



Research article

An exploratory study of the experiences of wheelchair users as aircraft passengers – implications for policy and practice



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ABSTRACT

Air travel has grown steadily in the region of 5–6% every year since 1970 meaning that in the UK alone, around 750,000 people use flying as a means of transport every day. Disability rates are also increasing in the UK, with over 13 million people having at least one. Air travel for the mobility impaired has been relatively unexplored, but with increasing rates of disability and passenger numbers, it is crucial to know what the most severely disabled people think of the current process. This study used qualitative interviews of a semi-structured nature with eight wheelchair-using participants who were invited to discuss their experiences of air travel as well as offering opinions. Key findings showed notable issues when wheelchair users interact with the aircraft. The manual handling, the equipment used, seating, communication and accessing the toilet on the aircraft led to physical pain and discomfort and in turn emotional distress. Recommendations include developing consistency, further disability training and a review of the equipment involved.

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1. Introduction

The International Classification of Functioning, Disability and Health (ICF), which is the World Health Organisation (WHO) framework for measuring health and disability at both individual and population levels, defines disability as “an umbrella term for impairments, activity limitations and participation restrictions”, with over one billion people estimated to have one or more disabilities equating to just over 15% of the global population [1,2].

Accessibility is a particular issue for those with disabilities but as a broader concept it should be thought of as being something that benefits or applies to everybody. Darcy & Dickson [3] estimate that 30% of a population will have access requirements at any point in time, and most people will have a disability at some stage during their lifetime.

1.1. Disability prevalence in the United Kingdom (UK)

The Office of National Statistics (ONS) collects data about disability from the Department of Work and Pensions (DWP), in particular from the Family Resources Survey which is conducted every year. The 2016 survey has found that 13.3 million people in the UK have some sort of disability which represents 21% of the total population. Seven million

people reported a mobility disability or, 52% of the disabled population [4]. Of those that reported a mobility disability, it is estimated that 44% of working age adults, 68% of state aged pensioners and 21% of children have a mobility disability.

1.2. Aviation figures in the UK

The aviation industry is a truly global industry and more people are travelling by air than ever before, whether they have a disability or not. Air transport volume is now five times as large as it was in 1970, with air travel growth rates being on average 5–6% per year in the period 1970–2000 [5].

The Civil Aviation Authority (CAA) is a regulatory body for the UK aviation industry and is responsible for providing air traffic services. The CAA reports statistics of aircraft movement and passenger movement, which is derived from the data of 55 airports. Two geographical regions have been selected to show this data London Area and Other UK [6].

Examining how many flights there are per year will give an indication about the size of the UK aviation industry. Table 1 contains the number of flights that take off and land per year in the UK, including all scheduled and chartered, cargo, commercial and military flights:

A secondary indicator to understanding industry size is how many passengers use the airports per year, but unfortunately data concerning passengers with reduced mobility who travel is not publically available. Table 2 describes how many passengers are flying from UK airports per year by geographical region:

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Table 1
Aircraft Movement in the UK in 2016 [7].

Region	Aircraft movement
London area airports	1,173,196
Other UK airports	2,020,088
Total	3,193,284

To place these numbers in perspective this equates to an average of 8725 aircraft movements and 742,706 passengers taking a flight every day of the year (totals divided by 366 (leap year) and rounded) [7,8]. This is important because the potential volume of people with disabilities could be in the region of 150,000 who may travel per day based on the 21% of the population [4] if they could travel as readily as the rest of the population.

More people are travelling by air than ever before, whether they have a physical condition or not. The freedom to travel should be considered as a right that everyone has, but those with physical disabilities do not enjoy the same access to transport as able-bodied people do [9].

2. Methodology

2.1. Qualitative research design

Creswell [10] has identified five approaches to conducting qualitative research; narrative research, phenomenology, grounded theory, ethnography, and case studies. The research was devised using three of these approaches to qualitative research; narrative research, phenomenology and ethnography. A harmony of these three elements was chosen as narrative research is collecting data as a story, phenomenology is the study of human experiences whilst ethnography is the study of people or cultures to try and understand their values or beliefs.

O'Day & Killeen [11] showed this last method to be recommended for studying disabled groups because there is more to understanding the needs of the people with disabilities than a health issue interacting with an environment. It allows researchers to explore further complexities such as social and economic constraints reflecting the reality of the lived disabled experience to help develop solutions to the challenges they face.

2.2. Participant recruitment

Participants were recruited through personal contacts of the principal author and expanded by snowball sampling, designed to result in a homogeneous sample as the research centred around participants being full time wheelchair users who have flown recently. Participants were of a variety of ages, but were all over 18 years old. They were approached to participate by means of an email from the principal author and the means to withdraw at any time and without giving a reason from the research was offered. Following participant recruitment, semi structured interviews were conducted with eight participants who agreed to offer their experiences of air travel.

2.3. Topic guide

A semi-structured topic guide was formulated in three sections: 'Individual Characteristics' used an ethnographic approach that obtained

Table 2
Passenger Movement in the UK in 2016 [8].

Region	Aircraft Movement
London area airports	163,209,810
Other UK airports	108,620,685
Total	271,830,495

basic data about the participant whilst allowing time for interviewer and participant to build a rapport whilst establishing that the interviewee was suitable to participate in the study. 'Travel Characteristics' also used an ethnographic approach to establish travel frequencies and to gauge whether the class of travel has an impact on the disabled traveller.

'The Journey' used phenomenological and ethnographical approaches and was the main aspect of the study and was at the core of gathering the experiences. This section was divided into subsections that used a narrative approach as it is the story of someone travelling through an airport: Booking air travel; Getting to the airport; Checking in; Security; Shopping, restaurants and duty free; Getting to the gate; Boarding the plane; On board the plane; Disembarking and Overall experiences of flying. Exiting through the terminal, passport control and baggage reclaim were omitted as most of these elements were already explored in earlier subsections.

The topic guide concluded with the opportunity for participants to suggest to the aviation industry where the experience could be improved upon for wheelchair users and whether they would like to comment on or add any other thoughts and opinions they had.

2.4. Interview analysis

The interviews were analysed using thematic analysis. The transcripts were coded manually into themes and subthemes by the experiences described within the framework of the topic guide manually. Whilst software is available for thematic analysis, a manual approach was taken by the principal author and checked for consistency by the other author because the principal author conducted all the interviews and was familiar with the central themes occurring throughout.

3. Results

3.1. Participants

Three females and five males took part with ages ranging from 24 to 69. The average age of a participant was 48.00 years. Two of the participants were disabled from birth, whereas the other six had acquired their disability, five of them describing themselves as having tetraplegia (a loss of function in all limbs) and one as paraplegic (a loss of function in two limbs, normally the legs) [12]. The average length of disability is 34.31 years including those born with disability and 23.08 years amongst participants with acquired disabilities. Half of the participants described themselves as using a manual wheelchair and the other half use a powered wheelchair; in addition, four of the participants have the need for a full time personal assistant who attends to their care needs (Table 3).

The participants provided a wealth of information about each aspect of 'The Journey' through the airport, however the results below are the key issues that wheelchair users encounter whilst flying.

Table 3
Participant characteristics.

Participant	Age	Gender	Length of disability	Disability type	Personal assistant	Chair type
A	69	Male	69 Years	From birth	No	Powered
B	36	Male	18 Years	Tetraplegia	Yes	Powered
C	45	Female	14 Years	Tetraplegia	Yes	Powered
D	53	Male	40 Years	Paraplegia	No	Manual
E	30	Female	20 Years	Tetraplegia	Yes	Manual
F	67	Male	67 Years	From birth	No	Manual
G	60	Male	40 Years	Tetraplegia	Yes	Powered
H	24	Female	6.5 Years	Tetraplegia	No	Manual

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