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TITLE PAGE

Title: The experiences of everyday travel for older people in rural areas: a systematic review of UK qualitative studies

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HIGHLIGHTS

- Turns the spotlight on an often-neglected group: older people in rural areas
- Undertakes a thematic synthesis of qualitative studies to focus on their experiences of everyday travel
- Benefited from feedback on initial findings from policy and practice advisors
- Discusses how reductions in transport provision impact on older people's lives
- Highlights the role of travel in affirming – or undermining – valued identities
- Describes how the transport infrastructure underpins quality of life in older age

1. Introduction

In line with global patterns (UNDESA, 2009; UNECE, 2017), older people make up a larger proportion of the UK's rural than urban population (DEFRA, 2018; Scottish Government, 2017; Wales Rural Observatory, 2013). While older people appreciate the beauty and neighbourliness of rural life (Burholt, 2012; Hennessy and Means, 2018), everyday travel can be a challenge. Older people are less likely to drive and more likely to have mobility limitations (Gale et al., 2014) and to report problems with accessing essential services (Shergold and Parkhurst, 2012).

Marked national differences in transport systems, including in car ownership (Eurostat, 2017) and public transport (Mageean and Nelson, 2003; Nelson et al., 2010), support a country-level focus for studies of rural communities. In the UK, bus services are poorer and car ownership is more common in rural areas: over 90% of households in villages, hamlets and isolated dwellings have a car/van compared with 65% in urban conurbations (DfT, 2016). Since 2010, government austerity policies have compounded these diferences. Reduced funding has brought major reductions (around 40%) in rural bus services and in community transport schemes, for example demand-responsive transport (DRT) with home-to-destination routing for users with mobility difficulties (Campaign for Better Transport, 2017; House of Commons Transport Select Committee, 2017). At the same time, the government made a commitment to 'rural proof' its policies (Bradshaw, 2015; DEFRA, 2012; DARD, 2015) to take account of the experiences of rural communities and imposed an Equality Duty on all public bodies to minimise the disadvantages experienced by older people (AgeUK, 2017; HM Government, 2010).

Qualitative studies provide insights into people's experiences, and evidence syntheses – where the findings of multiple studies are brought together – are singled out for the contribution they make to policy-making (Langlois et al., 2018; Whitty, 2015). However, despite the importance of travel for older people in rural areas, there are no systematic reviews focused on their experiences of everyday travel. We address this gap by synthesising evidence from UK qualitative studies.

2. Methods

Our review is registered on PROSPERO (CRD42018086275). PROSPERO is an international database of prospectively-registered systematic review in health and social care, welfare, public health, education, crime, justice and international development (https://www.crd.york.ac.uk/prospero/). We followed the Centre for Reviews and Dissemination (CRD) 'Guidance on Undertaking Reviews' (CRD, 2009) and reported the review according to the Preferred Reporting Items for Systematic Reviews and Metaanalyses (PRISMA). PRISMA is an evidence-based set of items which encourage the transparent reporting of systematic reviews (http://www.prisma-statement.org/).

2.1 Searches

We searched English language journals published between 1998 and 2017 in MEDLINE, CINAHL Plus, Scopus, AgeInfo and TRID (Transport Research International Documentation). Additionally, we checked references in potentially-relevant systematic reviews (Annear et al., 2012; Dadpour et al., 2016; Moran et al., 2014), hand-searched key journals and sought advice from researchers in the field.

2.2 Screening and study selection

We screened records by title and abstract to identify UK studies published in peer-reviewed journals. Full texts were screened by two reviewers (HG, KF); a third reviewer (SdB) undertook a full check of included and excluded studies.

Studies were included if they (i) included people aged ≥60 resident in rural areas (as defined by the study authors) and (ii) used qualitative methods to explore experiences of everyday travel. We included mixed-method studies where qualitative findings were described separately and studies including other groups where older people's experiences were separately reported.

We excluded studies where (i) participants were recruited based on their health condition (e.g. people with cardiovascular disease) and (ii) the experiences of rural older people were not separately reported (e.g. studies of adults; studies including both urban and rural participants).

2.3 Data extraction and quality appraisal

Three reviewers (SdB, KF, HG) undertook data extraction (using the columns in Table 1) and quality appraisal (Hawker et al., 2002). Quality appraisal (QA) of included studies was undertaken to ensure transparency (Carroll et al., 2012; Noyes et al., 2017).

2.4 Synthesis

We undertook thematic synthesis, an iterative 3-stage process that: (i) generates codes from the data (participant accounts and author interpretations), (ii) combines codes into descriptive themes and (ii) identifies cross-cutting analytical themes (Booth et al., 2016; Thomas and Harden, 2008). Three reviewers (SdB, KF, HG) undertook the synthesis using NVivo version 11 (QSR, 2012).

An initial set of codes was developed, checked and then applied to the data. Next, related codes were grouped together into broader descriptive themes from which analytical themes were developed (SdB, KF, HG). This final stage involved linking descriptive themes both to each other and back to the data from which the codes were generated. The analytical themes were shared and refined with policy advisers. The advisors were senior officers and practitioners working in local health, transport and environmental services, together with the lead for transport and health for older people at a major UK charity.

3. Overview of results

3.1 Study characteristics

Our searches located 520 records (Figure 1). After screening, ten studies reported in twelve papers met the inclusion criteria (Table 1). With one exception, quality scores were high (≥20). Lower-scoring papers provided less information on analysis methods, ethics and bias and contributed fewer codes to the coding schema.

Six papers (hereafter referred to as studies) were concerned with rural travel; the remainder focused healthy ageing (3), the experience of living in a rural environment (2), and environmental determinants of walking outdoors (1). The majority of study participants were aged ≥60; in two studies, they were ≥65 years and in two studies ≥70 years. In total, the studies reported on the experiences of 814 older people. Sample sizes ranged from 13 to 423; most studies (7) had 30-40 participants.

Most studies were carried out in England (5) or England and Wales (2). There was one Scottish and two Irish studies; both Irish studies enabled Northern Ireland participants to be identified. Studies included remote rural communities and three studies included both rural and urban participants; all three enabled identification of rural participants.

Eight studies were solely qualitative; four had a mixed-method design. Ten studies used one method of data collection, one used two methods, and one used three methods. The majority (7) of studies conducted semi-structured interviews with participants. Other methods of data collection included focus groups (5 studies), questionnaires with qualitative questions (1), and participant observation (1).

Eight studies provided information on their gender profile; 60% of their participants were women. Other socio-demographic information was limited. One study reported that all participants were white British; no other studies gave information on ethnicity. Eight studies included some socioeconomic information, with four reporting that participants were recruited from areas with differing socioeconomic profiles. Six studies included information on car use and indicated that the majority of households had a car. Health status was not reported in five studies; the remainder provided variable information (for example, on health conditions, physical activity and social exclusion).

Some information was provided on the participants whose verbatim accounts were included in the studies. The gender of the speaker was noted in six of the studies and, of these, five indicated their age range. We report these details for the accounts included in the sections below. Some studies noted the speaker's area of residence (e.g. 'Dorset', 'low density area in Oxfordshire') but, where information on health status is provided, this related to the study as a whole.

3.2. Codes and themes

Most codes related to older people's experiences of travel, and car travel in particular; relatively few related to broader experiences of the rural environment. A smaller group of codes related to health difficulties and wellbeing. The 37 descriptive themes captured the challenges of rural travel, including the lack of transport options, car dependence and the impact of driving cessation, and the relationship between being mobile, travel and wellbeing. Three inter-connected analytical themes were identified and shared with the project's policy advisors.

The first theme relates to the experience of living with an inadequate transport system. The second and third themes highlight the practical importance of everyday travel in enabling older people to maintain their lives and its symbolic importance in affirming valued identities. The impact of travel on health and wellbeing ran through all three themes.

4. Overarching themes

4.1 Theme 1: living with an inadequate transport system

The inadequacies of the rural transport system provided the context in which older people's experiences of everyday travel were set. Various system components were discussed, including walking, local bus services, community transport, hospital transport, taxis, and lifts from the family and friends.

Walking was described as an everyday travel mode only by those living in villages with safe pedestrian access to village shops, pubs and clubs.

. . . there are loads of clubs in the village . . . I could walk to any of the ones that I wanted to go to (female, aged in sixties) (Shergold et al., 2012)

We've got a really nice pub, exactly a mile down the road but I can't walk to it because it's much too dangerous. (male, aged in sixties) (Shergold et al., 2012)

Local bus services were valued by some older people – but there was a widespread perception that the bus did not provide a reliable and accessible mode of transport (Ahern and Hine, 2012; de Koning et al., 2015; King and Farmer, 2009; Manthorpe et al., 2004; Shergold and Parkhurst, 2012; Shergold et al., 2012; Ward et al., 2013; Windle, 2004). Study participants spoke about the absence and inadequacies of the bus service, including difficulties getting to bus stops and boarding buses. Such negative perceptions may not be based on direct personal experience; the perceived barriers to bus travel went hand-in-hand with limited knowledge of, and interest in, bus travel, perceptual barriers that further contributed to car dependence (Ward et al., 2013; Shergold et al., 2012). In consequence, and despite free travel being available for older people at off-peak times, the bus was typically not considered a viable option for everyday travel.

It's all very well the government giving out free bus passes, but where are the buses for us to use them on?! If it weren't for the community spirit in this area a lot of people wouldn't survive. (King and Farmer, 2009)

I think there is a bus that runs twice a day, but I don't know. I'd be a hermit I think without my car. (male) (Ward et al., 2013)

There is no bus. I've got to take the car to get to the bus! (Windle, 2004)

Steps off the bus are too difficult to get on and off. (Windle, 2004)

However, for the minority of older people without access to a car, without mobility problems and in areas with a regular bus service (for example in villages near urban centres), bus services were highly valued, with the concessionary bus travel scheme making a major difference to travel opportunities (Ahern and Hine, 2012; de Koning et al., 2015; Manthorpe et al., 2004).

Community transport, including community buses and DRT schemes, was widely discussed (Ahern and Hine, 2012, 2015; Manthorpe et al., 2004; Shergold and Parkhurst, 2012; Shergold et al., 2012; Ward et al., 2013; Windle, 2004) and was highly valued by users.

I am very pleased with community transport. I live 10 miles from the city, a very backward area, and there is no way to get out except with community transport and I can get that service anytime. It's absolutely brilliant. It's made a new life for me and also to say, the staff are brilliant. (Ahern and Hine, 2015)

Having the village bus is great…On the bus of course it's fun, because you meet people you know doing the same thing (male, aged in eighties) (de Koning et al., 2015)

However among non-users, there was a view, particularly among men, that community transport carried a social stigma. Thus, male participants in Ahern & Hine (2012) regarded community transport as a 'feminised' service offering *'trips that women like to make'*, such as shopping trips and visits to social clubs; in consequence, men were reluctant to use it. In a similar vein, participants in Shergold & Parkhurst (2012) study considered community transport, both public sector dial-a-ride schemes and volunteer-run community services, as being for *'the less able'* and *'older people'* (Shergold and Parkhurst, 2012).

As with travelling by bus, mobility limitations could make alternative travel modes difficult to use. DRT schemes (for example, minibuses and shared taxis) may lack wheelchair access and space to carry folded wheelchairs and mobility scooters (Ward et al, 2013). Lack of use was again associated with low levels of awareness of and confusion about DRT, including eligibility and how to access it (Ward et al., 2013).

Hospital transport and taxis. Travelling to healthcare appointments was particularly difficult for those without a car. But alternative travel modes – for example, hospital transport services and taxis - were experienced as problematic. Non-emergency hospital transport could be an ordeal, as the participant below explains. Taxis were regarded as expensive and were therefore reserved for occasional and/or emergency use (Ahern and Hine, 2012, 2015; Shergold and Parkhurst, 2012; Shergold et al., 2012; Ward et al., 2013).

Now, you can book a hospital car service but if you are having chemotherapy and you're picked up at something like half past seven in the morning because you've got…three other passengers they've got to pick up. And it's from here to Cheltenham. So you could go to Hereford, you could go all round, then you go in and you cannot come home until the last person's had their treatment and that can be very very [long wait]. If you've had chemo, it's evil. (female, aged in sixties) (Shergold and Parkhurst, 2012)

I was taken ill in October and I had to get a taxi; because the ambulance wasn't available I had to have a taxi to Abergavenny to the hospital for further tests, and it was £20 for a single journey. It is only 15 miles, you know. (female, aged in seventies) (Shergold and Parkhurst, 2012)

Lifts from family and friends were an important part of the rural transport infrastructure – but for occasional rather for regular use. It was only considered acceptable to ask for help for certain types of trips, with accessing healthcare as the major example (Ahern and Hine, 2012; Shergold and Parkhurst, 2012; Shergold et al., 2012). Unable to afford taxis, those without a car would forgo 'non-essential' trips, for example social and leisure trips, a pattern noted to be more common among men (Ahern and Hine, 2012). As this suggests, there was a commonly-expressed reluctance to turn to family and friends to meet travel needs. This related to a strong preference for self-reliance and concerns about developing dependent relationships in which the individual felt indebted to and a burden on the lift-giver (discussed further under the third theme). As explained by one woman in her eighties whose health problems meant she could no longer drive:

There are a few people who will offer it [rides], but not many who I would ask because I think to them, and I know the feeling, that once they do it, they have to do it again, you know. So I try not to ask too many people. (Schwanen et al., 2012)

As the accounts of walking, public transport, DRT, taxis and relying on family and friends suggest, the inadequacies of the rural transport system were experienced most acutely by those without access to a car. These inadequacies were also constantly invoked by car owners and drivers to explain their travel preference.

Having a car was explained in terms of the inadequacies and unsuitability of other travel modes. Having a car was *'essential'* and *'a lifeline'*, a view summed up by the phrase *'no car, no transport'* (Ahern and Hine, 2015). The car was widely regarded as the *de facto* mode (Shergold et al., 2012), with other modes seen to have inadequacies which owning and driving a car avoided.

Without my car I don't know what I'd do. (male) (Ward et al., 2013)

To me, motoring and things like heating are essentials that you can't really avoid. (male, aged in sixties) (Shergold and Parkhurst, 2012)

Unlike other modes of transport, car travel was widely viewed in positive terms. As one study participant put it, '*I love my car*' *(female)* (Ward et al., 2013). The car was '*handier*' (Windle, 2004), a dependable form of transport that could accommodate poor weather, distance to services and mobility limitations in ways that other travel modes could not (de Koning et al., 2015; Schwanen et al., 2012; Shergold et al., 2012; Windle, 2004; Ziegler and Schwanen, 2011).

I find it very frustrating, my lack of mobility. I live 100 yards from this (village) hall and it will take me nearly half an hour to walk and that's why I use the car. I use it as another pair of legs. (male, aged in eighties) (Ziegler and Schwanen, 2011)

Not surprisingly, driving cessation (discussed further under theme three) had major negative impacts on both the driver and, in households where their partner did not drive, on their partner.

I don't like my life now with my husband not driving. It (the rural transport service) stops at 6 o'clock at night. Rural transport has no flexibility. (Ahern and Hine, 2015)

While the emphasis was on the advantages of car travel, some negative aspects were noted. These related to the financial cost of car ownership and to traffic conditions – the speed and density of traffic for example - rather than the mode itself. An awareness of the environmental impacts of car use was not evident in the studies.

Motoring is expensive . . . we are limited in our income and so there's a limit to how much we can get out and about and go places. (female, aged in seventies) (Shergold et al., 2012)

4.2 Theme 2: maintaining the lives older people wish to lead

This second theme linked closely to theme one. The adequacy of the transport system mattered because it provided the platform on which fulfilling lives could be built and sustained. Everyday travel provided access to two sets of valued resources.

The first were essential goods and services (Ahern and Hine, 2012; de Koning et al., 2015; Guell et al., 2016; Manthorpe et al., 2004; Schwanen et al., 2012; Ward et al., 2013). Thus, the studies described the common trips that older people made, including food shopping, accessing services (e.g. the post office and bank) and getting to healthcare appointments. As noted under theme one, the car was experienced as facilitating these trips, particularly to distant locations and when the weather was poor, while other modes of transport made access to these key resources difficult.

Secondly, transport, and the car in particular, enabled access to a wider range of activities that gave pleasure and meaning to older people's lives. These included networks and activities linked to places of worship, social clubs and community events (Ahern and Hine, 2012, 2015; de Koning et al., 2015; Shergold and Parkhurst, 2012; Shergold et al., 2012; Ziegler and Schwanen, 2011). Study participants described being *'entirely dependent'* on the car with *'no other way of doing it'*; without a car, they would *'have to cancel social activities'* (Shergold and Parkhurst, 2012).

(A car) is necessary, well if we are to sustain our activities at the current level (male, aged in eighties) (de Koning et al., 2015)

The activities included informal care and volunteering, for example, care of grandchildren (Guell et al., 2016) and, like the male participant below, volunteer visiting:

I like my visits. I visit the homes and the hospitals of sick people…I like doing it. People say: 'Oh I couldn't be bothered' and I say, 'Well, I can because it helps me as much as it helps the people I am going to see' (male, aged in eighties) (Ziegler and Schwanen, 2011)

4.3 Theme 3: affirming identities

In addition to facilitating the lives they wished for, everyday travel enabled older people to express and enjoy valued aspects of their identity. Two particular aspects were highlighted: being self-reliant and being socially connected.

Firstly, everyday travel provided an arena in which to be self-reliant. Being able to drive demonstrated a continuing capacity for independence (Schwanen et al., 2012; Ziegler and Schwanen, 2011).

My own car is really important. It's my independence and although I go with my husband to most places and we then use his car, I really love having my own car… I am not stuck; so that is really important to me. (female, aged in seventies) (Shergold et al., 2012)

(The car enables me to be) almost totally independent (male, aged in eighties) (Ziegler and Schwanen, 2011)

Driving also avoided depending on others, a dependency seen to signal and symbolise getting old. Study participants spoke of not wanting to *'bother'* their family, given they had their own lives to lead (King and Farmer, 2009; Schwanen et al., 2012). Older people, and older men in particular, were invested in 'ageing well': in being independent, active and socially connected (Ahern and Hine, 2015; Schwanen et al., 2012).

Driving cessation meant losing this capacity; it was a tangible sign of increasing dependency and was experienced as a major loss, particularly by men (Ahern and Hine, 2012, 2015; Schwanen et al., 2012; Ziegler and Schwanen, 2011).

I've just had a medical condition [diagnosed] and the medicine that I've taken has deprived me of my driving licence and it is the most shattering blow I've ever felt in my life … There's no return and I've found it very difficult to come to terms with. One of the penalties of living and I wouldn't wish it on any of you to have that trauma…. (asking others for help is) really quite humiliating, you know. … I've never been as old as this before. (male, aged in seventies) (Ziegler and Schwanen, 2011)

Issues of identity also emerged in older people's accounts of the use, and change in use, of mobility aids. Some older people found that mobility aids like walking sticks and rollators could help to maintain their sense of independence. However, others described how it undermined their self-identity. As one wheelchair user put it:

I find now that I'm starting to get a bit reclusive. I've never ever been in the village in my wheel chair … and it's a lovely little village but the reason I don't go down the village in the wheel chair is [because] people are so kind and they say, 'What's the matter Joan?'. You know: 'What's happened? ' And I just don't want to sort of give them all a sob story. … I just wouldn't like to go down in the village in a wheelchair… So, no, I don't go down the village. (female, aged in seventies) (Ziegler and Schwanen, 2011)

Secondly, everyday travel was an arena for social contact and engagement. In villages with safe pedestrian access to local services, older people described how they enjoyed getting out and feeling part of their local community (Ahern and Hine, 2012, 2015; de Koning et al., 2015; Guell et al., 2016; Shergold et al., 2012; Ward et al., 2013; Ziegler and Schwanen, 2011).

If I was home all day …, you know, I'd go loopy, I really would. (female, aged in seventies) (Guell et al., 2016)

That's the good thing about [this village], the people are very, very friendly… Even (on) the street, you can't walk past someone in the street, they'll pass comments. (male, aged in sixties) (Ziegler and Schwanen, 2011)

it's a lovely social event to go over (to the village shop) (female, aged in seventies) (de Koning et al., 2015)

Like walking, bus travel could also open up valued social worlds, a dimension highlighted by users of local buses and community transport.

I enjoy being on the buses with other people, it's a social thing . . . there's always somebody I know on the buses. (female, aged in seventies) (Shergold et al., 2012)

It's a very social bus…he only runs the one bus, so we all know each other on the bus so it's quite a social occasion (female, aged in seventies) (de Koning et al., 2015)

(Interviewer) 'So how long have you been using this (community transport) bus then?' I asked. 'A few years,' she replied, 'it's a lifeline, as no one speaks to me in my street, so since the death of my brother, it's the only place to talk to people sometimes'. (female) (Ward et al., 2013)

5. Strengths and limitations

Our review focused on older people living in rural areas, a section of the population whose voices are rarely heard in research and policy (Hennessy et al., 2014). Drawing on qualitative studies, we used standard methods for systematic reviews and thematic synthesis to draw out common dimensions of their travel experiences. The emerging themes were shared with policy advisors. They endorsed the salience of the themes and contributed additional insights to our review.

Firstly, advisors highlighted the health and wellbeing impacts of everyday travel, noting in particular the part it played in social isolation and physical inactivity. An inadequate transport system was seen as a major contributor to loneliness and to the poor mental and physical health of older people who were 'housebound'. Conversely, an adequate transport system could facilitate walking and bus travel and, in so doing, promote social engagement and physical activity. For those with specific health needs, a well-functioning user-oriented DRT system was a pre-requisite if they were to take part in community-based activities.

Secondly, the advisors noted how, through the local transport system, central government impacted directly on the lives of older people in rural communities. They spoke of how reduced investment in bus services, community transport and pavement repair was increasing car dependence and making it more difficult for older people, particularly those without cars and with health difficulties, to maintain fulfilling lives. However, recognising community needs was not straightforward; as one advisor observed, when local government lacked the resources to meet local needs, 'people feel they speak but are not heard'. Investing in rural transport was seen as integral to 'rural proofing' and 'age proofing' policies, for example by reversing reductions in central government's funding of local authorities and by strengthening commitments to older people in national policy frameworks.

Some limitations of our review should be noted. The studies provided limited socio-demographic information on participants, including financial circumstances and household composition. Our review points to an important gender dimension to older people's travel experiences, with the car more central to men's lives and identity and women more positive about other modes of travel. These differences warrant separate study. Although older people with mobility limitations (de Koning et al. 2015; Schwanen et al. 2012; Ziegler & Schwanen 2011; King & Farmer 2009) and care home residents (Ward et al. 2013) were included in the studies, frail older people are likely to be under-represented in our review. Because of differences in the transport infrastructure of rural and urban areas, our review excludes older people living in urban areas; a separate review of their travel experiences is in progress.

Finally, our UK focus may restrict the generalisability of our findings. There are important differences between high-income countries, including in rural population densities and in transport systems (e.g. the coverage and quality of the road network and the public transport infrastructure) (Mageean and Nelson, 2003; Nelson et al., 2010; Pucher and Renne, 2005). For example, a Europe-wide analysis found that, compared to the UK, DRT services were more developed and better integrated in countries with a more regulated transport market (Mageean and Nelson, 2003). Despite these differences, studies elsewhere point to the centrality of transport for healthy ageing in rural communities (AARP, 2012; Davis and Bartlett, 2008). Long distances to activity sites combine with limited public transport provision to restrict rural travel mode choice and increase car dependence (Davis and Bartlett, 2008). In the USA for example, over a third of rural residents live in areas with no public transport services (Pucher and Renne, 2005). Reductions in rural bus services, and the differential impact on older people (AARP, 2012), are also common findings, as is the importance of protecting and promoting integrated public and community transport provision (UNECE, 2017).

6. Conclusion and policy relevance: everyday travel and quality of life in older age

The themes running through our review highlight the essential contribution that everyday travel – whether by car, public transport or on foot - makes to the lives of older people. As well as facilitating access to goods and services, everyday travel enables older people to enjoy their lives and express important aspects of their identity. As this suggests, everyday travel is best understood in terms of its impact on older people's 'quality of life'. The three themes align very closely with those identified by older people when asked about 'the building blocks' of quality of life in older age (Bowling, 2018). Major building blocks are 'living in a neighbourhood with good community facilities and services, including transport' 'engaging in a large number of social activities and feeling supported' and 'feeling independent, in control over life' (Bowling, 2018:87).

Quality of life is a broader concept than health or wellbeing, and is explicitly framed around the individual's perception of their life in relation to their hopes, pleasures and concerns (WHOQOL Group, 1994). It does not use clinical measures of health but relies on people's subjective evaluation of their lives. As our review makes clear, everyday travel is central to the achievement of older people's hopes and pleasures – and is, for many, a major concern. It thwarts – or facilitates – an individual's capacity to lead the life they wish to live and be the person they wish to be. Thus, modes of travel that are perceived as accessible, convenient and self-affirming provide the platform on which meaningful lives and important identities are sustained. Loss of these modes – and loss of the capacity to drive in particular – brings with it the loss of the lifestyles and identities that matter.

This quality of life perspective is central to health policies that seek not only to 'add extra years to life' but also to add 'extra life to those years' (Local Government Association (LGA), 2018a:1). It can also be applied to transport provision for older people, for example by including quality of life in policy impact assessments. Such assessments are urgently needed: the government's commitment to 'rural proof' and 'age proof' policies has coincided with the roll-out of austerity policies that have hit rural transport particularly hard (AgeUK, 2013; LGA, 2018b). As all three themes indicate, the weakening of the rural public transport infrastructure impacts most on non-car owners. Seen in a cross-sectional perspective, high levels of car ownership mean that the impacts are limited to a minority of older people living in rural communities. However, car ownership provides temporary protection; the ageing process brings with it declining car use and increasing dependence on other travel modes (Breeze and Lang, 2008). As this suggests, the public and pedestrian transport infrastructure underpins quality of life in older age. Investment in facilities for pedestrians, local bus services and community transport and DRT schemes is essential to improving alternatives to car dependence. In all these areas, ensuring provision for those requiring assistance with travel holds the key to promoting and protecting quality of life in later life.

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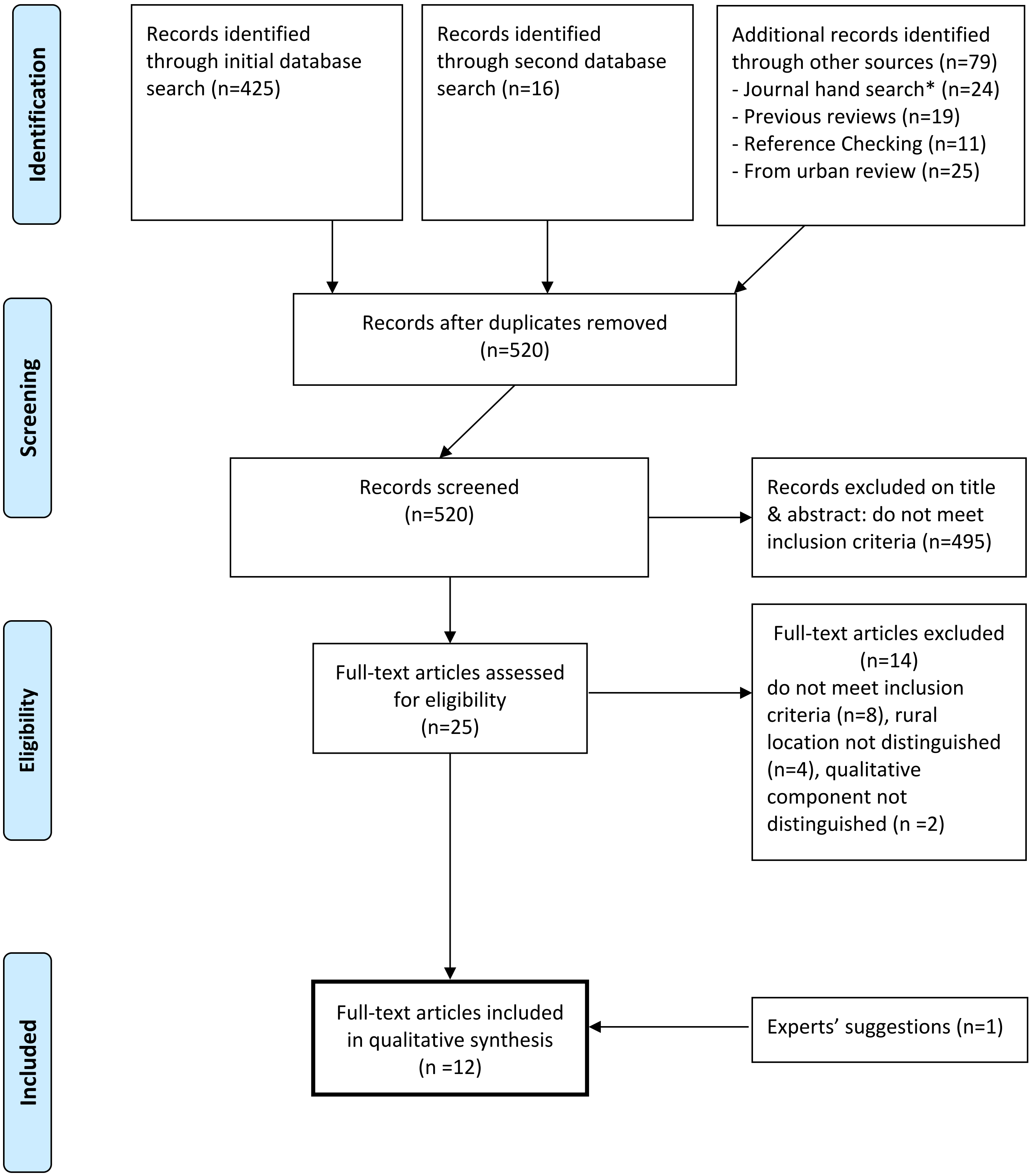
Figure 1: PRISMA flow chart of search strategy and study selection



From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). *P*referred *R*eporting *I*tems for *S*ystematic Reviews and *M*eta-*A*nalyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

*Jnl of Planning Literature, Built Environment, Jnl of Transport & Health

Table 1 Summary of included studies

Source Paper (n=12)	Country setting	Article title & *journal*	Participants & area (as reported in paper)	Socio-demographic & health profile (as reported in paper)	Method-ology/ methods	Health or well-being related focus (as reported in paper)	Indicative findings	QA
Ahern & Hine (2012)*	Armagh, Antrim, Fermanagh & Down, Northern Ireland	Rural transport – Valuing the mobility of older people. *Research in Transportation Economics*	37 participants (26 female), aged 60 or over, living in four remote and accessible rural communities	1 employed, 36 retired; 4 had a walking disability, 4 a hearing disability; 4 participants were drivers.	Focus groups.	Not reported	The car was the most important mode of transport for men and women in rural areas. This meant driving cessation had a negative effect on quality of life, especially for men. Women were more used to using alternative modes of transport such as community transport. Public transport was rarely used as it was inaccessible and inconvenient. This created difficulties both for accessing health services, which were often centralised, and for discretionary travel.	24
Ahern & Hine (2015)*	Armagh, Antrim, Fermanagh & Down, Northern	Accessibility of health services for aged people in rural Ireland. *International Journal of*	37 participants (26 female), aged 60 or over.	Not reported; 4 participants were drivers.	Focus groups.	Not reported	Participants had to give up driving for reasons such as ill health or its cost, causing a loss of freedom and independence. Drivers and non-drivers both found accessing health services difficult, particularly as a	26

	Ireland	*Sustainable Transportation*					result of the centralisation of these services. As community and public transport were generally unsuitable to take people to health services, many relied on lifts from family and friends. Elderly women, many of whom did not drive, face significant problems in visiting spouses in nursing homes or hospitals.	
de Koning, Stathi & Fox (2015)	Southwest England	Similarities and differences in the determinants of trips outdoors performed by UK urban- and rural-living older adults. *Journal of Aging and Physical Activity*	13 participants (7 female), age range 67-85 years, from a village with population <530.	All white British; average household income £15,000, range £7500 to >£30,000; a range of physical abilities and activity (daily physical activity measured using accelerometry); 10 were married, 3 single/divorced.	Qualitative study using the Ecological Model framework. Semi-structured individual interviews.	Not reported	For older people in rural areas, a community-based social network was important in facilitating use of outdoor environments, as was access to facilities and public transport. Older people had high levels of car dependence and car use was seen as essential to trips outdoors. Barriers to using the outdoors were mainly age-related, resulting from physical conditions or mobility limitations, rather than environmental causes.	30

Guell, Shefer, Griffin & Ogilvie (2016)	Norfolk, England	'Keeping your body and mind active': an ethnographic study of aspirations for healthy ageing *BMJ Open*	27 participants (12 female), aged 65-80 years, living in urban (n=12) and rural (n=15) areas.	Occupation: 14 professional, 13 manual; 14 were active, 13 inactive (physical activity levels measured using accelerometry over a week); 7 had musculoskeletal conditions, 7 other chronic conditions eg. cancer, diabetes or cardiovascular disease; 13 cohabited, 14 lived alone.	Ethnographic research design framed within social theory. Semi-structured interviews and semi-structured participant observation.	Interviews discussed 'attitudes towards active and sedentary living relating to health and well-being'.	'Activeness' can form part of more general aspirations of ageing proactively, rather than being experienced as discrete behaviours in everyday life. Social support can be garnered as a facilitator of active living, gaining encouragement, companionship or purpose. Social context can also be a barrier that needs to be negotiated, for example, when the ill-health or physical limitations of others reduce the time available for activeness or the intensity of activities that can be performed together.	30
King & Farmer (2009)	Scottish Highlands	What older people want: evidence from a study of remote Scottish communities. *Rural and*	23 participants, age range 55-87, from two remote mainland communities	Participants were recruited to have 'varied socio-economic background'; 9 lived alone, 14	Interviews, informal conversations, and focus groups.	Not reported	Participants considered that living in a remote area meant they had a degree of personal responsibility for accessing services. A lack of public transport meant those who could no longer drive had mobility problems and often relied on	32

		Remote Health	.	with others.			community support.	
Manthorpe, Malin & Stubbs (2004)	Midlands, England	Older people's views on rural life: a study of three villages. *Journal of Clinical Nursing*	48 participants, from three rural villages selected for populations with different socio-economic and occupational circumstances.	Not reported; 50 to 73% (depending on village) had access to a car.	Mixed-method study. Surveys with quantitative and qualitative questions.	Not reported	Older people in rural areas were aware of the challenges they faced in accessing services and maintaining mobility. These difficulties were seen to stem from driving cessation and the lack of public transport in rural areas. Support from community and family meant older people felt able to overcome these problems and accepted them in return for the benefits of rural life.	26
Schwanen, Bannister & Bowling (2012)	England & Scotland	Independence and mobility in later life. *Geoforum*	42 participants (24 female), > 70 years, from areas of high (n=20) and low (n=22) population density.	Sociodemographic information was not reported; 28 participants had 'little or no difficulty walking 400 yards', 14 were 'unable to do so alone'; 29 rated their quality of	Semi-structured individual interviews.	Not reported	Independence was seen a complex concept that is dependent on bodies, technologies, infrastructures, social networks and other elements for it to be achieved. Independent mobility was viewed as avoiding lifts provided by next of kin, friends or others for getting around, connecting this with the concept of dependency in later life which incorporates passivity, burden and	21

				life as very good or good, 13 as very, bad or alright; 17 cohabited, 18 were widowed, 7 single or divorced/separated.			undesirability.	
Shergold & Parkhurst (2012)**	England: North Cornwall, North Dorset & Gloucester-shire; Wales: Dyfed, Powys & Monmouth-shire	Transport-related social exclusion amongst older people in rural Southwest England and Wales. *Journal of Rural Studies*	38 participants, aged over 60, from six areas representing a gradient of rurality and affluence.	4 participants were 'often excluded in their communities'; 'majority had access to car'	Mixed-method study. Semi-structured interviews.	Interviews asked about the role of transport in supporting quality of life and community participation	Many older people in rural areas reported difficulties in accessing both essential services such as hospitals and amenities such as cinemas. Public transport was seen as inaccessible or inconvenient and although community transport was used, it was not a reliable means of accessing health services or other essentials. This meant there was greater potential for exclusion from non-discretionary services than from discretionary activities. However, social exclusion was likely to result from driving cessation as a car was seen as essential for rural life.	20

Shergold, Parkhurst & Musselwhite (2012)**	England: North Cornwall, North Dorset & Gloucester-shire; Wales: Dyfed, Powys & Monmouth -shire	Rural car dependence: An emerging barrier to community activity for older people. *Transport Planning and Technology*	34 participants, aged over 60, from six areas representing a gradient of rurality and affluence.	'a range of characteristics of interest from a transport and community involvement perspective'	Mixed-method study. Semi-structured interviews.	Interviews 'focused on mobility issues'	Older people in rural areas felt they could access the level of community activity that they wanted, although transport was perceived to be more of a barrier for those without car access. Some other modes of transport, such as public or community transport, were used but were felt to need support to properly meet older people's needs.	26
Ward, Somerville & Bosworth (2013)	Lincolnshir e, England	"Now without my car I don't know what I'd do": The transportation needs of older people in rural Lincolnshire. *Local Economy*	44 participants (35 female), aged > 60, from six rural communities with 'different levels of social and economic deprivation'.	Not reported; 19 participants were drivers.	Focus groups.	Not reported	Older people used a variety of transport options depending on their needs at the time and their ability to use a free bus pass, although they lacked awareness of community transport schemes. They held both positive and negative views of public transport, preferring the car as a mode of transport. They had suggestions for improving rural transport, and felt that social isolation and its associated health problems could be alleviated through better provision of transport.	23

Windle (2004)	Wales	Transport in rural Wales. *Working with Older People*	423 participants (247 female), aged 70- 90.	Not reported; 65% had car access; 30 were single, 217 married, 157 widowed, 15 divorced or separated.	Mixed-method; interviews with quantitative and qualitative questions.	Not reported	Car ownership was considered important in rural areas. Use of public transport was influenced by its accessibility and the health status of the user. Those who did not have access to private transport were more likely to have poorer health and suffer from loneliness.	13
Ziegler & Schwanen (2011)	County Durham, England	"I like to go out and be energised by different people": an exploratory analysis of mobility and wellbeing in later life. *Ageing and Society*	119 participants (71% female), aged 60-95 years, from five rural communities.	'self-rated presence or absence of a physical condition which limits how individuals get around'	Constructivist grounded theory approach. Focus groups.	Focus groups sought views on 'inter-sections between spatial mobility, ageing and well-being'.	Mobility of the mind and self is a driver of the relationship between mobility and well-being. Loss of physical mobility can negatively affect well-being but this is not always the case as other mobilities can compensate. Well-being is enhanced by physical mobility because it enables independence through autonomy and inter-dependence through social relations with other people.	26

* & ** papers arising from the same study