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Social Research that works for society

National Travel Survey 2019

Cognitive testing report

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1 Introduction

1.1 What is cognitive testing?

Cognitive interviewing methods provide an insight into the mental processes that respondents use when answering survey questions, thus helping researchers to identify problems with question wording and questionnaire design. These methods investigate four cognitive stages: how respondents understand and interpret questions; how they recall information that applies to the question; the judgements they make as to what information to use when formulating their answers; and the response mapping process. Each survey question under investigation is followed by a number of probing questions which assess these four processes. Apart from probing, cognitive interviews also make use of think aloud techniques and observation to ensure identification of any issues with the survey questions.

1.2 What we tested

We tested a number of new questions which had been developed to potentially be included in the National Travel Survey 2019. These questions included topics related to whether participants worked for the NHS or for other public sector organisations; vehicle ownership; ebike ownership; mode and frequency of transport, and loneliness. Findings on each of the questions tested are included within this report.

1.3 How the testing was undertaken

Cognitive testing protocols were developed in consultation with the Department for Transport. These protocols incorporated think aloud and probing techniques. Interviews were carried out by NatCen researchers and a specialist cognitive interviewer, who all have extensive experience carrying out cognitive interviews. Fifteen interviews were carried out in central London. All interviews were recorded with participants' consent. Participants were given a £35 cash incentive to thank them for their time and help.

1.4 Recruitment of test subjects

Participants were recruited via a specialist recruitment agency. Fifteen interviews were carried out in total. Table 1.1 shows the composition of the cognitive interviewing sample. Quotas were set to ensure a good spread by gender, age and level of education. Quotas were also set based on the intended routing of the questions to be tested. These quotas included owning a vehicle or ebike, commuting by rail, employed by the public sector and working for the health public sector.

Table 1:1 Recruitment quotas

Gender	Male	8
	Female	7
Age	18-29	3
	30-49	6
	50-64	4
	65 +	2
Highest qualification	A levels or above	12
	GCSE's or below	3
Own a vehicle	Yes	13
	No	2
Own an ebike	Yes	3
	No	12
Commute by rail	Yes	13
	No	2
Employed by public sector	Yes	9
	No	6
Health sector	Yes	4
	No	11

1.5 Analysis

All interviews were audio recorded with participants' permission. Based on these recordings, the interviews were summarised using a structured Excel pro-forma.

Responses to each survey question were recorded, along with observations made by interviewers, any think aloud that the participants have done, and answers to each of the scripted probes, as well as any spontaneous probes. Data could thus be read horizontally as a complete case record for an individual, or vertically by question, looking across all cases. Once the matrix was completed, the data in the matrix were reviewed thematically. The recommendations presented in this report are based on analysis of these data, as well as a debriefing session with all the interviewers who conducted the fieldwork, NatCen researchers working on NTS and representatives from the DfT.

2 Question findings and recommendations

The original questions that were tested are shown in boxes below. Findings are then summarised for each set of questions and recommendations are made.

2.1 NHS workers

ASK ALL

OcSect

SHOWCARD A

Which of the types of organisations on this card [do/did] you work for?

1. Private sector firm or company (including limited companies and PLCs)
2. Nationalised industry or public corporation (including the Post Office and the BBC)
3. Other public sector employer (including for example Central Government/Civil Service/Government Agencies, Local Authority/Local Educational Authority, Universities, Health Authority/NHS Hospitals/NHS Trusts/GP surgeries, Police/Armed Forces)
4. Charity/Voluntary sector (including charitable companies, churches, trade unions)
5. Other (specify)

ASK IF Other public sector employer

OcPubSect

SHOWCARD B

Which of the following types of public sector organisation [do/did] you work for?

1. Central Government/Civil Service/Government Agencies
2. Local Authority/Local Educational Authority
3. Universities
4. Health Governing organisation (for example Department of Health, NHS England, Clinical Commissioning Bodies and other Arm's-Length Bodies such as NHS digital, Health Education England and NHS improvement)
5. NHS Trusts or Foundation Trusts
6. Primary care (including GP surgeries)
7. Social or residential care
8. Police
9. Armed Forces
10. Other

2.1.1 Key findings

OcSect

- Overall, this question was easy for participants to answer.
- Participants said they were able to find their answer on the list of options.
- When probed about their understanding of the phrase ‘public sector employer’, participants said that could refer to:
 - An employee of the local authority, government based, health, educational system, police services
 - Working for local authority, school, NHS
 - Serving the public
 - Not working for the private sector, having a good pension, working for a government body
 - Someone employed by the government on government salary
 - *‘a civil servant who operates in a national framework to help strategize and implement governmental visions’*
 - *‘it is not private sector...it is public sector... could be a civil servant, could be dealing with policy, human resources... all sorts of things’*
- Participants thought the examples provided on the list of options were useful and helped clarify the question for individuals who were unsure of their answer.
- During probing, participants were asked whether they would add any examples to option 3 (other public sector employer). Participants thought the following examples could be added: fire service and schools.
 - One participant thought the example could state NHS rather than NHS hospitals and NHS trust, as she thought hospitals would be included under NHS trusts.
- One participant, who selected ‘private sector firm’, said she found the question slightly difficult because she is self-employed as an exam invigilator and had to think about her answer. However, she was able to answer correctly.

OcPubSect

- All the participants who selected option 3 ‘other public sector employer’ at OcSect were routed to this question.
- Participants generally found this question straightforward to answer.
 - *‘The examples given were very clear.’*
- Participants understood ‘health governing organisation’ to mean:
 - ‘Whether or not you are working within the NHS or ‘at arm’s length’ body’
 - ‘CCGs, CCQs, anyone that’s a governing body rather than a hospital’
- Similarly to the previous question, participants thought the following services were missing from the list of options:
 - Fire services
 - Education or schools.
- Although there is an option ‘Local Educational Authority’ participants did not notice this option and thought an option should be included for education and schools.

2.1.2 Recommendations and suggestions

OcSect

- This question worked well. However, we suggest adding fire service to the examples for 'other public sector employer'.

OcPubSect

- To ensure clarity of response, it may be beneficial to split code 2 (Local Authority/Local Educational Authority) and include a separate code for education.

2.2 Vehicle keepership

ASK IF they own a motor vehicle

Thinking about the vehicle for which you are the main driver ...

NewSec

Did you acquire this vehicle new, or secondhand?

1. New
2. Secondhand

AcqVeh

SHOWCARD C

How did you acquire this vehicle?

1. I paid the purchase cost upfront
2. I pay/paid recurring instalments, and will own vehicle at end of these payments
3. I pay/paid recurring instalments, and will not own vehicle at end of these payments

ASK ALL WHO DID NOT PAY FOR THE VEHICLE UP-FRONT (ACQVEH = 2 & 3)

PayDur

SHOWCARD D

What was the initial duration of these payments?

1. Less than 12 months
2. 12 months but less than 2 years
3. 2 years but less than 3 years
4. 3 years but less than 5 years
5. 5 years or more

ASK ALL WHO DID NOT PAY FOR THE VEHICLE UP-FRONT (ACQVEH = 2 & 3)

LongPay

Showcard E

And how long have you been making these payments?

1. Less than 12 months
2. 12 months but less than 2 years
3. 2 years but less than 3 years

4. 3 years but less than 5 years
5. 5 years or more
6. Finished paying for the vehicle

ASK ALL WHO DID NOT PAY FOR THE VEHICLE UP-FRONT (ACQVEH = 2 & 3)

MilRest

Is there a restriction on the number of miles you can drive this vehicle without paying a penalty?

1. Yes
2. No
3. Don't know

2.2.1 Key findings

NewSec

- This question was easy for most participants to answer. Participants said it was easy to remember whether they had purchased their car new or secondhand, primarily due to the cost of the expenditure.
- Participants correctly understood 'secondhand' to mean:
 - 'previously owned'
 - 'having previous one or more owners'
 - 'it is an older registration than the year and the car has already got miles on the clock'

AcqVeh

- This question was easy for participants who said they had paid for the vehicle upfront.
- For others the options did cause confusion. For instance, those who have taken out a personal loan (such as a bank loan) to pay for their car should answer code 1 – that they paid for their car upfront. However, there was consensus among participants that individuals should not include taking out a loan and paying for a vehicle as option 1 (*'I paid the purchase cost upfront'*). Therefore, the wording is not sufficiently clear for respondents.
- Participants could differentiate between response options 2 and 3, where individuals will either own or not own the car after the regular payments. However, some mentioned that they will have the choice at the end of their payments whether to purchase the car outright or not, and were unsure which answer they should give.
- Generally, participants understood 'recurring payments' to mean *regular* or *repetitive payments*. It was suggested that 'regular' may be a clearer term than 'recurring'.
- Some of the participants who selected option 2 or 3 said they were aware of the difference and were able to identify their answer on the list.

-
- Other participants however found it difficult to answer this question.
 - One participant who selected 'I pay/paid recurring instalments and will own vehicle at the end of these payments', thought her answer was reflected in all of the response options. The participant said she put down a deposit and paid it off early and she owned the vehicle, therefore paid instalments, then a lump sum and thus owned the car.
 - Another participant, who additionally selected option 2, said her answer did not fit the questions and she had to think of the most suitable answer from the ones she was presented with. She had also paid instalments but had stopped paying these and has owned the car for more than five years.
 - It was also noted that some people would not have paid for their car at all – for instance, if they had been given it as a gift by a family member or friend – and there is no option to cater for this response.

PayDur

- Some of the participants, who were paying instalments for their vehicle at the time of the interview, found this question easy to answer.
- One participant said this question was very easy because he was aware the registration number was 2016 in July and therefore selected 'two years, but less than three years'.
- One participant did not answer this question correctly and realised her error during the probing questions. She answered 'two years but less than three years', however, she initially had the payments set up for four years and had paid them off in two years.

LongPay

- Some participants said it was easy to remember how long they had been making the payments.
- One participant incorrectly selected option 4 ('3 years but less than 5 years') and changed her answer to 'finished paying for the vehicle' during probing.
- Another participant correctly selected 'finished paying for the vehicle'.

MilRest

- Participants correctly understood the term 'restriction' at this question to mean a clause or contract where an individual is unable to drive over a certain mileage without paying a penalty.
- Some participants felt this question was inapplicable to them and thought it should only be asked of participants who were leasing a vehicle.

2.2.2 Recommendations and suggestions

- It is clear that these questions caused some confusion and therefore a further stage of design and re-testing is required before these questions can be included in the NTS.

2.3 Ebikes

Ebike

Do you own or have regular use of an electric bicycle (or 'ebike')? An electric bicycle is one that is assisted by an electric motor when you pedal.

1. Yes, I own one
2. Yes, I have regular use of one
3. No
4. Don't know

2.3.1 Key findings

Ebike

- Participants found this question straightforward to answer, including participants who did not own an ebike.
- During probing participants explained what an ebike was:
 - Bike with an electric engine, which makes it easier to cycle up hill
 - Motor attached to bicycle, but you can still pedal
- One participant, who said he had never seen an electric bicycle, said the short description after the question aided his understanding.
- The other participants thought the explanation of an electric bicycle was useful and did not think anything was missing from the description.

Ebike was also tested quantitatively, using the October 2018 wave of the NatCen Panel – a probability-based panel survey¹ - covering 2,161 respondents. The purpose of this quantitative testing was two-fold: i) to get an early estimate of the prevalence of ebike ownership; and ii) to check whether those who think they have an ebike actually do. To this end, two questions were included on the Panel survey:

Ebike

"Do you own or have regular use of an electric bicycle (or 'ebike')?"

{WEB: "An electric bicycle is one that is assisted by an electric motor when you pedal."}

INTERVIEWER: "An electric bicycle is one that is assisted by an electric motor when you pedal."

1. Yes
2. No
3. Don't know

{IF Ebike = 1}

EbikeMkMod

{IF WEB: "Please write in the makes and models of any electric bicycles you own or have regular use of." IF TEL: "What makes and models of electric bicycle do you own or have regular use of?"}

¹ <http://www.natcen.ac.uk/our-expertise/methods-expertise/surveys/probability-panel/>

{WEB: “If you do not know the make(s) and model(s), please describe the bicycle(s).”}
 INTERVIEWER: “If you do not know the make(s) and model(s), please describe the bicycle(s).”

OPEN

Analysis of the Panel data shows that 2% of the population currently own or have regular access to an ebike. No respondents answered ‘don’t know’. This would appear to confirm the finding from the cognitive testing that the question is easily understood by respondents.

Table 2:1 lists the make and models of bikes that were suggested. The majority of these are ebikes, which gives us confidence that the question is effective.

Table 2:1 Answers given to EbikeMkMod	
Make/model	
	Addapto maxl
	Batribike tricycle
	Carrera Crosscity-e
	Carrera Crossfire
	Connect
	Cube
	Cube Hybrid
	electric tricycle
	Elite
	Forme racing bike
	FreeGo
	FreeGo Hawk
	G-Tech
	Ghost Andasol
	Kalkoff
	KTM Ventura Cross 9 Cube Reaction Hybrid One 400
	Lyndsey west
	Orbea Gain
	Viking eadvance36
	Viking Villager
	White battery bike
	Xiongying e bike

2.3.2 Recommendations and suggestions

Ebike

- This question worked as intended, we therefore suggest no changes to the question wording or description of an ebike. This question can be included in NTS 2019.

2.4 Frequency and mode of transport

In the NTS a series of questions already exist which collect information on the frequency with which respondents travel by different modes of transport.² These questions were last adapted in 2009. The questions currently use for following answer scale:

1. 3 or more times a week
2. Once or twice a week
3. Less than that but more than twice a month
4. Once or twice a month
5. Less than that but more than twice a year
6. Once or twice a year
7. Less than that or never

With this scale it is not possible to identify particularly frequent travellers by mode, which means its analytical value is reduced. However, as a long-running set of questions, these also provide important trend data. As such, it was decided to explore the possibility of using a new answer scale which provides greater granularity at the top of the scale, and to test what impact this would have on trend data. To achieve this, a dual testing approach was used: i) the questions with both answer scales were tested cognitively; and ii) the two answer scales were tested quantitatively using a split sample experiment on the NatCen panel.

2.4.1 Cognitive testing

I will now ask you a set of three questions about different modes of transport and how often you use each of them. I would like you to give me your answer in the first instance using SHOWCARD F [OR SHOWCARD G].

PrvCar

A. How frequently do you travel by private car? Do not include taxi.
PLEASE COUNT EACH SINGLE TRIP AS ONE JOURNEY AND EACH RETURN TRIP AS TWO.

Train

B. How frequently do you use a train, not including underground, tram or light rail?
PLEASE COUNT EACH SINGLE TRIP AS ONE JOURNEY AND EACH RETURN TRIP AS TWO.

Plane

C. How frequently do you take an **internal** air flight within Great Britain?
PLEASE COUNT EACH SINGLE TRIP AS ONE JOURNEY AND EACH RETURN TRIP AS TWO.

² These questions are included in the questionnaire under the heading: Methods of transport used

SHOWCARD F

1. 3 or more times a week
2. Once or twice a week
3. Less than that but more than twice a month
4. Once or twice a month
5. Less than that but more than twice a year
6. Once or twice a year
7. Less than that or never

I WILL NOW ASK YOU THE SAME QUESTIONS, BUT I'D LIKE YOU TO ANSWER USING SHOWCARD G [OR SHOWCARD F].

SHOWCARD G

1. At least once a day
2. 5 or 6 times a week
3. 3 or 4 times a week
4. Once or twice a week
5. Less than that but more than twice a month
6. Once or twice a month
7. Less than that but more than twice a year
8. Once or twice a year
9. Less than once a year
10. Never

2.4.2 Key findings

General

- Generally, participants had little difficulty answering these questions. However, there were some misunderstandings regarding whether participants should only be thinking about their journeys during the week, while they were working, or whether they should include weekend journeys.
- For instance, one participant said he travelled by train to work at least once a day during the week, but at the weekend he would not travel by rail. He selected 'at least once a day' but thought it was unclear whether he was supposed to include his weekend travel, and if so, what his answer should be.
- Participants preferred showcard G (the new, longer scale) rather than showcard F (the existing, shorter scale). The reasons for this were because participants felt showcard G provided more options and reflected their answers more accurately.

PrvCar

- Overall, participants were able to answer this question. However, there was some misunderstanding around the phrase 'private car'.
- When asked what 'private car' meant, participants generally included a car they owned themselves, as well as a friend's or a relative's car.
- However, there was some ambiguity around the term 'private car'.
 - One participant thought 'private car' referred to, '*a car that is ready for and is prepaid at a set location*'.
 - Another thought the word 'private' referred to a car hired through a business.

-
- Another participant said he would include a minicab because it is a private car and not for the public.
 - Participants thought the explanation to not include taxis was useful at this question.

Train

- Participants found this question easy to answer and were able to exclude underground, tram or light rail from their answers.
- As mentioned above, one participant was confused whether to answer about his travel into work and his travel for leisure. He answered ‘at least once a day’ at this question. However, during probing he explained that he only travelled by train during the week to and from work and therefore did not regularly travel by train for leisure or at the weekends. As the question explains ‘please count each single trip as one journey and each return trip as two’, the participant said he would have preferred an option of 8 to 9 times a week.

Plane

- Participants found this question very easy to answer.
- Participants correctly understood ‘internal air flight within Great Britain’ to mean:
 - ‘if I take an internal air flight within the British isles’
- However, some of the participants said they were thinking about internal flights within the UK, therefore including Northern Ireland. This would need to be specified if DfT are interested in internal flights within Great Britain only.

2.4.3 Quantitative panel testing

As discussed above, these two answer scales were also tested quantitatively to provide an indication of what impact, if any, using the longer, 10-point answer scale would have on trend data.

To achieve this, NatCen conducted an experiment on the October 2018 wave of its probability-based panel. When presented with these three questions, a randomly selected, representative half of the sample was given the existing answer scale, and half was given the new, longer scale. A total of 1,087 (unweighted) respondents were given the existing answer scale and 1,074 the new scale. Table 2.2 shows the breakdown of results for the existing scale and Table 2.3 shows the results for the new scale.

Table 2:2 Results for existing 7-point scale

	Frequency travelled by car	Frequency travelled by train	Frequency travel by internal flight
	%	%	%
3 or more times a week	63	5	*
Once or twice a week	11	6	0
Less than that but more than twice a month	5	7	*
Once or twice a month	6	12	1
Less than that but more than twice a year	3	19	3
Once or twice a year	3	25	10
Less than that or never	9	28	86

*Unweighted base: 1,087 * = Less than half of one per cent*

Table 2:3 Results for new 10-point scale

	Frequency travelled by car	Frequency travelled by train	Frequency travel by internal flight
	%	%	%
At least once a day	38	3	*
5 or 6 times a week	18	2	0
3 or 4 times a week	11	3	*
Once or twice a week	11	2	1
Less than that but more than twice a month	3	3	*
Once or twice a month	4	14	1
Less than that but more than twice a year	4	19	4
Once or twice a year	3	21	8
Less than once a year	1	17	23
Never	8	16	63

*Unweighted base: 1,074 * = Less than half of one per cent*

Table 2.4 compares the proportion answering ‘3 or more times a week’ for both the existing 7-point scale and the new 10-point scale.³ This suggests that the new scale, with greater granularity at the top end of the scale, tends to provide a slightly higher estimate of the proportion of the population who travel 3 or more times a week. If this trend were to be mirrored in the NTS itself, we would expect a change in answer scale to result in a two or three percentage point rise in frequent travelers as a result of the question wording, rather than a change in behaviour.

Table 2:4 Proportion answering ‘3 or more times a week’

	% Answering ‘3 or more times a week’	
	Existing 7-point scale	New 10-point scale
Travel by car	63	66
Travel by train	5	7
Travel by internal flight	*	*
<i>Unweighted base</i>	1,087	1,074

*= Less than half of one per cent

2.4.4 Recommendations and suggestions

- The cognitive testing has shown that the longer answer scale is preferred by respondents. The quantitative testing has shown that the two answer-scales are likely to provide similar results, but when collapsing the top three answer codes on the new 10-point scale, it is likely that the new scale will produce a slightly higher level of frequent travellers for some modes of transport. If the new scale is to be adopted, this change in answer-scale will need to be accounted for in any analysis of trend data.
- To aid any confusion for those who make more than six trips per week using a particular mode, but who do not use that mode every day, a note will be added to the questionnaire to specify that in these instances the answer should be coded as ‘5 or 6 times a week’. This code, then, effectively covers those who make more than five trips a week, but do not use that particular mode every day.

2.5 Loneliness

- Questions in the Loneliness section were administered as self-completion: Participants were provided with a hard copy of the questions and asked to answer them while using think aloud. The interviewers observed and when needed probed spontaneously. Once the participants had completed this exercise, they were asked the scripted probes retrospectively.
- The probing questions were provided by the Office of National Statistics via DfT. ONS is currently undertaking a programme of work to test the loneliness questions thoroughly so that they can be included in the set of harmonised questions and included for official statistics on various national surveys.

³ For the 10-point scale, the proportion answering ‘At least once a day’, ‘5 or 6 times a week’ and ‘3 or 4 times a week’ have been aggregated.

- For the cognitive testing, half of the participants were provided with a hard copy of the questions preceded by introduction A (Group A), and the other half were asked to complete the questions preceded by introduction B (Group B).

Intro A

The next questions are about relationships with others and are asked on behalf of the Office for National Statistics.

Intro B

Evidence shows that good transport links are important to help people remain linked into their communities. To help us to understand this better, the following questions are asked on behalf of the Office for National Statistics.

LackComp

How often do you feel that you lack companionship?

1. Never
2. Hardly ever
3. Some of the time
4. Often

LeftOut

How often do you feel left out?

1. Never
2. Hardly ever
3. Some of the time
4. Often

Isolated

How often do you feel isolated from others?

1. Never
2. Hardly ever
3. Some of the time
4. Often

Lonely

How often do you feel lonely?

1. Never
2. Hardly ever
3. Occasionally
4. Sometimes
5. Often/always

2.5.1 Key findings

General

- Generally, participants found the loneliness questions easy to understand and answer. However, difficulties were highlighted regarding whether the questions were appropriate for a travel survey due to their sensitive nature. Participants queried whether they should be thinking of how transport influenced their experiences of loneliness.

- Some of the participants in Group B said they were confused as to whether they should think about the link between loneliness and transport or if they should answer more generally about their experiences of loneliness.
- One participant said, *'it is not clear whether the question is talking about general family matters or addressing issues about when you are travelling - otherwise very straightforward'*.
- The other half of participants, Group A, who were shown introduction B during the probing, thought that introduction B was more appropriate and provided more information on why the questions were being asked and what the data would be used for. However, this had a significant effect on their answers to the questions and some of the participants changed their answers during based on the link between transport and loneliness.
- Although participants answered these questions during the cognitive interviews, there were mixed feelings about how they made participants feel and why the questions were being asked. Participants questioned the different nature of these questions compared to the previous ones that they were asked. This is an issue that is likely to transpire to the main survey as well.
- One participant, who answered 'some of the time' for all four questions, said he felt sad after answering these questions. He questioned what the data will be used for. The interviewer ensured that he was feeling better before ending the interview. Thus, caution needs to be given to the impact these questions have on the participants. Equally, it would be beneficial to monitor whether the inclusion of these questions in the main survey will have an effect on the answers participants provide to the following questions.

LackComp

- Participants said this question was straightforward to answer.
- Participants thought this question was asking whether individuals had friends, a partner or close relatives. When asked what 'companionship' meant to them, participants said:
 - *'relationships, friendship circles, socialising at work...having a companion, a friend'*
- Generally, participants perceived companionship as different to having someone to talk to. Participants felt that 'having someone to talk to' referred to professional individuals rather than a close companion. The examples they provided to illustrate this included GPs, health services, police, paramedics, a charity, such as the Samaritans. They perceived a companion as someone they would have a deeper relationship and communication with.
- One participant from Group B and answered the questions, felt the word companionship meant:
 - *'someone travelling with you and going to the same destination...it could be work or someone you travel with daily, you make the same journey and you get to know them'*.
 - Therefore, the participant was answering thinking primarily of the link between transport and loneliness rather than life companionship more generally.

LeftOut

- Similarly, the same participant from Group B mentioned above, thought primarily about feeling left out on transport. He thought 'left out' at this question referred to:
 - *'when travelling...probably seeing other people talking...having a daily commute and talking...where as you are alone making your own journey'*
- Another participant from Group B, thought the question referred to being left out due to lack of transport.
- Some other examples of what participants considered this question to mean:
 - *'To not be part of the community'*
 - *'How often do you feel left out of social events'*
 - *'When you have been forgotten, no one asking how you are or inviting you to events or contacting you'*
 - *'How often do you feel excluded from social events...everyone included, and you are left out for whatever reason'*
- Some participants thought this question was very similar to feeling isolated and suggested merging the two questions together.

Isolated

- Participants highlighted that they felt this question was similar to LeftOut. Participants said isolated means:
 - *'You feel like, obviously you are being left out of something, your group of friends are doing something, and you haven't been called'*
 - *'You can have lots of friends around you and still feel isolated, it's more a mental health one this one'*
 - *'Being singled out'*
 - *'How often do you feel disconnected from others. I think isolated means being physically separated. It could be from a group of people'*
 - *'Since being retired, I do feel isolated... you miss going to work and having people around you'*
 - *'It is pretty close to being 'left out', it is sort of being detached from others, maybe your circle of friends don't have the same values as you'*
 - *'Not having someone to talk to ... being alone, cut off from others'*
- As evidenced by these examples, participants had different nuances of understanding of what 'isolated' meant to them. These could have been influenced by their individual circumstances, but also by the context of the cognitive testing, that is, the previous questions they were asked to reflect on.
- Some participants thought about transport and the feeling of isolation. One participant said isolated might refer to an individual living in a remote village who might find the limited transport links led to feelings of isolation.
- Participants felt there was a difference between isolated and being alone: they talked primarily about 'isolated' being a circumstance, whereas 'being alone' could be a personal choice.

Lonely

- Participants were able to answer this question easily as well. The overall consensus was that 'lonely' was different from being alone and that it referred more to a feeling than a state of affairs.
- One participant suggested that this question could be combined with the companionship question as it tackled the same topic: being lonely was most likely due to a lack of companionship.
- At this question, participants explained 'lonely' to mean:
 - *'Lack of relationships. A lot of people are single, lack of someone to speak to, no general community to belong to, so that you have someone to relate to.'*
 - *'Do you feel lonely? Do you have enough people to talk to? Do you get out and meet with people? Are you tied down and possibly can't get out of your own flat?'*
 - *'How often do you feel alone, on your own when no one is around and not wanting to be alone.'*
 - *'If you haven't family or friends around you, haven't places to go, things to do, or someone to talk to, then you would end up lonely'*
- Most participants said that they did not notice the difference between the response options for this question, but they were all able to place themselves on the scale provided.
 - Some participants suggested that 'occasionally' and 'sometimes' were too similar and it would have been sufficient to have just one of the two response options included on the scale.
 - Some participants would have preferred to use the same scale used for the other questions in this section, while some suggested that this scale should be used for the other questions as well.

2.5.2 Recommendations and suggestions

- The four loneliness questions were easy for participants to understand and answer. We therefore do not suggest any specific changes to the actual survey questions.
- One suggestion would be to consider whether the same response options could be used for all questions. Although participants were not necessarily put off by having to answer the last question on a different scale, they did question the rationale for it.
- We do recommend careful consideration of how to introduce these questions in the National Travel Survey. Introduction B influenced participants' answers and made them think more specially about travel and whether this affected their experiences of loneliness. However, introduction A was perceived to have too little information to provide participants with a reason as to why they should answer the questions and how the data will be used.
- We recommend a clear introduction is included, to explain why the questions are being asked. This will have a beneficial impact on avoiding drop outs and non-response. The introduction should include details on the data being confidential and anonymous.
- It was discussed during the debrief that an explanation could also be added after the questions to explain why the data is being collected.

Appendix

Final question wording used in NTS 2019

NHS workers

ASKED OF ALL IN TURN, IF THEY ARE 16 OR OVER AND EMPLOYED OR HAVE EVER HAD A PAID JOB (DVAge >= 16 AND (DVIL03a = 1 OR EVERWK=1))

OcSect

SHOW CARD 32

Which of the types of organisation on this card [do/did] you work for?

1. Private sector firm or company (including limited companies and PLCs)
2. Nationalised industry or public corporation (including the Post Office and the BBC)
3. Other public sector employer (including for example Central Government/Civil Service/Government Agencies, Local Authority/Local Education Authority, Universities, Health Authority, NHS Hospitals/NHS Hospitals/NHS Trusts/GP surgeries, Police/Armed Forces, Fire service)
4. Charity/Voluntary sector (including charitable companies, churches, trade unions)
5. Other (specify)

ASK IF OTHER public sector employer (OcSect = 3)

OcPubSect

SHOW CARD 33

Which of the following types of public sector organisation [do/did] you work for?

1. Central Government/Civil Service/Government Agencies
2. Local Authority
3. Local Education Authority/school
4. Universities
5. Health Governing organisations (for example Department of Health, NHS England, Clinical Commissioning Bodies and other Arm's-Length Bodies such as NHS digital, Health Education England and NHS improvement)
6. NHS Trusts or Foundation Trusts
7. Primary care (including GP surgeries)
8. Social or residential care
9. Police
10. Armed Forces
11. Other

Ebikes

ALL QUESTIONS ASKED OF EACH PERSON AGED 5 OR OVER IN TURN
(DVAGE=>5)

Ebike

Do you own or have regular use of an electric bicycle (or 'ebike')? An electric bicycle is one that is assisted by an electric motor when you pedal.

1. Yes, I own one
2. Yes, I have regular use of one
3. No
4. Don't know

Frequency & mode of transport

ASK ALL YEARS

PrivCar

Name

SHOW CARD 18

How frequently [do you/ does name] travel by private car? Do not include taxi.

PLEASE COUNT EACH SINGLE TRIP AS ONE JOURNEY AND EACH RETURN TRIP AS TWO.

NOTE: ONLY INCLUDE TRAVEL WITHIN GREAT BRITAIN, OVER THE LAST YEAR OR SO.

1. At least once a day
2. 5 or 6 times a week
3. 3 or 4 times a week
4. Once or twice a week
5. Less than that but more than twice a month
6. Once or twice a month
7. Less than that but more than twice a year
8. Once or twice a year
9. Less than once a year
10. Never

ASK ALL YEARS. IF ever use bus (Busout <>No)

Ordbus

NAME

SHOW CARD 18

How frequently do you use local buses?

PLEASE COUNT EACH SINGLE TRIP AS ONE JOURNEY AND EACH RETURN TRIP AS TWO.

NOTE: ONLY INCLUDE TRAVEL WITHIN GREAT BRITAIN, OVER THE LAST YEAR OR SO.

1. At least once a day
2. 5 or 6 times a week
3. 3 or 4 times a week
4. Once or twice a week
5. Less than that but more than twice a month
6. Once or twice a month
7. Less than that but more than twice a year
8. Once or twice a year
9. Less than once a year
10. Never

ASK ALL YEARS.

Coach

NAME

SHOW CARD 18

(How frequently do you/does name use) an express bus or coach within Great Britain?

PLEASE COUNT EACH SINGLE TRIP AS ONE JOURNEY AND EACH RETURN TRIP AS TWO.

NOTE: ONLY INCLUDE TRAVEL WITHIN GREAT BRITAIN, OVER THE LAST YEAR OR SO

1. At least once a day
2. 5 or 6 times a week
3. 3 or 4 times a week
4. Once or twice a week
5. Less than that but more than twice a month
6. Once or twice a month
7. Less than that but more than twice a year
8. Once or twice a year
9. Less than once a year
10. Never

ASK ALL YEARS.

Train

NAME

SHOW CARD 18

(How frequently do you/does name use) a train, not including underground, tram or light rail?

PLEASE COUNT EACH SINGLE TRIP AS ONE JOURNEY AND EACH RETURN TRIP AS TWO. NOTE: ONLY INCLUDE TRAVEL WITHIN GREAT BRITAIN, OVER THE LAST YEAR OR SO.

1. At least once a day
2. 5 or 6 times a week
3. 3 or 4 times a week
4. Once or twice a week
5. Less than that but more than twice a month
6. Once or twice a month
7. Less than that but more than twice a year
8. Once or twice a year
9. Less than once a year
10. Never

ASK ALL YEARS.

TaxiCab

NAME

SHOW CARD 18

(How frequently do you/ does name use) a taxi/minicab?

PLEASE COUNT EACH SINGLE TRIP AS ONE JOURNEY AND EACH RETURN TRIP AS TWO

NOTE: ONLY INCLUDE TRAVEL WITHIN GREAT BRITAIN, OVER THE LAST YEAR OR SO.

1. At least once a day
2. 5 or 6 times a week
3. 3 or 4 times a week
4. Once or twice a week
5. Less than that but more than twice a month
6. Once or twice a month
7. Less than that but more than twice a year
8. Once or twice a year
9. Less than once a year
10. Never

ASK ALL YEARS

Plane

NAME

SHOW CARD 18

(How frequently do you/does name take) an **internal** air flight within Great Britain?

PLEASE COUNT EACH SINGLE TRIP AS ONE JOURNEY AND EACH RETURN TRIP AS TWO.

NOTE: ONLY INCLUDE TRAVEL WITHIN GREAT BRITAIN, OVER THE LAST YEAR OR SO.

1. At least once a day
2. 5 or 6 times a week
3. 3 or 4 times a week
4. Once or twice a week
5. Less than that but more than twice a month
6. Once or twice a month
7. Less than that but more than twice a year
8. Once or twice a year
9. Less than once a year
10. Never

ASK ALL YEARS

IF age is 1 or over and respondent goes out on foot (DVAge >1 AND Footout is not 3)

Walk

NAME

SHOW CARD 18

How frequently do you walk anywhere for 20 minutes or more without stopping. Please count each single trip as one journey and each return trip as two?

INCLUDE ALL WALKS, WHETHER FOR PLEASURE OR WITH A PURPOSE.

IF ROUND TRIP, COUNT AS ONE JOURNEY

NOTE: ONLY INCLUDE TRAVEL WITHIN GREAT BRITAIN, OVER THE LAST YEAR OR SO.

1. At least once a day
2. 5 or 6 times a week
3. 3 or 4 times a week
4. Once or twice a week
5. Less than that but more than twice a month
6. Once or twice a month
7. Less than that but more than twice a year
8. Once or twice a year
9. Less than once a year
10. Never

This new answer scale was also applied to the following questions:

If has ridden bike in last year (Cycle12=1)

Bicycle2

NAME

SHOW CARD 21

How frequently do you / does [name] use a bicycle?

PLEASE COUNT EACH SINGLE TRIP AS ONE JOURNEY AND EACH RETURN TRIP AS TWO

NOTE: ONLY INCLUDE TRAVEL WITHIN GREAT BRITAIN, OVER THE LAST YEAR OR SO.

1. At least once a day
2. 5 or 6 times a week
3. 3 or 4 times a week
4. Once or twice a week
5. Less than that but more than twice a month
6. Once or twice a month
7. Less than that but more than twice a year
8. Once or twice a year
9. Less than once a year
10. Never

If ever used app-based taxi/private hire services (PHVuse=1)

PHVFreq

SHOW CARD 25

How frequently do you use app-based services to book a taxi or private hire vehicle?

1. At least once a day
2. 5 or 6 times a week
3. 3 or 4 times a week
4. Once or twice a week
5. Less than that but more than twice a month
6. Once or twice a month
7. Less than that but more than twice a year
8. Once or twice a year
9. Less than once a year
10. Never

Loneliness

Please note that some minor changes to the answer scales were applied to the loneliness questions after testing, following advice from the ONS.

LonScreen

The next questions are about your relationships overall. Your answers will be completely anonymous.

LackComp

How often do you feel that you lack companionship?

1. Hardly ever or never
2. Some of the time
3. Often
4. Don't know
5. Prefer not to answer

LeftOut

How often do you feel left out?

1. Hardly ever or never
2. Some of the time
3. Often
4. Don't know
5. Prefer not to answer

Isolated

How often do you feel isolated from others?

1. Hardly ever or never
2. Some of the time
3. Often
4. Don't know
5. Prefer not to answer

Lonely

How often do you feel lonely?

1. Often/always
2. Some of the time
3. Occasionally
4. Hardly ever
5. Never
6. Don't know
7. Prefer not to answer

CASIEndX

Thank you very much for answering these questions. Your answers will help us understand how people's circumstances and feelings may affect their travel choices and vice versa.