

IMPROVING ACCESSIBILITY FOR PEOPLE WITH MENTAL IMPAIRMENTS

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1. INTRODUCTION

The purpose of this paper is to examine ways of improving accessibility for people with mental impairments. It draws on material that is being assembled in the drafting of a report on this topic that is being produced for DPTAC (Disabled Persons Transport Advisory Committee) which advises the UK Department for Transport on accessibility issues for disabled people.

In 2010, the UK Parliament passed the Equality Act in order to reduce socio-economic inequalities and to eliminate discrimination (Office for Disability Issues, 2011). The Equality Act 2010 covers a number of personal characteristics including age, race, sex and disability. The legislation says that a person has a disability if he or she has a physical or mental impairment, and the impairment has a substantial and long-term adverse effect on his or her ability to carry out normal day-to-day activities which include travelling.

Much work has been done to reduce the barriers to travel for disabled people (Department for Transport, 2005), but much of the emphasis has been on investment in engineering solutions, for example, ramps to enable people in wheelchairs to change level and tactile paving to assist blind people in wayfinding on the street. It can be argued that much less has been done to address the needs of people with mental impairments. This may be because engineering solutions are less appropriate in these cases.

From the discussion above it can be seen that there are legal as well as moral reasons to reduce the barriers to travel for people with mental impairments. This involves understanding the nature of the impairments and how these affect travelling, identifying the barriers to travel, and then establishing examples of ways of overcoming the barriers and considering how they function to improve access so that the most appropriate and effective measures can be implemented. The remainder of this paper considers these issues.

In the next section, the stages of making journeys will be analysed to establish the various skills that are required in travelling.

2. THE MENTAL SKILLS USED IN TRAVEL

Travelling requires a number of mental skills. These include the following:

- **The ability to remember:** travelling requires the recall of information obtained previously, for example the route to the bus stop, which bus to catch and the final destination.
- **Comprehension:** the ability to understand information from explicit sources such as direction signs, electronic screens and people, by interpreting the landscape, such as landmarks, and intuitively such as having a sense of direction.
- **Decision making:** the ability to process information and to make decisions based on it, for example whether to turn left or right, using a ticket machine, deciding when to indicate to the driver to stop the bus and deciding how much time to allow for interchange.
- **Communication skills:** the ability to understand others and convey information to them, for example, buying a ticket, asking for assistance and understanding requests from other passengers.
- **Having the confidence to travel alone:** having the self confidence to obtain enough information and process it to reach the destination efficiently and knowing how to cope if things go wrong.
- **The ability to behave appropriately** within the norms expected by society for a person of the age of the traveller.

The skills required to make a specific journey can be identified by breaking it down into the various stages and then considering the skills required for each of them. For example, a bus journey involving walking to the bus stop, travelling on a single bus and walking to the destination involves the following stages:

- Planning the journey: reading and understanding a timetable and, if necessary, a bus map, on paper or online, or remembering from previous experience.
- Understanding about personal safety and security.
- Walking to the bus stop.
- Deciding on the correct bus stop.
- Deciding on the correct bus.
- Boarding the bus.
- Purchasing a ticket from the driver, a sales kiosk or machine, including requesting the correct ticket and understanding the financial transaction.
- Finding a seat.
- Interacting with fellow passengers.
- Understanding audio-visual information during the journey.
- Recognising where to alight.
- Indicating to the driver to stop.
- Alighting from the vehicle.
- Walking to the final destination.

- Coping with a disrupted journey, for example when a bus is late, stops short of the destination or the service is disrupted.

The skills required to undertake each of these stages are indicated in Table 1. Many journeys involve greater complexity than that shown in Table 1, for example, interchange between bus and train.

Table 1 The mental skills required making a journey using a single bus

Mental skill	Stages in making a bus journey
Ability to remember	Planning the journey Walking to the bus stop Deciding on the correct bus stop Deciding on the correct bus Purchasing a ticket Walking to the final destination Coping with a disrupted journey
Comprehension	Planning the journey Understanding issues of personal safety and security Walking to the bus stop Deciding on the correct bus stop Deciding on the correct bus Purchasing a ticket Recognising where to alight Understanding audio-visual information Walking to the final destination Coping with a disrupted journey
Decision making	Walking to the bus stop Deciding on the correct bus stop Deciding on the correct bus Purchasing a ticket Finding a seat Indicating to the driver to stop Walking to the final destination Coping with a disrupted journey
Interpersonal communication	Purchasing a ticket Interacting with fellow passengers Coping with a disrupted journey
Confidence in travelling alone	Walking to the bus stop Indicating to the driver to stop Boarding the bus Purchasing a ticket Finding a seat Interacting with fellow passengers Walking to the final destination Alighting from the bus Coping with a disrupted journey
Ability to behave appropriately	Purchasing a ticket Interacting with fellow passengers

Most regular travellers will undertake all these tasks without the need for conscious thought, having built up the knowledge and skills required through experience, but some people with mental impairments may not have the full range of mental skills to make such a journey alone.

3. MENTAL IMPAIRMENTS

In the UK, the Office for National Statistics (2015) has defined a set of impairments for use in surveys. They are intended to cover the range of long-term health conditions that people may have. The initial question asked is 'Do you have any physical or mental health conditions or illnesses lasting or expected to last for 12 months or more?'. A mental health condition or illness will not necessarily have an adverse impact on the ability to make a journey, and so, in surveys, a further question can be asked about whether this is the case.

The categories are:

1. Vision (for example blindness or partial sight)
2. Hearing (for example deafness or partial hearing)
3. Mobility (for example walking short distances or climbing stairs)
4. Dexterity (for example lifting and carrying objects, using a keyboard)
5. Learning or understanding or concentrating
6. Memory
7. Mental health
8. Stamina or breathing or fatigue
9. Socially or behaviourally (for example associated with autism)
10. Other.

Of the categories, 'Learning or understanding or concentrating', 'Memory', 'Mental health' and 'Socially or behaviourally' are mental impairments. Whilst these are useful categories, much of the evidence about the impacts of mental impairments on travel uses more specific conditions, so it is necessary to understand which impairments are included within these four categories.

Conditions that affect learning or understanding or concentrating include:

- **Dementia including Alzheimer's disease:** Dementia is a syndrome (a group of related symptoms) associated with an ongoing decline of the brain and its abilities (NHS Choices, 2016). This includes problems with memory loss, thinking speed, mental agility, understanding and judgement.
- **Learning disability and learning difficulty:** There is some confusion in the literature between a 'learning disability' and a 'learning difficulty'. A learning difficulty is any learning or emotional problem that affects, or substantially affects, a person's ability to learn, get along with others and follow convention while a learning disability is a significant, lifelong condition that starts before adulthood, affects development and leads to help being required to understand information, learn skills and cope independently.

- **Traumatic brain injury** is an injury to the brain caused by a head injury. The cognitive effects of a brain injury affect the way a person thinks, learns and remembers (Headway, 2015).

Mental health conditions include:

- **Agoraphobia** is a fear of being in situations where escape might be difficult, or help would not be available if things go wrong (NHS Choices, 2016). Symptoms of agoraphobia relating to behaviour include not being able to leave the house for long periods of time and avoiding situations that could lead to panic attacks, such as crowded places, public transport and queues.
- **Anxiety** is a feeling of unease, such as worry or fear, that can be mild or severe (NHS Choices, 2016). Anxiety is the main symptom of several conditions, including panic disorder, phobias, post-traumatic stress disorder and social anxiety disorder.
- **Depression** has psychological symptoms including finding it difficult to make decisions and loss of self-confidence and self-esteem (Mental Health Foundation, 2016). It does not affect insight or cognition.
- **Schizophrenia** is a long-term mental health condition that causes a range of different psychological symptoms, including muddled thoughts based on hallucinations or delusions and changes in behaviour (NHS Choices, 2016).

Conditions that come under the heading of ‘Socially or behaviourally’ include:

- **Asperger’s syndrome** is an autistic spectrum disorder, often referred to as high functioning autism. A key feature of Asperger’s syndrome is the lack of intuitive ability to adapt socially and fit in with others (Mindroom, 2005).
- **Attention deficit hyperactivity disorder (ADHD)** is a group of behavioural symptoms that include inattentiveness, hyperactivity and impulsiveness (NHS Choices, 2016).
- **Autistic Spectrum Disorders (ASD):** Autism is a neurodevelopmental disorder that appears early in life, generally before the age of three (Mindroom, 2005). Children with autism may have problems with relating to others, difficulties with communication, and limited imagination. Autistic traits persist into adulthood, but vary in severity.

More information about the various conditions can be found at NHS Choices (2016). A number of these conditions can include memory impairment including ADHD, dementia, dyslexia and traumatic brain injury. Other causes of memory loss include a stroke, an underactive thyroid, vitamin B1 (thiamine) deficiency and a brain tumour.

These conditions may affect the mental skills used in making a journey as indicated in Table 2.

4. TRAVELLING WITH A MENTAL IMPAIRMENT

There is considerable evidence about the issues involved in travelling by people with cognitive impairments and mental health issues. Some of the evidence is outlined below.

4.1. Learning disabilities

SYSTRA (2014) carried out discussion groups for CENTRO including two with people with learning disabilities. They found that the following were important issues:

- Attitudes and behaviour of bus drivers including some people being defrauded.
- Behaviour of other passengers: smoking, drug taking, bullying.
- Congestion on buses.
- Because they had had travel training about their regular routes, changes to routes and timings caused problems.
- Difficulties understanding regulations and procedures, e.g. for concessionary travel passes and Ring and Ride.

4.2. Learning difficulties

Lamont et al. (2013) carried out focus groups with people with dyslexia and found the following general problems found when travelling:

- Listening and processing information at the same time.
- Numerical processing e.g. reading a bus number correctly.
- Reading, especially if all in upper case letters.
- Speech, because of difficulties in being able to express a verbal request for information.
- Spelling, especially at the pre-trip planning stage.
- Wayfinding.
- Emotional effects, for example frustration, nervousness, lack of confidence and low self esteem, feelings of inferiority, confusion and embarrassment.

4.3. Dementia

Chandaria and O'Hara (2014) identified six ways in which travel can be difficult for people with dementia:

- Frustration because of difficulty processing information.
- Poor balance and spatial awareness – people with dementia may go into defence or flight mode when approached suddenly.
- Loud speaking from other people thinking that the person with dementia is deaf instead of being unable to understand.
- Problems with perception and comprehension make it difficult to cope with changes and new journeys.
- Dementia is a hidden disability so others often do not realise.
- People with dementia usually have to give up driving.

4.4. Mental health

The Mental Health Action Group (2011) undertook a survey of people with mental health conditions where they identified the following issues:

- Overcrowding on buses was a problem.
- Journeys requiring changes were particularly stressful.
- Dial-a-Ride is not available to people with mental health conditions in some areas.
- The cost of travel was an issue for some people: only 41% had a concessionary bus pass, and some people could not buy cheap advanced rail tickets because they could not to commit to a journey because of the fluctuations in their condition.
- Some did not know they could request 'Passenger Assistance' on trains. Some who used it were ignored by staff because they did not look disabled.

Penfold et al. (2008) held nine interviews with people with mental health conditions. They found that travelling was vital for personal wellbeing. Confidence was found to be a key factor. They found three key aspects of travel:

- Routine and planning: familiarity with routes helped; the ability to plan trips is important.
- Safety and control: avoiding anxiety was a big factor; confined spaces and congestion caused problems.
- Affordability and finance: low incomes for those not in paid employment.

More of the evidence is reviewed in Mackett (2015).

4.5. The effects on travelling

There is evidence that people with mental impairments make fewer trips than other people, as indicated in Table 3. It should be noted that many people who do not have mental impairments do not use the various modes, for example because of the cost or lack of service.

Department for Transport (2016) shows the reasons for not using various public transport modes and for not driving. As an example, Table 4 shows the main reasons for not using local bus or using it less than desired. It can be seen that 'anxiety/lack of confidence' and 'cost' are key factors in deterring people with mental impairments from using the bus. Cost is important because many people with mental impairments have low incomes.

Summing up, the key needs seem to be to develop ways of increasing confidence and providing reassurance before and during journeys including:

- The provision of clear information in appropriate formats so that it can be comprehended by people with mental impairments;
- Simplification of journeys, so that decision making is easier;
- Easier communication with people on the journey;
- Greater understanding and empathy from staff and fellow passengers.

Ways of addressing these issues will be discussed in the next section.

Table 2 Mental impairments that may affect mental skills used in making a journey

	Ability to remember	Comprehension	Decision making	Interpersonal communication	Confidence in travelling alone	Ability to behave appropriately
Learning, understanding or concentrating	•	•	•	•	•	•
Mental health conditions			•		•	
Socially or behaviourally				•		•
Memory	•					

Table 3 Percentage of people with mental impairments that do not use each mode or use it less than desired

	Type of mental impairment					
	None	Learning	Intellectual	Memory	Mental health	Behavioural
Private motor vehicle	46	62	83	55	47	73
Local bus	48	58	71	50	44	64
Long distance bus or coach	48	60	78	53	48	73
Underground	51	60	75	51	47	70
Local train	47	57	73	48	42	67
Long distance/intercity train	47	58	74	47	43	66
Taxi or minicab	45	54	71	42	38	65

Source: Department for Transport (2016) using data from the Life Opportunities Survey

Table 4 Main reasons for not using local bus or using it less than desired by people with mental impairments (other than ‘A health condition, illness or impairment’ and ‘A disability’)

Rank	Type of impairment					
	None	Learning	Intellectual	Memory	Mental health	Behavioural
1	Transport unavailable	Cost	Anxiety / lack of confidence	Anxiety / lack of confidence	Anxiety / lack of confidence	Anxiety / lack of confidence
2	Cost	Transport unavailable	Cost	Difficulty getting in or out of the bus	Cost	Cost
3	Other reasons	Anxiety / lack of confidence	Overcrowding	Cost	Transport unavailable	Overcrowding
4	Delay and disruption to service	Other reasons	Transport unavailable	Difficulty getting to stop	Difficulty getting in or out of the bus	Delay and disruption to service
5	Too busy / not enough time	Delay and disruption to service	Attitudes of passengers	Difficulty getting from stop to destination	Difficulty getting from stop to destination	Fear of crime

Source: Department for Transport (2016) using data from the Life Opportunities Survey.

5. INTERVENTIONS TO REDUCE THE BARRIERS TO TRAVEL

A number of interventions have been identified in the literature that can help to overcome the barriers to travel for people with mental impairments. These are considered here under five headings: preparing to travel, improving the journey, support from people on the journey, the provision of information during the journey electronically, and packages of measures.

5.1. Preparation for travel

- **Travel training** involves classroom exercises and journeys with a trainer on a one-to-one basis to provide experience and give the confidence to make unaccompanied journeys.
- **Providing experience of travelling** involves offering, for example, supported rides on trains, bus station tours, Bus Days and cycle tryout schemes.
- **Inclusive travel guides** provide relevant information about ways of making journeys often with input into the design process by people with mental impairments.
- **Pre-travel information** on websites and in leaflets needs to be based on awareness of the needs and abilities of people with mental impairments.

Table 5 indicates how these interventions assist in the various mental skills required for travel.

5.2. Improving the journey

- **Special transport services** such as dial-a-ride provide door-to-door journeys reducing the number of decisions that have to be made.
- **Improving the local environment** involves using sound design principles to provide short, direct routes with, for example, adequate lighting and avoiding complicated patterns on the pavement.
- **Clear signs** during the journey help to provide guidance about the set of alternatives available at each decision point.
- **Parking provision** near to the destination helps, for example, people with agoraphobia to avoid walking long distances in unfamiliar surroundings and parents of children with behavioural impairments to escort them away from public places quickly if necessary.
- **Free or reduced price public transport:** In Britain, disabled people are entitled to a card offering free off-peak travel on buses and are able to purchase a card offering a discount on rail travel. This is important because many disabled people have low incomes because of their relatively limited employment opportunities. For people with mental impairments, the use of the concessionary bus pass removes the need to communicate verbally with the bus driver and to handle money.
- **Reduced price car lease:** Schemes such as Motability enable disabled people to lease a car at a reduced price assisting some people with, for example, mental health conditions, who could not otherwise afford to do so, to drive.

Table 5 Interventions to help preparation for the journey

	Ability to remember	Comprehension	Decision making	Interpersonal communication	Confidence in travelling alone	Ability to behave appropriately
Travel training	•	•	•	•	•	•
Experience of travelling		•	•		•	
Inclusive travel guides		•	•		•	
Pre-travel information	•	•	•		•	

Table 6 Interventions to improve the journey

	Ability to remember	Comprehension	Decision making	Interpersonal communication	Confidence in travelling alone	Ability to behave appropriately
Special transport services					•	•
Improvements to the local environment		•	•		•	
Clear signs	•	•	•		•	
Parking provision					•	•
Free or reduced price public transport					•	
Reduced price car lease					•	

Table 6 indicates how these interventions assist in the various mental skills required for travel.

5.3. Support from people during the journey

- **Staff training**, especially for bus drivers, can help to reduce communication difficulties with people who have mental impairments
- **Presence of staff** during the journey provides reassurance and information.
- **Passenger assistance** schemes involve the provision of staff to escort people, for example, when changing trains at stations
- **Travel assistance cards** are small cards which people with mental impairments can show to staff discretely to explain their needs or the nature of their impairment.
- **Safe places schemes** involve the person carrying a small card stating their carer's contact details to show at a shop or facility displaying the 'safe places' logo where a trained member of staff can contact their carer.
- **Better understanding from the public** could come from publicity campaigns to educate the public about the needs and characteristics of people with mental impairments.

Table 7 indicates how these interventions assist in the various mental skills required for travel.

5.4. Provision of information during the journey electronically

- **Audio-visual information (AVI)** on buses and trains provide information, such as the name of the next stop and reassurance about the route. Providing both simultaneously helps many people who require time to assimilate information, but there may be a danger of information overload for some people.
- **Mobile phone apps** can provide real time information during walk and bus journeys which some people with mental impairments may find useful. For walk journeys this may be information about the direction to take at junctions. For bus journeys it may be information about bus arrivals and when to get off the bus. They can also alert carers if the user leaves their planned route.

Table 8 indicates how these interventions assist in the various mental skills required for travel.

5.5. Packages of measures

- **Personalised travel planning** may be very useful for groups of people with a common origin or destination in order to match the provision of transport to their individual needs. Inclusion North (2011) describes the example of a multi-purpose day centre in Goole which examined the individual travel needs of those attending and replaced the use of a council minibus by other more cost-effective means tailored to the requirements of the people involved such as people being brought to the centre by a relative whose costs are paid and three who share a taxi, giving greater flexibility.

Table 7 Interventions to provide support from people during the journey

	Ability to remember	Comprehension	Decision making	Interpersonal communication	Confidence in travelling alone	Ability to behave appropriately
Staff training				•	•	•
Presence of staff during the journey					•	•
Passenger assistance schemes					•	
Travel assistance cards				•	•	•
Safe places					•	•
Better understanding from the public				•	•	•

- **Dementia friendly communities:** Schemes such as Making York Dementia Friendly (Crampton, et al., 2012) mean that some people with cognitive impairments are able to travel knowing that staff in shops will be friendly and that they can obtain advice and help if necessary.
- **Local packages** such as that being considered by CENTRO (2015) for the West Midlands bring together a number of the measures being discussed here.

Table 9 indicates how these interventions assist in the various mental skills required for travel.

6. CONCLUSIONS

This paper has summarised some of the skills that are required in making a journey and shown that mental impairments can affect skills and so people with mental impairments may have difficulties travelling. The key needs seem to be to develop ways of increasing confidence and providing reassurance. A large number of interventions have been identified. These can help to address some of these issues and may include adjustments that ensure compliance with the Equality Act 2010 by service providers. Whilst a wide range of interventions have been identified, there needs to be more research into the travel requirements of people with mental impairments and ways of overcoming them in order to establish which interventions are most effective in meeting their travel needs.

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Table 8 Interventions to provide information during the journey electronically

	Ability to remember	Comprehension	Decision making	Interpersonal communication	Confidence in travelling alone	Ability to behave appropriately
Audio-visual information	•		•		•	
Mobile phone apps	•		•	•	•	

Table 9 Packages of interventions

	Ability to remember	Comprehension	Decision making	Interpersonal communication	Confidence in travelling alone	Ability to behave appropriately
Personalised travel planning		•	•		•	
Dementia friendly communities	•	•	•	•	•	
Local packages	•	•	•	•	•	

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