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Journey to work: Exploring difficulties, solutions, and the impact of aging

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ABSTRACT

This study was conducted in the United Kingdom, as part of the New Dynamics of Ageing Working Late project, of the journey to work among 1,215 older workers (age groups 45–49, 50–55, 56–60, and 60+). The aim was to identify problems or concerns that they might have with their commute, strategies that have been adopted to address them, and the role that employers can play to assist them. Follow-up interviews with 36 employees identified many strategies for assisting with the problems of journeys to work, ranging from car share and using public transport, to flexible working and working some days from home. Further interviews with a sample of 12 mainly larger companies showed that employers feel a responsibility for their workers' commute, with some offering schemes to assist them, such as adjusting work shift timings to facilitate easier parking. The research suggests that the journey to work presents difficulties for a significant minority of those aged over 45, including issues with cost, stress, health, fatigue, and journey time. It may be possible to reduce the impact of these difficulties on employee decisions to change jobs or retire by assisting them to adopt mitigating strategies. It does not appear that the likelihood of experiencing a problem with the journey to work increases as the employee approaches retirement; therefore, any mitigating strategy is likely to help employees of all ages. These strategies have been disseminated to a wider audience through an online resource at www.workinglate.org.

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1. Introduction

The abolition in 2011 of the default retirement age in the United Kingdom (UK) offered the opportunity for those who were willing and able to remain in employment for longer. Prior to that, the number of workers over the state retirement age (65 for men, 60 for women) had already nearly doubled from 753,000 in 1993 to 1.4 million in 2011 (National Statistics, 2012). Economic, social, and demographic factors have combined to make the promotion of longer productive working lives a desirable policy objective. These include the need to reform pension schemes for them to remain financially viable, the desirability of retaining skilled workers, and the practical difficulties of supporting an aging population. Employers and the government have recognized that abolishing the default retirement age will lead to worker continuity and flexibility as well as financial benefits (Equality and Human Rights Commission, 2010).

Against this background, factors such as the onset of age-related health conditions, family commitments, and caring responsibilities may impede an older worker's ability to stay in the workforce. According to the National Audit Office (2004) "transport difficulty" is one of the barriers that prevent people over 50 from accessing opportunities for continued working, with cost, availability, and willingness to travel all factors that contribute. "Commuting stress" is also a factor that leads to employees encountering difficulty with the journey to work. According to Novaco and Gonzalez (2009), commuting stress

is associated with a range of health impacts, including negative mood (both at work and at home), frustration, cognitive performance impairment, and work absence. Commuting stress has been shown to be influenced by the distance and duration of the commute, the degree of predictability, and the extent to which employees feel they have some control over it.

The well-documented changes to muscles, eyesight, hearing, and memory that occur as a natural part of the aging process affect the ability to cope in traffic in a number of ways (Brace, Elliman, Page, Rackliff, Welsh, & Morris, 2007). These factors may also affect the degree to which older workers are affected by commuting stress, for example, by adding to cognitive performance impairments or levels of fatigue. Incidence of disability also increases with age, with the 2010–11 Family Resources Survey finding that around 15% of working age adults have a disability, compared to 45% of adults over state pension age in Great Britain. The physical capability of older workers to manage their commute is therefore a key factor that may prevent employees who are otherwise capable of remaining in work from continuing past the traditional retirement age. This may be exacerbated by a general trend for commuters to travel longer distances and to spend longer on the commute than was the case in the past (Nielsen, Hovgesen, & Lassen, 2005), potentially adding further to stress and anxiety and also increasing the cost of the journey.

Despite the potential effect that difficulties with the commute might have on older workers' access to employment,

Rackliff, Nicolle, and Maguire (2010) found few studies that considered the journey to work in the specific context of aging.

This research was undertaken as part of the Working Late project, a 4-year collaborative research project, funded under the UK Research Councils' New Dynamics of Ageing program (www.workinglate.org). It aimed to address the following questions:

- How might practical difficulties with the journey to work affect people's ability to stay in work as they age?
- Do older workers adapt their travel to accommodate their changing needs?
- To what extent can employers help older drivers to manage the journey to work?

Ageing is not a precisely bounded process, with the point of onset of difficulties varying for different individuals. This research therefore looks at workers over 45, in order to explore the issues for different age groups and to gain an understanding of how difficulties with the journey to work develop and vary at different life stages and as one grows older.

2. Literature review

There are no scientific grounds for identifying a particular age as the point at which the transition into older age begins: Aging affects individuals in very different ways, hence the ability to cope in traffic varies enormously between people of the same age. Some general trends associated with aging can nevertheless be identified. These include increased physical frailty, leading to a higher risk of sustaining a serious injury (Page, 2007); deterioration in eyesight and hearing; stiff joints and weaker muscles (Brace et al, 2007); and increases in the time taken to perceive and respond to information (Sanders & McCormick, 2002). All of these factors have implications for people's use of the transport system, the effect their journey to work might have on their general levels of health, and the degree to which they are able to cope with the physical demands of the commute. Data from the National Travel Survey (Transport, Department for, 2013) shows that older people maintain their total level of travel by car (for all journeys) into their fifties and sixties. For those aged 70 and over, the number of miles traveled appears

significantly lower, which may reflect the reduced likelihood of commuting journeys for this age group (see Table 1).

Although owning a car gives older people independence and improves their quality of life, studies show that older drivers compensate for age-related declines in physical, sensory, and cognitive abilities by avoiding certain road and traffic situations such as those involving bad weather, darkness, rush hour traffic, or complex junctions (Middleton, 2005; Talbot, Nicolle, Maguire, & Rackliff, 2011). Lea and McCallum (2011) demonstrated that older drivers who believe they have little control over driving situations perceive less comfort in these situations and engage in more self-regulatory driving behaviors, for example, varying the time at which to travel, the route taken, and even whether or not to actually make the journey. However, it may be the case that these self-regulatory options are not open to many employees (Rackliff et al., 2010), who because of their work commitments have less autonomy over their journey choices. Lack of control over traffic congestion, time pressure, or the environment within the vehicle have all been found to increase the stress caused by the journey to work in the general working population (Lyons & Chatterjee, 2008), an effect that will be exacerbated for those older workers whose ability to cope in traffic has begun to decline.

Any discussion of aging must consider disability, the incidence of which increases with age. The 2010–11 Family Resources Survey found that around 15% of working-age adults are disabled, compared to 45% of adults over state pension age in Great Britain, with the most commonly reported impairments being those that affect mobility, lifting, or carrying (Disability Issues, 2012).

Talbot and Nicolle (2009) examined the employment and driving experience of those who had attended one of the UK's mobility centers for a driving assessment or driving-related advice due to a disability. They found that disability influences transport mode and consequently influences decisions about employment and commuting. Based on 220 survey responses, 60 respondents who were employed before the onset of their disability remained in or sought employment following it. Most of these drove themselves to work before the onset of their disability (49); however, this number decreased to 37 following disability onset. An increased number became a passenger (0 before disability onset vs. 7 following disability onset) or used public transport (4 vs. 7), and 47% of respondents from the mobility centers survey stated that they did not wish to return to work or take educational courses following the onset of disability. Given the relationship between age and incidence of disability, the onset of a new or the aggravation of an existing problem could be a factor in the decision to remain in employment beyond the traditional retirement age.

Previous studies have shown that as people get older, they are less likely to travel by private transport, especially with respect to their own car driving (Smith, Beckhelling, Ivaldi, Kellard, Sandu, & Tarrant, 2006; Talbot et al., 2011). For those who give up or reduce their driving, public transport poses its own barriers. These include physical inaccessibility of the transport and stations; reduced comfort or stifling crowds; concerns over personal security; cost; difficulty of accessing information; and the quality of services, including availability, routing, and reliability (Smith et al., 2006; Rackliff et al., 2010; Talbot et al.,

Table 1. Average distance traveled by age and mode: England, 2013 (all journeys).

Mode	Age group						
	17–20	21–29	30–39	40–49	50–59	60–69	70+
Walk	240	216	215	178	166	162	112
Bicycle	40	69	79	92	53	33	10
Car/van driver	1,249	3,274	4,643	5,659	5,321	4,116	1,905
Car/van passenger	1,565	1,689	1,568	1,315	1,622	1,682	1,278
Other private transport ^a	223	92	103	142	155	157	132
Local and nonlocal buses	726	381	234	258	211	332	529
Rail ^b	838	1,183	1,039	857	780	447	199
Taxi/minicab	119	76	65	46	48	42	40
Other public transport ^c	78	48	111	35	120	44	11

Source. Department for Transport, 2013.

^aMotorcycles and private hire bus.

^bSurface rail and London underground.

^cAir, ferries, and light rail.

2011). For people who have habitually driven themselves to work, the use of public transport can be perceived as losing some degree of control, convenience, and status compared to driving (Talbot et al., 2011). While switching mode to public transport could in some cases present a solution for older commuters who become unwilling or unable to drive, it should be recognized that this is not without complications, both of a practical nature (are the services available, affordable, accessible), but also in terms of the degree to which making such a change affects people's sense of self-worth and confidence.

As part of the annual National Travel Survey (Transport, Department for, 2011a), commuters were asked whether they have any difficulties with their journey to work. In 2009, 35% of commuters traveling by car stated that traffic congestion and road works caused them difficulties, while 14% of those traveling by other means stated that unreliable public transport caused difficulties (Department for Transport, 2011b, Table 14). It should be noted that the National Travel Survey uses prespecified options for responses, which may restrict the responses that participants might prefer to give. Thus it can be argued that there is a need for a more open approach to eliciting difficulties as perceived by workers during their journey to work which formed part of this study. Evans, Wener, and Phillips (2002) found that people who perceived their commute to work as more unpredictable experienced greater levels of stress.

Lyons and Chatterjee (2008) identified a number of negative impacts of the daily commute, including the monetary and time costs, increased levels of stress and tiredness, and other health effects such as risk of accident involvement, exposure to pollution, and (for those commuting by car) increased risk of obesity. However, the link between commuting and health is not a simple one (McLennan & Bennetts, 2003; Lyons & Chatterjee, 2008). Some long-distance commuters will resist negative health effects better than others. Novaco and Gonzalez (2009) identified a number of factors associated with commuting stress, including the following: "elevated physiological arousal, negative mood on arrival at work, negative mood at home in the evening, lowered frustration tolerance, cognitive performance impairments, illness occasions, work absences, [and] job instability" (p. 18).

However, they acknowledge that commuting is not necessarily "intrinsically harmful." For drivers, commuting offers benefits in terms of their self-esteem and sense of mastery. For public transport users, Kuennen (2012) suggests that the commute can also provide benefits, such as "the opportunity to return phone calls, relax and enjoy the scenery. Commuting also provides the benefit as a buffer between work and family as a 'transition from one domain to the other'" (p. 50).

As suggested by Ball (2003), a broader base of practical initiatives to extend working lives can be implemented by employers. Travel plans, developed with support from initiatives such as the Department for Transport's Local Sustainable Transport Fund, may help to equip older employees to adopt alternative travel methods (Transport, Department for, 2010). Such travel plans can be an effective way of relieving local parking or congestion problems (improving journey time predictability) and can make public transport more accessible to those who believe driving to work is the only alternative. By offering initiatives

such as car share schemes, public transport information, and sustainable travel incentives, they can also be a valuable way of addressing the specific needs of older workers whose willingness or ability to continue with their current journey is declining.

The expectation that the number of older people who either want or need to remain in work will continue to rise makes understanding the impact of the journey increasingly important. Little previous research has addressed the journey to work in the context of age. Studying the experiences of those over 45 can therefore aid understanding of how the various factors that contribute to commuting difficulties impact individuals in different ways as they get older. Understanding this can usefully inform policies which have wider relevance.

3. Methodology

The research questions were addressed using a variety of methodologies, namely focus groups, a questionnaire, and interviews that explored the journey to work from the perspective of both employees and employers.

An overview of issues associated with the journey to work and their influence on employment was gained by holding two focus groups. Participants included domain experts, employer representatives, and older workers, assembled to form an advisory group during the early stages of the Working Late project.

3.1 Questionnaire

The results of these focus groups informed the development of a questionnaire with the aim of providing data on the extent to which the journey to work may change as working life progresses over the age of 45 (divided into the age ranges 45–49, 50–55, 56–60, and over 60 years). These results were both quantitative (e.g., on age of workers, type of work environment, commuting distances, mode of transport, and the proportion of the respondents who have or have had problems with their journey to work) and qualitative (e.g., on difficulties experienced by older workers when traveling to work, and concerns about their commute in the future).

The questionnaire was administered both online and in paper form and was distributed to a range of employees from the public and private sectors during March/April 2010. A convenience, snowball sample was used while attempting to achieve a reasonable distribution across age groups and gender, drawing upon a variety of job roles. Thus it was an exploratory study that raised relevant issues that would need to be checked using a more controlled sampling procedure if these issues are to be generalized (for example, across the private sector as well as public sector). Since the objective was to explore and gain an understanding of the difficulties for more mature workers, rather than compare the younger and older working population, our sampling strategy requested that only those 45 years of age and over should complete the questionnaire. It was thought that the questionnaire would be most effectively distributed to employees by utilizing project contacts with companies, employment groups, and charities established through the Working Late project. Attempts were also made to make contact with a range of companies from both the public and private sector, and employers were asked to distribute the

questionnaire to all employees. This resulted in the questionnaire being forwarded more widely to other work colleagues, friends, and employee group mailing lists, which produced a snowball effect.

Three questions were used to assess whether the respondent had a difficulty with the journey to work:

- Do you have any specific difficulties with the journey?
- Do you foresee any additional problems arising in the future?
- Have you ever considered retiring or changing jobs as a result of a difficulty with the journey?

Respondents gave free text answers to these questions; however, to aid in the analysis, a content analysis was conducted on the answers in order to categorize them. Categories, corresponding to key words, such as *cost*, *journey time*, and *health*, were generated from respondents' answers and the commonalities between them. Up to three categories were assigned for each respondent's answer.

3.2 Employee interviews

To gather more detailed information on difficulties with the journey to work and how employees adapt their travel behavior in order to overcome them, in-depth telephone interviews were conducted with a selection of questionnaire respondents who had or anticipated difficulties with their journey to work and had provided their contact details. Interviewees were selected from the questionnaire respondents using a purposive sampling strategy. The aim was to gain representation of the younger and older age ranges (45–55; 55+), both genders, the type of journey traveled (e.g., village to city), and the different difficulties in relation to the journey to work experienced by the questionnaire respondents.

The interview process was designed to be iterative, with initial interviews informing those conducted later. Each interview lasted for approximately 20 min and was audio recorded with the consent of the participant. Although interview questions were informed by the interviewee's earlier questionnaire responses, each interviewee was first asked to describe their journey to work, then to expand on their individual difficulties and strategies to overcome them. Prompts were used to gain additional information or to ascertain whether strategies suggested by other respondents in the survey could be applied to the interviewee's circumstances. The interview data was transcribed and a thematic analysis was conducted on the interview transcripts, which identified a set of codes describing the interviewees' difficulties, which in turn were linked with the suggested strategies.

3.3 Employer interviews

Interviews were also conducted with human resource or occupational health representatives of employers to identify any ways in which they were currently assisting their workforce with their journey to work. The aim was also to determine whether employers felt it was part of their responsibility to help employees who experience travel problems to overcome them. The employer sample was composed of existing contacts built up during the Working

Late project to represent a range of industries in both the public and private sectors. The focus was on larger organizations of over 1,000 employees; therefore, the conclusions are only indicative of companies of this size. A simple content analysis was performed on the interview data to identify the main support strategies and attitudes to providing support.

4. Results

There were 1215 completed questionnaires, with 78% ($n = 952$) from workers in the public sector and 6% (76) from the private sector. A further 15% ($n = 176$) of respondents selected "other," the majority of whom worked for a charity. At the time the questionnaire was distributed, 21% of the UK working population worked for the public sector with 79% working for the private sector (National Statistics, 2010). Given the affiliations of the Working Late Project contacts, the snowball sampling strategy led to a higher proportion of public-sector organizations. However, the distribution covered a wide range of activity sectors and locations across the UK so it was felt that the study would provide a fair overview of journey to work difficulties for the UK public-sector working population and give an indication of potential issues for private-sector employees.

The questionnaire respondent profile was as follows: 63% of the respondents were female ($n = 787$) and 37% male ($n = 443$). This is an overrepresentation of females compared to UK workers as a whole, where 45% were female and 55% male when the questionnaire was distributed (National Statistics, 2010). Within the sample, 28% ($n = 339$) were aged 45–49, 36% ($n = 442$) were aged 50–55, 25% ($n = 304$) were aged 56–60, and 10% ($n = 124$) were over 60. The relatively low number of participants in the over-60 group may be influenced by the state retirement age of females being 60 prior to 2010. For the majority of respondents, the car was their main transport mode (75%, $n = 914$). For Great Britain as a whole, the majority of business and commuting trips were made by car (67%) (Transport, Department for, 2011b).

Follow-up telephone interviews were conducted with 36 employees who had responded to the questionnaire and reported difficulties with their journey to work. These interviewees had the following characteristics: 47% were female ($n = 17$) and 53% male ($n = 19$); 36% ($n = 13$) of respondents were aged 45–49, 31% ($n = 11$) were aged 50–55, 25% ($n = 9$) aged 56–60, and 8% ($n = 3$) were over 60; 58% ($n = 21$) used the car as their main transport mode; 75% ($n = 27$) worked in the public sector and 8% ($n = 3$) in the private sector with 17% ($n = 6$) stating "other." Compared to the questionnaire respondent profile detailed previously, the interview sample had an overrepresentation of males and of the 45–49 age group, with an underrepresentation of the 50–55 age group and those using the car as their main transport mode. This was as a result of the purposive sample method that aimed to gain a more even representation of the gender and age groups and representatives of those using public transport and other private transport modes other than the car. The public/private/other distribution of the interviewee sample broadly reflected that of the questionnaire respondents as a whole.

Table 2. Journey difficulty categories by age group.

Issue category	Age group				
	45–49 yrs, <i>n</i> = 339	50–55 yrs, <i>n</i> = 442	56–60 yrs, <i>n</i> = 304	>60 yrs, <i>n</i> = 124	All, <i>n</i> = 1215
Specific current difficulties	27%	26%	26%	17%	25%
Anticipate future problems	37%	32%	33%	23%	32%
Considered changing job/retiring	20%	18%	20%	20%	19%
Percent stating difficulties in at least one category	52%	47%	47%	37%	46%

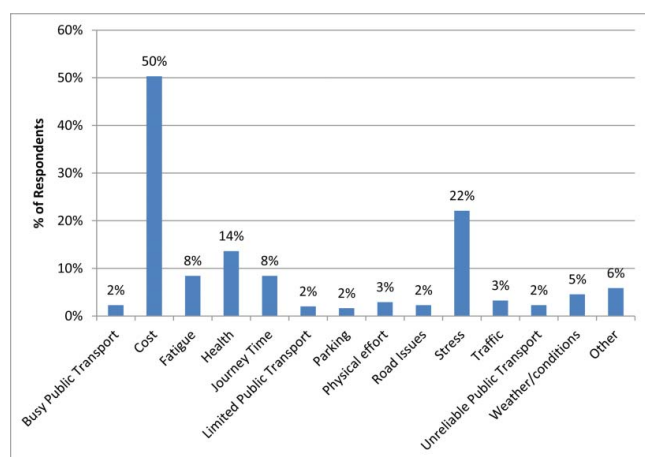
4.1 Questionnaire: Difficulties with the journey to work

Analysis of the data showed that across the whole sample 25% (308) had specific difficulties with their journey to work (for example, affording the cost of petrol), 32% (394) could foresee future difficulties, and 19% (233) had considered retiring or changing their job as a result of their difficulties. These percentages are not mutually exclusive. The total percentage of the sample of 1215 who gave a response within one or more issue categories was 46%. The percentage of each issue category by age is shown in Table 2.

It can be seen that the percentage of respondents reporting specific difficulties did not increase with age and even decreased for those over 60. Similarly, the percentage of each age group foreseeing potential problems decreased with age. This may have been partly due to this older group feeling they could cope with the journey until retirement rather than continuing to work beyond retirement or considering job change to a location closer to home. The percentage considering changing job was also almost the same for each age category.

The mean time taken to travel to work by all survey respondents was 30 min with walking journeys averaging the least travel time (19 min) and train journeys averaging the longest travel time of 56 min. Car journeys took on average 29 min. These figures are broadly comparable to mean journey times recorded for commuters in Great Britain with an average journey time of 28 min, walking averaging 18 min, train journeys 69 min, and car journeys 24 min (Transport, Department for, 2011a).

Figure 1 shows the range of difficulties reported by the questionnaire respondents who stated they had specific difficulties

**Figure 1.** Employees' current issues with the journey to work (*n* = 308 out of 1215).

with their journey to work. Some respondents only had one issue, while others had several. For the 308 respondents with specific difficulties, the most common difficulties were cost, stated by 155 respondents (50%); followed by stress, 68 respondents (22%); health, 42 respondents (14%); and fatigue and journey time, both with 26 respondents (8%).

The coding scheme was derived from a content analysis of participants' responses. Although some codes could be considered as related (e.g., stress and traffic), we felt it was important to keep both separate and at the same level to maintain a simple presentation and to highlight differences in emphasis of comments about similar problems. Of the 25% (308) of the whole sample that had current difficulties with their journey to work, 50% stated that cost was an issue. Of these, 74% (*n* = 114) commuted by car. For many of these respondents the cost of fuel was the main issue (*n* = 84 respondents) with others stating that the cost of running their car (*n* = 15 respondents) and parking (*n* = 15 respondents) were difficulties. Driving itself, especially in bad weather, was stressful for some respondents (*n* = 12). Respondents' comments suggested that fatigue can be an issue as a result of the journey (*n* = 13), e.g., "concentration on driving is tiring," or the work itself (6 respondents), e.g., "very tired at end of 10 hour shift." Of those having a specific difficulty, 23% (*n* = 72) were traveling by public transport. For those who stated cost was an issue and commuted by public transport (20%, 31), the cost of tickets was the main issue (*n* = 11).

Health difficulties affected 14% (*n* = 42) of respondents, including long-term physical conditions such as arthritis (*n* = 26) and conditions such as injury or illness (*n* = 10) that caused difficulties for a limited period of time. Mental health difficulties such as panic attacks affected the journey to work for a small minority of respondents (*n* = 3). Unreliable public transport (*n* = 8) and traffic (*n* = 18) were common causes of stress.

The majority of respondents stating that journey time was an issue had a commute of 30 min or more (19 of 26). One reason given for journey time being an issue is that it "adds to the length of the day." The length of the commute to work affects the proportion of respondents experiencing the five most common specific difficulties: cost, stress, health, fatigue, and journey time. The biggest differences were noticed for cost and stress. For those with a commute of less than 30 min (7 of 26), cost was an issue for 43% and stress an issue for 16%. For those with a journey time over 30 min, cost was a problem for 55% and stress a difficulty for 26%. Fatigue and journey time were slightly more common difficulties for those with a commute of over 30 min—10% and 9% respectively—compared to those with a commute of 30 min or less where fatigue and journey

Table 3. Current journey difficulties by age group (highest % across all age groups in bold).

Issue	Age group (n = 305)			
	45–49, n = 91	50–55, n = 113	56–60, n = 80	60+, n = 21
Cost	55%	50%	51%	29%
Stress	15%	27%	19%	33%
Health	13%	12%	19%	10%
Fatigue	7%	9%	9%	14%
Journey time	12%	5%	8%	10%

time were difficulties for 7%. The percentage of respondents stating health as an issue was the same for both groups (14%).

Table 3 shows the distribution of the top five difficulties of those who experienced them across each age group, representing 305 participants in the sample. Cost was clearly the most important current issue for all age groups but seemingly less important for the over-60 group (29% for this group compared to 50% or more for the others). The availability of subsidized fares may have contributed to this. In terms of stress, those over 60 did have the highest relative percentage who noted stress as an issue (33%), although the 50–55 age group were not far behind (27%). Health difficulties peaked with the 56–60 age group (19%) but the percentage of respondents experiencing health difficulties in the over-60 age group was the lowest (10%). The percentage of respondents reporting that fatigue was an issue increased slightly with age and the percentage of respondents reporting journey time to be an issue was fairly stable across the age ranges. It is acknowledged that the lower number of older respondents who experience difficulties may be explained by the possibility that some had stopped working or had opted out of completing the survey (selection bias). A chi-square test was carried out on the table to see if respondents in any of the age groups experienced each type of difficulty disproportionately to the rest of the sample. The 56–60 age group was combined with those 60+ to obtain an expected value of at least five in every cell of the table (Owen & Jones, 1994). No significant differences were found: cost ($\chi^2 = 0.72$, $df = 2$, $p > 0.1$), stress ($\chi^2 = 0.19$, $df = 2$, $p > 0.1$), health ($\chi^2 = 0.66$, $df = 2$, $p > 0.1$), fatigue ($\chi^2 = 0.73$, $df = 2$, $p > 0.1$), journey time ($\chi^2 = 0.21$, $df = 2$, $p > 0.1$). This indicates that journey to work problems tend to be experienced across the different age groups rather than just by older workers.

4.2 Employee interviews—journey difficulties and age

The questionnaire results show that although a quarter of the sample reported travel difficulties (e.g., cost, stress, health, fatigue, time), the likelihood of an employee reporting problems with their journey to work does not appear to increase with age. However, the employee interviews produced some anecdotal findings suggesting that there may be some age-related factors to be considered when examining the impact of difficulties with the journey to work.

For one female interviewee in the 56–60 age group, who suffers from chronic fatigue syndrome, the added impact of her drive to work in terms of fatigue was a key factor in her decision about whether or not to retire. Her employer allowed her to reduce her hours to 3 days a week, which allowed her to

continue to work, although at the point of the interview, she was considering applying for voluntary redundancy. Voluntary redundancy is where an employer asks a member of staff to agree to terminate their contract in return for a financial incentive.

For another female interviewee in the 60+ age group, her journey to work (walk, bus, and train) became very tiring following a 3-week absence from work due to a short illness. This effect was mitigated by an arrangement with her employer to work from home for 1 day a week: “On that day that I work at home I do feel much less tired because I’m not doing that commuting.”

Nevertheless, this interviewee was also considering her options in terms of voluntary redundancy at the point of interview as she felt she did not want to make her journey to work during another winter.

For these interviewees who were very near or beyond the state retirement age (60 years old for women in 2010), their difficulties with the journey to work proved a barrier to their continued employment; however, with the assistance of their employers, their ability to stay in work was extended by employing mitigating strategies.

In contrast, for another male interviewee in the 56–60 age category, whose difficulties were fuel costs and journey time, his age was a factor in reducing the likelihood of his changing jobs as a result of his journey to work: “It would be fair to say that the Atlantic would freeze over before I would leave my current employer at the age of 58. Whereas if circumstances changed and I was 40 years of age, I’d be more inclined to turn round and say that’s it, I’m off.”

However, for this interviewee, who was still several years away from the state retirement age (65 for males in 2010), retirement was not considered as an option.

For one interviewee, age was a factor that reduced the impact of the stress that they felt in relation to their journey to work by car: “more [of a problem] a few years ago especially with the kids in the sense that you had to be home for a particular time.... That was particularly stressful.... I’m getting old as well and mellowing in my old age.”

4.3 Employee interviews—strategies to overcome difficulties

The 36 employees who participated in the in-depth interviews suggested a wide range of strategies that could help mitigate difficulties with the journey to work. Some of the strategies primarily addressed one specific issue; however, many address multiple difficulties. These strategies will be described in relation to the five most common difficulties: cost, stress, health, fatigue, and journey time.

4.3.1 Cost

A range of strategies to reduce the cost of the journey to work were suggested. Interviewees who commuted by car found the following strategies effective in reducing the cost of fuel and maintaining a car:

- Buy a smaller, more economical car ($n = 3$)
- Car share ($n = 2$)

- Use cruise control on car to travel at a lower, more fuel-efficient speed ($n = 1$)
- Buy a fixed-price service plan ($n = 1$)
- Change transport mode: car to motorcycle ($n = 1$)
- Combine multiple trips ($n = 1$)
- Work from home 1 or more days a week ($n = 1$)
- Stay overnight near workplace ($n = 1$)

For example, one interviewee bought a smaller car to save costs without having to change jobs: “I thought if I want to work where I want to work then I have to cut down the costs so I bought a smaller car with a smaller engine to keep the costs down” (male, 50–55 age group).

For another interviewee, combining the journey to work with tasks such as shopping was suggested as a way that can save money by reducing the number of journeys necessary: “I do my shopping when I’m coming to work so I don’t do a separate trip for that” (female, 45–49 age group).

The interviewees who traveled by public transport reduced the impact of the cost of the journey by making savings on tickets or changing the mode of transport used:

- Take out a season ticket loan through employer ($n = 1$)
- Buy saver tickets (rather than standard single/returns) ($n = 1$)
- Change transport mode: bus rather than underground ($n = 1$)
- Increase number of hours worked per week ($n = 1$)

For example, for one person who worked part time, increasing the number of hours worked was an effective strategy to cope with an increase in bus fares: “About four years ago or so the bus fares really leapt and I decided to do an extra hour to justify the expense” (male, 61–65 age group)

4.3.2 Stress

Interviewees had a range of strategies to mitigate the effect of stress caused by their journey to work:

- Flexible working hours—avoiding traffic ($n = 1$)
- Listen to radio and music ($n = 1$)
- Change transport mode: Take the train for longer journeys (e.g., visiting different office) ($n = 1$)

For example, an interviewee who usually drives to work found that taking the train can reduce the stress of the journey: “If I ever do have the opportunity to take public transport... then I’ll go by train. I find that much more relaxing” (male, 50–55 age group).

4.3.3 Health

The interviewees who had health-related difficulties with their journey to work described the following strategies that they had put into place to mitigate them:

- Avoid going to office that is more difficult to access ($n = 1$)
- Reduce working hours to part time ($n = 1$)

For one interviewee who had health problems, reducing her hours and working every other day was a good solution, allowing her to continue to work but minimizing the impact of her illness and the journey: “It wouldn’t be worth doing less hours for five days a week because I would still have the same journey” (female, 56–60 age group)

4.3.4 Fatigue

Flexible working practices and changing the mode of travel were used by interviewees to mitigate the tiring effect of their journey to work:

- Work from home 1 or more days a week ($n = 2$)
- Flexible working hours ($n = 1$)
- Change of mode—sometimes take the bus instead of walking ($n = 1$)

For example, one interviewee, who usually walked to work, would take the bus if particularly tired or had a lot to carry. For another interviewee taking advantage of the employer’s flexible working scheme allowed alteration of the journey times and mitigated the effects of fatigue caused by the car journey: “I’m pacing my journeys better. I’m actually leaving at better times of the day, and it’s not quite so bad when it’s light” (male, 50–55 age group).

4.3.5 Journey time

Interviewees suggested a number of strategies that had reduced their car journey time or mitigated its impact:

- Work from home 1 or more days per week ($n = 1$)
- Flexible working hours ($n = 2$)
- Plan additional work-related journeys to coincide with the journey to and from work ($n = 1$)
- Change route taken ($n = 1$)

For example, altering the time of day when the employee travels to work can minimize the impact of traffic and therefore journey time. This is facilitated by flexible working practices. For one interviewee, who has worked for the same employer for more than 16 years and has a long journey to work, altering the route has been a successful strategy to avoid road construction or changes in traffic conditions.

Strategies for mitigating the impact of the journey time for those using public transport include using the transport mode to extend the working day and changing the route taken:

- Work on train ($n = 2$)
- Take different route—e.g., taking two tubes rather than one led to the same journey time but in more comfort as less busy ($n = 1$)

For example, one interviewee starts the working day at the beginning of the journey: “My working day starts when I get on the train—I work on the train” (female, 60–65 age group).

4.4 Employers’ perspectives

Twelve employers’ representatives were interviewed to assess the ways in which employers assisted employees with their journey to work. They represented the following sectors: manufacturing, government, education, and logistics. All except one were large businesses with 1,000 or more employees. A few of the employers ran schemes that directly assisted employees with their journey to work. For example, one employer set up a scheme whereby those who cycled to work were paid an allowance based on their mileage. Another introduced a time gap between shifts to allow employees to park more easily. Video conferencing was used by one employer to reduce the need and costs in traveling longer distances to attend meetings. Another company counted the journey to work as part of the contracted hours where employees were required to make long commutes

due to secondments. A secondment is where an employee is temporarily transferred to another job role within the same organization.

For the majority of employers, no specific schemes were adopted but general working practices assisted with the journey to work. Eight employers allowed working from home and/or other flexible working patterns such as variable start/finish times; however, the degree of flexibility for individual employees depended on the job role. Another allowed working from home for some staff but this was not official policy. Two of the employers facilitated working at alternative sites, which allowed those with a long commute to sometimes work closer to home when working from home was not practical because of the job role.

In general, the employers did not believe that age made a difference in relation to their employees' commute. Four employers suggested health- and fatigue-related difficulties may increase with age but in general employers believed that most types of difficulties, e.g., cost and journey time, were experienced by younger as well as older workers. Only one employer interviewed believed that an employee's journey to work was the responsibility of the employer. Two employers' representatives believed that it was solely the responsibility of the employee and the remainder thought that the responsibility was shared—the employee can choose where they live and therefore has to work out how to get to work, but the employer can facilitate this by being flexible in terms of working hours or working from home.

A number of the strategies suggested by the interviewees could mitigate a number of different difficulties with the journey to work, for example, flexible working hours, working from home, changing transport mode, and taking a different route. In addition, some strategies can be implemented by individual employees while others need employer agreements. Table 4 represents the strategies implemented in various workplaces discussed during the interviews carried out with both employees and employers. As indicated in the table, some of the strategies would be initiated by employees, others would require facilitation by the employer, while a third group could be either of these.

5. Discussion

Of the 1,215 respondents who completed the Journey to Work questionnaire, 25% had specific difficulties with their journey to work, 32% anticipated future difficulties, and 19% had considered retiring or changing their job (Table 2). The percentages of respondents reporting specific difficulties and/or had considered retiring/changing jobs was fairly stable across the age groups but the percentage of respondents who anticipated future problems actually decreased in the 60 and over age group. This may be because respondents' perception of potential difficulties is more negative than the experience of them or that as the younger respondents have more years to work they see more potential for difficulties than those with fewer years until retirement. In addition, those with health issues or other significant difficulties with the journey to work may have already chosen to retire and therefore are not included in this age category. Gender differences may also play a part in this as the retirement age for women in 2010 was 60 when the survey was conducted and therefore very few women are included in this age category.

Cost (50%), stress (22%), health (14%), fatigue (8%), and journey time (8%) were the most common difficulties experienced by employees in the sample (Figure 1). That cost is a significant issue with regards to the journey to work is perhaps unsurprising as the survey was conducted at a time when fuel prices were rising sharply and those working in the public sector were experiencing pay freezes. It is therefore possible that these effects have emphasized the significance of cost in this sample.

It would be expected that health- and fatigue-related difficulties would increase with age. In the case of fatigue, there were slight increases as respondent age increased, but the percentage of respondents reporting health difficulties was greatest in the 56–60 age group and lowest in the over-60 age group (Table 3). Since the mobility centers survey (Talbot & Nicolle, 2009) suggested that older workers are more likely than younger workers to retire due to ill health, it is therefore more likely that they are not included in the oldest age category of the current survey. The sample size is also much smaller for the over-60 age group, making interpretation less reliable. Older drivers

Table 4. Mitigating strategies implemented by the employee and/or facilitated by the employer.

Implemented by employee	Employer facilitated	Either implemented by employee or employer facilitated
Buy a smaller more economical to run car	Work from home one or more days a week	Stay overnight near work place
Use cruise control on car to travel at a lower more fuel efficient speed	Take out a season ticket loan through employer	Car share ^a
Buy a fixed price service plan	Increase number of hours worked	Avoid going to office that is more difficult to access
Change transport mode	Flexible working hours	Plan additional work-related journeys to coincide with the journey to and from work
Combine multiple trips	Reduce working hours to part time	Video conferencing
Buy saver tickets	Cycling allowance	
Listen to radio and music	Time gap between shifts to ease parking	
Work on train	Journey for secondment counted as work hours	
Take different route		

^aCar share occurs when someone who normally takes public transport will have occasional or regular lifts to work from a driver who is making the same journey. Car share could also allow two car drivers to reduce both of their costs (including both fuel and wear and tear) by sharing the use of one car, and taking it in turns to drive to work.

can find driving more stressful than when they were younger, although this will depend on driving skill and confidence. This may be reflected in the survey as the over-60 age group had the highest percentage of respondents reporting that stress was an issue (33%), although the 50–55 year olds were not far behind (27%). Therefore, the relationship between age and stress caused by the journey to work is unclear.

Although the questionnaire data show no clear relationship between age and problems with the journey to work, the interviews with employees indicate that when focusing on individual experience, age might influence the impact of difficulties with the journey to work. It is possible that difficulties with the journey will pose more of a barrier to work in the last few years before retirement, especially if they affect the individual physically, e.g., health or fatigue issues. A belief that the job market is less favorable for those over 50 might influence the employee's willingness to make significant changes such as changing jobs as a result of difficulties with the journey to work, especially if these difficulties are less physical in nature such as cost and journey time. For others, age might even decrease the impact of difficulties with the journey if time pressures such as child care commitments are no longer relevant. However, no generalizations can be made from the small number of examples among the employee interviewees and further research would be necessary to establish whether such age-related effects appear more widely in the employee population.

Working part time may be a solution that enables employees to work for a greater number of years. According to figures published by the Office for National Statistics, 66% of workers over state pensionable age work part time compared with 25% of those under it (Office for National Statistics, 2012). Making part-time work more available could help mitigate difficulties with the journey to work such as stress and fatigue; however, it may increase the potential of cost being an issue if the number of days worked is not reduced.

Since delays caused by traffic volumes, unreliability of public transport, and presence of time pressures all add to commuting stress, measures such as flexible working patterns could help to mitigate commuting stress. Flexible working allows employees to travel outside the congested peaks and removes the imperative to be at work by a particular time.

A wide range of strategies to mitigate difficulties with the journey to work were described during the interviews, with employees suggesting that the employees in the sample do alter aspects of their travel in response to difficulties they encounter with the journey to work. These strategies, however, are not limited to aspects specific to the journey, e.g., changing the route taken or mode of transport used. They include strategies where employees have altered the way they work, e.g., arriving at work earlier or working from home in order to alter when they travel. These strategies can therefore be said to be either actions that the employee as an individual can implement, actions that involve a negotiation between the employee and the employer and therefore require employer facilitation, or both. Employer-facilitated strategies such as flexible hours or working from home can mitigate a wide range of difficulties but many employees do not have flexible working as an option as it is not suitable for all job roles, and even if it is, not all employers realize its potential benefits.

The interviews conducted with employers suggest that large companies in a range of industries, both public and private sector, have the ability to and do offer some degree of flexible working to employees with an appropriate job role. The employers interviewed felt that the main responsibility to get to work lies with the employee; however, nearly all were willing to work in partnership with employees to mitigate possible difficulties with the journey to work. However, this may be more difficult for small- or medium-sized employers where employees often have to cover a wider range of job roles requiring presence during normal working hours. When it is not possible to offer flexitime or working from home, it might be possible to allow employees to reduce or condense their hours so that they are working fewer days a week.

The sampling strategy employed for the questionnaire resulted in an overrepresentation of public-sector workers and an overrepresentation of women. Public-sector workers may have different experiences of employment conditions, e.g., willingness of employer to support flexible working, than private-sector workers. Also it is possible that women's responses to difficulties with the journey differ from men's, an issue that it was not possible to explore in this study. Therefore, care should be taken not to overgeneralize the results discussed here. Further research is required to explore specific age-related issues as well as whether journey-related difficulties and strategies are applicable to the private as well as public sector. Since the research included only those who were still in employment, rather than also including those for whom the journey has become too much of a burden to remain in employment, there would also be value in investigating the extent to which the journey actually becomes the deciding factor. In addition, as the results indicate that age may not be a factor that influences the likelihood of experiencing an issue when approaching retirement and that certain difficulties might have different impacts on other age groups, there is a need for similar research to be conducted with the under-45-years-old group.

6. Conclusions

The results presented in this paper show that, for this sample, the journey to work presents difficulties for a significant minority of those aged over 45. It is unclear exactly how these difficulties affect people's ability to stay in work as they age; however, it is possible that there are some age-related effects for those in the last few years before retirement when their difficulties affect them physically.

It may be possible to reduce the impact of these difficulties on employees' decisions by assisting them in adopting mitigating strategies. As it does not appear that the likelihood of experiencing an issue with the journey to work increases as the employee approaches retirement, any mitigating strategy is likely to help employees of a wide range of ages. Strategies that help with a wide range of difficulties appear to be those that can be facilitated by the employer, e.g., flexible working. It is also likely that a mixture of employee-initiated and employer-facilitated strategies are going to be the most successful in mitigating difficulties, as

the appropriate strategies to apply will depend largely on the individual's circumstances.

Employers can have a significant role in helping older drivers to manage the journey to work by facilitating working practices that reduce the number of times an employee has to travel to work or allow start and/or finish times that do not coincide with peak travel times. For some companies this might include policies that allow flexible hours and/or working from home and for others it might involve managing shift start and finish times. The impact of mitigating individual employees' journey to work difficulties is likely to be beneficial to the employer, for example, by reducing stress levels and increasing productivity.

The research reported here is based on the over-45 age group to gain an understanding of how difficulties with the journey to work develop and vary at different life stages. However, the findings suggest that difficulties generally are not age specific, and the strategies suggested could be helpful for people of all ages.

The authors have developed an online resource to explore and present different ways of traveling to work when the journey becomes difficult, costly, tiring, or stressful, to enable workers to share their thoughts and comments and to facilitate discussion among employees and their employers. It is the intention that this resource can be used by both individual employees of all ages and their employers, and it is being disseminated through the project's networks and via the project's website at www.workinglate.org.

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References

- Ball, C. (2003). Ageing and work. *Quality in Ageing, Policy, Practice, and Research*, 10(2), 47–53.
- Benito, A., & Oswald, A. (2000). *Commuting in Great Britain in the 1990's* (Working paper). University of Warwick, Department of Economics. Retrieved from <http://wrap.warwick.ac.uk/1617/>.
- Brace, C. L., Elliman, R., Page, M., Rackliff, L., Welsh, R., & Morris, A. (2007, 17–19 October). *Identifying and designing for the needs of older road users*. Paper presented at the European Transport Conference, Leiden, Netherlands.
- Cubukgil, A., & Miller, E. J. (1982). Occupational status and the journey to work. *Transportation*, 11(3), 251–276.
- Disability Issues, Office of. (2012). *Disability facts and figures*, HM Government Department for Work and Pensions. Retrieved from <http://odi.dwp.gov.uk/disability-statistics-and-research/disability-facts-and-figures.php#3>.
- Equality and Human Rights Commission. (2010, July/August). Abolishment of the default retirement age is a positive step. *Equality and Human Rights Commission's newsletter*, 23.
- Evans, G. W., Wener, R. E., & Phillips, D. (2002, July). The morning rush hour: Predictability and commuter stress. *Environment and Behavior*, 34(4), 521–530.
- Kuennen, K. (2012). The impact of long commuting on the working individual. *Business Studies Journal*, 4(1), 45–57.
- Lea, E. J., & McCallum, T. J. (2011, 18–22 November). *Navigating traits: Exploring personality constructs and self-regulatory behaviors of older drivers*. Poster presentation at the Gerontological Society of America 64th Annual Scientific Meeting, Boston, MA.
- Lyons, G., & Chatterjee, K. (2008). A human perspective on the daily commute: Costs, benefits, and trade-offs. *Transport Reviews: A Transnational Transdisciplinary Journal*, 28(2), 181–198.
- McLennan, P., & Bennetts, M. (2003). The journey to work: a descriptive UK case study. *Facilities*, 21(7/8), 180–187.
- Middleton, H. (2005). Assessment and decision criteria for driving competence in the elderly. In G. Underwood (Ed.), *Traffic and transport psychology: Theory and application: Proceedings of the ICTTP 2004* (101–113). Amsterdam: Elsevier.
- National Audit Office. (2004). *Welfare to work: Tackling the barriers to the employment of older people* (Report by the Comptroller and Auditor General, HC 1026). London, UK: HRM Stationery Office.
- National Statistics, Office for. (2010). *Statistical Bulletin: Labour market statistics June 2010*. London, UK: ONS. Retrieved from <http://www.ons.gov.uk/ons/rel/lms/labour-market-statistics/lms-june-2010/index.html>
- National Statistics, Office for. (2012). *Older workers in the labour market: 2012*. London, UK: ONS. Retrieved from <http://www.ons.gov.uk/ons/rel/lmac/older-workers-in-the-labour-market/2012/older-workers-in-the-labour-market.html#tab-Number-working-beyond-State-Pension-Age-doubles-over-past-two-decades>
- Nielsen, T. S., Hovgesen, H., & Lassen, C. (2005). *Exploratory mapping of commuter flows in England and Wales*. Paper presented at the RGS-IBG Annual International Conference, London. Retrieved from http://vbn.aau.dk/files/1097420/TSN_RGS-IBG_paper05.pdf
- Novaco, R. W., & Gonzalez, O. I. (2009). Commuting and well-being. In Y. Amichai-Hamburger (Ed.), *Technology and well-being*. Cambridge, UK: Cambridge University Press.
- Owen, F., & Jones, R. (1994). *Statistics*, 4th ed. London, UK: Pitman.
- Page, M. (2007, July). *Fitness and illness*. Paper presented at the AIRSO Road Safety Conference Wales, Cardiff, UK.
- Rackliff, L., Nicolle, C., & Maguire, M. C. (2010, 5–7 January). The journey to work as a barrier to continued employment in later life. Paper presented at the 42nd Annual Universities' Transport Study Group Conference (UTSG), University of Plymouth, UK.
- Sanders, M. S., & McCormick, E. J. (2002). *Human Factors in Engineering and Design*. London, UK: McGraw Hill International.
- Singell, L. D., & Lillydahl, J. H. (1986). An empirical analysis of the commute to work patterns of males and females in two-earner households. *Urban Studies*, 23(2), 119.
- Smith, N., Beckhelling, J., Ivaldi, A., Kellard, K., Sandu, A., & Tarrant, C. (2006). *Evidence base review on mobility: Choices and barriers for different social groups*. London, UK: Department for Transport.
- Talbot, R., & Nicolle, C. (2009). *Impact of mobility services on people of working age: Outcome survey* (Unpublished report for Accessibility and Equalities Unit). London, UK: Department for Transport.
- Talbot, R., Nicolle, C., Maguire, M. C., & Rackliff, L. (2011). *The journey to work—a barrier to older workers? Include 2011*. London, UK: Royal College of Art.
- Transport, Department for. (2010). *Sustainable travel*. Retrieved from <http://www.dft.gov.uk/pg/sustainable/>
- Transport, Department for. (2011a). *National Travel Survey: Commuting and business travel factsheet*. Retrieved from <http://www.dft.gov.uk/statistics/series/national-travel-survey/>

- Transport, Department for. (2011b). *National Travel Survey: Commuting and business travel factsheet tables*. Retrieved from <http://www.dft.gov.uk/statistics/series/national-travel-survey/>
- Transport, Department for. (2013). *National Travel Survey: Average distance travelled by age, gender and mode: England, 2013* (Table NTS0605). Retrieved from <http://www.gov.uk/government/statistical-data-sets/nts06-age-gender-and-modal-breakdown>
- Turner, T., & Niemeier, D. (1997). Travel to work and household responsibility: New evidence. *Transportation*, 24(4), 397–419.