'. The subsequent question '*How old were you when you started to smoke cigarettes regularly?*' had the word 'regularly' omitted in order to ensure applicability to occasional smokers. Similarly, the ex-smokers' question '*And for approximately how many years did you smoke cigarettes regularly?*' had the word 'regularly' omitted in order to be relevant to individuals who have smoked, but not regularly, in the past. These changes and those suggested by field testing and team discussion were made to the final questionnaire. See Appendices for the final questionnaires in Cantonese, Punjabi, Urdu and Sylheti.

7.2 Summary of results

This project found that changes were necessary in existing translations of key tobacco-related questions in order to ensure understanding by lay people from the Indian Punjabi-speaking, Pakistani Urdu-speaking, Chinese Cantonese-speaking communities. In addition, this project developed previously non-translated questions in the above languages, in addition to Sylheti, that are necessary to collect comprehensive information on smoking and tobacco use in these groups. Questionnaires were developed in each of these four languages.

This project also yielded important insights into the practicalities of recruiting, training and carrying out research in ethnic minority communities using bilingual co-workers, and of involving lay ethnic minority communities in research.

8 Discussion and conclusions

This project has developed versions of a tobacco-related questionnaire which have been tested for understandability, linguistic and cultural appropriateness and face validity for use with Urdu, Punjabi, Cantonese and Sylheti speakers. In both oral languages, Cantonese and Sylheti, questionnaires have been produced in an innovative way which allows strict standardisation of questionnaire administration; the oral Cantonese is written using the standard Chinese script, and the Sylheti is written phonetically using Roman script. A set of reasonably comprehensive core questions have been developed in each language, and culture-specific questions included where appropriate. Existing questionnaires will require further proofreading, typesetting and validation before being used in the field.

All original aims and objectives have been met as follows:

- Key questions in existing surveys were reviewed and included in the tobacco-related questionnaire developed for use in Cantonese, Punjabi, Urdu and Sylheti speakers. Participants were asked if there were any key areas of tobacco use that were important for their community

that had been omitted from the questionnaire. Supplementary questions were not required as the questionnaire content was deemed relevant to tobacco use in each of the ethnic minority groups.

- The cultural acceptability and sensitivity of the questions were assessed via individual interviews and subsequent discussion groups with a panel of lay participants
- Questions that were not deemed to be culturally or linguistically accurate were modified as suggested by our panel of lay community members.
- The conceptual equivalence of the questions was established via a team discussion method during which all language versions were compared with all others for equivalence of meaning.
- We took steps towards ascertaining the optimal mode of administration of questions. Insights gained throughout the field work process showed that simple, straightforward questions in colloquial language were the best way to ensure understanding across a range of lay people, and that questionnaire interviewers need to be thoroughly trained in the methods of questionnaire administration to ensure rigorous completion of a standardised questionnaire, particularly given respondents' tendency not to answer in a simple way as indicated by the question's response options, but to provide an elaborate narrative. Moreover, interviewers must be convinced of the importance of not putting their own interpretation on statements made by participants. The researcher needs to monitor closely the quality of data collection.
- We deduced general principles concerning modes of enquiry into lifestyle factors with ethnic minority groups. First, there is a reluctance for people to pronounce upon or to criticise statements they see as emanating from an official source. Thus there will be a tendency for respondents to try to answer questions even if they do not fully understand the meaning. Thus prolonged and sensitive questioning may be required in order to extract alternative ways of expressing an idea or question.
- Second, modes of interaction, custom and polite discourse within a particular culture, may conflict with current modes of research enquiry where questions are put to a respondent without any social niceties and where the interviewers are trained to maintain a neutral stance on the topic under enquiry.
- Third, when smoking or tobacco use or, indeed any other activity, is a particularly taboo behaviour amongst a certain ethnic or gender group, great care must be taken to reassure respondents of anonymity and confidentiality and of the importance of accurate data to benefit the health of the respondent's community in the future. There were indications from this study that sensitive questions being asked by a high-profile member of the community who is personally known to the respondent may lead to socially acceptable, inaccurate, answers being given.

The quality and commitment of bilingual staff are vital in a project such as this, where the researcher has little direct contact with the participants and cannot speak all of the languages under study. In all language groups, quality control of interview data generated in languages other than that spoken by the English-speaking researcher has been challenging.

In order that researchers can oversee robust research in a range of languages not spoken by the main researcher, it is recommended that written phonetic versions of the original translated questions are developed, with word-for-word annotation to clarify the English meaning of each non-English word, in addition to written phonetic versions of any suggested modified questions. In this way it should be less difficult for an English-speaking researcher to monitor the changes and quality of the developing questionnaire throughout field work and modification. Otherwise data can become lost or difficult to follow.

During the current project, whilst it has been possible to produce a phonetic version of Sylheti using the Roman script, it was the researcher's opinion that this would have been much more difficult to do for Cantonese, as the sounds made are so subtle and different to the English that it

was difficult for the co-worker to spell out the terms in English, and therefore preferable to record the Cantonese using Chinese characters.

It is also vital for researchers to be aware of the practical and organisational challenges of carrying out research with several different community groups. The process is extremely time and resource-intensive, and swift progress can be difficult when co-workers have a range of other commitments. It is vital to bear this in mind when planning a similar project and to allow time/ funding to enable for the final report to be double-checked for accuracy by bilingual staff.

It is important for researchers to anticipate that sessional bilingual co-workers often have a range of other commitments and it should be ensured that they have the time available to make sufficient progress on similar studies. For example, one appointee failed to make adequate progress with recruiting panel members and carrying out interviews, and agreed that she could not commit to completing the interviews. Another co-worker, a previously shortlisted applicant who had been interviewed for the post some months previously, agreed to complete the project for us. Developing a 'pool' of bilingual co-workers qualified to carry out this type of work is advisable.

The final Punjabi, Urdu and Cantonese questionnaires produced contain questions in non-English scripts that were hand-written by the bilingual co-workers, then manually cut and pasted into a questionnaire format by the researcher. Some effort had been made to produce typed versions of these questionnaires. However, the cost of doing so using a professional service was deemed to be prohibitive. After liaison with staff at the University of Edinburgh's language laboratory, it was possible to enable a departmental computer using Windows XP to display non-English fonts in a Word document. However, the computer keyboard had Roman letters on its keys and therefore it was necessary to produce a separate document indicating which Roman key (or combination of keys) signified each letter or character in Urdu or Punjabi. Therefore, for a typist not familiar with the program or the keyboard, the process of locating each letter, using the appropriate key on the Roman keyboard and typing a question in this manner would be extremely time-consuming. A more complicated process is necessary for Chinese fonts; first, the appropriate font must be selected and enabled from a number of options available. Second, the Chinese word is typed phonetically in English and a list of possible Chinese characters appears, each phonetically similar when written in English but varying in relation to the tone of the utterance and its context. The correct character must be chosen from this list. It was clear that this process was restrictively difficult for untrained staff, and so a decision was made to produce hand-made questionnaires which were subsequently scanned into electronic form. Future work may benefit from the production of questionnaires typed using the appropriate fonts by a professional agency or by someone more familiar with the appropriate software.

9 The Future

As stated above, the developed questionnaires require further proofreading to ensure accuracy and consistency of spelling before widespread use. In addition, the current questionnaires should be professionally typeset.

Having gained experience in the methods required to ensure cross-cultural acceptability and validity of tobacco-related questions, subsequent work could expand the existing questionnaire to focus on other health-related behaviours and include attitudinal questions and demographic data. Insights gained from this project will be transferable to other areas of health research.

In the immediate future we have the intention to seek further funding to conduct studies of criterion validity and reliability on the four questionnaires. This work will also incorporate formatting of the questionnaires and the production of a culturally appropriate introduction to each language version. It is hoped that this project will begin early in 2005.

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