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# **Mental health and travel behaviour**

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## **Abstract**

*Introduction:* Travel requires various skills such as concentration, interpretation of information, and the confidence to take decisions and interact with other people. Mental illness can affect these skills and so cause barriers to travel. These issues are explored in this paper using the results from a cross-sectional on-line survey.

*Methods:* The survey focussed on domestic travel. The link to the survey was distributed by eighteen mental health or transport organisations and three individuals through social media, newsletters and websites. Weightings were applied to make the results more representative of the national population with mental health conditions.

*Results:* 89% of the respondents had anxiety and 76% were depressed. The biggest cause of anxiety was interacting with fellow travellers, both in terms of how they behaved and how the respondents felt that others perceived them. The second main cause of anxiety was needing support when travelling, both feeling out of control and requiring help from other people. Having to feel in control reflected another cause of anxiety: having to take action in an unfamiliar environment, because the method of travel has failed or because of the need to find suitable toilet facilities. Wayfinding caused anxiety in terms of feelings of disorientation, being lost and having to find the way. The fifth area of anxiety revolved around interacting with staff such as bus drivers and buying tickets. A high proportion of respondents had fluctuations in their health condition from day to day that meant that sometimes they could not leave home. Many of them were unable to commit to buying rail tickets in advance.

*Conclusions:* People with mental health conditions have difficulty travelling because of various barriers that they face. Changes such as clearer, comprehensive travel information, better-designed buses, trains and infrastructure and quieter, calmer, less crowded journeys would enable them to travel more.

*Keywords:* mental health; anxiety; accessibility; bus; train; travel

## **1. Introduction**

Mental illnesses are health conditions that involve changes in emotion, thinking or behaviour (or a combination of these). They include anxiety, depression, agoraphobia, and bipolar disorder. These can affect various aspects of life including travel.

The purpose of this paper is to explore the barriers to travel for people with mental health conditions using the results of a survey. In the next section, evidence on the relationship between travel and mental health is explored using the academic literature. Then the methodology used in this paper, an on-line cross-sectional survey of people with mental health conditions, exploring their use of domestic travel, is discussed. Various aspects of their mental health and how it affects their travel are considered in the following sections, both in terms of the effect on their ability to leave home and the implications for their use of various modes of travel. The paper is concluded with a discussion about the limitations of the approach and the drawing of recommendations. There is a more comprehensive report available elsewhere (Mackett, 2019).

## **2. The relationship between mental health and travel**

19.1% of adults aged 18 or older in the US, had a mental illness in 2018 (U.S. Department of Health and Human Services, 2020) and around one in six adults (17 per cent) surveyed in England met the criteria for a common mental disorder (CMD) in 2014 (McManus et al., 2016). Furthermore, in England, 26% of all adults have been diagnosed with at least one mental illness during their lifetime, while a further 18% say that they have experienced a mental illness without being diagnosed (Bridges 2015).

Travel requires a number of skills including concentration, interpretation of information, and the confidence to take decisions and interact with other people (Mackett, 2017). Having a mental health condition can affect these skills and so can affect the ability to travel. For example, anxiety can have a psychological impact that can include lack of concentration and loss of self-confidence. Depression has symptoms that include finding it difficult to make decisions (NHS, 2021).

The relationship between mental health and travel is complex: having a mental health condition can affect the ability to travel and travel can cause stress that may exacerbate mental illness. For example, a person might choose to travel by bus rather than by metro because they have claustrophobia, an irrational fear of confined spaces (NHS, 2021), and be caused anxiety by the stress of the bus journey, which may then affect their travel behaviour.

A number of researchers have examined the relationship between mental health and travel. Some researchers have found a positive relationship between public transport use and mental health. Chiatti et al. (2017) found that mental health was lower among older people not using public transport in a study in three cities in Sweden. Melis et al. (2017) found that accessibility to public transport was associated with positive mental health in Turin in Italy. These were cross-sectional studies that could not show the nature of the relationship. It may be the opportunities that could be reached by public transport rather than the journey itself that provided mental

health benefits through improved social engagement. This has been suggested by Reinhard et al. (2018) and by Whitley and Prince (2005) who found that, in London, free bus travel was associated with better mental health. Some positive aspects of travel on mental health were found by Penfold et al. (2008) who carried out nine interviews with people with mental health conditions who said that travel provided interactions with transport staff and other transport users, which they found positive.

Other researchers have found negative associations between travel and mental health. Strong and statistically significant negative associations between both carpooling and public transportation and mental health issues were found in the US by Ferenchak and Katirai (2015). Posner et al. (2018) carried out a survey of 243 people who had experienced poor mental health in adult life. 228 of the participants believed that mental health can affect travel behaviour, 179 negatively and 1 positively. 230 believed that transport systems can affect mental health, 178 negatively and 10 believed that there could be both positive and negative effects.

Posner and Sharp (2020) carried out a survey of 81 people who have experience of living with a mental health condition and found that participants identified no positive benefits for travelling by bus or train, but did find positive impacts of travel on their mental health for walking and cycling. Walking and cycling may be good for mental health because they are forms of physical activity and there is clear evidence of the benefits of physical activity on mental health, for example, depression (US Department of Health and Human Services, 2018). Kelly et al. (2018) found considerable evidence in the literature of walking both preventing and treating depression and anxiety, but more limited evidence for the effects on other mental health conditions. In the US, Choi and DiNitto (2016) found that non-drivers who walked for transport had lower depressive symptoms than those who did not walk.

The evidence on the relationship between mental health and travel has been reviewed by Posner (2017) to see how the choice of modes can be influenced by crowding, habits and control beliefs (e.g. people avoiding intense feelings of anxiety by choosing modes of transport offering higher levels of perceived control, such as private cars). She found a paucity of community-based research on this theme with much of the research conducted with participants recruited from among users of mental health services which introduced biases into the samples (Brugha et al., 2016).

Penfold et al. (2008) make the important point that confidence was a key factor in participants' experiences of using transport. They concluded that confidence was underpinned by three sets of factors: routine and planning; safety and control; and, affordability and finance. This is supported by evidence based on detailed analysis of the Life Opportunities Survey (Department for Transport, 2016) which found that 'anxiety/lack of confidence' was a major reason for people with mental health conditions not using local buses, long distance bus/coach, train and taxi as much as they desired. It was not a major reason for any of these modes for people with no impairments.

The Mental Health Action Group (2011) carried out a survey of 203 people with mental health conditions and found that many of the respondents said that they found it difficult to commit to a journey because their health condition could fluctuate from one day to the next. This meant that they were prevented from booking in advance for some rail journeys and obtaining the cheapest fares. They identified two areas of difficulty when travelling by bus: overcrowding and the complexity of some information at bus stops. Some respondents felt that staff ignored them because they do not look disabled.

Posner and Sharp (2020) found that the main impact of mental health on travel is avoidance, with some people choosing not to use certain modes of transport altogether while others chose not to at specific times of day or avoiding certain environments (e.g. not travelling at nights, not using poorly lit routes). Other barriers were linked to the absence of control on certain modes of transport, particularly bus and train, and the lack of certainty that arose while using these modes. They found that the main effect on mental health of travel by buses and trains was 'other people'. Overcrowding, bus and station design, route planning and navigation were also mentioned.

International travel can be associated with mental health benefits and risks (Flaherty, et al., 2020; Maher et al., 2020; Marcolongo et al., 2019).

The literature shows that there is a relationship between mental health and travel. There is evidence that having transport available to provide access to opportunities may contribute positively to mental health as can walking and cycling. However, there is evidence of negative effects of making a journey, with anxiety causing limitations on travel with people avoiding some modes or travelling at particular times of day. It is not clear from the literature which aspects of making a journey cause anxiety. This issue is explored in the survey which forms the basis of this paper.

### **3. Methods**

#### **3.1 Design of the questionnaire**

The focus of the study was travel within the country, and did not include international travel. The questionnaire was developed in consultation with experts in mental health and travel, who provided useful feedback on the design of the individual questions. Because the survey was being distributed anonymously on-line it was not practical to carry out a pilot survey which could be used to validate the survey because it would be very likely that some people would receive both the pilot questionnaire and the final one, which could cause confusion, and possibly distress.

The questionnaire covered a variety of topics relating to travel and mental health and is shown in the Appendix to this paper.

#### **3.2 Conduct of the survey**

The survey was carried out once on-line and so was cross-sectional in nature. The questionnaire was coded using Opinio software. Because the responses were all anonymous, the respondents could give comprehensive answers without fear about the stigma often associated with mental

illness (Public Health England, 2015). The link to the questionnaire was distributed by eighteen organizations and three individuals using social media (mainly Twitter), websites and newsletters. The organizations included ones concerned with mental health including SANE, Anxiety UK and the Mental Health Action Group, and transport organizations such as Transport for London, Transport Scotland and Sustrans. In addition, three individuals with a range of contacts in the mental health field distributed the link. Responses were received between 15 May and 26 July 2018. Ethical approval for the survey had been granted by the UCL Research Ethics Committee.

There were 389 responses to the survey. Four were removed, two because they were blank and two because they were from people without a mental health condition, leaving 385 useable responses from people who either had a mental health condition or were carers for people with such a condition. They were asked to provide information about their gender, their age group and the type of area that they lived in so that the survey results could be broken down into these groupings where appropriate, and to facilitate comparisons with other surveys to see how representative the sample was.

### **3.3 Weighting the sample**

Whilst carrying out the survey permitted the respondents to answer frankly, knowing that they were anonymous, it also meant that it was not possible to control the demographic structure of the sample. The sample has been weighted to help address this issue using the age and gender structure of the population in England with mental illness as represented by the latest Adult Psychiatric Morbidity Survey (APMS) (McManus et al. 2016)<sup>1</sup>. This meant that only the responses from people who gave both their age and gender in the survey being described in this could be used. This left 363 responses for analysis.

### **3.4 The demographics structure of the sample**

Because of the weighting procedure, the gender and age distribution of the respondents match those in the Adult Psychiatric Morbidity Survey (APMS) (McManus et al., 2016). This means that 36% of the sample was male and 64% female, and that 27% were age of 30 and under and 18% were over 60 years of age.

Out of the 363 responses being considered here, 18 were completed by carers, the rest by the person with a mental health condition. Of the 18 completed by carers, 6 were on behalf of people aged under 18; the other 12 were for people above the age of 18. Four of these 12 were employed, which is 33% compared with 59% of the overall sample of 363.

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<sup>1</sup> The responses in this survey were weighted by the age and gender cohorts of the sample in APMS whose score on the Clinical Interview Schedule (CIS-R) showed that they had symptoms of anxiety and depression which suggested that they were likely to benefit from acknowledgement and possible intervention.

### 3.5 The mental health of the sample

The mental health of the respondents in the survey is shown in Table 1. Most people reported more than one condition. Anxieties were reported by 89% of the respondents and depression by 76%. Other conditions mentioned included post-traumatic stress disorder (PTSD), obsessive-compulsive disorder (OCD), agoraphobia, and bi-polar disorder.

**Table 1** Mental health of the respondents in the survey

	% of respondents
Anxiety (including social anxiety and panic attacks)	89
Depression	76
Post-traumatic stress disorder (PTSD)	20
Obsessive-compulsive disorder (OCD)	14
Agoraphobia	13
Bipolar disorder	7
Other conditions	24

*Total number of respondents: 363*

The respondents were asked if their mental health condition had led to any of the following: social anxiety, panic attacks, communication difficulties or impaired memory. As Table 2 shows, many people gave positive responses. 87% said that they had social anxiety, and 67% suffered from panic attacks. Just under half said that their mental health condition led to communication difficulties, while slightly fewer reported that they had impaired memory. These help to explain some of the anxieties, because communication difficulties may be part of the reason for anxiety about interacting with other people, impaired memory may underlie part of the difficulty when wayfinding and having panic attacks in public may contribute to feeling self-conscious.

**Table 2** The effects of the mental health conditions on those in the survey

	% of respondents
Social anxiety	87
Panic attacks	67
Communication difficulties	49
Impaired memory	45

*Total number of respondents: 363*

There are interesting differences in these effects by gender and mental health condition. Many more women than men have panic attacks (76% of the female respondents, compared with 51% of the males). However, a greater proportion of the males said that they have difficulty communicating (56% of the males compared to 45% of the females). Many of the people with agoraphobia suffer from panic attacks. Social anxiety is an issue for people with all the mental health conditions mentioned in Table 1, especially people with PTSD, depression and OCD.

### 4. Panic attacks

67% of the respondents said that they suffer from panic attacks. The causes of panic attacks when travelling mentioned by the respondents included:

- Severe overcrowding;
- A high or wide gap between the train and the platform;
- Tight connections between trains because of delays;
- Tube train (metro) stopping in a tunnel;
- Getting lost;
- Car breaking down.

The panic attacks had various effects, for example:

- Becoming unconscious and then unable to move for an hour (Woman aged 18-30);
- Crying, sweating, shaking (Woman aged 41-50);
- Fainting (Woman aged 61-70);
- Fear of screaming so much that he could not stop (Carer of a man aged 41-50);
- Feeling exhausted, embarrassed and confused (Woman aged 31-40);
- Losing the ability to speak (Woman aged 31-40);
- Needing to get off the bus to get some fresh air (Man aged 41-50);
- When driving on a motorway, having to pull over and pretend that the car was faulty (Woman aged 61-70).

Some of the respondents gave graphic descriptions of having a panic attack, including the considerable distress that they felt and the need for assistance from other people. Panic attacks led to some people being unable to travel by specific modes again.

## **5. Anxiety when travelling**

The respondents were asked to indicate the causes of anxiety when travelling from a list that they were offered. They could tick as many as they felt were relevant or could add any other causes that were not on the list. Table 3 shows percentage of respondents giving each answer. The anxieties have been grouped, and the total numbers with one or more anxiety in each group shown.

**TABLE 3** Causes of the anxieties that the respondents have when they travel

	<b>% of respondents</b>
<b>Interacting with fellow travellers</b>	84
What other people think about them	66
Having to mix with strangers	65
How other people behave	48
<b>Needing support</b>	82
Feeling out of control	64
Feeling claustrophobic and unable to escape	56
Not being able to obtain help	34
<b>Wayfinding</b>	67
Feeling disorientated	46
Getting lost	36
Having to take decisions about where to go	35
Remembering where they are going to	19
<b>Needing to take urgent action</b>	63
Failure of the bus, train or car	46
Finding suitable toilet facilities	42
<b>Interacting with staff and purchasing tickets</b>	51
Having to talk to staff such as bus drivers	45
Using ticket machines	20
Handling money	14
Something else	14

*Total number of respondents: 363*

The largest cause of anxiety when travelling was interacting with other people, particularly what other people thought about the respondent and the need to mix with strangers, but also the behaviour of other people. The second largest group of causes of anxiety was the need for support, reflected in both internal feelings of being out of control and being trapped, and concern about not being able to obtain help when it was needed. The third group was anxieties about finding the way. Several aspects caused concern: some were internal such as feeling disoriented and fear of getting lost. Others reflected issues about their spatial relationship with the environment: taking decisions about turning left and right and remembering their destination. Sometimes when travelling, it is necessary to take decisions urgently, for example, when the means of travel fails so an alternative route or method has to be found, or it is necessary to find suitable toilet facilities urgently. Both these factors caused anxiety, as did the ticket-buying process. This may be because of the need to speak to the bus driver or because the use of ticket machines or handling money caused anxiety.

For almost all the anxieties mentioned in Table 3, more women than men suffered from the anxiety when travelling, particularly in terms of interacting with fellow travellers, needing support when travelling and taking decisions when wayfinding.

## 6. Leaving home

Having a mental health condition may prevent some people from travelling at all. As Table 4 shows, about a third of the respondents were frequently unable to leave home because of their mental health condition, and another third were occasionally unable to do so. Only 11% were never prevented from leaving home by their mental health condition. This was an issue for all the people with agoraphobia and nearly all the people with PTSD. It affected many more women than men.

**Table 4** How often having a mental health condition prevents the respondents from leaving home

	<b>% of respondents</b>
Frequently	31
Occasionally	36
Rarely	22
Never	11
Total	100

*Total number of respondents: 362*

Some of the respondents described how they felt:

- *“I just can't leave house at times. It's all too much”* (Person aged 51-60);
- *“I am sometimes too scared to leave the house”* (Woman aged 31-40);
- *“I don't do well in large crowds and most days I can't even leave my home”* (Women aged 31 to 40);
- *“The fear of leaving home to travel to work is sometimes too overwhelming, so I do not do it”* (Woman aged 41-50);
- *“I struggle to leave the house in general on bad day”* (Man aged 18-30).

An important aspect of mental illness is that the severity of its impact can fluctuate from day to day. 66% of the respondents were sometimes prevented from buying rail tickets in advance because they are not certain how they will feel on the day, and so cannot benefit from the cheaper rail tickets available to other people. This was an issue for 73% of the females in the sample compared with 54% of the male respondents.

## 7. Making journeys

As Table 5 shows, some respondents were unable to use each mode of transport because of their mental health condition. It also shows the number who had used each mode in the previous year to indicate which modes were potentially useable. 62% of the respondents could not use one or more modes because of their mental health condition, 48% of the men in the sample and 69% of the women.

**Table 5** Inability to use various modes of travel and use of each

	<b>% of respondents who were not able to use the mode of travel</b>	<b>% of respondents who had used the mode in the previous year</b>
Metro	36	44
Bus	30	73
Driving a car	30	47
Train	29	73
Tram	20	21
Cycling	17	18
Taxi	16	57
Walking	10	87
Being a car passenger	9	86

*Number of respondents: 363*

The mode of travel that the greatest number of people could not use was the metro, such as the London Underground, which affected 36% of the respondents, particularly people with agoraphobia. Just under a third of the respondents could not use bus or train, or drive a car, with more females affected than men. The two forms of transport that fewest people were unable to use were walking and being a car passenger. This is reflected in the high percentages that had used them in the previous year. However, it is interesting that about 10% of the respondents could not use these two modes, which appear to present relatively few barriers to users. These people may have been unable to use any modes of travel because the state of their mental health prevented them from leaving home. The relatively low usage of tram partly reflected the fact that trams are not available in many parts of the country.

## **8. Walking**

Walking was the mode of travel used by the largest proportion of the sample in the previous year, according to Table 5, but 10% of the respondents said that they could not do it. One woman aged 30-40 explained *“Walking is worrisome as I feel vulnerable and struggle to breathe and continue to walk when my heart rate and breathing is so rapid”*. Another woman also aged 30-40 said, *“I am afraid of walking far as I get dizzy feelings and weak jelly legs”*.

The respondents were asked to indicate which factors would encourage them to walk more. The top factor was ‘Better behaviour by other people’, which 44% of the respondents, particularly men, indicated but is nothing to do with the street environment. Some factors cited did reflect the nature of many streets: ‘Better pavements’, ‘Less noise’, ‘Less traffic’ and ‘Less clutter on the street’. Many more men than women said that having less clutter on the street would encourage them to walk more. People with agoraphobia, PTSD and OCD were particularly concerned about noise and many of those with agoraphobia also mentioned wanting less traffic. Just under one third of the respondents said ‘More toilet facilities’. Other factors cited by about 20% of the respondents were ‘Better signposting’, which would help to give more confidence about wayfinding, and ‘More places to ask for help’.

## 9. Bus

30% of the respondents could not use the bus. Some of them explained the difficulties that they faced in making a bus journey. For some people preparing for the trip was difficult: *"It takes me a long time, often days, to prepare myself to use public transport; often the day I need to go, I get sick in the morning"* (Woman aged 18-30). Some people prepared by walking the trip beforehand: *"I caught the bus two weeks ago for the first time in nearly 3 years. I was able to do it once I had walked the 3.5 mile route"* (Woman aged 51-60).

Some people found the bus system confusing, for example: *"I have chosen to walk rather than to use buses as I struggle with the anxiety of not being able to understand the ticketing/timetable requirements on buses"* (Man aged 51-60). Several of the respondents had boarded the wrong bus. One woman aged 31-40 said *"On way to counselling appointment and got so stressed due to anxiety, I got on the wrong bus despite being 5 mins from my front door"*. Being unsure which side of the road the bus goes from could lead to anxiety: *"I've caught buses from the wrong side of the road when distressed and ended up going backwards which made me have to go somewhere to calm before returning to people and the bus again"* (Person aged 51-60). A woman aged 41-50, said that she could only get off when another person did: *"So anxious that I couldn't get off the bus. If no one else is getting off at my stop, I have to wait and get off when someone else does. This means walking back a long way"*. Another cause of anxiety was buses being diverted off their normal route. For example, *"The bus took a diversion. I was stressed. I tried to blank the outside out. I kept trying to reassure myself it will be back to normal soon. I missed my stop. Thinking we were still on the diversion, I continued on the bus till they said it was end of route. I was so stressed and confused"* (Woman aged 18-30).

For some people, interacting with the driver caused problems. For example, *"I struggle with buses as you generally have to interact with the driver"* (Woman aged 31-40). The attitudes of other travellers can cause distress, such as *"Being surrounded by strangers, thinking that they are judging me on the bus, feeling like I can't get off, even though I can"* (Person with no age given). People can be made to feel anxious by bad behaviour by others even if it is not directed towards them: *"Just the other week, when on a bus home from a mental health support appointment, some of the other bus users were inconsiderate, abusive to each other, shouting and swearing etc. One lady's comments to another particularly upset me. I cried behind my sunglasses and hid my panic attack from all of them until I got home"* (Woman aged 31-40).

These comments reflect both the anxieties shown in Table 3 and the factors that the respondents said would encourage them to travel by bus more. The most popular answer was 'Better behaviour by other travellers', which had slightly more responses than 'Clearer information on board the bus about the route and the next stop' and 'Clearer bus timetables and maps'. The latter two factors are both associated with wayfinding which was a major cause of anxiety. 'Clearer websites' are another factor that would help. The need for better-trained bus drivers, mentioned by about one third of the respondents, reflects some of the comments above.

## 10. Train

Trains had been used by 73% of the respondents in the previous year, but 29% of the respondents were not able to use them at the time of the survey because of their mental health condition. Some of the respondents explained why.

Some people had anxieties before boarding the train: *“Often I can only do one way of the journey, as I can use a ticket machine at one end but at the start I’d have to talk to someone to receive a ticket to travel”* (Woman aged under 18). Finding the way around a station can be difficult: *“I struggle to negotiate complex geographical layouts and crowded situations. This makes it difficult for me to change Tube trains or use mainline stations”* (Woman aged 41-50). Station refurbishment can lead to difficulties: *“When London Bridge was being refurbished I could not use it at all because the changed layout added to my existing experience of disorientation in mainline stations”* (Woman aged 41-50).

On the train, the need to obtain a seat can cause anxiety: *“I feel really stressed walking to the train, wanting to ensure I get a seat as I am better travelling when I am sat down and can hide rather than standing and feeling like everyone is watching me”* (Woman aged 31-40). Overcrowding on the train can cause difficulties: *“If the train is overcrowded I would start feeling panicky and would not get on train. I can't handle crowds”* (Woman aged 51-60). Another cause of anxiety was failing to alight at the correct station: *“I have missed my stop on the train several times. On one occasion I became disoriented and went on for several stops getting more and more confused eventually calling a friend who reminded me of the route”* (Woman aged 41-50).

Delays to the train can also cause stress: *“If the trains are seriously delayed, I will avoid using them in case I get stuck between stations for an extended period (more than 10 mins). If this happens, I start panicking very quickly”* (Woman aged 51-60).

When asked what factors would encourage them to travel by train more, as well as wanting other travellers to behave better, the respondents said having better trained staff and being able to contact a member of staff on board would encourage them. Clearer information both before and during the journey would also help, as would having more toilet facilities.

## 11. Taxi

Only 16% of the respondents said that they were unable to use taxis, as shown in Table 5. Despite this, only 57% say that they have used them in the previous year, possibly, partly because of the relatively high cost. Some of the anxieties that the respondents had are reflected in these comments which show that one concern revolved around the need to talk to the driver *“I really don't want to engage in the sort of ‘bloke’ chatter that taxi drivers seem, so often, to feel is necessary”* (Man aged 51-60) and *“Find conversations with taxi drivers draining and difficult but find it hard not to play along making myself more exhausted”* (Woman aged 31-40).

Others perceived the driver as a threat, *“I get it into my head that the taxi driver will rape or kidnap me”* (Woman aged 18-30) and *“Being in a car alone with an unknown driver causes me anxiety as I don't know if they will do something bad”* (Woman aged 18-30).

## **12. Car**

As Table 5 shows, 47% of the respondents had driven a car in the previous year whereas almost twice as many, 86%, had been car passengers. 30% of the respondents were unable to drive because of their mental health condition, whereas the equivalent figure for being a car passenger was only 9%. The Driver and Vehicle Licencing Agency (DVLA) will not permit some people with mental health conditions to drive a car but the rules are complex (Driver and Vehicle Licencing Agency, 2021). For example, a person with mild to moderate anxiety or depression may have a licence to drive a car but a person with severe anxiety or depression may not. If necessary, a suitably qualified medical professional advises the DVLA whether an individual should be allowed to have a licence to drive.

The difference between the figures for driving a car and being a car passenger suggests that it is the act of driving rather than just travelling in a car that causes anxieties for many of the respondents. However, this is not always the case. For example, one woman, aged 41-50, said, *“I have to drive most of the time. If I don't drive, I feel out of control. I don't trust other people driving me or my children. I don't like our lives being in someone else's hands”*. For some respondents driving was the only form of travel that suited them: *“I just don't feel safe outside the house using any transport except driving”* (Woman aged 31-40). Another woman, aged 31-40, explained why driving suited her: *“I find driving generally fine though - it gives you your own personal space and you are not spending long surrounded by strangers”*.

## **13. Discussion**

About a fifth of all adults in Great Britain have a mental health condition. The evidence above illustrates some of the barriers that they face when they travel.

The main barrier to travel was found to be anxiety, which reflects the evidence in the detailed analysis of the Life Opportunities Survey (Department for Transport, 2016) which found that ‘anxiety/lack of confidence’ was a major factor preventing some people with mental health conditions from using some modes. In the survey being described here, the biggest anxiety issue was interacting with fellow travellers, both in terms of how they behaved and how the respondents felt that other travellers perceived them. Several commented that they felt that other people were laughing at them. This reflects the finding from the survey by Posner and Sharp (2020) that the main difficulty when travelling was ‘other people’. The second main cause of anxiety found in this work was concern about needing support when travelling, in terms of feeling out of control and needing help from other people. Both Posner (2017) and Penfold et al. (2008) identified ‘control’ as a requirement to travel with confidence. The need to be in control reflects another area of anxiety identified in this study: having to take action in an unfamiliar environment, which may be because the method of travel has failed or because of the need to

find a suitable toilet. Another area causing anxiety was wayfinding, in terms of feeling disorientated, being lost and having to find the way (Mackett, 2021b). Posner and Sharp (2020) also found route planning and navigation were causes of anxiety, particularly accessing information during the journey itself. The fifth area of anxiety found in this research revolved around interacting with staff such as bus drivers and buying tickets. The concerns about interacting with staff may partly reflect the concern about other people's perception of oneself. Concerns about ticket machines and handling money may partly reflect concerns about being in control and lack of confidence about handling uncertainty. Some people coped by avoiding certain modes, as Posner and Sharp (2020) also found.

Another finding from this research was the high proportion of respondents who had fluctuations in their condition from day to day which meant that sometimes they could not leave home. Many of them were unable to commit to buying buy rail tickets in advance, which the Mental Health Action Group (2011) also found in their survey.

Some of the issues raised reflect design issues in vehicles and infrastructure, which meant that some respondents felt that they would be unable to escape if they needed to, or found overcrowding very stressful. Posner and Sharp (2020) found similar issues.

The report on this work (Mackett, 2019) contains thirty-nine recommendations aimed at policy makers at national and local levels that should help to reduce the barriers to travel for people with mental health conditions (Mackett, 2021a). The recommendations revolve around ways of giving greater confidence to travellers by providing clearer, comprehensive information before and during travel, by providing training to staff to help them be more empathetic, and by involving people with mental health conditions in the design of vehicles and infrastructure so that environments are more supportive in terms of clear escape routes and places where people, who choose to, can travel in relative isolation. There are also recommendations about offering people with mental health conditions various travel concessions open to people with physical and sensory disabilities, to enable them to travel more cheaply, recognizing that some people with mental illness are unable to be employed fulltime, if at all.

## **14 Limitations of the work**

This research has produced interesting results but it is important to recognise the limitations of the work. The focus was on domestic travel so that it does not include air or maritime travel. The sample was self-selecting, and were all people who had access to the social media or other on-line outputs of organizations involved with mental health or travel. This means that they may be more alert to the issues that affect people with mental health issues than others. There were 385 useable responses, which is a sufficiently large sample to disaggregate into categories as shown in this paper, but not for detailed cross-tabulations. Weighting the sample to match the age and gender profile in APMS means that it is reasonably representative of the population in England with mental health conditions. Comparison with the APMS suggests that the original sample in the survey being discussed in this paper, before weighting, under-represented older people. This

may be because this survey had to be completed on-line and computer usage decreases in later life (Banks et al., 2016). It should be borne in mind that the APMS figures may not be truly representative of the population that they represent and the definitions of having a mental health condition are different: relatively objective in the APMS, self-declared in the survey being reported here. The self-declaration may be a strength of this survey: all the respondents acknowledged that they had a mental health condition and it affected their ability to travel. They were willing participants and took advantage of an opportunity to talk anonymously about some issues that affect them personally. It should also be acknowledged that the evidence on the number of people with mental health conditions in the overall population is uncertain, because of the sensitivity of the subject, the fluctuating nature of the illness, and the fact that many people with mental illness may not have been formally diagnosed.

## **15 Conclusions**

Even with the limitations outlined above, the results contribute to the understanding of the complex interactions between mental health and travel behaviour. There is clear evidence that a large proportion of the population has difficulty travelling because of various barriers that they face. In many cases, the respondents indicated that they would travel more if these barriers were addressed. This means that, in some cases, they would be contributing more revenue to the transport system, which would cover some of the cost of the changes required. Improvements such as clearer, more comprehensive travel information, better designed buses, trains and infrastructure, and quieter, calmer, less crowded journeys would benefit not only people with mental health conditions, but also all other travellers.

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## **Appendix: The questionnaire used in the survey**

The questionnaire used in the on-line survey described in this paper is shown below. Text in *italics* was instructions to the respondents.

### **Survey on mental health and travel**

*The purpose of this survey is to examine the issues that can make travel difficult for people with mental health conditions.*

*Please answer the questions below. Your answers are anonymous. It will not be possible for anyone to identify who has answered the questions. Should giving answers to these questions cause you to feel anxious you should stop, and then, if necessary, seek advice from an appropriate person such as your GP, counsellor or carer.*

*When you have answered the final question click 'Finish'. If you wish to stop and continue later, click on 'Save' at the end of the questionnaire.*

Q1 About you

- Do you have a mental health condition?
- Are you a carer for a person who has a mental health condition?
- Neither of these

*If you are a carer for a person with a mental health condition, please answer the following questions as if you were that person.*

*If you have answered 'Neither of these', you should leave the questionnaire now. Thank you for your interest in this work.*

Q2 Do you have any of the following mental health conditions (*Please tick all that apply*)

- Anxiety (including social anxiety and panic attacks)
- Depression

- Agoraphobia
- Obsessive–compulsive disorder (OCD)
- Post-traumatic stress disorder (PTSD)
- Bipolar disorder
- Another condition; please indicate what it is: ...

Q3 Does your mental health condition lead to any of the following *(Please tick all that apply)*

- Impaired memory
- Communication difficulties
- Social anxiety
- Panic attacks

### **The effects of your mental health condition on travelling**

Q4 Does your mental health condition ever prevent you from leaving home?

- Yes, frequently
- Yes, occasionally
- Yes, but only rarely
- No

Q5 When you go out, are you anxious about any of the following? *(Please tick all that apply)*

- Remembering where you are going to
- Getting lost
- Feeling out of control
- Feeling disorientated
- Feeling claustrophobic and unable to escape
- Having to take decisions about where to go
- Having to talk to staff such as bus drivers
- Having to mix with strangers
- How other people behave
- What other people think about you
- Using ticket machines
- Handling money
- Failure of the bus, train or car
- Not being able to obtain help
- Finding suitable toilet facilities
- Something else; please say what it is: ...

Q6 Has your mental health condition ever led to you becoming lost, experiencing severe anxiety or needing to seek help when travelling?

- Yes
- No

Q7 If this has happened to you, please explain what happened: ...

Q8 Have you used any of the following forms of transport in the past year (*Please tick all that apply*)

- Bus
- Tram
- Train
- London Underground or similar system
- Taxi
- Driving a car
- Being a car passenger
- Walking
- Cycling

Q9 Does your mental health condition prevent you from using any of the following types of transport? (*Please tick all that apply*)

- Bus
- Tram
- Train
- London Underground or similar system
- Taxi
- Driving a car
- Being a car passenger
- Walking
- Cycling

Q10 If you said that your mental health condition prevents you from using any of these types of transport, please explain how it does so: ...

### **Bus travel**

Q11 Do you have a concessionary travel pass giving you free bus travel (or a Freedom Pass if you live in London)?

- Yes
- No

Q12 If you do not have one of these passes, please indicate why not: (*Please tick all that apply*)

- I have applied for one and been refused
- I do not think that I am eligible to obtain one
- Applying for one is too complicated
- I do not travel by bus because of my mental health condition
- I do not need one because we do not have any local buses

- I do not need one because I travel by car for most journeys
- I do not know about the scheme
- I do not go out of my home
- Some other reason; please say what it is:...

Q13 Do you have a 'travel assistance card' to explain to bus drivers and other staff about your mental health condition or the help that you need when travelling by bus?

- Yes
- No

Q14 If you do not have such a card, do you think having one would encourage you to travel by bus more?

- Yes
- No
- I am not sure

Q15 Do you find that that electronic screens on board the bus showing the route and destination of the bus help you when you are travelling?

- Yes
- No
- Our local buses do not have this sort of information
- I do not travel by bus

Q16 Would any of the following encourage you to travel by bus more: *(Please tick all that apply)*

- Clearer bus timetables and maps
- Clearer websites
- Better trained bus drivers and other staff
- Better behaviour by other travellers
- Clearer information on board the bus about the route and the next stop
- More toilet facilities
- Something else; please say what it is: ...

### **Rail travel**

Q17 Do you have a Disabled Persons' Railcard giving you one third off rail fares?

- Yes
- No

Q18 If you do not have one of these Railcards, please say why not. *(Please tick all that apply)*

- I have applied for one and been refused
- I do not think that I am eligible to obtain one
- Applying for one is too complicated

- I do not travel by train because of my mental health condition
- I do not need one because we do not have any trains near where I live
- I do not need one because I travel by car for most journeys
- I do not travel by train enough to justify buying one at £20 a year
- Some other reason; please say what it is: ...

Q19 Does your mental health condition ever prevent you from buying rail tickets in advance because of uncertainty about how you will feel on the day?

- Yes
- No
- I do not travel by train

Q20 Have you ever used 'Passenger Assist', the scheme in which a member of staff at a railway station provides assistance to an individual who has requested it?

- Yes
- No

Q21 If you have used Passenger Assist, did you find that it worked well?

- Yes
- No
- Sometimes

Q22 If Passenger Assist has not worked well for you, please explain: ...

Q23 Do you find that that electronic screens on board the train showing the route and destination of the train help you when you are travelling?

- Yes
- No
- Our local trains do not have this sort of information
- I do not travel by train

Q24 Would any of the following encourage you to travel by train more: *(Please tick all that apply)*

- Clearer rail timetables and maps
- Clearer websites
- Better trained station and on-board staff
- Better behaviour by other travellers
- Clearer information on board the train about the route and the next stop
- Being able to contact a member of staff in person when you are on the train
- More toilet facilities
- Something else; please say what it is: ...

## **Badges**

Q25 Do you have a 'Please offer me a seat' badge to help you when you travel?

- Yes
- No, because I have not heard about the scheme
- No, but I am aware of the scheme

Q26 If you do not have one of these badges, would you be happy to wear one?

- Yes
- No

Q27 Would wearing such a badge encourage you to travel by bus or train more?

- Yes
- No

## **Travel training**

Q28 Have you ever received travel training, which is where an expert provides training on a one-to-one basis to increase your confidence when travelling?

- Yes
- No

Q29 If you have not received travel training, do you think that this sort of training would encourage you to travel more?

- Yes
- No

## **Travelling by car**

Q30 Do you have a licence to drive a car?

- Yes
- No, because I have never passed my driving test
- No, but I used to have one which was withdrawn because of my mental health condition
- No, but I used to have one but no longer do so for some other reason

Q31 Do you have a Blue Badge enabling you to use disabled parking spaces?

- Yes
- No

Q32 If 'no' why not: *(Please tick all that apply)*

- I have applied for a Blue Badge and been refused
- I do not think that I am eligible to obtain one
- I used to have a Blue Badge but it was revoked
- Applying for one is too complicated
- I do not have a car

- I do not know anything about the scheme
- I do not travel car enough to make it worth applying for one
- Some other reason; please say what it is: ...

### **Walking**

Q33 Would any of the following encourage you to walk more? *(Please tick all that apply)*

- Better signposting on the street
- Less clutter on the street
- Better pavements
- Less traffic
- Less noise
- Better behaviour by other people
- More places to ask for help
- More toilet facilities
- Something else; please say what it is: ...

### **Mobile phone apps**

Q34 Do you use mobile phone apps to help you when you are travelling?

- Yes
- No

Q35 If do use mobile phone apps to help you when you are travelling, please say which apps and how they help:...

Q36 If you do not use mobile phone apps to help you when you are travelling, please say why not

- I do not have a suitable mobile phone
- I find them too complicated to use
- I have not found any that meet my needs
- Something else; please say what it is: ...

### **Employment**

Q37 Are you in paid employment?

- Yes
- No, but I would like to be employed
- No, and I do not wish to be employed

Q38 If you are not in paid employment and would like to be, are there any improvements to the transport system that would make it easier for you to do so? Please explain: ...

Q39 Is there anything else that has not been mentioned that would make it easier for you to travel? Please explain: ...

**Some information about you (or the person for whom you are completing the form)**

Q40 What is your gender?

- Male
- Female
- Prefer not to say

Q41 What is your age?

- Under 18
- 18-30
- 31-40
- 41-50
- 51-60
- 61-70
- 71-80
- 81 or over
- Prefer not to say

Q42 Which of these best describes the area where you live

- London
- A city other than London
- A town
- A village
- A rural area