

UK Biobank

Touch Screen Questionnaire

Version 1.0

<http://www.ukbiobank.ac.uk/>

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This manual details the procedure for the Touch Screen Questionnaire at an Assessment Centre of the UK Biobank

Contents

1. Introduction	2
2. Staff	3
3. Operation of the Touch screen questionnaire in the Assessment Centre	3
4. Appendices	5
4.1 Appendix 1 Supplementary notes for consent & touch screen station	5
4.1.1: Using keyboard and mouse instead of touch screen	5
4.1.2: Participant decides to abandon the touch screen questionnaire	5
4.1.3: Potentially sensitive questions	5
4.1.4: Linking questions	6
4.1.5: Medical questions	6
4.1.6: Logic checks	7
4.1.7: Managing common touch screen problems	9

1. Introduction

1.1: This manual details the procedure for the Touch screen Questionnaire at an Assessment Centre of the UK Biobank. This takes place at the 2nd 'station' of the Assessment Centre visit, as listed in Table 1.

Table 1: Sequence of assessment visit

	Visit station	Assessments undertaken
1	Reception	<ul style="list-style-type: none"> • Welcome & registration • Generating a USB key for Participants
2	Touch screen Section	<ul style="list-style-type: none"> • Consent • Touch screen questionnaire • Hearing Test • Cognitive function tests (Shape, Pairs, Fluid Intelligence, Snap)
3	Interview & blood pressure	<ul style="list-style-type: none"> • Interviewer questionnaire • Blood pressure measurement • Measurement of arterial stiffness (Pulse Wave Velocity)
4	Eye measurements	<ul style="list-style-type: none"> • Visual acuity • Auto-refraction • Intraocular pressure • Retinal image (OCT Scan)
5	Physical measurements	<ul style="list-style-type: none"> • Height (Standing and Sitting) • Hip & waist measurement • Weight and Bio-impedance (Body Composition) measurement • Hand-grip strength • Ultrasound bone densitometry • Spirometry (Lung function Test)
6	Cardio (Physical fitness)	<ul style="list-style-type: none"> • Exercise ECG (Cycling)
7	Sample collection & exit	<ul style="list-style-type: none"> • Blood samples collected • Urine sample sought

		<ul style="list-style-type: none"> • Saliva sample sought • Consent & result summary printed • Travel expense claim provided
8	Web-based diet questionnaire	<ul style="list-style-type: none"> • Dietary assessment

1.2: Throughout this document, the term ‘Participant’ signifies a study participant who is taking part in the Assessment Centre process, regardless of whether they eventually give or withhold consent to take part in the UK Biobank study.

1.3: The collection of data from assessment visits uses the direct data entry system of the Assessment Centre Environment (ACE). This has five components (**Assessment Centre Environment**), of which Tactus operates the Consent, Touch screen questionnaire and Cognitive function test stations of the assessment visit.

1.4: At the start of their visit, each participant is issued with a USB Key at the Reception station. This USB Key acts as a participant identifier (it contains Participant ID, name, date of birth and gender) and as a temporary storage device for the recorded data. As the participant progresses between stations, the USB key acts as an identifying token and also as a data transfer mechanism. At the Reception & Exit module, all data on the USB key is removed, after it has been backed up to the Assessment Centre head PC.

2. Staff

The staff member performing this procedure can be any that are on duty. This can include: Study Interviewer, Duty Manager Phlebotomist, Laboratory Technician, Measurement Technician or Receptionist. The Assessment Centre Manager oversees that all staff work in accordance with this procedure.

3. Operation of the Touch screen questionnaire in the Assessment Centre

3.1: After successful completion of the Consent module, the participant is asked to remain at the touch screen station so that they can complete the questionnaire.

3.2: From the Tactus start-up screen the staff member selects the ‘Questionnaire’ operation

The screenshot shows the 'UK Biobank: Tactus' interface. It is divided into several sections:

- Identities:** Fields for Centre Name (Rentrev), Assessment ID (98765), Computer ID (760), Staff User (CARONP, Miss Caron Paterson), PID code (900 000 001 - TRAINING, RESTRICTED TEST VERSION), and Visitor (Miss Elizabeth Bizzie - TRAINING).
- Status:** Shows a timestamp (21/04/2009 16:25:02) and buttons for 'Need unknown', 'Not transferring', and 'Network Unavailable'.
- Control:** Buttons for Refresh, Change User, Prepare, Training (highlighted with a dashed border), and Exit.
- Operation:** Buttons for Consent and Questionnaire.
- Records:** A list of steps: Welcome, Consent, Touchscreen, Interview+BP, Biometrics, Blood sample, and Conclusion.
- Training Mode:** A large blue area on the right with the text 'Training Mode' and 'Click Training button to proceed'.

3.3: The participant is instructed to read the text on the following screen (below) and then select the 'Next' button to start the touch screen questionnaire;

The screenshot shows a yellow header with the following text:

You are now ready to start the touch screen interview.

Please be reassured that all of your answers will be treated with absolute confidentiality. The information you give us will have your name and address removed, so that no individual could ever be identified, before being used by researchers.

Press the NEXT button on the screen to continue.

The main area of the screen is light blue. At the bottom, there is a navigation bar with four icons: a blue smiley face labeled 'Back', a brown circle labeled 'Info', a green question mark labeled 'Help', and a yellow smiley face labeled 'Next'.

3.4: The participant is advised to ask for help at any time, to avoid getting stuck on any question, and to not make precise calculations for numerical questions. The questionnaire takes about 30 minutes to complete; the 'Info' button shows how far they are through the questionnaire (see also Appendix 1 Supplementary notes for consent & touch screen station).

3.5: When the participant has completed the questionnaire, an on-screen message asks them to select 'Next' to begin the **Hearing** and Cognitive Function tests.

3.6: Cleaning of touch screens

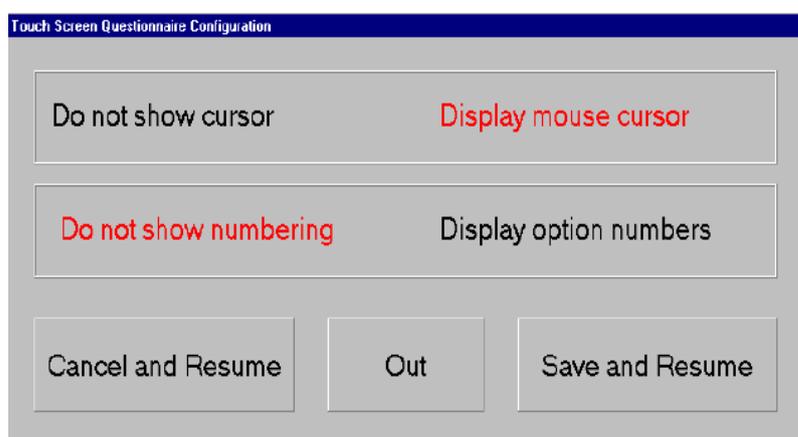
The computer screen is wiped with sanitised screen wipes and the desk is wiped with azowipes after each participant completes the touch screen section in order to ensure infection control and the proper functioning of the screen.

4. Appendices

4.1 Appendix 1 Supplementary notes for consent & touch screen station

4.1.1: Using keyboard and mouse instead of touch screen

If the participant wishes to complete the touch screen questionnaire using a keyboard and mouse, or a combination of these (for example, because of disability) the staff member will access a Configuration screen from which the appropriate function can be selected:



4.1.2: Participant decides to abandon the touch screen questionnaire

If the participant decides to abandon the touch screen questionnaire at any stage, they are asked to continue to the end, selecting 'Prefer not to answer' to all subsequent questions.

4.1.3: Potentially sensitive questions

Participants may find some questions sensitive, so each question in the touch screen questionnaire has the option to select 'Prefer not to answer'. Potentially sensitive questions are listed below with the reason they are asked:

Potentially sensitive questions:

- What is the average total income before tax received by your HOUSEHOLD? (Income is one marker of socioeconomic status and deprivation.)
- What is your ethnic group? (Ethnicity may alter risk of illness and exposure to certain lifestyles.)

- What best describes the colour of your skin without tanning? (Skin colour has been associated with risk of skin cancer and fracture.)
- Were you adopted as a child? (This is relevant to questions on family medical history.)
- Have you ever seen a general practitioner/psychiatrist for nerves, anxiety, tension or depression? (this may alter the risk of illness.)
- What was your age when you first had sexual intercourse?
- About how many sexual partners have you had in your lifetime?
- Have you ever had sexual intercourse with someone of the same sex?
- How many sexual partners of the same sex have you had in your lifetime (Questions on sexual history assess factors that have been associated with various cancers and infections. N.B. For the purposes of these questions, 'sexual intercourse' includes vaginal, oral or anal intercourse);
- Are you menstruating today? (This is asked because it may affect the urine sample)
- Have you ever had any stillbirths, spontaneous miscarriages or terminations? (Number of pregnancies may be a risk factor for certain cancers and vascular diseases, and stillbirths and miscarriages may be related to genetic predisposition)

4.1.4: Linking questions

Responses to certain questions in the touch screen questionnaire can determine what questions are asked in the interviewer questionnaire and before spirometry, since certain medical conditions may make this test more risky. Participants may be advised when they select a response to the following questions that they will be asked about it later in the visit:

Linking questions:

- Where were you born?
- Which of the following describes your current employment situation?
- Has a doctor ever told you that you have had cancer?
- Have you had any major operations?
- Has a doctor ever told you that you have had any of the following? (question listing various common serious medical conditions)
- Has a doctor ever told you that you have any other serious medical conditions
- Do you regularly take any prescription medications?
- Do you smoke now?

4.1.5: Medical questions

As the touch screen questionnaire is designed to be self-completed, the medical questions are brief. Participants are asked about previous:

- Heart attack
- Angina
- Stroke

- High blood pressure
- Blood clot in leg (DVT)
- Blood clot in lung
- Emphysema/chronic bronchitis
- Asthma
- Hayfever/allergic rhinitis/eczema
- Diabetes
- Fracture in the last five years

Participants are advised to enter 'Yes or possibly' if they think they definitely or possibly had any of these diagnoses when asked "Has a doctor told you that you have had any other serious medical conditions?" As this is a linking question, at interview the presence or absence of the condition can then be confirmed.

4.1.6: Logic checks

4.1.6.1: In order to minimise errors or inconsistencies in participant responses, the touch screen incorporates a number of checks on the data that are entered.

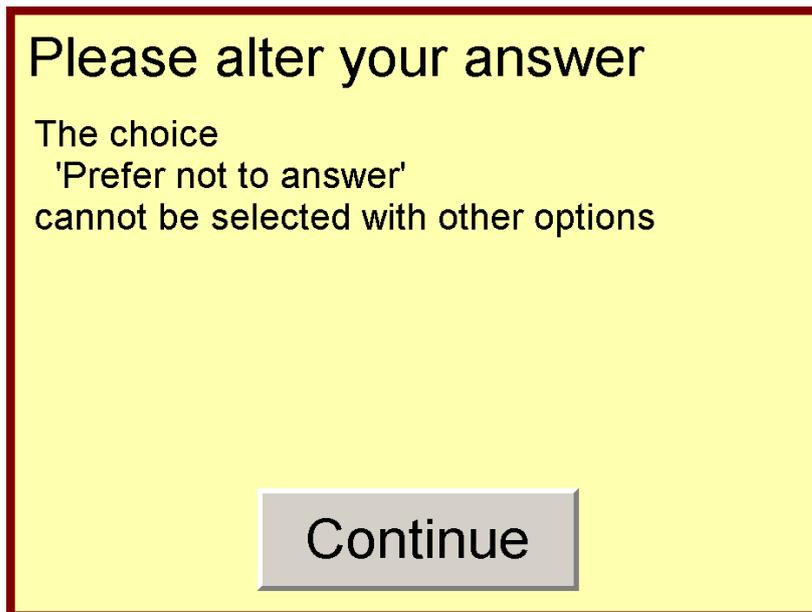
4.1.6.2: With questions that allow more than one response, the touch screen questionnaire will not allow contradictory answers. For example, the checking program would not accept the selection of 'College or University degree' and 'Prefer not to answer' in response to question D12: "Which of the following qualifications do you have?" because the responses are not consistent.

Which of the following qualifications do you have?
(You can select more than one)

College or University degree
A levels/AS levels or equivalent
O levels/GCSEs or equivalent
CSEs or equivalent
NVQ or HND or HNC or equivalent
None of the above
Prefer not to answer

Back Info Help Next

4.1.6.3: In the example above, when the participant touches 'Next' the check message will appear and they will not be able to proceed until the inconsistency is corrected:



4.1.6.4: Similarly, for numeric entry questions, both 'impossible' and 'improbable' check values have been incorporated into the checking program. For example it would not accept the response '90' (perhaps inserted by mistake instead of '9') in response to the question "How many years have you worked in your current job?".

How many years have you worked in your current job?

90 years

7 8 9 Clear

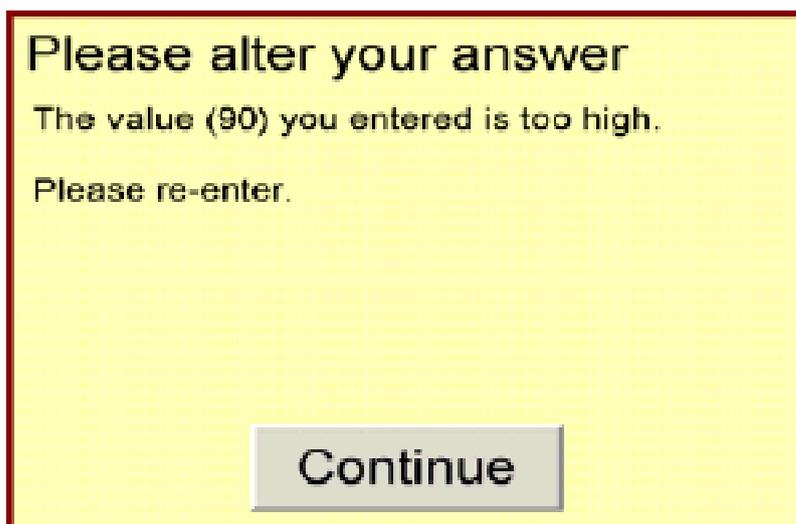
4 5 6 Less than a year

1 2 3 Do not know

0 Prefer not to answer

Back Info Help Next

4.1.6.5: In the example above, when the participant touches 'Next' the check message below will appear because the response is considered impossible, and they will not be able to proceed until the error is corrected:



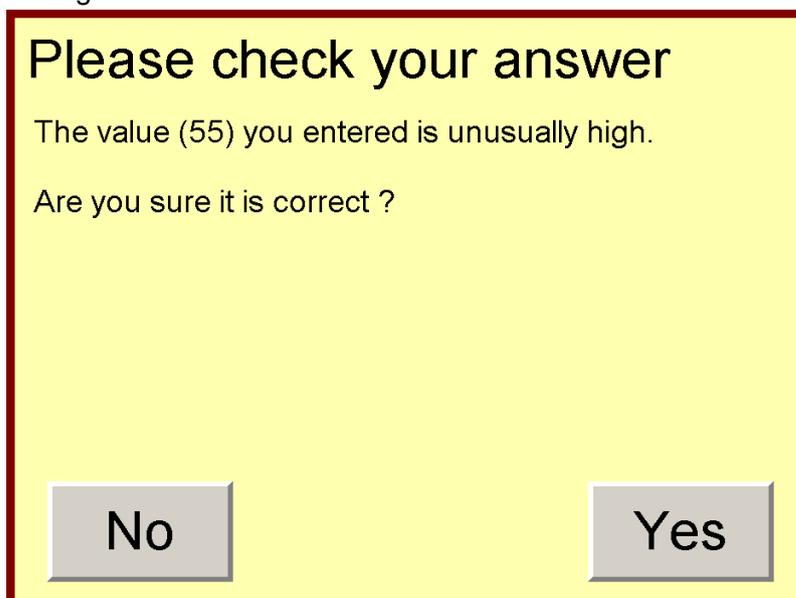
Please alter your answer

The value (90) you entered is too high.

Please re-enter.

Continue

4.1.6.6: If the participant entered 55 in response to this question the check message would appear, because the response is improbable but not impossible (since in this case the participant is 67 years old). The participant must enter 'Yes' to confirm their response before proceeding



Please check your answer

The value (55) you entered is unusually high.

Are you sure it is correct ?

No **Yes**

4.1.6.7: Logic checks can also depend on answers to previous questions. For example, if the participant's response to the question "Have any of your brothers or sisters suffered from any of the following illnesses?" includes "Prostate Cancer", their answer to a previous question: "How many brothers do you have?" must have been at least one.

4.1.7: Managing common touch screen problems

Some of the common problems participants may encounter are listed here:

4.1.7.1: Cannot find appropriate response: For categorical questions, where participants need to choose from a selection of responses, a participant may find that their response does not fit any category. In these cases they are encouraged to select the category that is closest to what they would like to select, and if this is not appropriate, to choose 'Do not know'.

4.1.7.2: Rounding up numerical responses: All numeric answers only allow for whole numbers. Where a participant inputs a value that includes a fraction they are asked to round to the nearest whole number, rounding halves upwards. So $\frac{1}{2}$ - $<1\frac{1}{2}$ is rounded to '1' and $1\frac{1}{2}$ - $<2\frac{1}{2}$ is rounded to '2'.

4.1.7.3: Check messages: Participants may receive a message prohibiting them from continuing because their answer suggests they have misread the question, for example entering a value greater than 24 after misreading 'number of hours in a week' for 'number of hours in a day'. In these cases the staff member assists them by checking they have not misread the units or period sought.

4.1.7.4: Alternative responses to numeric questions: All questions that ask for a numeric response (displaying a number pad) also have a small selection of non-numeric responses to the right of the number pad. These can include 'Prefer not to answer', 'Do not know' and 'Less than one'. Participants are advised to select one of these responses if a numeric answer is not appropriate.