

Kelly Marie Roberts

Concessionary bus travel: exploring the relationships between concessionary bus travel, health and wellbeing and social connectivity.

Submitted to Swansea University in fulfilment of the requirements for the Degree of Doctor of Philosophy

Date: 18.07.2022

# Declaration

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Signed .....KMRoberts..... (candidate)

Date .....18/07/2022.....

## STATEMENT 1

This thesis is the result of my own investigations, except where otherwise stated. Where correction services have been used, the extent and nature of the correction is clearly marked in a footnote(s).

Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

Signed .....KMRoberts..... (candidate)

Date .....18/07/2022.....

## STATEMENT 2

I hereby give consent for my thesis, if accepted, to be available for photocopying and for inter-library loan, and for the title and summary to be made available to outside organisations.

Signed .....KMRoberts..... (candidate)

Date .....18/07/2022.....

# Acknowledgements

*“No one can prepare you for your first research project. Reading books can give you the knowledge to guide you through it, however it takes time, dedication, confidence, attention to detail, expertise and understanding to truly get you from A to B in the research world.”*

These are the first lines of my acknowledgements for my MSc Dissertation in Social Research. I remember writing them well and am sitting here laughing at my reference ‘from A to B.’ Little did I know how important the term ‘from A to B’ would become when writing my doctoral dissertation. Concessionary travel for older people means more than getting from ‘A to B, but this is where it begins for many.

These words ring true now more than ever. No one can prepare you for your first research project. I would like to add, no research project can prepare you for a PhD. The process has been challenging, exasperated by family illness, personal struggles, work commitments and life in general. However, writing these acknowledgments and finishing this doctoral research project gives me a sense of pride, joy and unmeasurable relief. There have been many times where I thought I would not make it to this point.

If I were given the ability to speak to myself when I first embarked on this research journey, I would say to take it one journal article, chapter or paper at a time, to use footnotes or track changes from the very beginning, and to stop overthinking and just start writing. I would also tell myself it is okay to stop and take five when needed. Feeling overwhelmed does not mean you cannot do it or keep going. Finally, I would say it is imperative to put yourself and your family first and to make more time to enjoy the little things in life.

As I reflect on the achievement of completing this research, there are many people I would like to thank for helping to get me here. First, to my two children Codi and Lexi. Thank you for being patient, understanding and the most loving, kind and thoughtful children a mother could ask for. I am in awe of the strength and resolve that you both have. You teach me something new every day. To my husband Leighton. You provided calm when there was chaos and have supported me without question. You took on the role of mother and father and gave

me the time I needed to complete this research. I am forever grateful to my little family unit. As always, my achievements are your achievements.

To my mother, sisters, nieces, nephews and friends. You have provided support, comfort, love and humour during some the of the darkest times. Any time I had free was spent with my children and husband, yet you still hovered in the background cheering me on and checking in. Thank you for the funny texts, memes and gifs. They have kept me going (even if I didn't respond for days on end).

Second, I would like to give thanks to my wonderful, resourceful, funny, and extraordinary participants. You gave me your precious time and shared your experiences for nothing in return. Without you this work would not exist and for this I am forever grateful. I wish you the very best going forward and hope that your journeys from A to B will always be smooth, memorable, comfortable and meaningful.

Finally, I give thanks to the Centre for Innovative Ageing, Swansea University for funding this project and giving me the opportunity to contribute to ageing research. A huge thank you to my supervisor Dr Charles Musselwhite. Your guidance, cool and calm demeanour and support has given me the confidence to believe in myself. To my secondary supervisor Dr Amy Murray. You joined the team late and hit the ground running. Your knowledge, guidance, understanding and support has helped me more than you know. I almost lost my way and my team provided encouragement when I needed it the most. I will always remember what you have done for me.

A final thank you to all those that have contributed to this journey. You all know how difficult it has been for me to get from A to B and I will never forget the support I have received from each and every one of you.

# Abstract

The United Kingdom (UK) is experiencing an ageing of its population. At the same time, society is becoming increasingly mobile. As people spread themselves wider and thinner, policymakers have the challenge of providing suitable mobility options for older people to ensure there is an acceptable level of social connectivity. To address transport disadvantage and encourage modal shift from car to bus, UK governments (England, Wales, Scotland and Northern Ireland) have introduced concessionary bus travel. The schemes are both popular and successful, however recently there has been a reduction in concessionary pass use linked to poor and inadequate transport options, societal influences and changing mobility needs. The following thesis critically examines the relationships between concessionary bus travel and its implications for the health and wellbeing of older people in maintaining social connectivity and improved quality of life. Conducted in Wales, this study employed a two-phase multiple method approach. The first phase involved conducting semi-structured interviews with identified concessionary bus pass users (n=33), which allowed respondents to share personal experiences in their own words. The second phase comprised of phase one participants completing a seven-day paper-based bus travel diary (n=10), which added a further dimension of frequency and behaviour in real time to the results. Findings show similarities in the way older people experience bus use in the context of their daily lives. However, the findings also demonstrate the subtle differences between the mobility needs of older people in relation to bus use, levels of health, wellbeing, and overall quality of life. The thematic analysis led to the creation of *The Maintaining Social Connectivity Model* which can be understood as the development of policy and transport opportunities in creating an age-friendly community environment and older people's experiences of this. The model incorporates all elements of the public transport chain (infrastructure, transport options, opportunities and social connections for example) to link social connectivity to the *development, contribution, and outcome* of concessionary travel and improved health, wellbeing and quality of life for older people. It is concluded that an attractive, useable, age-friendly bus travel environment is achieved when all three elements of connectedness are considered and can be met.

# Contents

<b>DECLARATION</b> .....	<b>2</b>
<b>ACKNOWLEDGEMENTS</b> .....	<b>3</b>
<b>ABSTRACT</b> .....	<b>5</b>
<b>CHAPTER 1: INTRODUCTION TO THE STUDY</b> .....	<b>11</b>
1.1 Overview .....	11
1.2 Research context, background, and relevance .....	11
1.3 Research Aims, Questions and Objectives .....	13
1.3.1 Aims.....	13
1.3.2 Research questions.....	14
1.3.3 Objectives .....	14
1.4 The Research Approach .....	14
1.5 Thesis Outline .....	14
<b>CHAPTER 2: LITERATURE REVIEW</b> .....	<b>16</b>
2.1 Overview .....	16
2.2 Background: Secondary Research Analysis .....	16
2.2.1 Methods used to review the literature .....	16
2.2.2 Completing the literature review .....	17
2.3 Older Age, Mobility and Social Exclusion .....	20
2.3.1 Trends: An Emerging Hypermobile Society .....	20
2.3.2 Trends: Trip Making and Mode of Choice for Older People .....	23
2.3.3 Older age and Transport disadvantage .....	28
2.3.4 Older Age: meaning and understanding social exclusion .....	30
2.3.5 Understanding quality of life: Hierarchical model of mobility need .....	37
2.4 The policy development of concessionary fares.....	45
2.4.1 Public Transport and Zero-Fare Public Transport.....	45
2.4.2 Regulating the Bus Industry: A potted history.....	46
2.4.3 Concessionary Bus Travel: Policy Development relating to older people .....	48
2.4.4 The Concessionary Fares scheme in the UK .....	49
2.4.5 The Concessionary Fares scheme in England .....	50
2.4.6 The Concessionary Fares scheme in Wales .....	51
2.5 Concessionary bus travel: interventions in practice .....	53
2.5.1 Age-friendly community transport .....	53
2.5.2 Current bus transportation options available in Wales.....	54
2.5.3 The mechanisms in place.....	62
2.5.4 Access to age-friendly communities.....	69
2.6 Chapter Summary .....	74
<b>CHAPTER 3: RESEARCH METHODOLOGY</b> .....	<b>76</b>
3.1 Overview .....	76
3.2 Gaining an Understanding: The Methodological Framework .....	76
3.2.1 Theoretical framework: approach and design.....	76
3.2.2 What about ontology?.....	79
3.2.3 Epistemology: The Theory of Knowledge .....	81
3.2.4 Stage two: Theoretical perspective .....	82
3.2.5 Phenomenology.....	82
3.2.6 Social Constructionism .....	85
3.2.7 The social construction of a social problem .....	88
3.2.8 Developing the aims of the research questions .....	90
3.3 Applying the understanding: the methodological approach .....	91
3.3.1 Stage three: Methodology.....	91
3.3.2 Transport Studies: Traditional and current methodologies .....	92
3.3.3 A multi-method research approach .....	95
3.3.4 Sampling Strategy .....	100
3.3.5 Recruitment: purposive network sampling .....	101
3.3.6 Recruitment: snowballing.....	103

3.3.7	Recruitment: entering the field .....	104
3.3.8	Phase one – A qualitative Research approach .....	108
3.3.9	Quality in qualitative research.....	109
3.3.10	Choosing the right qualitative method.....	110
3.3.11	Designing the Interview Questions.....	111
3.3.12	Phase Two – A quantitative Research Approach .....	113
3.3.13	Choosing the right quantitative method .....	113
3.3.14	Quantitative travel diaries .....	114
3.3.15	Designing the Travel Diary Questions.....	115
3.3.16	Quantity in quantitative research.....	116
3.3.17	Ethical considerations.....	117
3.3.18	Assessing the risks .....	117
3.3.19	Informed Consent and the right to withdraw .....	120
3.3.20	Data protection and confidentiality .....	121
3.3.21	The Research Setting .....	121
3.3.22	The interviews .....	121
3.3.23	The travel diaries .....	124
3.3.24	Recognising participant contributions.....	124
<b>3.4</b>	<b>Critical self-awareness – reflections and development .....</b>	<b>125</b>
3.4.1	The researcher as the instrument .....	125
3.4.2	The Unintentional Pilot Study.....	126
3.4.3	Researching with two hats on: Inevitable bias .....	128
<b>3.5</b>	<b>Evaluating the Understanding: The approach taken to data analysis .....</b>	<b>132</b>
3.5.1	Stage four: Methods.....	132
3.5.2	Phase one – qualitative approach .....	132
3.5.3	Phase one – qualitative analysis plan .....	133
3.5.4	Phase two – quantitative approach.....	140
3.5.5	Phase two – quantitative analysis plan .....	140
3.5.6	Step 1: Data editing and coding.....	141
3.5.7	Step 2: Descriptive analysis .....	142
3.5.8	Step 3: Interpret and report on the analysis .....	144
3.5.9	Step 4: Merge phase one and phase two findings .....	144
<b>3.6</b>	<b>Chapter Summary .....</b>	<b>144</b>
<b>CHAPTER 4: FINDINGS .....</b>		<b>146</b>
<b>4.1</b>	<b>Overview .....</b>	<b>146</b>
<b>4.2</b>	<b>A. Interview Findings .....</b>	<b>146</b>
4.2.1	The meaning of connectedness.....	147
4.2.2	The <i>development</i> of the connection.....	147
4.2.3	Access to desired destination .....	147
4.2.4	Pedestrian infrastructure .....	152
4.2.5	Public travel as a <i>contributor</i> to connection.....	160
4.2.6	Bus use: the travel routine .....	161
4.2.7	Bus Accessibility.....	165
4.2.8	The <i>outcome</i> of the connection .....	173
4.2.9	Community connection .....	173
4.2.10	Social interaction .....	177
4.2.11	The social connections.....	181
<b>4.3</b>	<b>B. Travel Diary Findings .....</b>	<b>187</b>
4.3.1	Descriptive data.....	187
4.3.2	Bus using trends .....	191
4.3.3	Quality of the journey.....	198
4.3.4	Alternative travel options.....	201
<b>4.4</b>	<b>Chapter Summary .....</b>	<b>204</b>
<b>CHAPTER 5: DISCUSSION .....</b>		<b>205</b>
<b>5.1</b>	<b>Overview .....</b>	<b>205</b>
<b>5.2</b>	<b>Creating The Maintaining Social Connectivity Model .....</b>	<b>206</b>
5.2.1	The relationships between concessionary bus travel, health and wellbeing relate to the built	

environment (practical), the mechanisms in place (practical) and the outcome of age friendly travel (psycho-social) .....	206
5.2.2 Developing the connection.....	208
5.2.3 Contributing to the connection .....	209
5.2.4 The outcome of the connection and creating connectivity.....	209
<b>5.3 The meaning of concessionary bus travel and owning a pass .....</b>	<b>210</b>
5.3.1 Concessionary bus travel means independence and freedom.....	210
5.3.2 Older people find it difficult to categorise the meanings of bus use .....	214
<b>5.4 Older people’s experiences of concessionary bus travel: Car use and access .....</b>	<b>216</b>
5.4.1 User Drivers use the bus for more leisure orientated purposeful trips, whereas the car is used for more functional travel purposes (medical appointments for example). User Non-Drivers on the other hand report their bus use as both functional and for social purposes. ....	217
5.4.2 The concessionary pass has stimulated a modal shift for those that have alternative travel options and is being used in conjunction with the car as opposed to or instead of the car. ....	221
5.4.3 Reducing the cost of travel is a fundamental reason for changing travel behaviours .....	223
<b>5.5 Bus Accessibility and companion travel .....</b>	<b>226</b>
5.5.1 Concessionary travel for both User Drivers and User Non-Drivers is dependent on bus accessibility . ....	227
5.5.2 Companion travel has the potential to increase bus use for older people .....	231
<b>5.6 The relationship between older people and concessionary bus travel, social connectivity, health, and wellbeing.....</b>	<b>235</b>
5.6.1 Concessionary bus travel provides opportunities for maintaining community connection, social interaction, and social connectedness.....	235
5.6.2 The concessionary bus pass has the potential to continue to improve quality of life .....	237
<b>5.7 Chapter summary .....</b>	<b>241</b>
<b>CHAPTER 6: CONCLUSION .....</b>	<b>242</b>
<b>6.1 Overview .....</b>	<b>242</b>
<b>6.2 Findings and Contributions to knowledge.....</b>	<b>242</b>
6.2.1 The relationships between concessionary bus travel, health and wellbeing .....	243
6.2.2 The meaning of concessionary bus travel and owning a pass .....	243
6.2.3 Older people’s experiences of concessionary bus travel: Car use, access, and concessionary travel... ..	244
6.2.4 Older people’s experiences of concessionary bus travel: Bus accessibility and companion travel .....	246
6.2.5 The relationship between older people and concessionary bus travel, health, and wellbeing .....	248
<b>6.3 Recommendations.....</b>	<b>250</b>
6.3.1 Addressing Barriers - The Policy Approach.....	250
6.3.2 Addressing Barriers - The Practical Approach .....	251
6.3.3 A Total Transport Approach – Shifting Modal Use .....	252
6.3.4 Concessionary Travel - Improving Health and Wellbeing.....	253
<b>6.4 Limitations of the Research .....</b>	<b>255</b>
<b>CHAPTER 7: REFERENCE LIST .....</b>	<b>258</b>
<b>CHAPTER 8: APPENDICES .....</b>	<b>285</b>
<b>8.1 Appendix One: Ethical Application.....</b>	<b>285</b>
<b>8.2 Appendix Two: Screening Tool.....</b>	<b>290</b>
<b>8.3 Appendix Three: Participant letter.....</b>	<b>291</b>
<b>8.4 Appendix Four: Participant Consent Form .....</b>	<b>292</b>
<b>8.5 Appendix Five: Travel Diary Questions .....</b>	<b>293</b>
<b>8.6 Appendix Six: Travel Diary Consent Form and risk assessment .....</b>	<b>294</b>
<b>8.7 Appendix Seven: Participant Information Sheet .....</b>	<b>295</b>
<b>8.8 Appendix Eight: Participant debrief information sheet.....</b>	<b>297</b>
<b>8.9 Appendix Nine: Interview Prompt Changes Post Pilot Study.....</b>	<b>298</b>



<b>Tables</b>	<b>Title</b>	<b>Page number</b>
Table 1	<i>Participant inclusion &amp; exclusion criteria</i>	104
Table 2	<i>Groups identified from screening tool</i>	107
Table 3	<i>User Drivers screening tool responses</i>	107
Table 4	<i>User Non-Drivers screening tool responses</i>	108
Table 5	<i>Criteria in evaluating quality in qualitative research (Stenfors et al., 2020, p. 598)</i>	109
Table 6	<i>Overall aims and objectives of the primary research (phase one and two)</i>	116
Table 7	<i>Six-step data analysis procedure (adapted from Braun &amp; Clarke, 2006)</i>	134
Table 8	<i>Main themes and sub-themes identified in the thematic analysis of the interviews</i>	139
Table 9	<i>Quantitative analysis plan</i>	141
Table 10	<i>Groups identified from screening tool (User Driver/User Non-Driver)</i>	147

<b>Images</b>	<b>Title</b>	<b>Page number</b>
Image 1	Taxonomy of models of Quality of Life (Bowling, 2005)	41
Image 2	Swansea City Bus Station (Sustainable Swansea, 2022)	68
Image 3	Swansea City Bus Station (Sustainable Swansea, 2022)	69
Image 4	Example of emerging themes	135
Image 5	Microsoft word and post-it notes coding system	137
Image 6	Example of one edited and coded diary entry	142
Image 7	Example of charted and tabulated diary entry	143
Image 8	Example of narrative coded diary responses	143
Image 9	Residential area of Travel Diary Participants (Google Maps, 2021)	188
Image 10	Aerial distance between participants (Google Maps, 2021)	188
Image 11	Loughor bus stops (Google Maps, 2021)	190
Image 12	Gorseinon bus stops (Google Maps, 2021)	190
Image 13	Gorseinon bus station (Google Maps, 2021)	191
Image 14	Mapped location of travel diary entries (Google Maps, 2021)	193

<b>Figures</b>	<b>Title</b>	<b>Page number</b>
Figure 1	<i>Hierarchal model of mobility needs (Musselwhite &amp; Haddad, 2010).</i>	38
Figure 2	<i>Contingency Map of factors influencing passenger perception and journey experience on the bus (Clayton, 2012).</i>	44
Figure 3	<i>A Conceptual Model of Social Connectivity (Menec, 2017).</i>	54
Figure 4	<i>Annual Impacts for Great Britain (Greener Journeys, 2014).</i>	56
Figure 5	<i>MMR research designs (adapted from Tashakkori &amp; Teddlie, 1998, cited in Davis et al., 2011).</i>	98
Figure 6	<i>The Maintaining Social Connectivity Model</i>	208
Figure 7	<i>Schematic Overview of the Research questions and findings</i>	242

<b>Graphs</b>	<b>Title</b>	<b>Page number</b>
Graph 1	Annual growth in licenced vehicles (DfT, 2019a).	21
Graph 2	Full car Licence Holders by Age (GB) 1975-2010 (ONS, 2020a).	22
Graph 3	Full car Licence Holders by Age (GB) 2011-2019 (ONS, 2020a).	22
Graph 4	The number of trips taken in Great Britain (ONS, 2020b).	23
Graph 5	The number of trips taken in Great Britain (ONS, 2020b).	24
Graph 6	The number of trips taken in Great Britain (ONS, 2020b).	25
Graph 7	Annual changes in bus trip frequency aged 60 and over (DfT, 2010).	27
Graph 8	Bus Use Frequency 60+ (DfT, 2020)	28
Graph 9	Residential area (Travel Diary Findings)	187
Graph 10	Locality: Current Residence (Travel Diary Findings)	187
Graph 11	Days Travelled (Travel Diary Findings)	192
Graph 12	Age of Participants (Travel Diary Findings)	192
Graph 13	Trip Destination (Travel Diary Findings)	194
Graph 14	Reason for Travel (Travel Diary Findings)	194
Graph 15	Employment Status (Travel Diary Findings)	194
Graph 16	Outbound Boarding (Travel Diary Findings)	195
Graph 17	Outbound Disembarked (Travel Diary Findings)	195
Graph 18	Inbound Boarding (Travel Diary Findings)	196
Graph 19	Inbound Disembarked (Travel Diary Findings)	196
Graph 20	Travelled if dark/late (Travel Diary Findings)	196
Graph 21	Walking Distance to the Bus Stop (Travel Diary Findings)	197
Graph 22	Quality of the Bus Journey (Travel Diary Findings)	198
Graph 23	Journey Difficulty (Travel Diary Findings)	199
Graph 24	Journey Difficulty Reason (Travel Diary Findings)	199
Graph 25	Decision to travel (weather) (Travel Diary Findings)	200
Graph 26	Weather affect decision to travel (Travel Diary Findings)	200
Graph 27	Travelled if had to change bus (Travel Diary Findings)	201
Graph 28	Travelled if had to carry items (Travel Diary Findings)	201
Graph 29	Alternative Travel Choice Options (Travel Diary Findings)	202
Graph 30	Travel if had to Pay (Travel Diary Findings)	202
Graph 31	Choice of travel mode (Travel Diary Findings)	203

<b>Diagram</b>	<b>Title</b>	<b>Page number</b>
Diagram 1	MMR methodology (Creswell & Clark, 2007)	99

# Chapter 1: Introduction to the study

## 1.1 Overview

The aim of this introduction is to present the main ideas that have been developed throughout this study. Chapter 1 begins with the research context, background and relevance, before the research aims, objectives and questions are discussed. The chapter ends by providing an outline of the research approach and chapter aims.

## 1.2 Research context, background, and relevance

This study aims to identify relationships between concessionary bus travel and its implications for health, wellbeing, and connectivity amongst older people.

The UK is experiencing an ageing of its population (Age UK, 2019a; ONS, 2019). Recent data shows that since the start of the 19<sup>th</sup> century, the UK has seen mortality rates decline and life expectancy increase. This means there are 15.5 million people aged 60 or over in the UK at the time of writing (23% of the UK population) (MHA, 2021). Current projections show that by 2050, one in three people in the UK will be aged 60 years and older (ONS, 2009; 2019). Changes in longevity also show that those aged 85 and over (termed the 'older old' (Andrews, 2012a)) could double and it is projected that 23.4% of male and 29.2% of female babies born in 2018 will survive to the age of 100 (ONS, 2019). Evidence also shows that people in the UK are travelling an average of 20 miles a day (Yurday, 2021). Adams (2001) projected that people will continue to spread themselves wider and thinner, termed the 'hypermobile' society, he argued that people will become more dispersed, consume more space, and this will lead to greater disparities between the rich and the poor. For example, the shift towards car use in recent decades has resulted in land use dispersion, or a splintering urbanisation that increases distances between activity centres and opportunities. This has created structural issues relating to mobility and travel, specifically because amenities are being placed on the outskirts of towns and cities, which places further emphasis on driving to ensure these services are accessible (Murray, 2019). One major factor noted in this rising trend has been the advent of widespread car ownership and use over the last few decades (DfT, 2019a). Despite providing opportunities in terms of increased leisure and social activity, levels of car access and

ownership in later life is considered a contributory factor in increasing social exclusion (Andrews, 2012a; Murray, 2019). Transport disadvantage is considered a complex, multidimensional construct that has been exasperated by the interaction between land use patterns, the changing transport system, and personal individual circumstances (Currie & Delbosc, 2011). As such, the opportunities and activities made available due to the new hypermobile society can inadvertently exclude those older people reliant on public transport (such as the bus). Davey (2007) and Hine and Mitchell (2003) recognise the lack of car access in a car-centric society as a fundamental issue increasing the risk of social exclusion. For example, data shows that although the number of car licence holders has risen from age 60, 85% of those aged 60-69 hold a full car licence compared to 67% of those aged 70+ (and compared to 35%, and 15% in 1975/76 (ONS, 2020a).

Research shows that the basic utilitarian need for mobility in older age is underpinned within the official policy rhetoric of UK Concessionary Fares policies. UK Governments have long recognised that transport is a contributory factor to social exclusion, especially relating to unequal mobility and inadequate services in outlying urban and isolated rural areas (DETR, 2000). Since the 1990s there have been a considerable number of government reports acknowledging the issue of transport disadvantage and the need to tackle social exclusion in older age (DfT, 2009, 2012; SEU, 2003; Welsh Government, 2018c). Following a potted and disjointed policy attempt to tackle exclusion, UK governments have introduced concessionary bus travel to older people (however eligible age and entitlement differs across England, Wales, Scotland and Northern Ireland), along with some people who have a registered disability (Butcher, 2015; DfT, 1998). The pass is linked to maintaining social connectivity for older people, as well as directly allowing them to contribute to the economy as workers, shoppers, and wider customers.

The concessionary travel scheme is considered both popular and successful. The benefits link to increased levels of mobility amongst pass holders as evidence suggests it has improved social inclusion and generated substantial economic, social, and environmental benefits, which go beyond concessionary passengers themselves (Ling & Howcroft, 2007). For example, evidence shows that the scheme delivers excellent value for money with each £1 spent generating approximately £2.87 in benefits (Greener Journeys, 2014). However, recent

evidence also shows a 2.5% reduction in concessionary travel in 2018/19 (DfT, 2019). This reduction is linked to poor and inadequate transport options related to infrastructure and location, available transport links, and the mechanisms in place relating to accessibility. The consequences of transport disadvantage can lead to older people becoming socially excluded.

Academics have noted however that there is difficulty explaining the concept of social exclusion relating to concessionary travel, as it is based on perceptions and experiences around quality of life (Andrews, 2012a; Cristea et al., 2020; Gabriel & Bowling, 2004; Musselwhite & Scott, 2019). Current provision tends to focus on output measures (increases in bus trip frequency and distance), with less attention given to the outcome of the policy in terms of its contribution to creating individual, meaningful benefit in terms of social inclusion and connection. To ensure transport and active travel (a term used to describe walking and cycling for purposeful journeys, and in combination with public transport (Active Travel Act, 2021)) is an attractive and usable alternative, the development of local and national policy and infrastructure needs to recognise the importance of age-friendly communities (i.e., places where people of all ages can live active and healthy lives). This maintains that the psychosocial benefits of mobility go beyond travelling from one place to another (Gossling et al., 2018; Wilkinson et al., 2019). This cannot be captured using a solely aggregate approach as the full benefits of the concessionary bus pass cannot be compared solely to an increase in the number of trips being made. There is currently no defined methodology in place to assess all elements of the public transport chain, relating to the development, contribution and outcome of concessionary travel and how this relates to improved health, wellbeing, quality of life for older people and social connectivity. It is concluded that individual need and experience are essential aspects of current assessment when developing policy around age-friendly travel, and subsequent age-friendly communities and an attractive, useable, age-friendly bus travel environment is achieved when all three elements of connectedness (development, contribution and outcome) are considered and can be met.

## **1.3 Research Aims, Questions and Objectives**

### **1.3.1 Aims**

The overall aim of this study was to critically examine the relationships between

concessionary bus travel and its implications for the health and wellbeing of older people in maintaining social connectivity.

### **1.3.2 Research questions**

Several research questions have emerged and have been implemented to meet the below objectives:

1. What is the meaning of concessionary bus travel and owning a pass?
2. What are older people's experiences of concessionary bus travel?
3. What are the relationships between concessionary bus travel, social connectivity and the health and wellbeing of older people?

### **1.3.3 Objectives**

The research objectives are:

- To explore concessionary bus travel for older people
- To understand the policy development of the concessionary bus pass
- To explore the relationships between concessionary bus travel and the health and wellbeing of older people
- To explore how concessionary travel allows older people to maintain social connectivity.

## **1.4 The Research Approach**

The approach of this research study has been to conduct a narrative secondary review of available literature before collecting qualitative and quantitative primary data and interpreting this using an epistemological perspective of relevant theoretical paradigms.

## **1.5 Thesis Outline**

This thesis is comprised of six major chapters. Chapter 1 is the introduction to the study, which sets out the main ideas that have been developed throughout. The literature review commences in chapter 2 and is comprised of four sections; *2a) background: secondary research analysis, 2b) older age, mobility, and social exclusion, 2c) the policy development of*

*concessionary fares and 2d) concessionary bus travel: interventions in practice.* Chapter 3 presents the methodological framework and approach that has underpinned this study before discussing the approach taken to data analysis. Three specific sub sections include *3a) gaining an understanding: the methodological framework, 3b) applying the understanding: the methodological approach and 3c) evaluating the understanding: the approach taken to data analysis.* Chapter 4 presents the findings from the interviews (n=33) and the seven-day travel diary (n=10) to explore how pass holders are using their pass in the context of their daily lives. Chapter 5 forms the discussion section. Here the study's research aims, objectives and questions have been reconsidered and juxtaposed with the understandings and interpretations drawn from the literature analysis, qualitative interviews and quantitative travel diary data. Finally, chapter 6 concludes the thesis and provides suggestions for possible further research, along with recommendations for further policy and practice. The reference list and appendices are presented at the end of the study.

# Chapter 2: Literature Review

## 2.1 Overview

This chapter provides an understanding of the secondary research and aims to explore current understandings of concessionary bus travel and its implications for the health and wellbeing of older people. It is broken down into four sections, including *2a) background: secondary research analysis*, *2b) older age, mobility, and social exclusion*, *2c) the policy development of concessionary fares* and *2d) concessionary bus travel: interventions in practice*.

## 2.2 Background: Secondary Research Analysis

This section outlines the narrative literature research method used in this study and the research process and findings.

### 2.2.1 Methods used to review the literature

According to Machi and McEvoy (2009) and Jahan et al., (2016) a narrative literature review is a comprehensive analysis of current knowledge that aims to create meanings, beliefs and constructions about a topic founded on a theoretical point of view. Machi and McEvoy (2009) and Jones (2004) note the main strengths of using this method are it allows the researcher to understand the varieties of insights made in the field by easily combining large amounts of information, as well as helping the researcher to establish a theoretical framework and focus area. In this case, adopting this approach allowed for the summary and analysis of published research and policy documentation. For example, studies centred on older age, mobility and social exclusion led to questions regarding the dominant social construction of these concepts. Ideas about challenging this dominant social construction emerged and were interpreted using the theoretical framework of Crotty (2003) *The foundations of social research process: meaning and perspective in the research process*, Hacking (1999) *The Social Construction of What?* and Elder-Vass (2013) *The Reality of Social Construction*. By drawing on social constructionism as a theoretical approach, this led to ideas about what the aim of the fieldwork and methodological approach would be. For example, challenging various other constructions of older age, mobility and social exclusion from participants' own perspectives and lived experiences. Specifically, how pass holders have changed the way they use the bus,



how governments have responded to this change and to what extent this policy has contributed to the improvement of quality of life for older people (the underpinning aim of all concessionary fares policies).

Several scholars note the subjective nature of conducting a narrative literature review, as well as the potential conflict of interest (Gough et al., 2012; Pautasso, 2019). A systematic literature review could have offered a scientifically rigorous alternative approach, especially as this method identifies, selects, and evaluates research to answer a pre-determined question (Gough et al., 2012). However, this approach was not appropriate, primarily because research questions were not pre-determined and because conducting a narrative review would more likely raise ideas and questions not explored had a rigorous review been adhered to. This was the case, as following the narrative literature review process on the topics of older age, mobility, social exclusion, and bus pass use, meant that the original aim of this study changed ‘to critically examine the relationships between concessionary bus travel and its implications for the health and wellbeing of older people in maintaining social connectivity’ (discussed below).

### **2.2.2 Completing the literature review**

According to Pautasso (2019) reviewing the literature can be done in three stages. The first stage is identifying relevant keywords and using them to search within various databases. A basic search of the term ‘concessionary bus travel’ was undertaken using Google Scholar’s search engine and Swansea University’s IFind and library catalogue to gain insight. Formal approaches to literature searching has changed in recent years, and the use of Google Scholar has been heavily debated as a resource to be used in professional literature searches, particularly in searches for grey literature. Haddaway et al, (2015) used a systematic case study review to investigate the utility of Google Scholar and findings suggest results contain a moderate amount of grey literature, however this is usually from page eighty. Haddaway et al, (2015) and Zientek et al, (2018) both agree Google Scholar offers viable avenues for searching and disseminating research, however, note this should not be used as a standalone resource.

‘Concessionary bus travel’ as a keyword was used as both a separate term (concessionary – free for older people) and as one subject area (concessionary bus travel). As this is not a catch-all term. The search also included general terms such as ‘older age,’ ‘public travel,’ ‘travel, health and wellbeing. At this stage it became apparent that ‘older age, mobility and social exclusion’ had been widely studied, as well as transport disadvantage in older age. Search terms increased to include ‘the impact of the concessionary bus pass,’ ‘mobility needs and transport,’ and ‘the experience of bus pass use’. However, although this confirmed that travel in later life spans across several academic disciplines including social policy, sociology, psychology, and gerontology, the search was time consuming and complicated at times due to the generated number of results. Additional searches included exploring more relevant subject specific academic journals (including Transport & Health; Gerontology; Social Policy; Ageing; Sociology; Psychology) and using more precise keyword searches such as ‘bus pass use,’ ‘health and wellbeing.’

Overall, completing stage one in this way was straightforward and ensured that the search captured the context, scope, and parameters of the research topic. Results showed key concepts of ‘age,’ ‘mobility,’ ‘social exclusion’ and ‘quality of later life are widely used terms, yet they remain poorly defined (see Kenyon et al, 2003; Sen, 2000; Walsh, et al., 2016). In addition, this search highlighted concessionary travel can reduce social exclusion, isolation, and loneliness and improve health, wellbeing, and social connectivity, however, focuses on these issues in isolation to one another (Gates, 2019; Walsh, et al., 2016). Research has been limited when the objective is to evaluate relationships between concessionary fares policies, transport, bus pass use and social connectivity. Therefore, the literature search focused on understanding the policy development and practical implementation of concessionary fares. Policy documents such as the ‘*All Wales Concessionary Travel Pass 2002* and *The Travel Concessions (Extension of Entitlement) (England) Order 2005*. This showed that concessionary travel is a distinct social policy category locally and nationally and concessionary schemes differ across Wales, England, Scotland, and Northern Ireland and for local authorities across all regions. The gap identified at this stage was significant because each devolved nation has its own individual policy on concessionary travel (discussed below), while at the same time statutory responsibility for public transport is non-devolved. This means that devolved governments have no direct contractual relationship with service operators, however local

authorities are tasked with implementing concessionary travel schemes at a local level. This involves working with bus companies and users to ensure that specific bus routes are in service to attempt to tackle isolation and social exclusion. For example, in the Local Transport White Paper *Creating Growth, Cutting Carbon. Making Sustainable Local Transport Happen* (2011) a commitment was made to invest in transport infrastructure, tackle congestion and decarbonise transport by way of reforming public services. This was backed up by the *Open Public Services White Paper* (2011) which gave people and providers more control over the services they receive, ending the top-down approach. However, there are different policy, regulatory and funding approaches in place across the UK and each local bus market is different. Local Authorities have a duty to ensure passengers have options for local travel, however, this is dependent on finance and regulation and is exasperated by the needs of an ageing population. Realising this top-down, fragmented approach created a divide within the literature search. Academic research focusses on improving health and wellbeing, social connectivity, isolation, and loneliness by guiding policy implementation on improving travel links, however this is usually at a national level. Government provision is implemented on a local level and each transport network in all local authorities is different. Overall, there is a disparity in what the research shows and what happens locally in terms of services being implemented and why. This information led to the creating the structure of this chapter and including a section on older age, mobility, and social exclusion (from an academic perspective), the policy development and outcomes of concessionary fares (from a political and policy perspective) and social connectivity (reviewing interventions in practice).

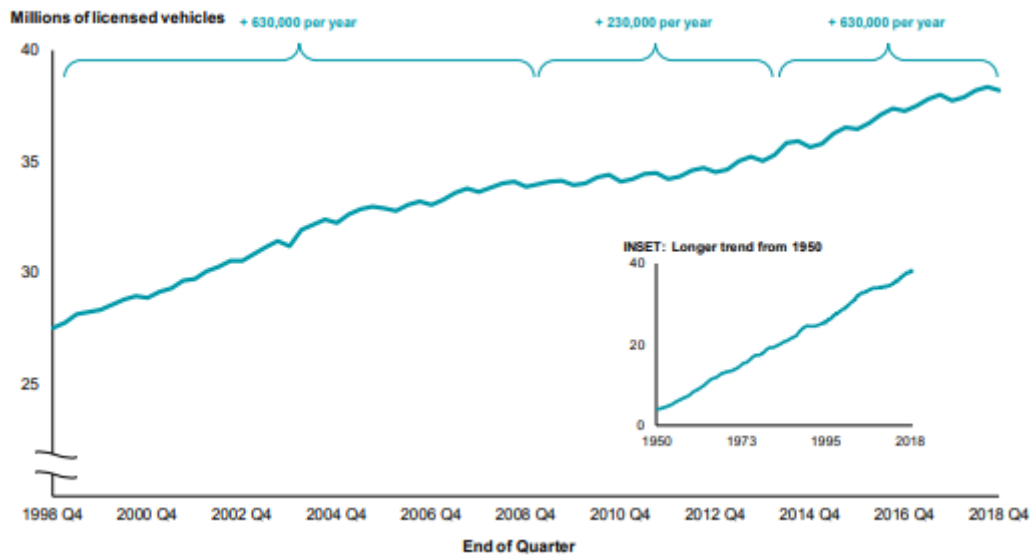
The second stage of Pautasso's (2019) three stage process is to check the list of references cited in the research papers identified in stage one, and the third stage is to continuously track recent publications that cite the papers identified in both stage one and stage two. This was followed through the duration of the research study and proved to be vital for two reasons. First, it highlighted several significant policy changes locally and nationally (see chapter 3) and second because it is important to ensure that research is not reproducing already published material. At the time of writing this section (March 2021), the research aims of this study have not been examined and published.

## **2.3 Older Age, Mobility and Social Exclusion**

The following sections draw upon available literature published on the transport characteristics of older people. Generic concepts, including that of ‘older age,’ social exclusion’ and ‘quality of later life’ are explored and applied in the context of social connectivity and the health benefits of the concessionary bus pass use.

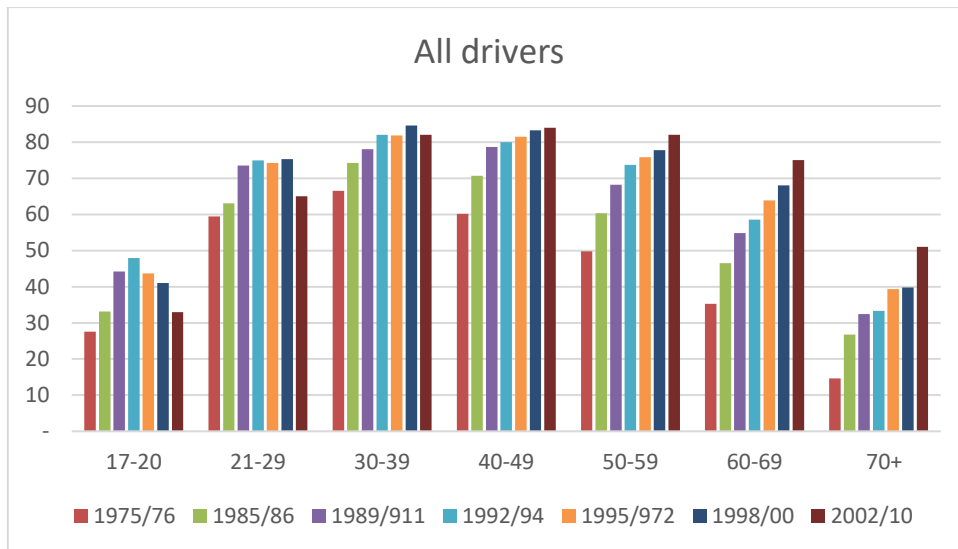
### **2.3.1 Trends: An Emerging Hypermobile Society**

Evidence suggests that people in the UK are travelling for longer distances than ever before, and that society is becoming increasingly mobile. In 1950, the average British person travelled up to five miles per day (Adams, 2001), which increased to 20 miles a day in 2021 (Yurday, 2021). This growth trend is considered a double edge sword. On the one hand mobility is empowering and liberating, on the other this contributes to increased global emissions. Adams (2001; 2005) coined the term ‘hypermobile society’ in 2001 when discussing transport and communications. He notes that the speed and reach of this will have profound consequences as society spreads itself wider and people spread themselves thinner. Society will become more dispersed, consume more space, become polarised and this will lead to greater disparities between the rich and the poor. On the other hand, this hypermobile society has supported opportunities for many in terms of leisure activities, consumption, and work. One major factor noted in this rising trend has been the advent of widespread car ownership and use over the last few decades (DfT, 2019a). Graph 1 shows that between 1998 and 2018 the typical annual growth in licenced vehicles has averaged 630,000 per year (DfT, 2019a). In 2019 there were over 40 million licenced vehicles used on the road in the UK, the highest number in history (Hull, 2020).

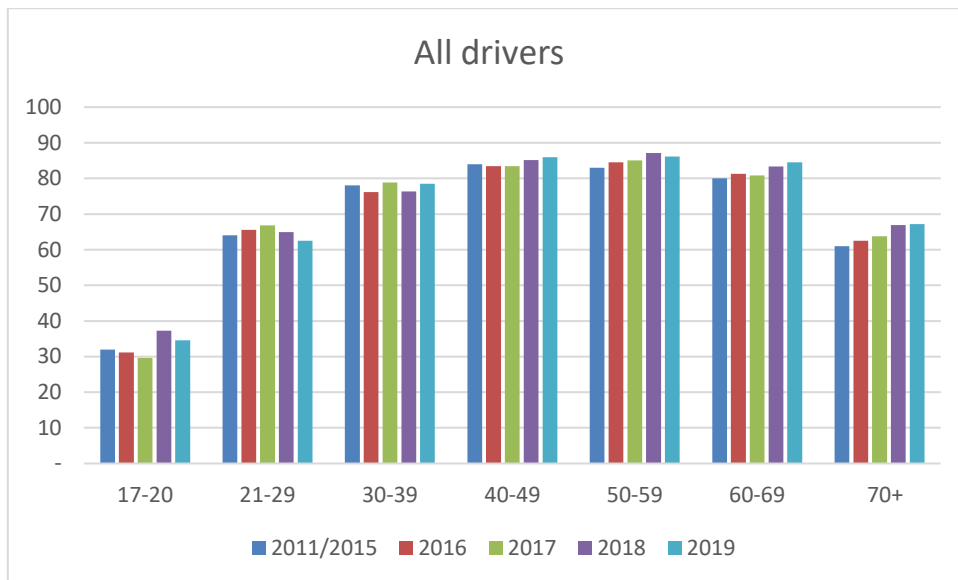


Graph 1: annual growth in licenced vehicles (DfT, 2019a).

Levels of car access and ownership in later life is considered a contributory factor in increasing social exclusion (Andrews, 2012a; Murray, 2019). For example, people may not be able to access services due to low incomes or because a bus route does not go to the right places. Recently, social exclusion is discussed in relation to society now being designed for the convenience of car use (Adams, 2001). This is attributed to the car-centric land use development that Andrews (2012a) discusses in his work. For example, graph 2 below shows that historically the number of car licence holders has risen from age 60, with the gap narrowing from 2011-2019 between those aged 60-69 and 70+. Specifically, 85% of those aged 60-69 and 67% of those aged 70+ hold a full car licence, compared to 35%, and 15% in 1975/76 (ONS, 2020a). This shows a growth in car licence holding of older people.



Graph 2: Full car Licence Holders by Age (GB) 1975-2010 (ONS, 2020a)



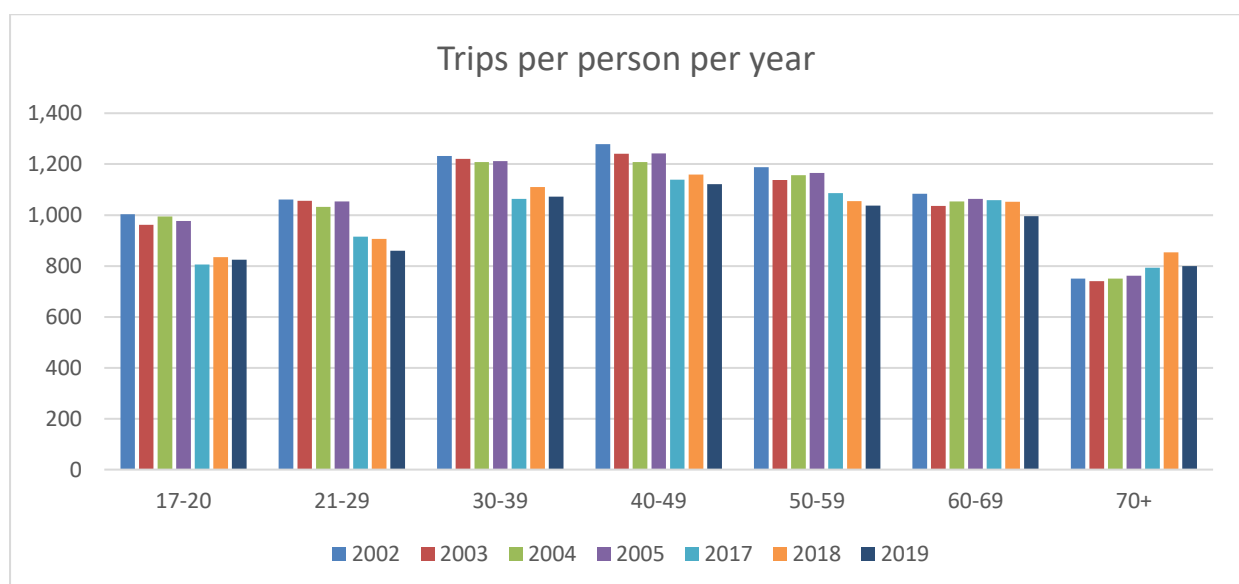
Graph 3: Full car Licence Holders by Age (GB) 2011-2019 (ONS, 2020a)

However, it is important to note that graphs 2 and 3 only provide data on licence holding, not levels of car ownership or licence using. It could be assumed that those owning a car also hold a licence, however it cannot be assumed that those who hold a licence also own a car or have access to one (Andrews, 2012a). Data that differentiates between licence holders and non-car owners is not freely available as this is difficult to quantify. Finally, data does not distinguish between those who have never held a licence and those who chose or were forced to stop driving (Andrews, 2012a). There is a wide variation in the transport characteristics of older people, however. This can relate to lifestyle and physical characteristics that lead to

decisions about making most trips by car, less trips by car, purposely choosing other modes of transport (such as the bus) or having no other choice but to use public transport. This distinction needs to be made to understand the reasons why an older person chooses a specific travel method. Although the figures in graph 2 and 3 suggests that more older people hold a car driving licence compared to forty-five years ago, this does not mean it can be assumed that a substantial proportion have access to a car or that they are not reliant on other modes of transport, such as the bus. Therefore, it is appropriate to discuss the trends of trip making and the mode of choice of older people.

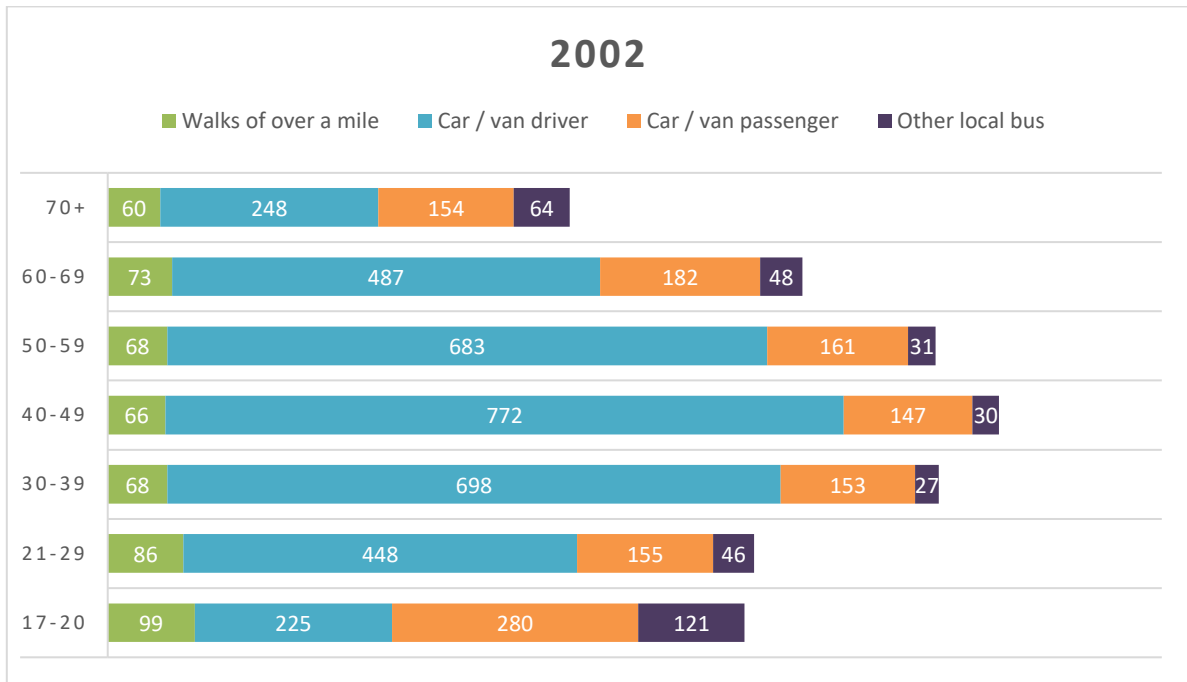
### 2.3.2 Trends: Trip Making and Mode of Choice for Older People

Evidence shows there have been substantial changes in the travel behaviours of older people since 1975 (See DfT, 2010, 2011, 2020). The average number of overall trips made in Great Britain, in terms of age, increase up to age 40-49, but then decrease thereafter (see graph 4 below). There are several reasons for this presented in the literature. According to Sundling (2015) a psychological factor underlying a change in relation to travelling in later life is due to issues encountered when using public transport. ILC (2015) note approximately 35,000 people aged 65-84 in England have reported difficulty walking even a short distance, while over 20% of those aged 70-74 living in rural areas use public transport weekly compared to 38% of those living in an urban area.



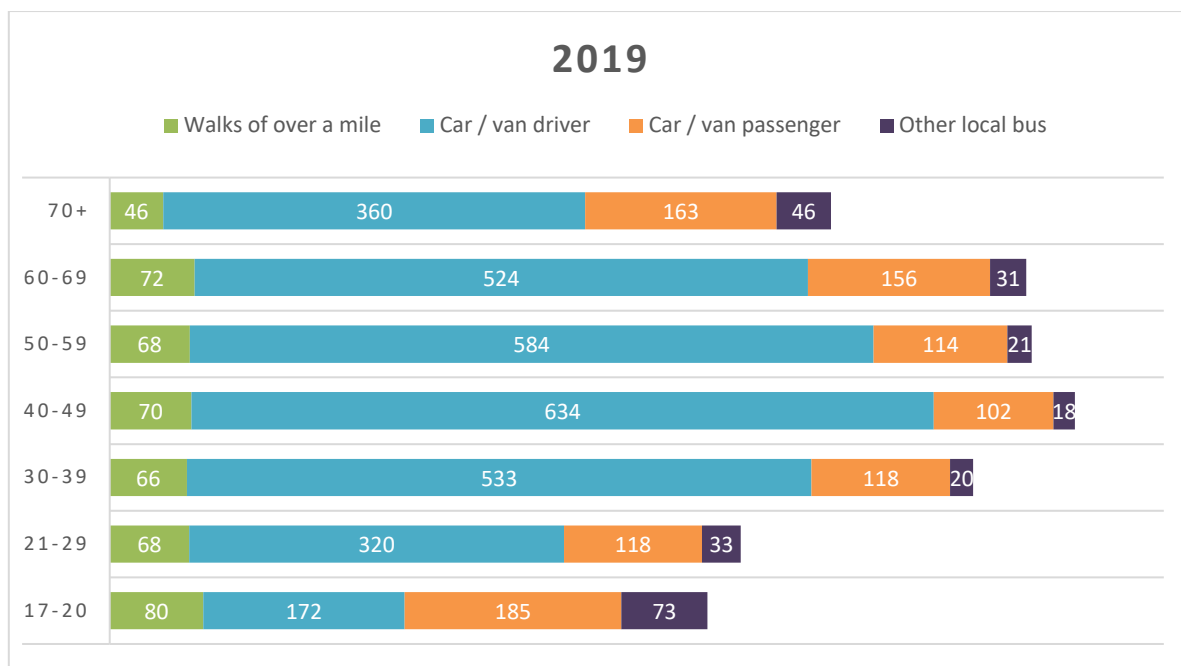
Graph 4: the number of trips taken in Great Britain (ONS, 2020b).

Graphs 5 and 6 below show the types of trips taken in 2002 compared to 2019. Graph 5 shows that most trips were undertaken by private car (as a driver or passenger) in 2002, which increased in 2019. The data also shows that bus journeys only represent just over 10% of overall journeys in 2002 for those aged 70+, and less than 10% for those aged 60-69. In 2019, car use (as a driver or a passenger) increased and bus use decreased for both age groups (Office for National Statistics, 2020b).



Graph 5: the number of trips taken in Great Britain (ONS, 2020b).





*Graph 6: the number of trips taken in Great Britain (ONS, 2020b).*

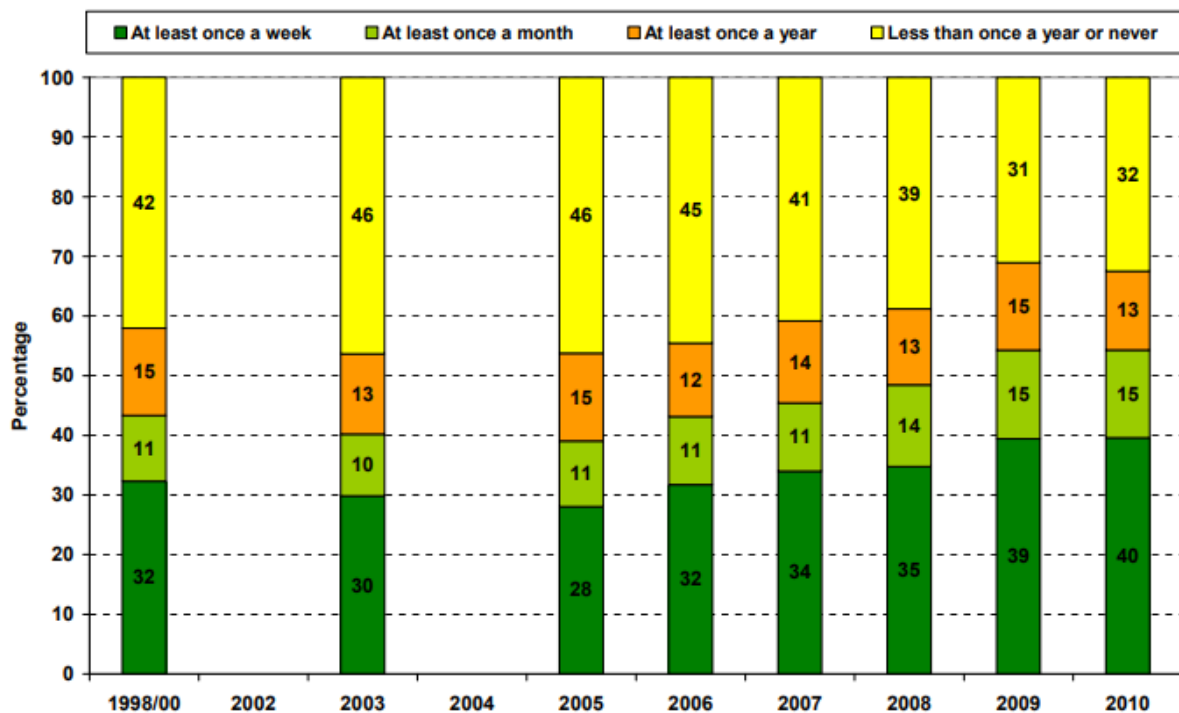
This supports evidence that the car is generally seen as the preferred mode of transport for older people (Cobb & Coughlin, 2004). Murray (2019), Musselwhite and Shergold (2013) and Musselwhite and Scott (2019) refer to a wide range of studies in their work that have drawn upon perceptions of public transport and the mobility needs and travel patterns of older adults. Murray (2019) notes there is a reluctance amongst older adults to shift their modal behaviours (from car use to bus use) due to a lack of valid alternative transport modes, waiting times and overcrowded conditions. Murray (2019) also focuses on convenience in her study on the process of driving cessation and continued car use (also drawing on the work of Liddle et al., 2007 and Gilhooly et al., 2003), noting this as a key reason for continued driving in later life. For example, the convenience of having a car parked nearby allows the driver access to additional services and amenities, which is seen as a positive influence on quality of life. This supports the evidence noted above as it would suggest that older people find it difficult to walk for long distances. However, it is important to note that Murray (2019) highlights that the findings from Gilhooly et al., (2003) should be interpreted with caution as there is no explanation of the ages of older adults in the sample, excluding potentially important distinctions between age groups. Murray (2019) goes on to note that age results in profound differences in driving experiences. In their research, Murray (2019), Musselwhite and Shergold (2013) and Musselwhite and Scott (2019) find the car is simple and straightforward

as a mode of transport when considering practical needs (such as physical and cognitive effort). The above research, along with the work of Adams (2001), shows there is an increasing area of transport research linked to the hypermobile society that suggests private mobility is centred around the car and to hyper-connectivity as this allows more choice over the destination and provides a better opportunity to stay connected to friends, family, services, and shops.

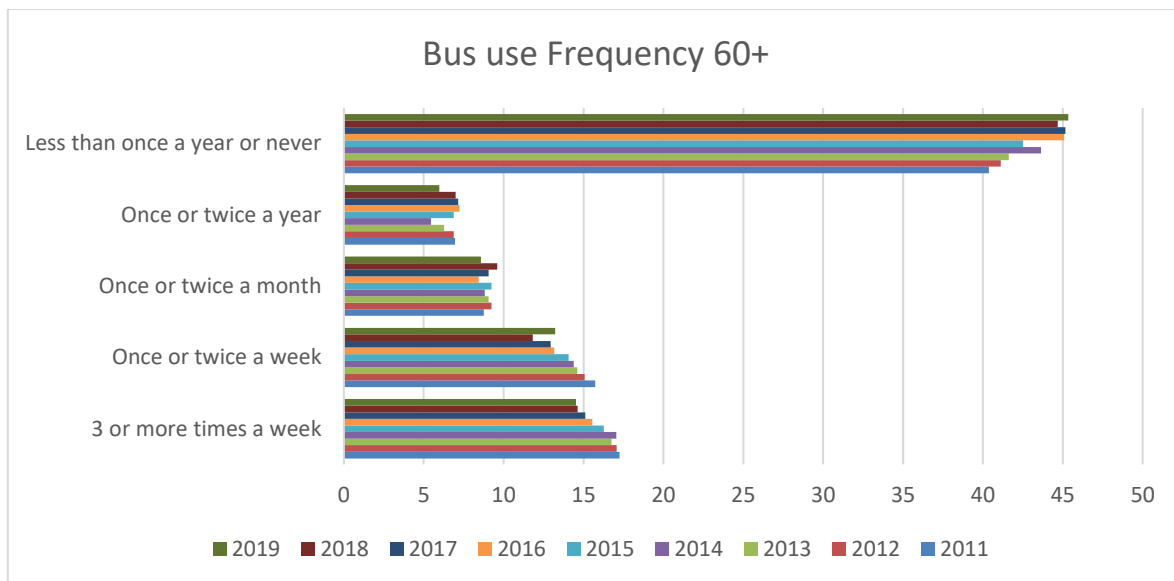
However, the consequences of this hypermobile society are also discussed in detail. Lyons et al., (2002) note that some older people can experience issues such as reduced accessibility to opportunities, social networks, and services. This was the case when considering insufficient mobility within a society and environment that has been built around the assumption of high mobility. As noted in Adams (2001), Andrews (2012a) and Rye and Carreno (2008), the hypermobile society and shift towards car use in recent decades has resulted in land use dispersion, or a splintering urbanisation that increases distances between activity centres and opportunities. Murray (2019) draws upon the structural issues that this has created, namely that amenities are being placed on the outskirts of towns and cities, which places further emphasis on driving to ensure these services are accessible. However, a key issue here is that car centric locations less conducive to bus travel have resulted in a less physically accessible landscape within which older people can navigate. This is illustrated by the rising popularity of out-of-town superstores constructed around easy accessibility by car (Andrews, 2012a). Therefore, a spatial rupture occurs for many older travellers between the location desired and the individual trying to access this (Andrews, 2012a; Church et al, 2000). As a person ages, their desire to travel does not reduce at the same time as their ability to drive, therefore a mobility deficit can arise, which is characterised by a gap between desired mobility and actual mobility (see Andrews, 2012a; Rosenbloom, 2004). Consequently, the overall effects of the hypermobile society stretch beyond the simplicity of car ownership and encompasses those unable to travel as much as they would like to. This has a knock-on effect on neighbourhoods and communities, seen as becoming less welcoming with reduced opportunities for social engagement (Adams, 2001). The travel characteristics of older people can be said to be dependent on the provision of transport and the quality of public transport services.

Finally, Graphs 7 and 8 below show the annual changes in bus trip frequency for those aged

60 and over. Although the National Travel Survey is not designed to measure short term trends in travel patterns (DfT, 2010), data on the frequency of local bus use suggests that there may be an increase in bus use among those aged 60+. Graph 7 presents data between 1998 and 2002 and shows that overall, there was an 8% increase in the proportion of people using the bus once a week, and a 10% decrease in the proportion never using the bus. In addition, between 2005 and 2010, the proportion of people in this age group who said they use a bus less than once a year (or never) fell from 46% to 32%. Between 2011 and 2019 graph 8 shows that there has been a slight increase in the proportion of people over the age of 60 using the bus once or twice a week, as well as a decrease in the proportion using the bus less than once a year (DfT, 2020).



Graph 7: the annual changes in bus trip frequency for those aged 60 and over (DfT, 2010).



Graph 8: Bus Use Frequency 60+ (DfT, 2020)

From this data, it could be argued that the extension of the Concessionary Fares policy may account for part of the increase in the likelihood of people using the bus. However, despite the data suggesting an increase in use of the bus overall, evidence also suggests that transport disadvantage in later life has significant consequences for the quality of life of older people (Andrews, 2012a).

### 2.3.3 Older age and Transport disadvantage

Transport disadvantage is considered a complex, multidimensional construct that was brought about due to the interaction between land use patterns, the changing transport system, and personal individual circumstances (Currie & Delbosc, 2011). There is a wealth of research focussed on transport disadvantage imposed on the individual for not owning a car, however evidence also suggests that owning a car can also lead to transport disadvantage due to the costs involved. Cobb and Coughlin (2004) note that participation in this increasing mobile society means that transport is seen as the glue holding life's activities together. This is because it provides connection between an individual and their chosen location. However, a problem and research focus on older people's mobility and transportation stems from findings that suggest older people are at a higher risk of experiencing transport disadvantage. Factors relate not only to physiological changes (for example, physical frailty, reduced flexibility and strength, visual impairment, neurological disease, cataracts etc.) but also physical barriers (for example traffic density and flow) (Broome et al. 2009; Shrestha et al.,

2017). These findings (i.e., that ageing makes travel physically challenging due to a variety of barriers) also lead to the conclusion that some older people are finding it increasingly difficult to maintain the expectations of mobility. Outdoor mobility refers to the physical ability to move outside of the home, either by foot or other means of transport (Rantanen, 2013). Research conducted by Rantanen (2013) found that outside mobility promotes healthy ageing and although community and transportation systems influence mobility, older people report negative environmental features in their neighbourhoods as a common problem. Overall, this means that older people are more likely to be disproportionately affected by wider societal changes in mobility and physical constructions (Hine & Mitchell, 2003; Lyons et al, 2002). This is especially the case when an older person gives up driving in later life, termed driving cessation. Murray (2019) notes that the loss of driving ability can dramatically impact the lifestyle of older people, especially within a society where the car provides a level of mobility that is incomparable to any other travel modes. Several areas have been identified within the literature, including *triggers for driving cessation and the role of planning; outcomes and meanings of driving cessation, and understanding life after driving* (see Murray, 2019). Triggers for driving cessation include declining health, and sensory and cognitive impairments, leading to the conclusion that driving cessation is an age-related illness problem influenced by gender, marital status, increasing age, unemployment, low income, neurological disease, cataracts, decreased physical activity and functional disability (Chipman et al., 1998; Dellinger et al., 2001; Hakamies-Blomqvist & Wahlsrom, 1998; Marottoli et al., 2000, cited in Murray, 2019, p. 29).

The body of research around driving cessation concludes that this process leads to negative psychological consequences (depression) linking to a loss of spontaneity and freedom, social interaction and engagement, and reduced opportunities to participate in social activities (Murray, 2019). Importantly, Musselwhite (2017) notes that although primary needs (such as attending appointments) can be met following driving cessation, wider needs (such as driving for the sake of it) are not, and this can affect an older person's level of contact with nature as well as their social interaction and physical exercise (see also Murray, 2019).

The research referred to above highlights an important point. It shows that the opportunities and activities made available due to the new hypermobile society can inadvertently exclude

those older people reliant on public transport (such as the bus). Davey (2007) and Hine and Mitchell (2003) recognise the lack of car access in a car-centric society as a fundamental issue increasing the risk of social exclusion. It can be argued then that the physiological and physical barriers that make private car use difficult (leading to driving cessation) can also mean that taking public transport is equally as difficult for some older people, increasing the chance of them becoming socially excluded (Adams, 2001; Carp, 1980; Hine & Mitchell, 2003). This is because the importance of an older person's-built environment and local community can become central following driving cessation (Murray, 2019). However, Gilhooly et al., (2002) examined public and private transport needs in relation to quality of life in old age and found that giving up driving was perceived as negative by current drivers, however those who had stopped driving suggested not having access to a car was less problematic than originally expected.

#### **2.3.4 Older Age: meaning and understanding social exclusion**

The aim of the rest of this section is to discuss the difficulties faced when defining 'older age' and 'social exclusion' in later life. Specifically, the associated problems with the concepts in terms of measurement and identifying trends when seeking indicators of transport disadvantage for concessionary bus pass users. This is because until recently, eligibility to hold and use a concessionary bus pass was considered automatic when a person reaches the age of 60 (other criteria includes having a disability). Therefore, the concept of age has a fundamental importance in this study, however the concept of age itself is hard to define.

To a doctor, ageing is a non-disease, nevertheless, can be defined as the accumulation of damage to somatic cells, leading to cellular dysfunction and increased vulnerability to death (Izaks & Westendorp, 2003). However, these changes are neither linear nor consistent. This is because they are loosely associated with a person's age in years. Ageing is also associated with life transitions (such as retirement) and individual experiences represented by numeric life stages (Wilson, 2000). This is commonly signified by a predetermined chronological milestone, often used as a benchmark to restrict access, or allow entitlement to some privileges (Andrews, 2012a). Recently, this related to changes to the TV licence, previously free for those aged over 75, however from August 2020 this is now only the case for those over 75 and in receipt of Pension Credit (Age UK, 2020a). Turning 60 with respect of the

Concessionary Fares Policy is no exception, as eligibility is set to change to the state pension age of 67 by 2028. In addition, the age at which a person can apply for a concessionary pass depends on place of birth and current residence (the variations in terms of eligibility are discussed below) (Age UK, 2020b).

This demonstrates the need to approach this topic with caution. The idea, according to Baltes and Carstensen (1996), is to view ageing as a process and not an end state with conclusive boundaries. Additionally, ageing 'is' a biological process but what it means to be 'old' is socially constructed (discussed further in chapter 3). This process has attracted attention in the context of the relevance and need for a concessionary travel scheme policy linked to social exclusion and its relationship to mobility and quality of life for older people. However, a significant amount of research has been published relating to the term social exclusion, as well as around the issue of defining the term. In the context of ageing populations, there remains ambiguity surrounding its meaning. Walsh et al., (2018) note this is because of the disjointed evidence-base that has spread across multiple disciplines, which has created a challenge when trying to develop an understanding of the concept in relation to old age.

Since the 1980's the multidimensionality of exclusion has been increasingly recognised. It is described as the process of being shut out, fully or partially, from social, economic, political, or cultural systems that determine social integration in society (Andrews, 2012a; Silver, 1994; Walker, 1997). Traditionally, the approach to the term was to view it as an end state, for example something that happens following the combination of linked problems. Here the definition centres on the premise that something is happening, rather than something is being experienced, which implies that social exclusion is the binary opposite of social inclusion (Andrews, 2012a; Levitas, 1998). Using this logic, removing barriers to exclusion can lead to re-inclusion. The barriers commonly cited include monetary, spatial, physical, mobility, temporal, and mode-availability constraints (Andrews, 2012a; Social Exclusion Unit, 2003). It becomes even more disjointed when a review of the literature revealed that monetary issues are often singled out as the leading aspect in tackling social exclusion (as poverty and social exclusion are sometimes used mutually). This reduces the concept to simply a condition experienced by marginalised groups, due to their lack of financial resources (Andrews, 2012a; Brants & Frissen, 2005). For example, the car has become the mechanical personification of

political and cultural ideology of capitalist values of equality, freedom, progress, and individualism, which is so important that its absence suggests an indicator of poverty (Folwell, 1999; Gorz, 1979, cited in Andrews, 2012a). The definition of relative poverty is found on the Open Education Sociology Dictionary (2013) as being determined by income distribution over a given population and an example of this is “an individual with a low income, owns a used car while their neighbour has a higher income and just bought a new car”. Therefore, a lack of resources may be relative, categorised by a person having some resources but not enough to participate fully in the activities normal to society (Andrews, 2012a; Bryne, 2005). Poverty is responsive to thresholds as it is distributional, however social exclusion is relational and specifically about the effects on people (Andrews, 2012a; Levitas, 1998). This has been evidenced in the way that many schemes (such as welfare-to work, see *The Work Programme*, Department for Work and Pensions, 2011) theorise paid work as the main factor in achieving reintegration (Andrews, 2012a; Phillipson, 1982). The fundamental issue here is that neither training, education nor indeed paid work is the central solution to solving the problem of social exclusion in later life. In addition, this does not consider or reflect the experience of some older people who are often excluded on a longer-term basis and are less likely to achieve full re-inclusion (Perri, 1997). This leads to a lack of clarity in what social exclusion means for older people as the emphasis is placed on work and employment. It can be argued that this potentially has the inadvertent effect of downplaying the exclusionary effects of age-related retirement on the one hand (Phillipson, 1982), but that it can prevent the decline of physical and mental wellbeing amongst older people on the other (Lum & Lightfoot, 2005). This is because voluntary work is seen as a key element of community engagement and social wellbeing as well as a way of tackling loneliness and social isolation amongst older people (Parkinson et al., 2018). However, an older person is more likely to experience economic hardship following retirement. This means that adequate income levels cannot be used as a measurement of social exclusion, simply, because it is not just about access to basic human needs and avoiding income inequality, but also the structures in place that aid in the detachment from participating in the norms of a society.

It is also important to review how social exclusion is recognised by local and national governments (the next section of this chapter discusses the policy development of concessionary fares). Research shows that the basic utilitarian need for mobility in older age



is underpinned within the official policy rhetoric of UK Concessionary Fares policies. UK Governments have long recognised that transport is a contributory factor in social exclusion, especially relating to unequal mobility and inadequate services affected by inadequate transport in outlying urban and isolated rural areas (Social and Transport Research Services, 2001). Social exclusion is specifically mentioned in official policy rhetoric, with the aim of Concessionary Fares policies being to prevent social exclusion in older age (see also *Taking Wales Forward 2016-2021*) and recognising there is a need to connect opportunities, allowing access to services within communities that are fundamental to life and living (food, shopping, healthcare, banking etc.). There is also a recognition within the policy rhetoric that transport hold's life together and provides a link between desired activities and their locations (see *Taking Wales Forward 2016-2021*). To provide this link, there is a need to ensure that the benefits that result from concessionary bus travel schemes operate through external activities that are associated with bus journeys (Kelly, 2011). This view argues that treatment of travel is derived from demand, which is reflected through a tendency in traditional measures to focus on factors such as distance travelled, cost, number of passengers and location (see also Andrews, 2012a; Bowling et al., 2003; Mokhtarian & Salomon, 2000). However, for concessionary bus travel, three inconsistencies have been highlighted that mean the scheme may not always fulfil the need for utilitarian travel (Andrews, 2012a). Concessionary travel is contingent on eligible pass holders having 1) a bus stop nearby, 2) the physical ability to board the bus and 3) the cognitive ability to navigate bus travel (discussed below). Overall, the wide-ranging approach to social exclusion can be criticised as the focus is not on the door-to-door journey, but the accessibility to and from public transport stops (AgeUK, 2019). This fails to account for the genuine trip patterns and day to day organisation, which makes it difficult to identify overall effect and impact. In cases where pass holders can take the bus and use the service, the bus is seen as not fully meeting pass-holding requirements. ILC (2015) found that 1.45 million people over the age of 65 find it difficult to travel to a hospital using a bus (there was variation depending on area), others noted difficulty when going shopping, and difficulties if bus timetables had to be synchronised with medical appointments. This is an issue, as evidence also shows that two-thirds of hospital patients are aged 60 and over. The Community Transport Association (CTA) (2017) explored the potential of taking a *Total Transport* approach to commissioning non-emergency patient transport (NEPT). One good practice example is noted in Devon County Council where an established

Coordination Service includes NEPT. West Berkshire Council provides accessible minibuses from their in-house fleet to deliver NEPT to and from hospitals in Oxfordshire and Swindon. This initiative has allowed older people to attend appointments at diverse health care facilities and has increased utilisation of vehicles in between the existing peak travel times for Adult Social Care (CTA, 2017). Despite these good practice examples, some barriers and obstacles have been noted when developing *Total Transport* approaches with the health sector. Specifically, the division of responsibilities – and funding – between the NHS and local authorities, as well as issues scheduling services to timed outpatient appointments.

The psycho-social benefits of movement relate to having a balance of mind (Metz, 2000), which supports the finding that decreased opportunity to be mobile can lead to loneliness and depression (Fonda et al, 2001). For these reasons, the act of being able to move is a central aspect of life that goes beyond simply travelling from origin to destination (Andrews, 2012a). More recent figures show that concessionary pass holders have higher levels of satisfaction with the journey itself than fare-paying passengers (93% compared to 85% respectively). However, it should be noted that this may be due to fare-payers and free pass holders tending to travel at different times (DfT, 2019b). According to Musselwhite & Haddad (2010), Mokhtarian and Salomon (2000) and Ellaway et al. (2003), evidence also suggests that mobility can contribute to older people's feeling of status, autonomy and accomplishment as well as having the ability to access activities such as those in clubs and organisations, thereby allowing a level of independence and social interaction. Summarising the literature, Andrews (2012a) notes that concessionary travel schemes facilitate interactions between older people and neighbours, fellow bus travellers and wider community members, and this increased social interaction has the benefit of improving access to networks and information, as well as mental wellbeing and physical activity (see also Galliger et al., 2008; Kelly, 2011). Musselwhite and Scott (2019) note that older people are more likely than ever before to be active and mobile within this hypermobile society, mainly due to people's activities taking place over wider geographical conditions. Ling and Howcroft (2007) found that many concessionary pass holders had increased their mobility since receiving the pass, however more recent data shows a 2.5% decrease in concessionary bus passenger journeys in 2018/19 (DfT, 2019). This reduction is linked to poor and inadequate transport options, confidence in using the service and access to services. Glasgow and Blakely (2000) in their work *Older nonmetropolitan*

*residents' evaluation of their transportation arrangements* found that current drivers within the study experienced higher levels of participation in social roles and interactions relating to older people's wider mobility practices. Their research describes two indicators of social integration, 1) participation in social roles (such as club member or volunteer) and 2) interaction with social support or social networks (visiting relatives, friends, and neighbours) (discussed further in section three of this chapter below). Overall, it can be said that increased mobility can increase opportunities and overall life prospects in later years.

These psycho-social benefits place a greater emphasis on the importance of mobility and using the bus, in more ways than can be determined by evaluating the aggregate data of trips being carried out. Additionally, the approach to modelling travel time and greater speed in transport (Metz, 2000) is in direct opposition with emerging evidence that older travellers have a desire to optimise and maximise mobility (with emphasis placed on mobility as an experience) (Andrews, 2012a). The failure to operationalise the concept of mobility (in relation to older travellers) is attributed to the fact that the focus is on modal shift and collective benefit, at the expense of the individual (Andrews, 2012a; Hine & Mitchell, 2003). Andrews (2012a) illustrates this when he points out the contrast between city commuters (accustomed to overcrowded carriages) whose core objective is to reach a destination, whereas the mature traveller may prefer space and a leisurely ride to enjoy the scenery. The point here is simply addressing the issue of accessibility (by removing the need to travel for example) could not substitute for the destination derived benefits that are provided by physical mobility (Andrews, 2012a; Lyons et al, 2002).

Overall, it can be argued that there are contrasting conceptualisations of social exclusion, all representing underlying assumptions. Firstly, it may not be possible to measure the concept aggregately in relation to isolation or loneliness and second it needs to be conceptualised from an individualistic perspective (Andrews, 2012a). This is because a one-dimensional approach fails to take in to account the varying needs and characteristics of older people. In addition, evidence shows that the relationship of transport to income, employment and inequality are similar whether the barrier is availability or cost (Gates et al., 2019). The implication in terms of this research is that concessionary fares policies must be able to provide for basic needs, as well as facilitate achievement of higher-level psycho-social needs.

Referring to Musselwhite and Haddad's *hierarchal model of mobility needs* (see figure 1 below), psychosocial aspects relate to independence, choice, freedom, control, autonomy, and self-identity. Specifically, the study found that those able to independently meet their mobility needs reported increased levels of wellbeing and overall quality of life (Musselwhite & Haddad, 2010). The model therefore encapsulates the subtle difference between preventing social exclusion and encouraging better quality of life. For example, failure to perform utilitarian needs (shopping, medical appointments etc) can result in people being cut off from society, increasing the risk of social exclusion; yet the inability to fulfil psycho-social needs may not result in direct isolation, instead a lower perceived quality of life for the individual (Andrews, 2012a; Scharf et al, 2003). Evidence supports this, specifically relating to psycho-social needs and the likelihood of older people reporting isolation, loneliness, and depression in later life (Mokhtarian & Salomon, 2000; Gabriel & Bowling, 2004). Graham et al., (2018) conclude in their study on *The experiences of everyday travel for older people in rural areas: A systematic review of UK qualitative studies* that quality of life is a broader concept than health or wellbeing, as it is framed around individual experience and perception of hopes, concerns, and pleasures. However, travel is central to the success of achieving hopes and pleasures and exclusion can thwart an individual's capacity to lead a life they aspire to lead, which can then subsequently lead to a loss of identity, isolation, loneliness, and depression (Graham et al., 2018). This can lead to lifestyle deterioration and affect the desire and/or ability to fulfil utilitarian needs. Musselwhite and Haddad (2010) further comment that older people had the least awareness of their higher-level psycho-social mobility needs. This coupled with the issue of measuring individual need, could mean that the factors that contribute to the best possible quality of life are often poorly or inaccurately measured and, consequently, under-evaluated within policy (Andrews, 2012a; Braithwaite & Gibson, 1987). Graham et al., (2018) note that the quality-of-life perspective is central to health policies where the aim is to "add extra years to life" and "extra life to those years". They argue that this can be applied to transport provision for older people by including quality of life in policy impact assessments. That said, Kelly (2011) found that concessionary fare travel has the biggest impact on marginal trips (for social purposes), while trips for utilitarian purposes (shopping and medical) were less affected. Research conducted by Santoni et al., (2015) link this to health variations, stating that the older the population age group, the greater the variation found in cognition, physical and sensory function as well as social engagement.

Graham et al., (2018) found that common trips that older people made (food shopping, accessing services, attending healthcare appointments) were mainly facilitated by car, depending on distance and weather conditions as other modes of transport made access to these key resources difficult. Additionally, transport (including the car) enabled access to a range of activities that gave pleasure and meaning to older people's lives (places of worship, social clubs, and community events). The research presented suggests that the reasons for inclusion/exclusion are varied, demonstrating an individual approach is needed when considering older people's mobility and transport needs.

### **2.3.5 Understanding quality of life: Hierarchical model of mobility need**

It can be argued that a central belief of Concessionary Fares policies in the UK is that social inclusion, and by extension, mobility, is an important and necessary quality of life. Therefore, to improve quality of life, mobility ought to be promoted and encouraged. This premise is supported in academic literature (Graham et al., 2018; Hine & Mitchell, 2003; Musselwhite & Haddad, 2010). The previous section explored the relationship between social exclusion and old age and concessionary travel, and by extension quality of life. This section continues to explore the meaning of 'quality of life' through Musselwhite and Haddad's (2010) *hierarchy of mobility needs* model, as this has proved a useful way to classify older people's transport needs. This is because it bolsters the wealth of evidence already pointing to the fact that mobility represents more than the act of traveling.

Musselwhite and Haddad (2010) explored the relationship between mobility and quality of life and created a three-tier hierarchy of mobility needs of adults in later life (see figure 1 below), following qualitative research with 57 current and retired drivers aged 65 and over in the UK. The adaption of the model builds on Maslow's *hierarchy of needs* (Musselwhite & Haddad, 2010) and differentiates between a) utilitarian travel needs (primary and functional: shopping and medical appointments); b) affective travel needs (secondary: independence and freedom); and c) aesthetic travel needs (tertiary: travel for travel's own sake).

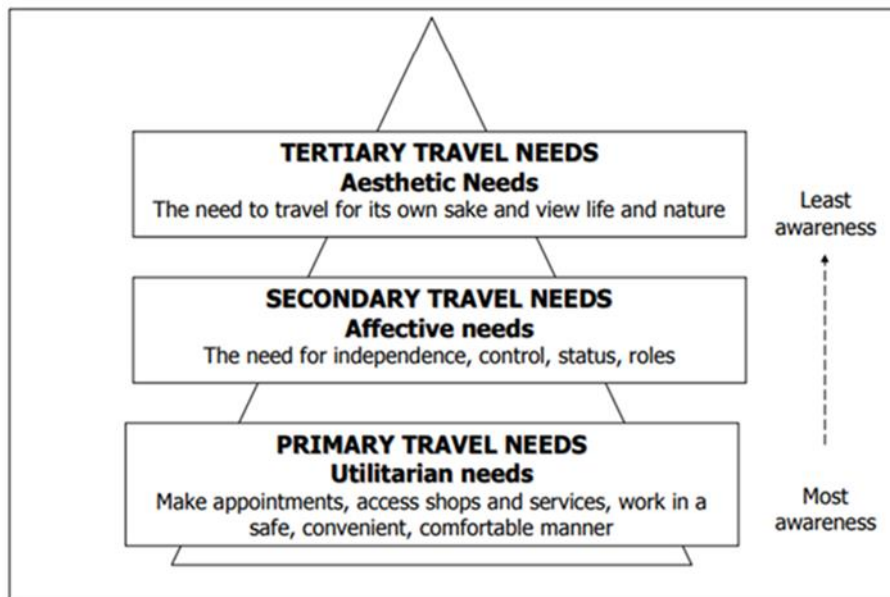


Figure 1: Hierarchical model of mobility needs (Musselwhite & Haddad, 2010).

The Social Exclusion Unit (2003) in their report *Making the Connections: Final Report on Transport and Social Exclusion* support the use of a hierarchical approach to analysing mobility in later life. The report notes that the term ‘quality of life’ stems from the premise that when basic needs (such as housing and food) are met, higher level objectives such as happiness and self-realisation can be achieved (Andrews, 2012a). The *hierarchical model of mobility needs* captures health and wellbeing through a self-report measure for example, and proposes that if needs are met, this would result in better health and wellbeing (Musselwhite & Haddad, 2010). Here, the authors deal with a multi-faceted concept at the same time as remaining true to a co-productive, bottom-up, person-centred approach. This stance has been noted as problematic when researchers seek more objective ways to numerically analyse the relationship between travel needs (see Musselwhite & Haddad, 2018). Musselwhite and Haddad (2018) go on to note however, that relating needs to health and wellbeing is problematic, especially as accessibility to transport is confounded with several factors that could influence it.

Other studies have used micro-level factors to determine a person’s overall satisfaction with their current lifestyle. Felce and Perry (1997) created a model that recognises that different people will attach different importance to parts of their lives, and this depends on their

personal values, current priorities, and past experiences. Boggatz (2016), searching for what makes up quality of life in later life, applied concept analysis to the literature and found three overarching categories (like the *hierarchal model of mobility needs*), 1) *satisfying life conditions* (likened to utilitarian needs), 2) *subjective general wellbeing* (related to affective/ psychosocial needs) and 3) *subjective fulfilment of the dimensions of human life* (likened to aesthetic needs). Boggatz (2016) notes three definitions of quality of life in old age concluding overall that fulfilment of the dimensions of human life is a suitable definition of quality of life in old age (referring specifically to nursing care). However, as noted, perceptions and understandings of wellbeing can vary amongst the over 60's group when relating this to a person's subjective assessment of their own quality of life. For example, a person's standards, principles, and values can change over time, especially if circumstances change and quality of life is reduced as a result. Blome & Augustin (2015) found that measuring change in quality of life is difficult as it is not observable and there is no direct criterion on which to validate measurement. Their study focuses on the biases in quality-of-life assessments, specifically *acquiescence* (where respondents tend to agree to items) and *extreme response style* (where respondents tend to give extreme responses) and recommends further research on such biases in terms of more consistent terminology being used. Alternatively, objective life indicators (i.e., macro-level variables such as education, housing conditions and employment status) are represented by an external assessment of individuals and circumstances to try to condense indicators of the wellbeing of a population, rather than the individual (see Bowling, 1995; Felce & Perry, 2007; Wolfensberger et al, 1994). However, this use of solely aggregate statistics in the context of concessionary bus travel does not describe the meaningful impact upon a person's character of life. Similarly, Bowling et al., (2003) are critical of measures that use top-down criterion for measuring the term.

Felce and Perry (1997) incorporate both objective and subjective indicators within their model, demonstrating an understanding that the term should encompass physical, material, social, productive, and emotional wellbeing. Nordbakke and Schwanen (2014 cited in Musselwhite & Haddad, 2018, p.11) outline different approaches given to wellbeing in relation to the needs of older people. In their work they critique the *hierarchal model of mobility needs* based on its self-reported, undefined stance and recommend the need for a more certain definition of wellbeing. In 2018 Musselwhite and Haddad published *Older*

*people's travel and mobility needs: a reflection of a hierarchical model 10 years on.* Examining the literature that links driver cessation to health and wellbeing, Musselwhite and Haddad (2018) identify that it is fraught with methodological problems, which makes the relationship less linear than it first appears, concluding in their paper that there are problems of definition of quality of life and the surrounding factors influencing them (Musselwhite and Haddad, 2018). Specifically, how can it be possible to show a relationship as lacking different and contrasting variables, especially in the context of transport and when considering the multitude of factors that may influence health and wellbeing.

There is a strong and established literature on definition and measurement of quality of life and a range of definitions used according to the context. Bowling (2005) argues that a multi-faceted perspective of quality of life is needed to reflect the views and needs of the population concerned. This should encompass physical health, psycho-social wellbeing and independence, control, circumstances and the environment. This would reflect both macro societal and micro individual influences, relating to a collection of objective and subjective dimensions that interact together (Lawton, 1991, cited in Bowling, 2005, p. 7). In addition, this needs to include theoretical distinctions between the liveability of the individual and the environment as well as the external utility of life. Lawton (1982, 1983a, 1983b, cited in Bowling, 2005, p. 7) developed a quadripartite concept of the 'good life' for older people, later changing this to 'quality of life' to account for all of life. Arnold (1991, cited in Brown et al., 2004) noted quality of life assessment in frailer older people needs to include physical functioning and symptoms as well as emotional, intellectual, cognitive and social functioning, social support, life satisfaction, sexual functioning and vitality. Overall, quality of life is subjective and depends on individual perceptions. These are considered more powerful than objective economic or socio-demographic indicators when the aim is to explain the difference in quality of life. Brown et al., (2004) provide a *Taxonomy of Models of Quality of Life* to include models based on a wide variety of electronic and manual searches of literature, most of which investigated quality of life relating to health and clinical outcomes (see image 1).



### **Box 1.3 Taxonomy of models of QoL**

- ◆ Objective indicators
- ◆ Subjective indicators
- ◆ Satisfaction of human needs
- ◆ Psychological characteristics and resources
- ◆ Health and functioning
- ◆ Social health
- ◆ Social cohesion and social capital
- ◆ Environmental context
- ◆ Idiographic approaches

*Image 1: Taxonomy of models of Quality of Life (Bowling, 2005, p. 9)*

They review each concept in *Models of quality of life: a taxonomy, overview and systematic review of the literature* (2004) and conclude it is broad ranging, linked to a person's relationships, physical health, psychological state, level of independence and environment. They disagree that a single measurement scale will cover everything connected to life quality. As such, academics attempt to measure quality of life relating to a set of measures (relating to the impact of health impairments), however when more general (relating to happiness, wellbeing, purpose, autonomy), different measures are used and considered more useful. For example, Strauss (1984), and Brown et al. (2004) identify illness as a particular risk to deteriorating quality of life in older age, implying that there is an inherent relationship between successful ageing and quality of life and that this is linked to factors such as maintaining independence and supposed control (physical, mental and cognitive health is further elaborated upon below). Hyde et al., (2003) developed a needs satisfaction measure of quality of life in early old age (CASP-19), using four ontologically grounded domains (control, autonomy, pleasure, and self-realisation), drawing on Maslow's *Toward a Psychology of Being*. Hyde et al., (2003) explain control to be the ability to actively intervene in your environment, autonomy as the right to be free from unwanted interference, while self-realisation and pleasure capture active and reflective processes. In this study, Hyde et al., (2003) used the quality-of-life measure with focus groups, a self-completion pilot, and cognitive interview testing which produced a 22-item scale that made up a postal questionnaire (later reduced to 19 items). This received a 92% response rate (out of 286 people aged 65-75) and results indicated this to be a useful scale for measuring quality of life

in older people. Specifically, including these four domains when measuring quality of life showed that a good life quality is linked to engagement in reflexive processes of self-realisation via activities that make people happy. Jackson et al., (2019) examined relationships between free bus travel and wellbeing as well as the extent to which two mediators (social isolation and physical activity) can explain these associations. Specifically, they analysed associations with three measures of psychological wellbeing: 1) quality of life (creating one global measure of wellbeing) 2) life satisfaction (positive affect) and 3) depressive symptoms (negative effect). They used the CASP-19 measure (Hyde et al., 2003) to assess quality of life, as well as the Satisfaction With Life Scale (Diener et al., 1985) and the eight-item version of the Centre for Epidemiologic Studies Depression Scale (Steffick, 2000). Scores were calculated using the three scales and findings show holding a concessionary pass is positively associated with quality of life as well as higher levels of life satisfaction and lower levels of depressive symptoms. This is partly explained by an increase in physical activity and a reduction in social isolation, demonstrating clear benefits of concessionary bus travel in maintaining wellbeing in older age.

Overall, academics measure quality of life in relation to several specific aspects of life relating to the individual. Policy also promotes the enhancement of quality of life, in the context of an ageing population, and has become of increasing importance to policymakers and academics (Andrews, 2012a; Gabriel & Bowling, 2004; Cristea et al., 2020; Musselwhite & Scott, 2019). Gabriel and Bowling (2004), when commenting on its policy relevance, argue that public policy is concerned with maintaining mobility, independence and active contribution and is more likely to respond to the physical, physiological, and social challenges of older age and adding quality to life. Their account of quality of life identifies several specific factors relevant to older people, including an emphasis on self-maintenance and the prevention of deterioration of life quality (which can arise due to declining physical and cognitive abilities) (Gabriel & Bowling, 2004). Relating this discussion back to travel, Graham et al., (2018) note that everyday travel enabled older people to express themselves and enjoy valued aspects of their personal identity, including being self-reliant and socially connected. This, they conclude, enabled the study participants to enjoy their lives and express their identity. It can be argued that everyday travel can be best understood in terms of the impact it can have on an older person's quality of life. This can include, but is not limited to, having access to good

community services and facilities (including public transport links), engaging in social activities, and having independence.

Referring to Musselwhite and Haddad's three-tier hierarchy of mobility needs (2010) it was noted that the model captures health and wellbeing through a self-report measure (i.e., if needs are met, this would result in better health and wellbeing) as it is a multi-faceted, bottom-up, person centred approach. The model was developed with people from a variety of backgrounds to represent different contexts, and as have been applied successfully by academics internationally (see Musselwhite & Haddad, 2018). In addition, the model has also been applied in a way to improve the public realm of older people (see Musselwhite, 2018) as well as in the context of bus use. Building on the model, Clayton (2012) noted the relevant and different categories of factors related to bus travel in his work and created a contingency map of factors (see figure 2 below). Using a mixed-method approach (online data collection, focus group and on-board bus survey), Clayton (2012) found that the service aspects of bus travel form the primary factors in terms of practical needs (i.e., the bus providing an essential service for accessing employment, personal engagements, and social obligations), and relates this to fares, reliability, and punctuality. The secondary and tertiary factors place a greater emphasis on space, comfort, and other non-instrumental aspects of bus travel. As such, secondary social needs include personal space, wider cultural norms of use and sociality, while aesthetic needs relate to the ride quality, travel time activity potential, the journey itself, nature and scenery and the design of the bus.

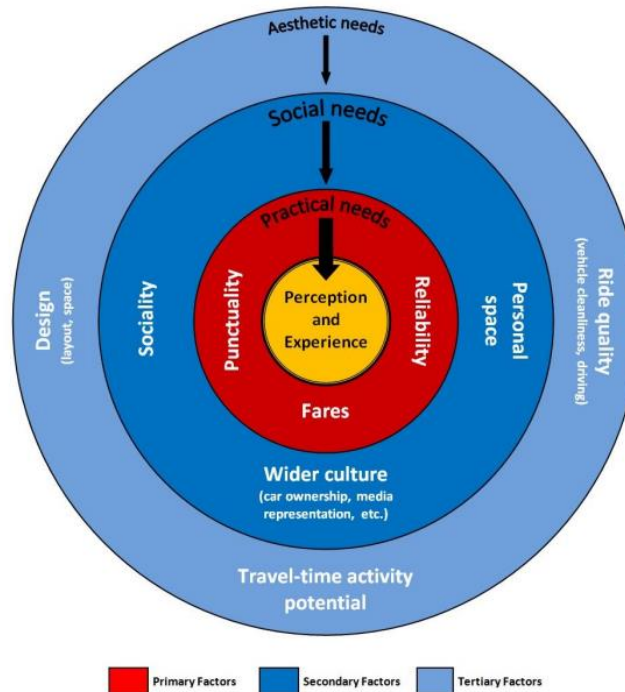


Figure 2: Contingency Map of factors influencing passenger perception and journey experience on the bus (Clayton, 2012)

Clayton (2012) does not include age and subjective influences (experience or social disposition) in the contingency map. Although these are recognised by Clayton as having an influence on all factors included, he justifies this position by noting their subjective nature: “they are not aspects of bus travel, but rather ‘lenses’ through which the journey experience is filtered and perceived” (2012, p. 275). Overall, this work focussed on travel-time activity and the potential to improve journey experiences by exploring the ways in which travel-time activities on the bus give meaning to experiences of the journey. As such, the contingency map is extremely useful for this purpose as it frames travel activity within the wider characteristics of bus travel, which in turn forms part of the studies recommendations that bus operators and industry stakeholders consider ways to improve passenger experience (Clayton, 2012).

Musselwhite and Haddad’s three-tier hierarchy of mobility needs, and Clayton’s Contingency Map propose ways to meet needs within travel with the aim of improving health, wellbeing, and passenger experience. As a bottom up, person-centred approach, both models provide a framework that has been useful as understanding the meaning of quality of life and gaining a

deeper understanding of its effect on the character of a person's life links into this research, specifically locating bus travel within individual circumstance and understanding what the term means. It is important to understand what significance is given to the bus travel taking place, especially in the context of declining mobility and social exclusion. Quality of life can be said to be as much about meeting the challenges of later life as it is about engaging with life (Andrews, 2012a). A key debate is if the term should refer to the person's subjective perceptions of way of life or to the life conditions of an individual or both. To this research, quality of life reflects subjective, objective, macro-societal and micro-individual, positive and negative influences that act together and overall impact on services on people's day to day life (Andrews, 2012a; Lawton, 1999, cited in Brown et al, 2004). It is thought that by combining these elements, the character of an individual's life will extend beyond that of inequality and social exclusion. Musselwhite and Haddad (2018) recognised this and note there is strong evidence that the *Hierarchical model of mobility need* remains much the same as when it was created in 2008. They argue that the model can be adapted to consider different contexts within travel and mobility, retaining the three levels of need. Importantly, Musselwhite and Haddad (2018) stress that all three levels of the model must be captured when having conversations with older people and as such, interventions also planned around all three levels of need.

## **2.4 The policy development of concessionary fares**

This section will now discuss the policy development, practical intervention, and the overall outcomes of providing free bus travel for older people in the UK, with a specific focus on Wales. Following an introduction to the scheme available, a brief and potted history of bus regulation within the bus market in the UK will be discussed, including the four transitions of the bus industry, providing further context of government subsidy for buses in the UK today, specifically Wales.

### **2.4.1 Public Transport and Zero-Fare Public Transport**

Large scale public transport developed in the nineteenth century; however, it was not until 1976 that government subsidy schemes emerged (Goeverden et al., 2006; Transport Act, 1968). This is attributed to the increase in car ownership and the increased cost of public

transport. Today, the attractiveness of public transport is due to its contribution to traffic demand, environmental advantages, as well as having the advantage of preventing isolation, promoting independence, quality of life and improving road safety (Andrews, 2012a; Gabaldon-Estevan & Kaufmann, 2006; Ingvardson, 2017).

There are two types of zero-fare schemes, and both have differing objectives. The first scheme has the objective of alleviating external transport issues (i.e., congestion). The aim is to offer a zero cost (or discounted) bus fare to reduce congestion (see Button, 2010) and this has worked well in inner city areas according to Goeverden et al., (2006) and Weston (2011). However, Andrews et al., (2012) disagree and argue that this has the potential to create an additional demand for travel, which is detrimental to the problems it is trying to solve; not to mention the environmental impact of some bus fleets across the UK (Simmons, 2012). The second scheme, and focus of this study, are concessionary fare schemes that have the aim to make a valuable contribution to improving the health and wellbeing of older people (and those with disabilities) by improving social conditions and enabling those identified as vulnerable (i.e., older people, the disabled, those experiencing financial hardship) to remain active for longer. The underpinning of concessionary fares schemes then is to facilitate travel and promote independent living to the benefit of those it is intended for (DfT, 1998).

Throughout the UK, there are three groups that have access to some form of concessionary public travel. The first group is offered a reduced rate (for example reductions for students) and the second group is offered free travel as a companion to travel with someone who has a concessionary pass (discussed later). The third group and focus for this study, has access to public travel that is free via a concessionary bus pass.

#### **2.4.2 Regulating the Bus Industry: A potted history**

The first example of public provided transport can be traced back to 1828 when the first horse drawn bus service operated between Paddington and Regent's Park to the City (London Transport Museum, 2021). The introduction of the motor bus sixty years later ended the horse drawn bus service (Gould, 1999) and paved the way for a private bus market model (Andrews, 2012a). However, this gave rise to competitiveness which then resulted in

haphazard and poorly coordinated provision that failed to offer a dependable service to its users (see Mackie et al., 1995). The second transition came in 1930 under the Road Traffic Act and the creation of public service vehicle licencing, which introduced regulations based on safety and traffic congestion. The Act also offered some operators monopoly rights to their routes, introduced a maximum speed limit of 30 mph and restricted the number of continuous driving hours for bus drivers (Andrews, 2012a). The third transition came in 1962 when the bus industry was nationalised (Gould, 1999), however in 1985 the bus industry was privatised with the implementation of the Transport Act. The belief was that this would reintroduce competition in the market, however Mackie et al., (1995) in their research on *Bus deregulation: ten years on* note that despite creating some coordination and operator costs falling, there was a decline in investment and usage and the industry was criticised for its lack of entrepreneurship, rising costs and failure to respond to rising car ownership.

The current regulatory context of the bus industry in England came under New Labour in 1997 and can be characterised by a trend of increased state subsidy to the industry on the one hand and leaving operators to compete in a free market on the other (Andrews, 2012a). In England, overall subsidy to the bus industry rose from £763,000 in 1997/98 (Butcher, 2009) to an estimated total net support paid of £2.21 billion in 2018/19 (of which £1.11 billion was for concessionary travel) (DfT, 2019). The trend of rising state subsidy in England has led several commentators to question the value of the quasi-state/quasi-privatised industry (Hibbs, 2005; Morris et al., 2005), as decisions about supply is distorted, benefits are reduced and there has been no enhancement (The Equality Trust, 2015). The evidence suggests that the bus industry holds neither commercial nor public values in England, rather it is a complex mix of the two.

It is important to note that statutory responsibility for public transport is non-devolved to the Welsh Assembly Government (WAG). This means that the Welsh Government has no direct contractual relationship with service operators. The bus service therefore continues to be deregulated and is provided commercially by operators (for example First Cymru) (National Assembly for Wales, 2011). In 2018 the Welsh Government launched the White Paper *Improving Public Transport* and proposed to legislate for reforming the planning and delivery of local bus services (as well as taxi licencing and private hire vehicles). The aim was to take

more responsibility for rail and buses and address some of the structural problems relating to a decrease in bus use (bus reliability, accessibility, congestion). In 2019, Ken Skates, Minister for Economy and Transport announced The Public Transport (Wales) Bill as a key element of reform for the bus service industry (Welsh Government, 2019). The Bill had the ambition of delivering a “high quality, low carbon, multi-model and integrated public transport network to meet the needs of the travelling public.” This included addressing the negative impacts of deregulation by giving local authorities power to intervene in services provided as well as work with partners to better integrate routes and timetables. However, despite introducing the Bill to the Senedd in March 2020, the First Minister took the decision to withdraw the Bill in July 2020 as there is a need to collaborate further with the sector due to the Coronavirus Pandemic and establish a best approach for the future to support recovery (Welsh Government, 2020b). That said, local authorities currently do have responsibility for providing socially necessary services (as previously mentioned) and therefore the Welsh Government does make funding available to support and protect these services (National Assembly for Wales, 2011). The most recent figures show that funding is allocated annually to Wales’s local authorities by a formula that reflects their overall populations and their rural or urban characteristics. In 2018, £25m was shared between the twenty-two local authorities, which supplements their own expenditure on bus and community transport services (Welsh Government, 2018a).

### **2.4.3 Concessionary Bus Travel: Policy Development relating to older people**

The above section discussed the regulatory context relevant to UK bus regulation policies. This following section provides a potted history of the policy development of concessionary provision relating to older people and the technicalities of how it is operated. Reference is made to the concessionary schemes in England, Scotland, and Northern Ireland as they have noteworthy differences compared to the scheme in operation in Wales (despite being subject to a similar legislative framework). The overall focus is placed on Wales however as this is the region of interest and research within this study.

The provision of subsidised concessionary travel for older people is not a new phenomenon, however the scale of provision in recent years across the UK has made it a significant transport intervention (884 million bus journeys are now being made each year by concessionary



holders) (DfT, 2019). Allocation for concessionary travel can be traced back to 1976 when discretionary powers were given to local authorities under the 1968 Transport Act (Benwell, 1976). Local authority expenditure meant that £58 million was provided on a local basis, however this provision was a haphazard patchwork of schemes that were ill thought out as there was no common code of practice in the issuing of passes and district councils had no scheme in operation (at county or district level) (Benwell, 1976). The provision of concessionary bus travel has changed to a compulsory provision. Formalising the current landscape of concessionary fare travel has been twofold. Since the 1990s there have been a significant number of government reports that have acknowledged the issue of transport disadvantage on the one hand and the need to tackle social exclusion in older age on the other (SEU, 2003; Welsh Government, 2018c). The shift from purely regulatory measures to one that identifies the role of transport as a social policy issue was thrust into the governments social exclusion agenda when the Labour Government formally acknowledged the potential for older people to become excluded (financially and personally) from the transport that they may wish to take (Andrews, 2012a; DfT, 1998; The Department for the Environment, Transport & the Regions, 2000). Thereafter, the Social Exclusion Unit (2003), elaborating on the White Paper *A New deal for Transport: Better for everyone* (DfT, 1998), pushed forward a holistic approach when considering transport provision by adding barriers to using public transport (physical accessibility, availability, cost, location of services, safety) to their report. This would link across central and local government as a component part of all services (in work, health, social care, education, shops, leisure) to underline the importance of public transport in meeting the needs of older people. Alongside the governments push to improve transport disadvantage and social exclusion for older people, several important academic texts have been published discussing social exclusion and transport connectivity (for example, Coronini-Cronberg et al., 2012; Graham et al., 2018; Musselwhite & Scott, 2019; Shrestha et al., 2017), further highlighting the continued need to create an approach that will provide a solution to tackle the issues being discussed.

#### **2.4.4 The Concessionary Fares scheme in the UK**

In the 1998 White Paper *A New deal for Transport: Better for everyone* (DfT, 1998) the Labour Government aimed to introduce 'a national minimum standard for local authority concessionary fares schemes' for older people. However, the political dimension of

concessionary fares policy in England, Wales, Scotland, and Northern Ireland is complex. During the 1990s local government reform and devolution in Scotland and Wales led to many trips being considered cross boundary in nature. It was believed that a nationwide scheme could resolve these issues and reduce administrative costs. This decision was also influenced by extensions of the schemes in Wales (2003), Northern Ireland (2001), Scotland (2002) where such policies attracted the attention of core supporter groups and were found to be influential in attracting votes of older people (Andrews, 2012a; MacKinnon et al., 2008).

#### **2.4.5 The Concessionary Fares scheme in England**

The Transport Act 2000 gave older people (defined in the Act as "a person who has attained pensionable age") the entitlement to a half-fare concession on local bus travel during specific times (i.e., Saturdays, Sundays, and Bank Holidays and between 0930 and 2300) (Andrews, 2012a; Butcher, 2015; DfT, 1998). The scheme came into effect in June 2001 and the permit was to be issued by local authorities, allowing the holder to claim the concession fare within the authority boundary. The concession initially applied to women over the age of 60 and men over 65, however a legal judgement found this to be discriminatory (Butcher, 2015). The definition of 'elderly people' was subsequently amended in the Travel Concessions (Eligibility) Act 2002 to 'persons who have obtained the age of 60' and included a power to replace references to age 60 with a formula that increases the eligible age alongside changes to pension age (Butcher, 2015). These changes have been commended and criticised. On the one hand it meant that an estimated one million men benefited directly and immediately, however on the other the pension age has been increasing since April 2010 (Butcher, 2015). The Travel Concessions (Eligibility) (England) Order 2010 legislated for this change and further changes made by the Coalition Government in 2015 have meant that the age of eligibility has risen faster and higher than originally envisaged. According to the governments State Pension Age calculator, in England, a person born in 1960 will not be entitled to a concessionary bus pass until 2028 (age 67), unless classed as disabled (HM Government, 2021). The age at which a person can apply for a concessionary bus pass also depends on date of birth and place of residence (see HM Government, 2021). The eligibility for the London Freedom pass is in line with women's state pension age, however those born on or after 6 October 1954 will not be eligible for a Freedom Pass until they are 66 (Age UK, 2020b). The impact these changes will have on the quality of life of older people are yet to be measured.

In England, the Concessionary Bus Travel Act (2007) changed the provisions set out in both the Transport Act (2000) and the Greater London Authority Act (1999) so that the free bus travel concession became a free-fare available not just in the area local to a pass holder's residence, but also on local bus travel anywhere in England. This change meant England spent an extra £350 million in 2006/07 through the Formula Grant system to fund the cost to local authorities (Butcher, 2007). The objective to extend provision centred on the aim to address the issue of social exclusion and to ensure that bus travel remained within the means of those on lower incomes (DfT, 2014). It was envisaged that this would not only reduce the cost of travel, but also help approximately 54% of older people who do not have access to a car to travel freely in their local area (Andrews, 2012a; Butcher, 2009). In addition, the Act includes a power that allows mutual recognition of national concessionary bus passes across the UK, which means it has the potential to be a national UK-wide scheme. However, residents in England are still only eligible to bus travel concession at off-peak times, although it differs between counties.

#### **2.4.6 The Concessionary Fares scheme in Wales**

In Wales, the concessionary bus travel scheme was introduced in April 2002 for residents aged 60 and over (as well as qualifying disabled people of all ages), allowing free travel across local authority boundaries to make it an all-Wales scheme. Passes can be used at any time of the day, unlike in England where passes are restricted to the off-peak period. Welsh pass holders can use cross-border services if their bus journey starts or ends in Wales, although they are generally unable to transfer between bus services in England (Older People's Commissioner for Wales, 2010). *Taking Wales Forward 2016-2021* is a Welsh Assembly policy that highlights the commitments the government will deliver to make a difference to the lives of people in Wales (Welsh Government, 2016). The focus of the programme is to improve the Welsh economy and reform public services to build a united and connected Wales. The policy highlights the complexity of challenges ahead, including that of the concessionary bus pass and the financial viability of the scheme (Welsh Government, 2016). This is because the popularity of concessionary bus travel amongst older people in Wales has increased since its inception and current costs to the Welsh Government shows that reimbursement to bus operators over the course of the scheme are in the region of £840m (Welsh Government,

2017).

Although maintaining access to free bus travel remains the policy objective, the Welsh Government published a consultation in October 2017 to seek views on age of eligibility, entitlement, and administration (Welsh Government, 2018b). The Welsh Government received 456 responses to the consultation, which are summarised in the *Bus Service Policy Discussion: Consultation Outcome Report 2018* and show that 54% argue the current age of eligibility should be retained while 95% supported maintaining travel at any time of the day (half of respondents who expressed this preference also agreed that an applicable fee could be introduced).

In September 2019, the Welsh Government announced that all concessionary passes in circulation across all 22 Local Authorities would expire in December 2019 and a new pass would be re-issued (due to updated electronic readers on buses from February 2020) (Welsh Government, 2020a). No administration fee was charged. This has been undertaken by Transport for Wales, who have taken over the running of concessionary bus passes (previously the Welsh Government held the responsibility for overseeing the administration of concessionary travel) (Welsh Government, 2020a). At this stage entitlement did not change, however Transport Minister for Wales, Ken Skates, announced in 2019 that eligibility for the free bus pass was set to rise in line with state pension age under Welsh Government plans (Welsh Government, 2018c). The Welsh Government then reversed this decision in 2019 when making the decision not to take the Public Transport (Wales) Bill forward (Welsh Government, 2020b). The original decision to increase eligibility to entitlement was a direct result of the rising cost of the pass. In 2016 more than 750,000 passes had been issued, and 35,000 each subsequent year due to people meeting the eligibility criteria (Welsh Government, 2018b). By 2020 figures show that 83% of users (over half million) had made an online application to renew their concessionary travel card (Transport for Wales, 2020). It is estimated that over the next 20 years the percentage of people aged over 65 in Wales is set to increase to around 25% of the entire population (currently 20%) (Welsh Government, 2018b).

## **2.5 Concessionary bus travel: interventions in practice**

This final section of the literature review chapter ends with a discussion on the practical interventions of the concessionary bus pass in terms of how it can have a direct impact on an older person's quality of life. This is because it is deemed necessary to establish a link between concessionary pass use, quality of life and overall health benefits, and to understand the mechanisms and practices currently in place that allow or prohibit this.

### **2.5.1 Age-friendly community transport**

Modern societal development is characterised by a change in social and psychological conditions that include individualisation, competition, and loneliness and this is linked to a wide range of reasons including a growing population, technology, faster means of transport, socialising and dwelling (Gossling et al., 2018). Remaining connected is becoming important. Relationships are formed and found in mobility therefore travel is considered a necessity for society, and not an option. Gossling et al., (2018) expand on this point noting that social contexts and the underlying motivations for travel have changed. By integrating social and psychological perspectives they found that travel is a mechanism for social connectedness. Wilkinson et al., (2019) refer to social connection in the sense of belonging to a group, suggesting it is a core psychological need that is essential to feeling satisfied with life. In this sense it is considered as being opposite to social isolation, specifically because a lack of connection can result in a deterioration of well-being and have a negative health consequence. Finally, it can be said that travel and transit can increase an individual's level of physical activity due to the need to walk at the start and end of each trip. Sener et al., (2017) note the potential of transit health related impacts and provide a review of current understandings related to physical activity and transit use, including its related health cost benefits. Their findings reveal that transit use can be linked to increased levels of activity and improved health outcomes (also noting the overall effects are not certain). Menec (2017) expands on the notion of social connectivity by drawing on a diverse body of literature (within the fields of epidemiology, community development and organisational effectiveness) to conceptualise the concept in terms of four related components: 1) creating connectedness, 2) empowerment, 3) social influence and 4) access to material resources and services (see figure 3 below). The author describes each of these components in relation to the individual, organisation and community and concludes that the implications for implementing age

friendly communities go beyond local communities themselves. Specifically, social connectivity cannot be separated from the broader policy, economic and political context (see Menec, 2017). As such, communities cannot become fully age-friendly without considering broader societal influences.

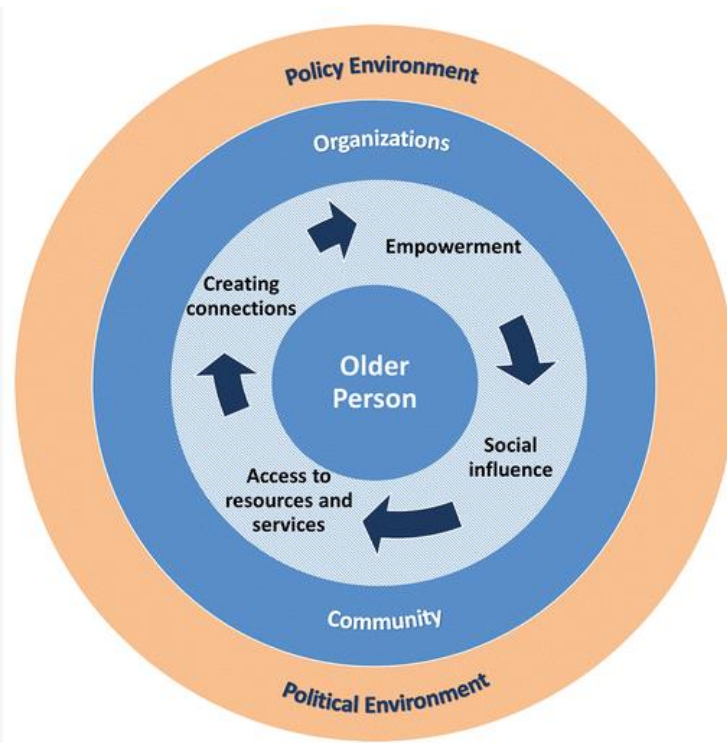


Figure 3: A Conceptual Model of Social Connectivity (Menec, 2017).

However, the model and four components referred to in Menec’s (2017) research are designed as a conceptualised term and model to social connectivity and as a heuristic metaphor in the context of age-friendly communities to allow specialists from different fields to draw upon them. The following section discusses social connectivity in the context of older people’s experiences of concessionary travel.

### 2.5.2 Current bus transportation options available in Wales

This literature review has referred to driving cessation and noted that this process can lead to psychological consequences (a loss of spontaneity, freedom, social interaction, and engagement) and can lead to social exclusion and reduced quality of life. The evidence has also suggested that the opportunities and activities made available due to the new hypermobile society can inadvertently exclude those older people reliant on public transport

(such as the bus). Therefore, the importance of an older person's-built environment and local community become central when considering public transportation options. This section will review the literature relating to current public transportation options available in Wales, with a specific focus on Swansea.

a) The economic and social impacts of concessionary bus travel

Transport and poverty are intricately linked as increased income is seen as a key mechanism of upward social mobility (NatCen, 2019). As noted, poverty is the lack of sufficient economic and material resources to maintain an acceptable standard of living. This literature review has also noted that adequate income levels cannot be used as measurement of social exclusion. However, income levels can be used to understand the demographic and socio-economic status of pass users. Research by Age UK shows that most eligible older people with an annual income below £15,000 own a bus pass; those with incomes above £15,000 are less likely to do so. Age UK has also found that older people without access to a car are twice as likely to hold a bus pass and five times as likely to use it frequently (Age UK, 2020b). Following the Department for Transport's guidance on economic appraisal, Greener Journeys (2014) analysed the costs and benefits arising from concessionary travel for older and disabled people and results showed that the scheme delivers excellent value for money with each £1 spent generating approximately £2.87 in benefits (see figure 4 for a breakdown).

Annual impacts for Great Britain	£ million, 2010 prices
<b>(a) Impacts on concessionary bus passengers</b>	<b>£1,336</b>
<i>Free travel</i>	£1,073
<i>Service enhancements</i>	£72
<i>Smart and integrated ticketing</i>	£191
<b>(b) Impacts on other bus passengers and other road users</b>	<b>£573</b>
<i>Benefits to non-concessionary bus passengers from service enhancements</i>	£447
<i>Option and non-use values</i>	£17
<i>Benefits to other road users (decongestion)</i>	£139
<i>Environmental improvements (noise, local air quality, GHG)</i>	£14
<i>Accident reductions</i>	£21
<i>Indirect tax revenues from modal transfer (fuel duty)</i>	-£66
<i>Bus operator impacts</i>	£0
<b>(c) Wider economic impacts</b>	<b>£297</b>
<i>Voluntary work</i>	£297
<i>Social care and child care</i>	not estimated
<i>Retail productivity</i>	not estimated
<i>Patient, social services and community transport</i>	not estimated
<b>(d) Health and wellbeing impacts</b>	<b>£458</b>
<i>Physical health</i>	£458
<i>Social inclusion, mental health and wellbeing</i>	not estimated
<b>(e) Cost to Government</b>	<b>£927</b>
<i>Cost of reimbursing operators</i>	£1,057
<i>Administration costs</i>	£23
<i>Change in indirect taxes (VAT)</i>	-£152
<b>Total benefits (a + b + c + d)</b>	<b>£2,664</b>
<b>Total costs (e)</b>	<b>£927</b>
<b>Benefit cost ratio</b>	<b>2.87</b>

Figure 4: Annual Impacts for Great Britain (Greener Journeys, 2014)

Greener Journeys (2014) also found that half of the benefits accumulate directly and immediately to concessionary travellers themselves, 20% to other bus passengers and other road users from transport network improvements, and the rest to the wider community from wider economic and social impacts and from improvements in health and wellbeing. Specifically, this research notes that pass holders directly benefit through greater freedom (access to shops, services, amenities etc), service frequency and enhancements (i.e., additional capacity to carry demand) which has led to a reduction in passenger waiting times at bus stops (Greener Journeys, 2014).



The direct benefit of the convenience of travel itself is also brought about by an integrated system. Greener Journeys (2014) note that these gains overwhelmingly benefit those without access to a car and those on low or moderate incomes. The impact for other bus users and road users is causally linked to enhanced services due to increased capacity. Greener Journeys estimated a 15% increase in the number of passengers and a 10% increase in the number of bus kilometres. These wider economic impacts relating to concessionary pass use also relate to formal and informal voluntary work, social care and childcare activities and health and wellbeing impacts (Greener Journeys, 2014). It was estimated that the value of older people partaking in voluntary work, social care and childcare is £10 billion, £34 billion, and £3 billion respectively (Greener Journeys, 2014). It must be noted that these figures do not include benefits from social care, childcare, the impacts of increased retail and commercial activity, savings on patient, social services, or community transport, as it is difficult to average genuine productivity gains in comparison to a redistribution of resources (Greener Journeys, 2014). If the former is true, the estimate provided would underestimate the true value of the scheme. In addition, it is difficult to measure the full value of voluntary work and childcare if also considering these activities in relation to wellbeing, health benefits and the role of concessionary travel.

Finally, Greener Journeys (2014) analyse the cost of the scheme to the Government. The scheme includes cost of reimbursing bus operators and the cost of administration. Bus operators are reimbursed for carrying concessionary pass holders on the basis that they are 'no better and no worse off' as a result (Greener Journeys, 2014). This means that government spending on concessionary travel is based on demand and the principle of operator reimbursement. The Welsh Government allocated £5m to concessionary fares travel in the 2020/2021 supplementary budget (Welsh Government, 2020c), however as this is a demand led service, take up has been low (yet to be analysed) due to the coronavirus pandemic. The Welsh Government has reprioritised any leftover spend on supporting the bus industry to recover post pandemic (Welsh Government, 2020c). It is important to also note that the scheme needs to be adjusted to consider differences in indirect tax rates between zero VAT rated buses and other goods and services. If the scheme were withdrawn, it is assumed that concessionary pass users would still use the bus and therefore would buy a ticket. This would

divert funds away from other services that include an expenditure tax. This means that the government would potentially save on operator reimbursement costs, however, would experience a reduction in indirect tax as a paid for ticket may mean diverting funds from taxed services to an untaxed bus ticket (Greener Journeys, 2014).

Overall, Greener Journeys (2014) place a focus on the benefits that extend beyond the concessionary travellers themselves instead of, rather than in addition to, the specific travel needs of older people. It can be argued that developing connections when considering transportation options benefits those who are in lower income households and have no access to a car. The above evidence also suggests that an increased use of the concessionary pass has led to wider economic and social benefits, including indirectly and directly to pass holders and their extended families. This became evident in 2020 during a UK wide lockdown because of the coronavirus pandemic. In England, a temporary suspension of free travel for older people at peak times in London was put in place. The Government noted that the decision was made to cut the number of passengers using public transport during rush hour, rather than as a money-saving exercise, however one older person noted in a live interview that as an informal care provider for her grandchildren this has meant an additional cost of £50 per week for travel (Braddick, 2020).

#### b) Infrastructure: The built environment

Musselwhite and Scott (2019) address how older people cope when they give up driving and found that the provision of infrastructure and services themselves was frequently mentioned by their study participants. They termed this 'infrastructure capital' and defined it as having the necessary resources to carry out mobility in the local area. This category received the most responses as older people mentioned how important it was to have the right services. Hard infrastructure to access public transport was therefore considered the highest priority for participants in this study. This included having a quality bus service that goes to a range of places, when required. Graham et al., (2018) also found that various system components including community transport, hospital transport and lifts from family and friends were important to older people in their study, however the inadequacies of rural transport were noted specifically as being a barrier in the context of older peoples experience of everyday travel. Age UK (2019b) focussed on hospital transport and found that 1.45 million people over

the age of 65 find it difficult to travel to hospital via bus, however noted considerable variation depending on location. Cuts to services across England and Wales have had an impact on services provided to and from medical appointments and Age UK (2019b) note that supported bus services have been cut by £73.8m since 2010/11 with over five hundred routes being reduced or withdrawn. This impacts upon both rural and urban communities and led to 24% of respondents noting there was no other form of public transport available. Gilhooly (2003) also found that even those with alternative options (such as family members) were reluctant to ask for a lift, even to hospital or a GP appointment.

Referring to travel and availability relating to type of area (rural vs urban), evidence suggests that older people make up a larger proportion of the rural population in the UK and rely more heavily on transport systems than younger age groups (Graham et al., 2018). However, evidence from DfT (2019) shows that take up rates of older concessionary passes are highest in urban areas, with 79% of eligible pensioners holding passes in 2017/18. Rye and Carreno (2008) found a relationship between pass take-up and area type. They note that pass ownership has grown, however this is low in rural areas. This may be because bus services are poorer and car ownership is more common in rural areas. Graham et al., (2018) note 90% of household's villages, hamlets and isolated dwellings have private transport compared with 65% in urban areas. In his research, Musgrave (2006) found 75% of rural parishes had no bus, partly explaining why only 4% of trips in the most remote areas were made by bus at that time (Rye & Carreno, 2008). One reason for the decline in take up as well as the poor services, according to Graham et al., (2018) is because of government austerity measures (approximately 40% reductions in rural bus services and in community transport schemes). Between 2010/11 and 2016/17 £103 million has been cut from bus support across England and Wales (32% reduction in budget overall), with some local authorities withdrawing their support altogether (see Better Transport, 2019). One notable reason for these cuts is that bus travel per head is declining, ironically due to rising passenger costs (fares have risen on average by 39%) (Waterson, 2019). The result leads to operators cutting back on commercial routes deemed unfeasible (Westerson, 2019), which raises the issue of usability in rural areas that are more diverse, disparate, and geographically dispersed (De Witte et al, 2008). Evidence from MVA (2003, cited in Rye & Carreno, 2008) found that within rural areas of Wales, those who attained a pass made around seventy-five bus trips per year, compared to

around 100 in urban areas. Additionally, evidence also shows that almost half of those acquiring a pass in 2003 came from rural areas, and the increase in concessionary trip making was accounted for by this group (MVA, 2003, cited in Rye & Carreno, 2008). Rye and Carreno (2008) subsequently note that there is clear evidence suggesting that people in rural areas use the bus less frequently than those in urban localities, likely related to service frequency and accounting for factors such as car ownership and income. Within Swansea, public transport covers a large area (Swansea and Gower) and buses run to many parts of the city and surrounding areas, however a review of the local bus services funded by the City and County of Swansea suggests that several rural routes are subsidised by the authority (Swansea, 2019). For example, within the City and County of Swansea, commercial services are run by First Cymru or South Wales Transport. If a commercial service is run without any council subsidy, the local authority has no control over the route, timetable or fares charged (Swansea Council, 2019). One positive aspect of this approach is that local councils are able to subsidise bus routes that are not deemed commercially viable for service operators if they are considered socially necessary. An example of this can be seen with the introduction of a subsidised service providing a direct route from Gorseinon to Morrison (a hospital route). Previously, residents living in the Gorseinon area would have been required to take two buses to complete this journey as operators do not consider the service commercially viable (Swansea Council, 2019). A request was raised in 2019 to the Transport Unit Manager within the authority to increase the frequency of the Gorseinon to Morrison bus timetable following several requests from residents. It was noted in the response that the authority fully funds the service, but that several requests have been made for new and enhanced services elsewhere and due to the budget for subsidised bus services being fully committed for the financial year, the request would come at the expense of reducing a service elsewhere (personal communication, February 14, 2020). This suggests that there is a need to increase services within rural areas as routes have been deemed not to be commercially viable by operators, however socially necessary by the local authority.

However, social exclusion is not confined to older people and evidence shows that the lack of access to public transport in rural areas affects all people within the community (Bus Users, 2019). Where local authorities do subsidise rural bus services, the priority is on providing access to shops and health services, which ignores the needs of the younger generation and

the patterns of people working entry level jobs, shifts and those using public transport for night-time activities (Bus Users, 2019). The irony here is that because the needs of younger people have been overlooked, this has been a contributing factor to higher car ownership and less bus usage (Bus Users, 2019). Additionally, operators provide concessionary travel based on being 'no better and no worse off,' therefore if demand and take up is low, this will lead to a decline in bus services. This shows that Local Authorities follow an outdated approach to subsidised bus services to retain traditional day bus options and in doing so focus on the needs of older bus users, at the detriment of younger travellers, creating a paradox.

#### c) Infrastructure: Future developments

Capital investment into the economy, specifically transport, received a significant uplift in the 2020/2021 supplementary budget (Welsh Government, 2020c), with tens of millions of additional spending directed towards developing infrastructure schemes and updating existing ageing infrastructure. This is in addition to £130m commitments made in 2020 to invest in priority areas (transport, education, housing). The publication of the *Wales Infrastructure Investment Plan (WIIP): project pipeline* (2019a) set out plans to invest £33bn on infrastructure projects. This plan relates to road infrastructure and the *National Transport Finance Plan* (Welsh Government, 2019) committed to a five-year programme of road, bus, rail, and active travel investments. This investment puts decarbonisation at the heart of decision making and as such active travel plays a key role. Active travel has become an important part of urban planning, and this can be seen with the Wales Active Travel Act (2013) (the first Act of its kind). Local authorities must consider active travel as part of any urban/rural planning. This shows the commitment the government has made to active travel as they have recognised that this can aid in the enhancement of road safety, reduce road infrastructure demand, and improve network links and performance. This can be seen with the commitment to upgrading public transportation networks and includes significant investments into projects including the £1.2bn Cardiff Capital Region and the £1.3bn Swansea Bay City Deal (Swansea Bay City Deal, 2019). Specific funding (£120m) is dedicated to the Cardiff Interchange which will be the main modal transport exchange for the South Wales Metro (due to be completed in 2024) as well as an extra £20m for the North East Wales Metro to deliver active travel and bus infrastructure improvements in Wrexham and Deeside. In Swansea, the development of the first Swansea Bay Metro project is underway, and this will

cover Swansea, Neath, Port Talbot, Carmarthenshire, and Pembrokeshire. The aim is to connect communities across Swansea Bay City Region by improving rail and bus links (Swansea Bay City Deal, 2019). Plans include improved bus services as well as improved facilities for people to walk and cycle. However, terms of reference for the regional transport sub-committee still need to be developed, while studies are being undertaken to develop these plans. Broome (2013) notes the importance of involving older people in route design and found that older people prefer cross-suburban travel, leisure destinations, shops and other towns and found that flexible route bus systems meet this need.

Recent evidence shows that governments have introduced multimodal mobility innovations as well as planning interventions to promote active travel, however sustainable transport accessibility is still considered an increasing rural problem that disproportionately effects those reliant on public transport (Bauchinger et al., 2021). Bauchinger et al., (2021) note that rural and urban challenges for sustainable, accessible, and connected transport are both distinct and inter-related. This is because policy and infrastructure aim to reduce emissions in urban areas, however, improve and increase accessibility in rural areas. Arguably, any investment and resulting structural improvements need to be designed with concessionary travellers to directly deal with the specific travel needs of older people. In addition, despite the positive and welcome investments, any subsequent improvements will take some years before individuals are able to experience these structural connectivity benefits (Transport for Wales, 2021). In addition, schemes of this nature place a burden on Local Authorities to complete the work, usually with a time limit on the availability of the grants and funds awarded. This also puts a burden on local taxpayers to invest during a time when they can least afford it. Local Authorities have a significant role to play, including supporting residents beyond structural changes to assist in making the change to active travel, however years of austerity have led to departments being underfunded, creating a challenge for councils.

### **2.5.3 The mechanisms in place**

Concessionary travel is contingent on eligible pass holders having 1) a bus stop nearby, 2) the physical ability to board the bus and 3) the cognitive ability to navigate bus travel.

- a) a bus stop nearby (urban and rural)

As discussed, older people rely on public transport and make up a larger proportion of the rural population, however austerity measures and cuts to bus services has led to a reduction in services, specifically within urban areas and relating to bus accessibility. This has had a negative effect on older people and their ability to use the mechanisms in place. Referring to their study participants, Graham et al., (2018) note that they spoke about specific inadequacies, including getting to the bus stop. Hess (2012) also found a critical component of travel by public transit is the trip to a bus stop and found walking can be a barrier to transit for older people who may experience declining physical mobility or who may walk more slowly than others. This is supported by research from Shrestha et al., (2017) who found that the ability to get from home to a bus stop, for example, is a great barrier to public transit use, especially when also factoring in pedestrian environments (junctions, crossings, pavements, tactile surfaces). Two communities (Strathclyde and West Midlands) have recognised these mobility needs of older people and have created a 'ring and ride' service. This innovative and on demand bus service is designed to provide access to those who are not able to access (or do not have access to) local transport. Journeys are pre-booked by passengers, where they will be collected from their door, or any nearby location, and taken anywhere within the service area. These provide the benefit of giving residents an opportunity to travel, without having to walk to a bus stop. However, it must be noted that these are not free services, and the schemes differ across counties. For example, some schemes are only available if the trip is considered essential and no other means of transport is available. In addition, pre booking and relying on this service removes any element of spontaneity and freedom (Urban Transport Group, 2021).

From an older individual's perspective, an ideal bus stop location would be close to home, visible, in a well-lit place, with seating, weather protection and clean (Shrestha et al., 2017). This shows that the distance, location, and condition of the bus stop (and surrounding environment) can affect overall accessibility. This is supported by Hess (2012) who discusses perceived versus objective measures of the built environment. His research suggests that older adults do not accurately perceive walking distances (possibly related to a lack of signage). The research suggests that the approach to a bus stop needs to be more age friendly in terms of the pavement (low and level gradient), with crossing facilities, while the bus stop itself needs to be in good condition and well maintained. Broome et al., (2013) conducted a

study in Hervey Bay and Brisbane, Australia, to measure satisfaction of implementing age-friendly guidelines for public buses over a three-year period (the method included measuring satisfaction before placing specific interventions and after). They found that the overall negative influence both before and after intervention included where a bus stop was located and the design of the shelters. However, it is important to note that interventions did not include modifications to bus stops or shelters at either location within the study (Broome et al., 2013). Overall, this research suggests that providing bus stops that are close to homes and destinations are a priority for older people, as well as the accessibility of the bus stops and shelters themselves (including accessible seating, weather protection, integration when boarding). Creating an age friendly approach to bus stops is important to older people and improving this barrier may assist older people to maintain bus use and allow them to fulfil the need for utilitarian travel and maintain connectedness. However, this reinforces the paradox. Older users are reliant on improved services that provide an age friendly approach, however discontinued services result in abandoned shelters and disused bus stop degrading in quality due to lack of use and funding.

b) the physical ability to board the bus

The design of the bus itself can also be an important factor in accessibility. Shrestha et al., (2017) note the ideal attributes of the ideal bus within their research. This includes stepless entrances (low floor), bright colour contrasting handrails (to aid visual impairment), priority seating, real-time audible information, and the provision of a ramp to enable wheelchair access as well as space for wheelchairs. In addition, the design should accommodate people with difficulties beyond being less mobile (colour contrasts for the visually impaired for example). They base these recommendations on the various studies that have been carried out to examine the issue of older people (as well as those with disabilities) being able to confidently board the bus. The United Nations Development Programme (UNDP) (2010) recommended a safe and convenient pedestrian infrastructure as essential for those to access public transport. The report specifically refers to the importance of lower-floor vehicles, well-designed handrails as well as clear signage and priority seating. Examples of best practice in the UK include the regulations laid out in the *Bus and Coach Accessibility and the Public Service Vehicle Accessibility Regulations 2000* (DfT, 2005). This requires all buses across the UK to be fully accessible and notes that over a third of full-size local buses are low floor vehicles, which



rises to over 80% in major urban areas (DfT, 2005). This again highlights the disparities between urban and rural accessibility. In addition, despite an effort to improve accessibility to public transport full compliance was not expected until 2022. Broome et al., (2013) found that legislation only mandated a minimum of 25% of all bus services to increase the proportion of lower floor buses. Getting on and off remained a critical barrier suggesting satisfactory progress has not been made. In addition, Gilhooly et al., (2003) found in their research that older people have a negative experience when using the bus relating to the poor attitudes of bus drivers themselves. This was linked to feelings of being treated differently as concessionary users are not direct fee-paying users. The study also interviewed bus operators, and this confirmed the perception of older people as being a 'nuisance' who potentially caused overcrowding due to demands for access. In addition, this study found that bus operators rarely mentioned sensory difficulties (such as seeing or hearing announcements) as a concern of public transport (Gilhooly et al., 2003). This demonstrates a further paradox and a divide between perceptions of those needing adaptation and the perceived understandings of those who do not. Broome has further explored this issue et al., (2013) who identify the friendliness and helpfulness of bus drivers as a core priority of an age-friendly bus system. Their pilot study found that age-awareness training for bus drivers has the potential to improve bus driver behaviour. Further research highlights the good practice examples that have been put in place to ensure accessible public transport (see PT Access, 2008). For example, Bus Buddying has been established to help people with physical and sensory disabilities, as well as all others who face barriers or lack confidence using public transport. The service provides one-to-one support by Bus Buddy Volunteers who travel with clients. This project has been undertaken in Leeds and results show the scheme creating independent travellers. This partnership scheme (between local operators, local authorities, and the community) is funded by the Department for Transport's Urban Bus Challenge and is designed around users' needs (see Touchstone, 2021). This is considered a ground-breaking new concept and a step towards lowering the barriers of using accessible public transport (PT Access, 2008). For example, findings show that the buddy system leads to increased and more frequent use of the transport service in Leeds. However, it must be noted that this is related to use of the fully accessible transport system. This shows that there is still a need to ensure accessibility, despite the various guidelines and best practice models being developed to improve convenience. Shrestha et al., (2017) note for example that despite the progress made

in recent years relating to improving accessibility, an estimated 10-20% of European citizens (including older people and those with disabilities) still experience barriers and reduced accessibility to transport. Overall, it can be said that there is agreement between academics and policymakers relating to meeting utilitarian travel needs linked to the physical ability to board a bus. It is recognised that there are some examples of good practice, however there is progress to be made as good practice is not equally spread across the UK and indeed Europe.

c) the cognitive ability to navigate bus travel

The issue of accessing the bus, and by extension having access to the benefits of the policy, is also restricted if pass holders do not possess the relevant cognitive and skill-based capabilities to use the bus (Lyons et al, 2002). Mobility is related to two core requirements, 1) access requirements (public transport and time availability and income level), and 2) practical skill (physical and cognitive). Some difficulties experienced include getting to the bus stop, being confident in knowing what bus to take, alighting, using the pass, and knowing how to return home from the journey (De Witte et al, 2008; Metz, 2003). Roper and Mulley (1996) and Mackett (2017) note the mental skills required to make a journey. Each stage requires physical and spatial awareness, as well as cognitive skills (to determine availability, accessibility, affordability etc.), which are more likely to be lacking in older travellers. Mackett (2017) also notes the skill of having the ability to remember information obtained previously, comprehension of information received, the ability to take and make decisions, interpersonal communication skills, confidence in travelling alone, and the ability to behave in line with contemporary social norms. Musselwhite and Haddad (2010) found that whilst bus service operators were seemingly effective at providing information on timetables and fare structures, little information was available relating to day-to-day informal information (which buses are more accessible, where to put baggage, the procedure for getting off etc.). Shrestha et al., (2017) in their paper *Review of Public Transport Needs of Older People in European Context* undertook research based on the European Commission GOAL (Growing Older and Staying Mobile) project and describe the requirements of older people using public transport in terms of four main issues: affordability, availability, accessibility, and acceptability. The authors refer to the role technology has to play in bus travel, specifically because needs differ from person to person. They note that the information needs to be clear, concise, accurate and timely as well as available to those using technology (smartphones) or those relying on

printed information. A review of the available information for passengers in Swansea shows that there is an available Traveline Cymru app for smartphones as well as a 'bus times via text message' service (see Swansea Council, 2020a). Gaber et al, (2020) investigate patterns of technology use (smartphones, self-service, ticket machines for public transport). Their study found that everyday technology use can be problematic for older people as this requires numerous cognitive, fine motor and perceptual capabilities (i.e., using journey planning apps). Gaber et al, (2020) also note that the concessionary pass facilitates out of home activity and reduces the challenges older people experience when using technology (as this eliminates the need to use a ticket machine for example). However, Gaber et al, (2020) also found that older people report a lack of trust or familiarity for newer smartphone models, especially those that require relatively complex cognitive skills. Shrestha et al., (2017) note that only 5% of a survey conducted on over 200 older people in Austria use technological services when trip planning. However, Shrestha et al., (2017) found participants between the age of 60 and 75 have a high usage of technology (compared to the other groups in the same study). The study concludes that policy development recognises the different needs of older people, however the level of implementation varies from place to place. Broome et al., (2013) found that their study participants rated satisfaction about known bus information positively. When the researchers introduced a new system (a bus buddy programme), this had minimal uptake and satisfaction declined during the research period.

The evidence above suggests that caution needs to be taken when information or current systems are changed. If an alternative approach needs to be considered and implemented (i.e., technology and updated bus user apps), creating an age-friendly strategy may ease confusion. In addition, this cannot be at the expense or as an alternative to a current system (such as a printed timetable placed in information boards) as this too could have a negative effect on older people reliant on using this method. Instead, new strategies created could be aimed at new residents or new users (for example, those retiring from driving). Providing various forms of information (printed, real time at bus stops, on board, and web based), and safe access to and from public transportation is considered extremely useful to older people and any move towards an entirely electronic system would fail to meet the needs of older people. This has been considered in Swansea as the main bus station, located in the centre of the city, has recently benefited from a renovation (see images 2 & 3 below). The bus station

has colour-contrast way finding flooring, braille maps, RNIB REACT systems (providing real-time information at bus stops for people with sight loss), and improved disabled toilet facilities (Swansea Council, 2020a). Noting these improvements are in the semi-urban area of the city, it is important to also note that improvements to more rural bus stations have also been made. In Gorseinon (a small town on the outskirts of Swansea City and the study area for the primary research of this thesis), the bus station has recently benefited from upgraded information boards for printed timetables, perforated anti-vandal panels, new timetable cases within shelters, replaced litter bins and a new raised pedestrian crossing with countdown timers to ease crossing into Gorseinon High Street (Swansea Council, 2020b), personal communication, 2020).



*Image 2: Swansea City Bus Station (Sustainable Swansea, 2022)*



Image 3: Swansea City Bus Station (*Sustainable Swansea, 2022*)

#### **2.5.4 Access to age-friendly communities**

The psycho-social benefits of mobility go beyond travelling from one place to another. There are two main indicators of social integration: 1) participation in society and enabling social interaction (shopping, medical appointments, social clubs, social roles) and 2) interaction with social support or social networks (the ability to visit relatives, friends, and neighbours, and reducing isolation, loneliness, and depression). The final part of this section refers to the bus as being the facilitator in achieving mobility.

##### **a) participation in society and enabling social interaction**

The Countryside and Community Research Institute (CCRI) has worked with the University of Plymouth, Cardiff University, Swansea University, and the University of the West of England to investigate how older people interact with their local community and what social and economic issues are important to them. This is the largest research programme on ageing in the UK, collaborating with five UK research Councils (see Hennessy et al., 2012). The project investigated the types and the extent of connectivity amongst older people in rural communities. The findings show that active community participation was higher among married couples as well as the 'young old' and those who considered themselves as healthy. Of the 900 people aged over 60 surveyed, the majority did not find transport to be a barrier

to community participation, however as age increased, it was noted that 'carelessness' made transport problematic (Hennessy et al., 2012). The study also noted that respondents in the low-income category expressed higher levels of satisfaction and connection in their community, however public sector cuts to services suggest that inclusion is declining. Connectivity was linked to those involved in leisure activities while a lack of participation was linked to a lack of interest (Hennessy et al., 2012). Overall, the research identified several key roles within community life that aided in fulfilling connectivity, including volunteering, running events, and promoting community engagement. The research has had an impact across several academic disciplines (gerontology, social policy), specifically in transport studies in terms of developing new knowledge and understanding about mobility and social connectivity (Hennessy et al., 2012). For example, Green et al., (2012) studied impacts of bus use in London, drawing on data from 47 participants aged 60 and over. They found that the concessionary pass represents a lifeline for older people in terms of allowing access to vital services (such as hospital appointments). Hirst and Harrop (2011) studied 152 existing pass holders in Manchester and found that without the scheme and resulting infrastructure in place, participants were more likely to sacrifice trips to see friends and family as well as partake in leisure and recreational trips. Andrews (2012a) found that encouraging active travel promotes social integration. Here the bus is seen as a 'social space' where informal networks of support can be formed, and new recreational trips can be taken due to the reduced cost of travel. However, Kelly (2011) found no evidence of significant spill over. The key implication in this research links to the cost of travel (the price of the bus fare for example). It is argued that the cost is not a determining factor that limits social participation, but the transport itself. This suggests that the concessionary pass is not the determining factor in reducing social exclusion, but public transport and the role this plays.

Coronini-Cronberg et al., (2012) found that activity is reduced when an older person has access to a car, while those living in larger populations are more likely to use active travel options, including bus transport, but are less likely to walk. They associated this with larger populations being more likely to have better transport links, compared to rural areas that provide fewer opportunities. However, rural areas provide more opportunity for recreational activity, which may explain why people living in these areas are more likely to walk. Graham et al., (2018) note that everyday travel provides access to two sets of valued resources: goods

and services and pleasure and meaning. Having access to goods and services relates to common trips that people make (food shopping, accessing services, healthcare appointments). Literature confirms that the reduction in travel costs enhances quality of life due to the increase in disposable income. Hirst and Harrop (2011) for example note findings that participants have more of a disposable income to afford treats at a concert due to the saving of the parking fee. Travel in terms of pleasure and meaning includes activities linked to places of worship, social clubs, and community events, volunteering or informal care. These travel purposes were studied by MiD (2008, cited in Shrestha et al., 2017) and showed that shopping and leisure amongst older people are the main motives for travel. Specifically, access to healthcare, food shops and other cultural and social facilities (such as libraries, leisure centres, town centres and places of worship) were considered important, with access to healthcare being recognised as vital. Barriers to accessing these services have been noted (transport disadvantage, lack of access to a car, bus stop location), as well as barriers to using services (low floor buses, improving the built environment). Broome et al., (2013) evaluated the impact of implementing age-friendly guidelines for social participation for older people. The authors hypothesised that Hervey Bay post-intervention would experience increased frequency of community participation for older people (i.e., visiting libraries, museums) (see Broome et al., 2013). Overall, the findings show that participants in Hervey Bay maintained their social activity participation and bus use, however, participants in Brisbane experienced a decline in both over the three-year intervention period. Broome et al., (2013) note that the evidence does not support the hypothesis, however, conclude that an alternative hypothesis would instead support the finding that age-friendly changes have maintained social activity participation, despite ageing. They note that the reduction in social activities in Brisbane (as well as the decline in overall satisfaction with the bus system) can be attributed to the activities which were associated with either ease of bus use or driving status. Overall, the authors conclude that an age-friendly approach to transport provision does benefit participation in a range of social activities.

Referring to the *hierarchy of mobility needs* there is a slight difference between preventing social exclusion and encouraging quality of life. For example, the failure to perform utilitarian needs (shopping, medical appointments, and personal business) can often result in social exclusion, however the inability to fulfil higher level needs are not as direct, but rather may

affect character of life and contribute to lower quality of life (Musselwhite & Haddad, 2010). Graham et al., (2018) note that active travel has the benefit of affirming an identity as it facilitates independence and enables older people to express and enjoy valued aspects of their identity. Evidence shows for example that older people have described enjoying getting out and feeling a part of their local community, therefore everyday active travel provides an arena for social contact and engagement (Graham et al., 2018). Overall, it can be argued that failing to meet these utilitarian needs increases the likelihood of older people experiencing isolation, depression, and loneliness in later life.

b) interaction with social support or social networks

It has been noted that governments have acknowledged the issue of transport disadvantage and the need to tackle social exclusion. Policy rhetoric recognises active travel and the benefits of concessionary travel in reducing physical and mental health and increasing wellbeing (SEU, 2003; Welsh Government, 2018c). Consequently, the rationale behind active travel (and by extension concessionary travel) is to enhance the physical and mental wellbeing of older people. This is done by the access provided to the bus journey itself, as well as the range of activities this gives a person access to. Hirst and Harrop (2011) confirm this rationale as they note their participants reported using concessionary travel to attend several physical, health and leisure activities (swimming, line dancing, organised walks). They conclude that the concessionary pass was key to providing these opportunities. This is further discussed by Kelly (2011) who studied the impacts of walking and the links with concessionary travel. The results show that moderate walking increased by an average of 0.5 days per month (consistent with the increase in bus use). Overall, the evidence suggests that active travel and increased public transport use has the potential to contribute to the active lifestyle of older people as increases in bus use correlate with increased walking time. On the other hand, Graham et al., (2018) focus on the impacts of physical inactivity on mental health and found this is a major contributor to loneliness. This is especially the case for those who are housebound. This is exasperated when participants live with an inadequate transport system or have difficulty travelling alone, leading to some considering bus use as inaccessible (Graham et al., 2018). In this case, lifts from family and friends were considered an important part of rural transport infrastructure, however this is seen as more occasional and only acceptable for primary travel needs (hospital appointments) (Graham et al., 2018). In



addition, Graham et al., (2018) found that older people are reluctant to ask family and friends for a lift (due to self-reliance and feeling of being a burden) to meet 'non-essential' trip needs (including leisure and social trips). This highlights that older people may not make the link between attending an appointment and meeting social and leisure needs as being primary travel needs. Both are equally as important in terms of improving quality of life.

Andrews (2012a) discusses active travel in the context of facilitating interactions between neighbours, fellow bus travellers and the wider community, especially while on the bus. These increasing social interactions can lead to improved access to networks (support, information, mental wellbeing) and better social integration. Age UK (2019b) note that older people with restricted mobility benefit from companionship when travelling as they may need support and assistance (i.e., help with alighting, carrying shopping, communicating). Companionship may also increase confidence to use public transport (to attend a hospital appointment for the first time) especially for those who are reliant on walking aids, use a wheelchair, live with dementia, or have ill-health. Finally, evidence suggests that companion travel could reduce feelings of being a burden and encourage active travel (Age UK, 2019b). Companion travel is part of the Scottish concessionary fares scheme, available to all (the companion must be over the age of 5) (Transport Scotland, 2020). The aim is to make the journey easier for older people to help with alighting, carrying shopping and communicating (it must be noted that there is no available literature that evaluates the success of the Scottish companion scheme). In addition, some local authorities across England and Wales allow a companion to travel for free as part of the concessionary fares scheme. However, Age UK (2019b) found companion travel to be haphazard in some areas, noting confusion amongst older people in terms of eligibility and entitlement. In one case, Age UK (2019b) note the experience of a blind person who was told he did not qualify under the scheme, despite admitting he only needing assistance for the first few journeys. Swansea Council (2020c) offer companion travel; however, this is limited to meeting certain criteria. Local authorities are given discretion over companion travel (Age UK, 2019b), however there is a need for a consistent and clear national scheme that includes entitlement based on physical need and psychosocial need.

Haigh (2011) notes that active travel (including the concessionary bus pass) encourages older people to 'get out more' and lead richer social lives, leading to improvements in their mental

as well as their physical health. The result of this leads to better mobility, greater strength, and lower risk of heart disease, falls and broken bones. Evidence supports this as there is an increasing awareness of the links between transport and health and physical activity. Coronini-Cronberg et al., (2012) found that physical inactivity cost to the UK economy was an estimated £10.7bn annually. Specifically, older people are the least likely to achieve recommended levels of physical activity, leading to weight gain and health problems. However, Webb et al., (2012) analysed three waves of data over a six-year period and found that active older people who use public transport had reduced the chance of becoming obese (compared to those who do not). The authors conclude that increased activity by public transport can reduce, or protect, older people from becoming obese. Coronini-Cronberg et al., (2012) did note that reduced active travel was linked to increasing age (due to frailty, comorbidities, and less option), however they were not able to confirm this hypothesis. Instead, the evidence supports the argument that promoting physical activity reduces mortality and morbidity (Coronini-Cronberg et al., 2012). It is argued that that small increases in moderate activity can reduce the risk of ill health in older people, and as such findings suggest that older concessionary travellers are more likely to report active transport use as well as more frequent walking (Coronini-Cronberg et al., 2012). These findings bolster current evidence that also show active transport use is linked to increased levels of physical activity and social well-being.

## **2.6 Chapter Summary**

This chapter has explored bus travel for older people, specifically the policy development of the concessionary bus pass and the relationships between concessionary bus travel and the health and wellbeing of older people. Travel (whether by car, public transport, or on foot) is essential to meeting everyday needs as well as facilitating access to goods and services. However, those with barriers to travel (e.g., location, physical and cognitive ability) experience difficulties and reduced opportunities. Recent changes in the regulatory context of the bus industry can be characterised by a range of objectives relating to social and environmental issues. The separate concessionary bus pass schemes that operate in England, Scotland, and Wales are aimed at improving social inclusion and it is recognised there is a need to ensure public transport is easy to use, safe, reliable, and clean. It is also accepted that older people share experiences, especially relating to social exclusion and compared to those

aged under the age of 60 (but when this occurs differs). However, there is inequality embedded within the transport system through government subsidies, further increasing economic inequality (e.g., Wales receives a lower rate of subsidy than regions like London). In addition, transport disadvantage is seen as being heightened in poorer areas where there are lower levels of car ownership and poor transport links. This is also the case in rural areas, where car access and ownership are higher. It can be said that mobility related exclusion is not related to the car itself or by default, but the spatial, financial, and personal limitations that allow a person to participate in society. Examining the literature relating to the relationships between concessionary bus travel and its implications for the health and wellbeing of older people in maintaining social connectivity showed that transport and travel is not one-dimensional (i.e., just getting from A to B), but also includes psycho-social needs relating to independence, choice, freedom, control, autonomy, and self-identity. Including quality of life into assessments when considering transport and infrastructure improvements strengthens public transport and the potential to improve inclusion. Overall, any policy that succeeds in reducing social exclusion has the potential to significantly improve quality of life, health, and wellbeing, however, there needs to be a more active approach that considers the different characteristics and subtle differences between the mobility needs of older people relating to concessionary bus travel. This is explored through meanings of concessionary bus travel and owning a pass, experiences of bus travel and relationships between concessionary bus travel, social connectivity and the health and wellbeing of older people.

# Chapter 3: Research Methodology

## 3.1 Overview

The research journey is a difficult one, especially when considering the processes involved. One thing that most researchers have in common however is an understanding of the importance of employing a sound research design at the start of a study (Bourner & Greener, 2016; Creswell, 1994; Crotty, 1998; Williams, 2007). This chapter outlines the methodological steps of this research journey process, the theoretical foundations employed, and the approaches taken to data analysis. Three specific sub sections make up the structure of the chapter. The first subsection includes *3a) gaining an understanding: the methodological framework*. This begins by exploring the ontological, epistemological, and theoretical frameworks that have underpinned this study. The second sub section of this chapter includes *3b) applying the understanding: the methodological approach*. This section details the strategy, plan of action, process and design that lies behind the use of research methods in this study. The third sub section of this chapter includes *3c) evaluating the understanding: the approach taken to data analysis*. Having already discussed the theoretical and practical methods employed in this study, this final section identifies the approaches taken to data analysis.

## 3.2 Gaining an Understanding: The Methodological Framework

A research methodology is concerned with the research approach that is taken by the researcher(s). The methodology therefore provides the principles and framework within which research is conducted, and this allows the researcher to adopt a philosophical position to study the phenomena (Creswell, 1994; Williams, 2007).

### 3.2.1 Theoretical framework: approach and design

Theories are created to attempt to explain, predict and understand a phenomenon, and in some cases challenge existing knowledge. A theoretical framework is the structure that supports a research study, often described as the frame that holds the study together. In this respect, the framework is the link between theory and practice (Swanson & Chermack, 2013).

Research projects and their conclusions can be defined by a theoretical framework, however

there is the possibility that this too can be influenced by the researcher's worldview. For example, the research process itself and their outcomes are dependent on how researchers interact and interpret assumptions, existing data, theories and how they use this when gathering evidence and interpreting the data (Crotty, 1998; Swanson & Chermack, 2013). Overall, to ensure the research is valid, it is important to employ a sound research design. This is because the framework employed, and the findings generated can be used as a source of decision making. In this sense, there is a degree of responsibility on the part of the researcher to produce a sound, valid and comprehensive study.

To find and apply the appropriate research design, several authors have made similar recommendations when the aim is to provide a philosophical and conceptual structure to the research process. Creswell (2009) notes three components: philosophical worldview, selected strategies of inquiry and research methods. Flick (2006) links qualitative research perspectives, theoretical positions, methods of collection and application; while DePoy and Gitlin (1998) differentiate between philosophical foundations, research, and design tactics. Overall, Dyson and Brown (2006) note there are advantages to starting research with a clear model, including consistency and quality imposed on the research problem. However, Easterby-Smith et al., (2008, p. 56) warn against having a firm and fixed epistemological stance from the beginning as there may be a "failure to think through philosophical issues" which can seriously affect the quality of the research. Miles and Huberman (1994 cited in Gehrels, 2013, p. 20) offer a notion to loosen the debate around epistemology. They state that adhering to a model provides a frame and structure to the research and although it may be tempting to operate on the poles, the actual practice means that all researchers are closer to the centre with several overlaps.

Essentially, all authors noted above are suggesting a reflective approach when designing and applying research. Conducting research in this way enables transparency and gives the ability to properly argue why certain choices have been made (Gehrels, 2013). In essence, both the subject of the research and the position and view of the researcher is included, while consistency is imposed on the research problem. For these reasons, the theoretical framework and model drawn upon for this study is that of Crotty (1998) and his work in *The Foundations of Social Research*. The model follows four elements:

- 1) Epistemology
- 2) Theoretical perspective
- 3) Methodology
- 4) Methods

Crotty (1998) notes that to clarify the link between theory and practice within research, these four elements should be discussed. Crotty justifies this by saying that when developing a research proposal or an idea, two questions need to be answered: 1) what methodologies and methods will be used? 2) how do we justify this choice and use of methods and methodology? According to Crotty (1998) the answer to the second question lies with the purpose of the research or the research question (i.e., that there is a need for a process capable of fulfilling the research purpose and answering the research question(s)). To ask about the reasons for this choice is to ask about a researcher's theoretical perspective for making this choice. From here there is also a need to understand human knowledge, what it entails, and what status can be ascribed to it, as well as what kind of knowledge a researcher believes will be attained when conducting their study. Four questions have now emerged including:

- 1) What epistemology informs this theoretical perspective?
- 2) What theoretical perspective lies behind the methodology in question?
- 3) What methodology governs this choice and use of methods?
- 4) What methods will be used?

Epistemology deals with the nature of knowledge and justified belief. The theoretical perspective deals with 'how we know what we know' and is the logical stance that informs the methodology (see Crotty, 1998). This means that the theoretical perspective is a set of assumptions about truth and reality and these assumptions "inform the questions we ask and the kinds of answers we arrive at as a result" (Crossman, 2019). The third level, the methodology, is the strategy, plan of action, process and/or design that lies behind the choice of the particular use of research methods. The final level, the methods, are the techniques or procedures used to gather, interpret, and examine the data in relation to the hypothesis or

research question(s) (Crotty, 1998). It must be noted that although Crotty's approach is clear cut with an identifiable reality, it is not static as there is no strict relationship between the levels of the model (Gehrels, 2013). However, it is argued that this model constitutes a strong framework of analysis and one that can help to ensure the soundness of the research study.

### **3.2.2 What about ontology?**

Ontology as a separate perspective was considered in this study. Ontology is loosely defined as a term to describe assumptions and beliefs about the basic nature of reality (particularly social reality). Bryman (2001) discusses these beliefs in terms of dichotomy. On the one hand as an objective reality existing independently of the observer (usually under the objectivist, realist or foundationalist ontology), while on the other hand, that reality is subjective and negotiated within groups (usually an anti-positivist, anti-foundationalist ontology informed by interpretivism or constructivism) (Bryman, 2004; 2015). Questions of ontology are central to the questions asked in social research. For example, ontology can be used to answer questions relating to 'what is reality' and this has been ascribed to various beliefs. Arguably, it can be said that ontology therefore should be addressed first as a perspective in social research and sit at the top of the research pyramid under which epistemology, theory, methodology and methods belong.

Critics suggest that many social researchers bury the discussion of ontology or only deal with the perspective superficially by aligning it with a method or a theory (such as action research or grounded theory). For example, it is argued that when ontology is not examined, the research can become incoherent as it sets out using one position and may end up working within the logic of another (Grix, 2002). However, it is difficult to talk about ontology without exploring epistemology, as the two perspectives are intertwined. Social researchers have difficulty keeping ontology and epistemology apart conceptually as a result. For example, realism (i.e., reality exists outside of the mind) can imply objectivism (i.e., an epistemological notion – meaning exists in objects that are independent of consciousness) (Crotty, 1998). Guba and Lincoln (1994, p. 108) make this link when they make a claim that if a real reality is assumed, the stance of the individual is therefore one of 'objective detachment or value freedom' as it would not be possible to discover 'how things really are' and 'how things really

work'. Here Guba and Lincoln (1994) are saying that accepting the world and the things within it existing separately of an individual's consciousness does not suggest that meanings exist separately of consciousness. A positivist ontological perspective would also have the belief that reality is given. For example, an objective reality exists independent of human beings, social structures, or influence as it already exists, therefore is not influenced by society or people. In contrast, an interpretivist ontological perspective has the view that reality or truth only exists through human engagement, and reality is constructed by people and between those who experience it (Bryman, 2004; Crotty 1998). Crotty (1998) argues that a world without a mind is conceivable, however meaning without a mind is not. Consequently, realism (ontology) and constructionism (epistemology) are compatible and further demonstrate how epistemological and ontological issues can occur together.

Ontology therefore is not an individual element of the model developed by Crotty (1998). Crotty justifies this by noting that ontology is concerned with 'what is' (relating to the existence of nature or the structure of reality) and is better placed alongside epistemology (relating to 'what it means to know') to inform the theoretical perspective. For this reason, both ontology and epistemology are intertwined and dealt with as they emerge. For example, the theoretical perspective that has underpinned this study (and by extension the assumptions made about truth and reality) is social constructionism. Arguably, to talk about constructionism, means to talk about the construction of meaning and the construction of meaningful reality.

In the context of this study, and for clarity, the assumptions, values, and beliefs that have shaped the research fall within an interpretivist ontological perspective. Interpretivists believe that reality is socially constructed through engagement with the world. In other words, reality is not static, and comes into existence through human engagement. Therefore, the same phenomenon can have different meanings depending on cultural, political, historical, and social environments and the contexts in which reality may occur (Bryman, 2004; Crotty 1998). The researcher did not start out with the aim to find a type of reality that could identify *the* relationship between concessionary bus travel and the health and wellbeing of older people, as this does not exist. Instead, the aim was to identify *relationships* between concessionary bus travel and the health and wellbeing of older people, and this was done by



researching and uncovering various interpretations of concessionary travel, health and wellbeing and understandings that have emerged within this subject area.

The following sub sections of this chapter will now bring focus to the relationship between the theoretical foundations of this research study and the methodologies and methods that have been employed (following Crotty's four stage model).

### **3.2.3 Epistemology: The Theory of Knowledge**

Crotty (1998, p. 3) defines epistemology as “the theory of knowledge embedded in the theoretical perspective and thereby the methodology”. Rosenthal and Rosnow (2008, p. 744) refer to epistemology as “the origin, nature, methods, and limits of human knowledge or human understanding of the world”. Generally, epistemology describes beliefs about the discovery of knowledge, provides a philosophical grounding for deciding how a researcher's ontological perspective about reality can be translated into knowledge, and how to be sure that this is adequate and legitimate (Crotty, 1998).

Numerous theories have been developed over time to answer the question ‘what it means to know’ and many questions arise when considering epistemology and objective truth or constructed meanings (see Crotty, 1998). To this research, the epistemological perspectives that have shaped the knowledge sought for this study include objectivist and constructionist epistemologies.

Objectivist epistemology holds that meaning and meaningful reality exist apart from the operation of consciousness (Crotty, 1998). Crotty explains this by referring to a tree. For example, the tree in the forest is a tree (whether people know of its existence), therefore it carries the meaning of ‘tree-ness’. When the tree is discovered, the discovery is simply that the meaning has been there all along. This metaphor is in parallel to early ethnographic research as this objectivist view of ‘what it means to know’, as well as understandings and values can be objectified when studying people to find an objective truth (Crotty, 1998). In this sense, humans attribute meanings to things that have always existed. Therefore, it is possible to gain knowledge by using scientific measures to produce value free explanations of

social phenomenon being investigated (Bryman, 2004; 2015).

Constructivist epistemology rejects the objectivist epistemology view and argues that there is no objective truth waiting to be uncovered, as truth comes into existence through engagement with reality. Constructionists believe that meaning is constructed, not discovered, which leads to the view that different people can construct meanings in different ways. Therefore, the social world is distinct and separate from the natural world and research methods employed should explore these socially constructed meanings. For these reasons, the commonly used methods are qualitative methods (Berger & Luckman, 1966; Bryman, 2004; 2015; Crotty, 1998). There are several distinct branches that have stemmed from constructionism (including for example, symbolic interactionism, ethnography, social constructionism, and phenomenology) and each have developed different theoretical foundations surrounding knowledge. To this study, discovering knowledge about the relationships between concessionary bus travel and the health and wellbeing of older people was influenced by phenomenology and social constructionism as constructionist epistemologies.

### **3.2.4 Stage two: Theoretical perspective**

Crotty (1998, p. 3) defines the theoretical perspective element in his model as “the philosophical stance informing the methodology and thus providing a context for the process and grounding its logic and criteria”. Here, it is argued that researchers bring several assumptions to their chosen methodology, and to produce a sound piece of research, there needs to be an honest discussion about these assumptions.

### **3.2.5 Phenomenology**

Phenomenology is a social theory that is rooted in the work of Husserl (1859-1938), later developed, and adapted by many scholars over time (see for example, Gadamer, 1900-2002; Heidegger, 1889-1976). The universal and unifying idea behind phenomenology posits that meanings of the social world already exist (Crotty, 1998). This means that human beings are born into and experience a world that already has recognised meanings, social order, reality, organisations, interactions etc. and this has been passed down through different generations

and cultures. The goal of phenomenology then is to describe this experience and the way things appear and are perceived to the consciousness (Crotty, 1998).

The approach taken in phenomenology is through the objectivity of the observer and the way humans come to understand the world, how it has been constructed and the agreement about how it works, referred to as the lifeworld. In this case, phenomenologists claim that meanings become sedimented and habitualised to form this lifeworld, to the extent that the reasons why humans ascribe meanings and actions to things becomes skewed and often lost (Crotty, 1998; Tuffour, 2017). In this sense, meanings have roots in human actions and activity as background knowledge, assumptions, expectations etc. are not unique constructs. Furthermore, phenomenology views consciousness as being developed through experience. When humans try to make sense of something, this is always with a purpose in mind, however, as the social world is seen as the product of social processes, this follows the idea that humans must supply the purpose. This leads to the philosophical view that there is no a priori meaning to existence and the world 'just is' (Warwick, 2018).

Finley (2013) in his work *Unfolding the phenomenological research process: Iterative stages of "seeing afresh"* notes that phenomenology aims for complex, fresh and rich description of phenomena as 'concretely lived'. The task of phenomenology then is to explore subjective meanings and how these give rise to an objective social world. Arguably, it is difficult to translate complex human consciousness into a phenomenological methodology, especially when the aim is to explore assumed or taken-for-granted human situations (that usually go unnoticed or are unquestioned) (Crotty, 1998). In addition, phenomenologists aim to describe 'lived experiences' by focusing on the individual at the same time as seeking common perceptions among groups. However, a main criticism of phenomenology is that it lacks attention to the wider social context. In addition, within phenomenology, debates continue about the appropriate ways to undertake phenomenological research, with two broad categories being identified (descriptive and hermeneutic) (Tuffour, 2017). Descriptive phenomenology examines the structure of experiences as they occur in consciousness. Here the descriptions of the experience are attached to the data without the influence of external theory (Tuffour, 2017). Husserl developed methods of bracketing for example, where all preconceptions about both the subject and object are suspended to allow the consciousness

to be analysed phenomenologically. The researcher is to 'bracket' past knowledge or assumptions. Heidegger (1962) rejected the idea of suspending personal opinions, noting this is impossible. Therefore, the hermeneutic or interpretive approach is based on the principle that reduction is impossible and personal knowledge is useful and necessary (Tuffour, 2017). A sub-section on inevitable bias and personal knowledge (below) details an account of any preconceptions the researcher has and how this may have influenced the research.

Overall, phenomenology challenges common-sense knowledge and this can be achieved by setting aside (as much as possible) understandings of phenomenon to allow for the possibility of the emergence of new meanings (Crotty, 1998). In this case, it is the researcher's review of the literature and knowledge base that can lead to the discovery of a topic area that needs further investigation. In this study, the literature search identified the consequences of transport disadvantage and mobility leading to overall social exclusion, isolation, and loneliness. This is well documented in the research, however local and national governments have no specific method to link output measures (frequency and distance) with context-specific information, which has led to a policy disconnect at a local and national level (relating to active travel, transport, infrastructure, usable alternatives etc). To create an age friendly travel and community environment that ensures the benefits of concessionary bus travel can lead to inclusion, this study aims to investigate the benefits of the concessionary bus pass and link up opportunities for social connectedness to exist and continue (three elements of connectedness have been identified).

Interpretive phenomenology has underpinned this study. The approach has been to study a small cohort (of concessionary bus pass users), explore and understand meanings ascribed to bus use and the possible link to health and wellbeing. The aim is to blend the researchers and the participants understanding of lived experiences and meanings ascribed to these, develop patterns, and ultimately shed light on new meanings related to the complexity of the social world. To do this, an importance is placed on the lived experiences, feelings, emotions, and personal response of the participants. This aligns with the current preference as scholars are now adopting an interpretivist phenomenological analysis to study social phenomenon (Tuffour, 2017), particularly in the study of transport and travel behaviour (Lucas, 2013;

Musselwhite, 2011; Murray, 2019; Urry, 2016).

### 3.2.6 Social Constructionism

*“The starting point of the social sciences has to be the ordinary social life of people”  
(Schutz, 1932/1976, cited in Aspers, 2009, p. 3).*

Schutz is considered the founding father of phenomenological sociology as he adapted phenomenological epistemological perspectives and applied these to the social sciences in his quest to explore various understandings of reality. Berger and Luckman (1966) defined reality as a quality relating to phenomena that is recognised as independent of an individual's volition. Berger and Luckman (1966) believed that the aim of sociology and sociological research ought to explore and investigate the everyday lives of people and their socially constructed ideas of knowledge. Their work has been of particular significance to social constructionism as they were interested in how knowledge is produced, formed, distributed, and adopted as well as how the validity of knowledge can be socially established (Berger & Luckman, 1966).

*“Meaning is not discovered; it is constructed through the interaction between  
consciousness and the world” (Crotty, 1998, p.44).*

Crotty (1998) defines constructionism as the epistemology positioned in the middle of two extremes: subjectivism and objectivism. Constructionism believes that the essence of creating knowledge is not finding an objective truth waiting to be discovered, it is an approach that sees realities as social products of the actor, interactions, and institutions (Flick, 2006). Therefore, knowledge is constructed through social interchange between the subject and the object and social constructionism as a theory of knowledge in sociology examines the development of constructed understandings (Elder-Vass, 2013; Hacking, 1999). This perspective believes that a great deal of human life exists due to social influences, and it assumes that understanding, significance and meaning are developed in coordination with other human beings (Owen, 1995; Hacking, 1999).

The core idea of social constructionism lies behind an awareness that “this thing could not have existed had we not built it; and we need not have built it at all, *at least not in its present form*” (Boghossian, 2001, p. 1). This is evident in Moussa’s work on *The Social Construction of Women Refugees* (1992). Moussa argues that women were deemed refugees because of social events, which exposes the idea that the way in which a belief is shaped (i.e., that there is a kind of person – the woman refugee) is deserving of being singled out for distinct attention. As discussed in chapter 2, the concept of age is socially constructed, and this has consequences for older people who experience the ageing process differently. Questions arise about the age of entitlement for a concessionary bus pass (previously linked to the age of retirement) as this has now changed and differs across the UK. The age of entitlement is no longer aligned with these changes, suggesting that theory construction around this topic (to be inclusive) would be better placed focusing on experiences, multidisciplinary perspectives, and various levels of analysis (see Baltes & Carstensen, 1996; Gorman, 1993; Grigsby, 1996). Hacking (1999) goes further in his study and concludes that when X is said to be socially constructed, this is shorthand for at least two claims. (1) X is not inevitable as it is not determined by the nature of things, and (2) X can be done away with, or at the very least transformed. Hacking (1999) examined a wide range of articles and books within his study and suggests that social construction is applied not only to worldly items (i.e., things and facts) but also to beliefs about them. For example, while ageing itself is a biological process, what it means to be ‘old’ or ‘young’ is socially constructed. This is because there is no specific inherent cultural meaning to the biological process of ageing, however cultures do instil ‘young’ and ‘old’ with meanings (Gleason, 2017). Therefore, age is socially constructed as ageing is perceived differently around the world. The lack of an operation definition of ageing is also attributed to age being a biological reality and functional social construction rather than a process experienced differently from person to person (Andrews, 2012a). Evidence suggests however that a person can report ‘feeling old’ in one context and ‘not old’ in another (Andrews, 2012a). Metz (2000) and Rosenbloom (2004) note that it is these variations in experiences and perceptions that present difficulties when attempting to measure the concept of age, further highlighting the diversity and heterogeneity of those over the age of 60. For example, notions of age (i.e., when someone is perceived to be ‘too old’) are to an extent socially constructed as perceptions can vary and be shaped by interactions and

experiences (Swift & Steeden, 2019). Nelson and Dannefer (1992); Rye and Carreno (2008) and White & Baker (2010) criticise the simple numeric approach to ageing, also pointing out the heterogeneity within the age group itself (in terms of health, income, and travel patterns), noting that there are far more variations in this group than between any other age group within society.

Spector and Kitsuse's (1973a; 1973b; 1987) theoretical work on the *Social Construction of Problems*, and Loseke's (2007; 2017) work on the *Social Construction of Policy Problems* emphasise the nature of social problems and they argue that these are best understood through the definitions and interpretations that human beings construct about them. Furthermore, these theories focus on the ways in which society understand and/or experience social problems, through analysing the historic, cultural, social, economic and political values that have defined them and therefore shaped their solutions. Consequently, social constructionism is applied to social research as a means of theorising about specific topics. Social problem theories (Berger & Luckmann, 1966; Burr, 2015; Clarke, 2001; Green, 1975; Loseke, 1999; 2017; Spector & Kitsuse, 1977) look at the processes by which society designates social conditions as social problems. This contrasts with realist perspectives, who treat social problems as given or pre-determined (Clarke, 2001). Social constructionists and social problem theorists argue that the central role of meaning is that there cannot be social problems that are not the product of the process of social construction. This is because throughout history and through different circumstances, some conditions have been treated as private misfortunes, yet in other circumstances defined as social problems. Therefore, social problems only become real when humans categorise them as troublesome, problematic, in need of repair and requiring some form of a collective response (Clarke, 2001; Green, 1975; Jacobs & Manzi, 2000; Loseke, 2017).

Defining this research in the constructionist tradition would reject an objectivist and positivist approach, as these would traditionally start with a theory in the body of the literature to produce a hypothesis to be tested. This is because objectivism claims that research should be objective and value free (Richards & Morse, 2007). However, the sample researched in this thesis were not value free and reality was not constructed. As noted above, the researcher brings several assumptions to the chosen methodology, and within this study this included an

understanding of the policy issues relating to public travel, concessionary travel, isolation, depression, and issues experienced by older people (as a politician, researcher, student, and grandchild). Social constructionism is concerned with the process of how a body of knowledge becomes socially accepted as a reality. This relates to the aim of this research study and the ways in which social constructions and assumptions about age, quality of life, policy formation, concessionary travel, health, wellbeing, and social connectivity have been studied as separate issues, but understandings about the links and connections with these phenomena and have not been questioned.

### **3.2.7 The social construction of a social problem**

It has been noted above that the epistemological perspective that underpins social constructionism as a theory of knowledge is popular amongst academics within the social sciences today. This is because it holds the view that the social world is created through social interactions between humans. However, constructionism has also developed as a means for theorising about different topics within several disciplines and constructionist ideas have inspired forms of practice outside of the academic world (Gergen, 2009). It could be said that social constructionism is both a theoretical perspective and an epistemological perspective. The social construction of a social problem is one example that can be used to describe this phenomenon.

The social construction of a policy problem has been a key focus for academics recently, as this is considered the process by which society designates particular social conditions as social problems (Clarke, 2001; Page, 2001; Schneider & Ingram, 1993; Wacker & Roberto, 2011). This perspective is controversial for several reasons. First, it rejects the realist perspective (i.e., social problems are given) and instead says to take a step back and ask, 'why this is a social problem' and 'who said it is'. Second, because a personal trouble may become a public issue, this does not necessarily mean that there will be agreement about the extent, cause, or resolution to the problem. Mills (1959, p. 8-9) asserts that:

*“Troubles occur within the character of the individual and within the range of his immediate relations with others; they have to do with his self and with those limited areas of social life of which he is directly and personally aware.”*



The resolution of troubles, then, lie within the individual as an entity and the social setting open to personal experience. The trouble is seen here as a private matter and therefore individual. However, Kemeny (1984; 1992) notes that every problem is involved in conflict about what should be done to solve it and whether it exists and merits public attention. Therefore, the solution emerges from socially constructed definitions (see Schneider & Ingram, 1993) and social constructionism offers a theoretical lens where the development of social policies can be explored (see for example, Clarke, 2001; Page, 2001; Schneider & Ingram, 1993; Wacker & Roberto, 2011). This is because social policy can be loosely defined as the study of social problems and the policies that aim to address them (Blakemore & Griggs, 2007).

A social constructionist perspective would ask why some social problems become the focus of legislation and why others do not (Wacker & Roberto, 2011). Mills (1959) identifies the distinction between a *personal trouble* and a *public issue* when he characterised this as the difference between the personal troubles of a person's social environment and the public issues of social structure. Mills concludes that what is considered an issue is likely to change in accordance to time and place, and how the problem is defined will determine the nature of the policy response. Therefore, social constructions have an important role in understanding current policies (or lack thereof), as *personal troubles* or *public issues* can be influential in determining the policy agenda (see Page, 2001). Loseke (2007) claims that the social construction of social policies requires that society must be persuaded that a social problem or condition exists, that it is troublesome and widespread, that it *can* be changed, and that it *should* be changed. Considering this perspective, social policies are influenced by the process of social construction as it will determine what problems are deemed worthy of a policy response and direct the way this response is operationalised. Schneider and Ingram (1993) agree and argue that social constructions influence the policy agenda as they become embedded in policy as messages that are absorbed by citizens and affect their orientations and participation. The theory is seen as important as it helps to explain why some groups are advantaged more than others and how policy designs reinforce or alter such advantages.

Overall, the social construction of a policy problem can be understood through definitions

and interpretations that humans construct about them. Accordingly, it is easier to understand why some issues attract attention, while other equally significant problems are ignored as they consider the historic, cultural, social, economic, and political values that have defined problems, and their shaped solutions. This is relevant to this study as Spector and Kitsuse (1973a) note that every social problem has its own unique history and the task is to “determine if social problems have a ‘natural history’ and if so, to describe its stages and the contingencies of its development” (p. 146). This idea can be linked to age and aging and the context of the relevance and need for a concessionary bus travel scheme, specifically, when a focus was placed on social exclusion and the link between mobility and quality of life in older age.

### **3.2.8 Developing the aims of the research questions**

The literature review revealed that notions of age and ageing have been shaped by socially constructed assumptions that vary and are influenced by interactions and experiences. It is believed in many cases that using a simple numeric approach to ageing ignores the wide variations within this cohort. This demonstrates the need to approach this topic with caution as any inclusive theory construction needs to take into consideration the heterogenic experiences and multidisciplinary perspectives that go beyond empirical trends or averages. Ageing is a biological process, but what it means to be old is socially constructed. It is within this context that this methodology explores the socially constructed assumptions about ageing and the processes that have sustained this.

In addition, the literature review revealed that there is a need to bolster evidence surrounding the individual benefits of the concessionary bus scheme as this can inform policy and future decisions relating to transport and travel services. This study recognises that research to date has focussed on the relevance and need for a concessionary travel scheme policy linked to social exclusion and the relationship to mobility and quality of life for older people. However, there is currently no defined methodology in place to assess all elements of the public transport chain, relating to the development, contribution and outcome of concessionary travel and how this relates to improved health, wellbeing, quality of life for older people and social connectivity. This is difficult when the aim is to evaluate concessionary fares schemes

against mitigating the effects of social exclusion and improving quality of life as there is no average concessionary pass holder and user.

Taking into consideration the socially constructed assumptions of ageing and how this has influenced the lived experiences of older people in terms of the development of a concessionary fares scheme, the following research questions emerged:

1. What is the meaning of concessionary bus travel and owning a pass?
2. What are older people's experiences of concessionary bus travel?
3. What are the relationships between concessionary bus travel, social connectivity and the health and wellbeing of older people?

Research to date has explored the meaning of concessionary pass use in several key areas, however to this researchers' knowledge, existing literature has not explored this in the context of the relationship between concessionary travel, health and wellbeing and linking social connectivity to the development, contribution, and outcome of the connection from participants own lived experiences.

### **3.3 Applying the understanding: the methodological approach**

As the epistemological and theoretical underpinning of this study has been discussed, this section will now detail the methodological design and approach taken to the research, including the rationale for these choices.

#### **3.3.1 Stage three: Methodology**

Crotty (1998, p. 3) defines the methodology element in his model as "the strategy, plan of action, process or design lying behind the choice and use of particular methods and linking the choice and use of methods to the desired outcomes". For Crotty (1998), at this stage there is a need not only to describe the methodology, but also the rationale for the choice of methods that are employed. This section will first explore traditional and recent methodologies used in transport research before detailing the strategy, plan of action, process and design that lies behind the use of research methods in this study.

### **3.3.2 Transport Studies: Traditional and current methodologies**

The history of transport research reflects the modes of transport changes and the drivers that have shaped UK transport systems throughout the twentieth century (Gunn, 2018). During the twentieth century, consumer demand, rising standards of living, technological innovation and changes to government provision have driven the growth in car ownership, aviation travel and the use of public transport up (Gunn, 2018), while at the same time leading to a decline in walking and cycling (Government Office for Science (GOS), 2019). Major periods of change include the years following the two world wars (aviation motor manufacturing), the 1960s as a period of experiment in transport (containerisation and rapid aviation and motorway construction), and finally the privatisation of air and rail travel and key infrastructure projects during the last few decades (Gunn, 2018). Some of the recognised consequences of these changes include an overloaded transport system, congested roads and crowded public transport. However, Gunn (2018) notes that the changes in patterns of transport and mobility and the resulting consequences are difficult to assess as they are 'hard to isolate' and are 'still playing out'.

Civil engineering has been the dominant discipline within transport research and as a result is the discipline that has shaped living conditions for modern people (i.e., by building various settlements and transport systems that are efficient, effective, and meet expectations) (Haladin & Antie, 2003; Ksiaskewicz, 2012). Transport planning and research developed alongside the emergence of the car in the 1920s, where the process of evaluation included journey potential, demographic and urban planning forecasts and the creation of alternative solutions. However, historically this research has focussed on the preference of quantitative over qualitative research methods. An example of this is in the research conducted by Erlander and Stewart (1990) where graphical models are used to explain the flow of traffic. In this research the flow of water was used to explain the flow of traffic for example (Ksiaskewicz, 2012). However, Raje (2007, cited in Ksiaskewicz, 2012, p. 133) notes that the conclusions drawn in this example would be based on the perception of mobility and mass movement, suitable for macro level analysis.

Although using quantitative research methods have proved useful within the field of transport research, especially when the overall aim is to generalise high levels of statistical data to reflect the needs of a population, this is not suitable when the aim is to understand participants thoughts and behaviours, reasons for travel beyond the destination or the positive connections made through social interactions. For example, a recent cross-sectional longitudinal ecological study used aggregated data in twenty-five North American cities and observed that cost and time were important determinants of city-wide public transport ridership (Boisjoly et al., 2018). However, Gascon et al., (2020) notes that one main limitation is that many studies that apply an ecological design, where the aim is to compare large groups instead of individuals, is that they are only beneficial for hypothesis generation rather than hypothesis testing. In addition, it can be argued that quantitative data gathering is unsuitable when studying the specific transport needs of people, particularly older people and those with mobility needs. Evidence presented in chapter 2 noted that the bus system is built around the needs of the young traveller, which raised issues about usability in rural areas that are more diverse, disparate, and geographically dispersed (De Witte et al, 2008; Westerson, 2019). It could be argued that this is due to a poorly designed transport system as transport planners have optimised structures based on standardised quantitative research results. The outcome has been the creation of a hypermobile society that does not always meet the social and economic needs of older people or those with specific mobility needs.

Considering future developments in transport technology and research is also important. Cars powered by fossil fuel will be replaced with electric vehicles, while high speed rail is predicted to transform journeys between cities and enhance capacity. Developments and investments into public transport are also predicted to provide more choice, reliable and accountable services, greener journeys, and all at a lower cost. According to GOS (2019) this integrated 21<sup>st</sup> century transport system will be underpinned by digital connectivity and data. This reinforces the need to consider the transport system as a whole system, but to balance this with the consideration of individual travel behaviours by making people central and at the heart of any connective system. In addition, considering the transport system (and by extension the bus system) as a whole system, as well as incorporating the wide range of factors that people experience when using this service, highlights that this is multidimensional as an academic research area and discipline (involving topics covered in social policy,

gerontology, and transport research). For example, it has been noted that there is a significant amount of research based on reducing social exclusion, isolation and loneliness related to concessionary bus use and public transport and academics agree that methods of transport research need to incorporate a person-centred approach when the aim is to understand human behaviour.

Although transport research still involves the use of a quantitative model, there is a shift in the approach and methodologies being used and qualitative methods in transport research are now being considered (Ksiazkewicz, 2012). Urry (2016) notes that the importance of social synchronisation started to develop with the introduction of the Transport Studies Unit at Oxford (in 1983) and the Social Exclusion Unit (in 2003). In addition, an interdisciplinary approach is now underway following the report on *The Future of Mobility*. The aim is to bring evidence together from a range of fields including the social sciences, engineering, and science (GOS, 2019). Lucas (2013) in her work *Qualitative methods in transport research: the 'action research' approach* explores the potential of 'action research' as a transport survey method. The aim is to critically assess action research and its effectiveness in the resolution of transport policy challenges (including mitigating climate change, transport related social exclusion and intergenerational equity issues) by developing practical knowledge based on lived experiences and grounded in a participatory world view. The advantages of action research and by extension qualitative research, means that the outcomes can be useful to participants (it can lead to local changes for example) and researchers (findings can be considered robust and grounded). However, a key issue would then mean that the results are localised and may only allow for micro level analysis. One growing body of transport research now also includes attitudinal travel surveys. These are not generally classified as qualitative (Clifton & Handy, 2001), however can be used as a means for measuring factors in travel behaviour. For example, Ryuichi et al., (1994) incorporated attitudinal questions in their three-day travel diary when they were studying residents in five neighbourhoods in San Francisco. Sections focused on neighbourhood preferences, lifestyle, mode choice and outdoor hobbies (thirty-nine questions). The researchers used factor analysis, creating eight factors that showed attitudes are strongly associated with travel demand measures. Overall, this allowed the researchers to determine the power beyond socio-economic, demographic and neighbourhood characteristics. Several studies have also used the travel diary as a

qualitative method (based on attitudes and perceptions), however have focused more on the aspects of travel rather than the diaries (see for example Clifton & Handy, 2001). Mokhtarian (2001, cited in Clifton & Handy, 2001) notes that survey design in this context is challenging and exasperated when the aim is to capture attitudes. This is because attitudinal surveys (and travel diaries) can be susceptible to wording bias, context effects and order problems.

Overall, the evidence suggests that the social context of the transport system relating to older people and concessionary bus use is important. While quantitative approaches are interested in knowing frequency and distribution for example, qualitative approaches focus on the experiences of the individual related to travel. The reasons for adopting a multi-method approach within this research study, which employs the use of both quantitative and qualitative methods, is discussed below.

### **3.3.3 A multi-method research approach**

Considering the aims of this study, specifically to assess the relationship between concessionary bus travel and its implications for the health and wellbeing of older people in maintaining social connectivity, a multi-method approach has been adopted.

A multiple method research (MMR) approach is a type of research that draws on data from more than one source and may employ more than one type of analysis, allowing for the combination of differing philosophical underpinnings (Davis et al., 2011). Within the social sciences, a division exists that separates qualitative and quantitative research traditions and recently mixed methods have emerged as a way of bridging both traditions (Gonzalez-Castro et al., 2010). This encouraged the use of multiple techniques to be used in the same study. Davis et al., (2011) assert that using multiple methods to study a phenomenon can help to produce results that are considered more robust and compelling, compared to single method studies. Andrews (2012a) uses an MMR approach in his work when analysing changes in bus use, as well as the nature of these changes to the quality of life of concessionary bus pass users. The study adopts a quantitative survey method approach to research aggregate level trends and follows this up with qualitative focus groups to ground the aggregate data and explore subtle behaviour changes. Stradling et al. (2007) adopted MMR to explore ideal bus

journey experiences. The study consisted of a large-scale quantitative survey that was supported by qualitative data to explore the wider findings in greater depth. Clayton (2012) also adopts an MMR approach in his thesis on travel time activity, technologies, and journey experiences on the bus. Here qualitative data was collected to explore travel-time activity and journey experience to generate an in-depth discourse through a questionnaire, and the themes were refined for further analysis through a quantitative large-scale survey to test wider applicability. Finally, Clifton (2001) undertook semi-structured interviews to identify the mobility constraints of low-income households. The findings were complimented by analysis of regional travel diary data to clarify the decision-making process behind observed travel behaviours. Applying these two methods allowed Clifton (2001) to conduct a thorough examination of the mobility needs of the poor. Clifton (2001) notes that the interviews were able to provide rich details and a depth of understanding (such as time, demand, financial resource, activities, needs), which would not have been possible through analysis of the travel diary data alone (which described aggregate travel patterns of a large sample size). The results showed differences between the observed travel behaviour of low-income populations compared to those with additional financial resources (Clifton & Handy, 2001).

Reflecting on the work of Andrews (2021a), Clayton (2012), Clifton and Handy (2001) and Stradling et al., (2007), the use of multi-methods within this study also recognises that quantitative data alone would be insufficient to assess lived and individual experiences of concessionary travel and bus use as these experiences are highly contextual and subjective. On the other hand, it is deemed important to understand some aggregate factors such as travel time, distance walked, and duration on the bus. The logical approach therefore was to employ a two-phase multiple method approach. The first phase involved conducting semi-structured interviews with identified concessionary bus pass users to address the research questions. Conducting semi-structured interviews would allow the respondents to share information in their own words at the same time as allowing the researcher to adapt and be flexible. For this reason, it was deemed unsuitable to ask respondents to recall specific aggregate information such as travel time, distance walked, duration on the bus etc. The second phase comprised of phase one participants completing a seven-day paper-based bus travel diary. The overall aim of the travel diary is to bolster the information provided at the interview stage and add a further dimension to phase one results. This would allow the



researcher to further understand how, when, where and why phase one participants travel around using the bus, as well as the quality of the journey, if any external factors would have affected the decision to travel by bus, and what other options would have been available if this was the case. The travel diary was therefore designed to be a complementary or embedded method, to be completed in what could be perceived as the more natural environment (i.e., before, during or after bus use) when asking these questions would be more appropriate.

Methodologists writing about MMR have classified the different types of multi method designs, with Tashakkori and Teddlie discovering almost forty types within the literature (1998, cited in Creswell & Clark, 2007). These classifications represent several diverse social science disciplines, emphasise different facets of designs and lack overall consistency. As the goal of MMR is about heightened knowledge and validity, the design used should be of a sufficient quality and the purposes of use must be made clear (Schoonenboom & Johnson, 2017). Greene et al., (1989, p.259) distinguish five purposes for MMR including (1) *Triangulation*, or convergence of information through different sources; (2) *complementarity*, or concurrent examination of various facets of a phenomenon through two or more studies (3) *development* or use of one study to inform a subsequent study; (4) *initiation*, or the use of a preliminary study to launch the main study; and (5) *Expansion*, or the use of different methods for different inquiry components. Several authors have adapted or supplemented these classifications (see Creswell & Clark, 2007; Davis et al., 2011), with Bryman (2006, p. 105-107) formulating additional aspects and rationales for conducting MMR. This demonstrates there are several ways for using MMR, all with differing purposes.

When designing an MMR study, Schoonenboom and Johnson (2017) note it is occasionally helpful to have an overall theoretical drive. This is because a study investigation is either focused on exploration and description (inductive or qualitative) or on testing and prediction (deductive or quantitative). In MMR, the component that relates to the theoretical drive is the 'core' component or the 'supplemental' component (Morse & Niehaus, 2009; Schoonenboom & Johnson, 2017). In Morse and Niehaus (2009), the core component is written in capital letters to show that more weight is attached to the data coming from that component (for example, QUAL - quan). For this reason, the core component must be able to

stand on its own and be implemented rigorously, whereas the supplementary component does not have to stand on its own and can be done less rigorously (Morse & Niehaus, 2009). Applying less rigour to the supplementary component has been criticised by Schoonenboom and Johnson (2017) however, as there is no explanation relating to the specific ‘rigour’ that can be dropped in this situation. In addition, to do this would mean conflicting the aims and purpose of MMR, which is to meet multiple criteria of validity.

Finally, Creswell & Clark (2007) note that once a researcher has decided what MMR approach to use, the next stage is to choose the specific design that will best address the research question(s) or problem. According to Davis et al., (2011) the two fundamental design decisions are the *weight* assigned to each method as well as the *timing* of the use of methods. This is because the weight dimension describes the level of reliance placed on each method, whereas the timing reflects the order the data has been analysed and used to answer the research question(s). Overall, the researcher may decide to assign either equal or unequal weight to the method (reflecting the importance placed on the data in answering the question) and a sequential or concurrent timing dimension. Here, sequential means that the first method collects, analyses, and interprets the first data prior to the implementation of the second method, whereas concurrent means that multiple sets of data are collected, analysed, and interpreted at the same time (see figure 5) (Davis et al., 2011).

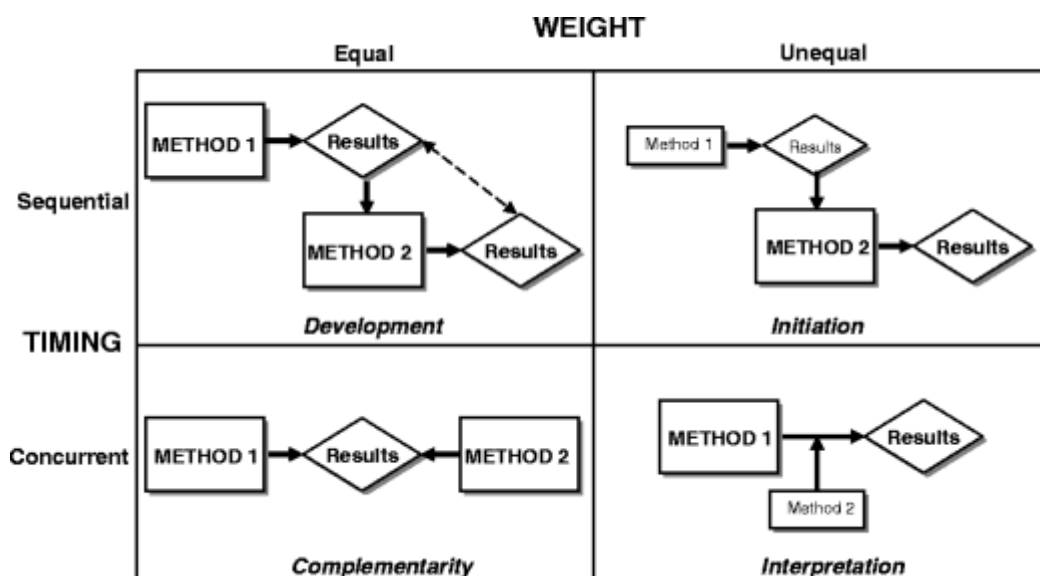
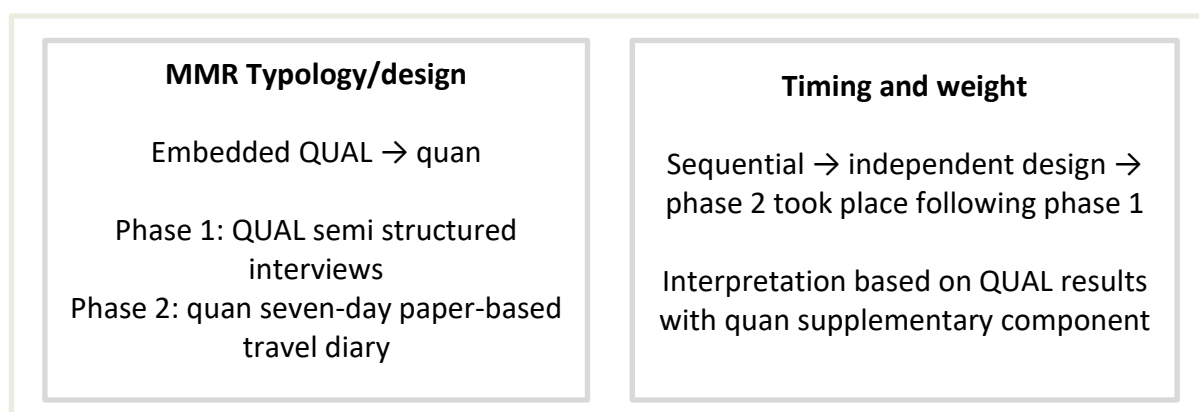


Figure 5: MMR research designs (adapted from Tashakkori & Teddlie, 1998, cited in Davis et al., 2011)

The point of integration is the distinguishing feature of an MMR design and determining this point and how the results will then be integrated is considered the most important decision within an MMR study (Schoonenboom & Johnson, 2017). Morse and Niehaus (2009) note two points of integration (the results point and the analytical point). The results point of integration follow the process of writing the results of the first component and then integrating the second component. The analytical point of integration is where the first component or stage of qualitative results is followed by a second analytical stage, where the topics in the first stage are ‘quantized’ in the second (Schoonenboom & Johnson, 2017). Teddlie and Tashakkori (2009) identify four possible points of integration (conceptualisation, methodological experimental, analytical experimental, inferential stage), however these further complicate the point of integration as being too course to distinguish between some types of mixing. For example, Schoonenboom & Johnson (2017) note that mixing during the experimental stage can take several forms. The authors argue that a researcher can mix at any stage within the study as the options are widespread, however it is important to consider this process as the ‘bridging together’ of two or more components based on the overall purpose set out in the study design and the choice for using MMR.

As discussed, there are various purposes for conducting MMR and each includes various typologies of mixed method designs (see Creswell & Clark, 2007; Morse & Niehaus, 2009; Teddlie & Tashakkori, 2009). This study has adopted Morse and Niehaus (2009) combination of QUAL → quan, which follows a qualitative core component (inductive theoretical drive) with a sequential quantitative supplementary component. Creswell and Clark (2007) also propose commonly used designs, including an embedded MMR design (see diagram 1 below).



*Diagram 1: MMR methodology (Creswell & Clark, 2007)*

This study has collected quantitative and qualitative data simultaneously, however priority is given to one approach that guides the study (qualitative in this case) while the other approach is embedded into the study to play a supplementary role (in this case quantitative). Overall, this design is deemed useful when the aim is to gain a broader perspective on the research topic (Creswell & Clark, 2007; Pardede, 2018). This MMR approach and design is justified in this case as the aim of the study is to identify relationships between concessionary bus travel and its implications for health, wellbeing, and connectivity amongst older people in the context of their daily lives and lived experiences (phase one – qualitative) and how these concessionary pass holders use the bus in the context of their daily lives (phase two – quantitative). The quantitative aspect of this study does not hold equal weight, however, does hold the advantage of adding depth to the overall study. Method triangulation of the data was considered (see Carter et al., 2014; Heale & Forbes, 2013; Jick, 1979; Patton, 1990) as this involves using multiple methods of data collection about the same phenomenon to test validity through the convergence of information from different sources. However, although the analysis of phase one and two was independent (discussed below), the purpose was not to determine if they both yielded the same results. Therefore, the results are presented separately in the findings chapter. The qualitative results form the first main section (A) and the quantitative (B) forms a smaller sub section at the end of the chapter, embedded to add some aggregate dimension and depth to phase one results. The data is analysed and interpreted in one single report of results (chapter 6 – discussion).

### **3.3.4 Sampling Strategy**

Given the aims of the research, it was decided to employ one overall sampling strategy to study concessionary pass holders and users prior to the phase one stage and use these participants for the phase two stage due to the embedded design. Various sampling techniques exist (Creswell, 2009), however two were considered for this study (purposive and convenience).

Convenience sampling was considered in the first instance as this is a technique used to recruit participants who are easily accessible and convenient to the researcher (Bryman, 2004; 2015). In this case the researcher considered approaching local authorities to access public information on concessionary pass users within the context of Swansea, South Wales.

A random sampling technique would then allow for an equal chance of selection. However, three concerns arose from the outset. First, local authorities would have to follow the General Data Protection Regulation (GDPR) Act (2018). Second, even if this was not the case, the researcher deemed this technique as inappropriate due to the professional position held as a county councillor for the City and County of Swansea (the distinguished roles of being a doctoral researcher and a county councillor are discussed in a separate section below, to address any potential ethical issues raised). It was decided that applying for information in this way could have caused confusion about the aims of the research and the reason the information was being requested. For example, this could have blurred the lines and boundaries between the positions of county councillor and PhD researcher. Finally, random sampling is mainly used within a quantitative research model (Bryman, 2004; 2015), whereas this study places more weight on the qualitative aspect of the methods employed.

Purposive network sampling was therefore deemed suitable due to the different recruitment strategies that can be employed when using this method (gatekeeper, formal and informal networks, snowballing, advertisement) as this can maximise efficiency, validity, and the credibility of the results (Bryman, 2004; 2015; Hennink et al., 2011). In addition, this technique is more widely used in qualitative research as it provides the means to recruit participants who fit the set inclusion criteria, which allows for the collection of in-depth and detailed information, knowledge, and insight related to the phenomenon being studied (in this case lived experiences of concessionary bus use). There are several different purposive recruitment strategies that can be employed, each with their advantages and disadvantages. The rationale for selecting specific participants must reflect the purpose or goals of the study, while recruitment itself should aim to control bias and obtain a representative sample size (Hennink et al., 2011). Therefore, it is considered useful to use several strategies (placing posters, attending meetings, or contacting personal/formal networks) as this may offset any shortcomings (Bryman, 2004; 2015; Hennink et al., 2011).

### **3.3.5 Recruitment: purposive network sampling**

The first recruitment method considered was to use social media as an informal network. The use of social media as a recruitment tool is increasing (Gelinis et al., 2017), and some

researchers have had a great response and outcome. For example, Clayton (2012) used Facebook to recruit participants to a 'Bus Tales' research group, which led to 146 members joining. This research study considered this strategy and planned to post a brief description of the study's research aims online (through Facebook, Twitter, LinkedIn), including the necessary contact details of the researcher. Participants would be asked to contact the researcher directly. This would allow the information to be shared widely and provide the protection of anonymity to those who chose to respond. In this case, social media is considered an attractive recruitment tool as it provides the option to reach wider segments of the population at random (Gelinias et al., 2017). However, despite the growing popularity of using social media, there is no specific regulatory guidance to use this as a recruitment method (Gelinias et al., 2017), which raises ethical issues (including investigator transparency and respect for the privacy of social media users). For example, social media users, particularly vulnerable and older adults as users, may lack the knowledge or know how to manage privacy settings and may fail to grasp the extent to which information is shared online and made publicly available (Boyd, 2010). The possibility of an older person 'commenting' on a shared recruitment post and not realising that their comment could be read, and their profile viewed by another social media user, posed too much of a safety issue, ultimately raising concerns about privacy and anonymity. Without clear regulatory guidelines, this recruitment method was considered unsuitable.

The second tool considered as a recruitment method was placing posters and advertisements in different parts of the community. This would include public places such as notice boards in doctor's surgeries, community centres, supermarkets, and shop windows. An advantage of using this method includes giving participants the ability to self-identify their eligibility criteria as well as the option of choosing to be a part of the study without coercion (Hennink et al., 2011). General disadvantages include the response rate often being low, however, this recruitment method was discarded after identifying a potential conflict related to the researcher's role in the community as a county councillor. The researcher has several posters already advertised on public buildings, with her image, contact details and surgery dates and times visible. It was deemed unsuitable to place a poster advertisement relating to bus-pass use in the same areas as this may have caused confusion in the community. For example, it may have caused some older people to perceive the research as being led by the City and

County of Swansea, which could have impacted on the validity of the research and raises ethical issues surrounding transparency, honesty, and public trust.

Finally, using formal networks (such as Age Cymru, Age Concern etc.) was considered, however as noted above, there is a challenge gaining the necessary permission from network organisers. In addition, recruitment could be limited and exclude those who do not use a specific network or service (Hennink et al., 2011). Using informal networks is an alternative and effective strategy, especially when the aim is to contact participants with specific characteristics (Hennink et al., 2011). Therefore, the strategy adopted was to contact informal personal social networks and then follow a snowballing technique.

### **3.3.6 Recruitment: snowballing**

Snowballing is a simple technique that involves firstly sampling and recruiting a small group of individuals and asking these participants to propose and suggest other participants who have similar characteristics (Hennink et al., 2011). The snowballing method adopted for this study is threefold. First, the researcher contacted participants already known through informal networks and contacts, mindful that confidence and trust already exists as well as transparency about the role of the researcher (expanded upon below). Participants can then refer acquaintances based on this relationship (Jawle, 2012). However, it is argued that using this method raises issues of bias and validity as there is a risk that the study has a lack of diversity within the sample. This is because participants can be seen as interrelated, sharing common characteristics and life experience (Hennink et al., 2011; Jawle, 2012). To avoid this built-in bias, and add diversity to the sample, the second method adopted within this snowballing technique was to follow the process of exponential non-discriminatory snowballing. This process involves each participant providing multiple referrals to avoid a linear snowball sample (Hennink et al., 2011; Jawle, 2012). This was not difficult to achieve as all participants were able to refer more than two acquaintances that met the eligibility criteria.

The third and final technique applied to this method was to purposely select participants using a screening tool (see appendix 2). Using a screening tool as a method of data collection allows

the researcher to extract and identify components in a sample with the minimum number of steps (Munoz-Olivias, 2004). This method is usually employed as a simple method to provide ‘yes/no’ responses and generally has a quantitative emphasis (Munoz-Olivias, 2004). However, the aim of the screening tool in this study was not to gather this data to analyse and assess, but instead to determine eligibility for participation and easily differentiate between participants (i.e., pass users and car owners/drivers). This is because evidence in chapter 2 noted that bus pass use is dependent on access, infrastructure, and overall connectivity of the bus service within a locality (Age UK, 2019b; Graham et al., 2018; Rye & Carreno, 2008). Research is well established in these areas, however, there appears to be a lack of evidence noting the reasons why an older person chooses to use the bus when they have access to a car (chapter 2 noted the car being seen as the preferred mode for example). For these reasons, the aim was to recruit bus pass users and drivers, as determined by the screening tool, to add a further layer of diversity to the sample.

### 3.3.7 Recruitment: entering the field

Once the recruitment methods had been determined; the researcher started the formal recruitment process. The inclusion criteria for participation in the interview phase comprised of any person over the age of 60 who held and used a concessionary bus pass. This was determined as per the *All-Wales Concessionary Travel Pass 2002*, which defines those aged 60 and over, male or female, as eligible at the time of data collection (see table 1 below).

Inclusion criteria – bus pass users	Exclusion criteria
60 years old and over	Under 60 years old
Holds and uses a valid concessionary bus pass	Does not travel by bus
Able to provide informed consent	Not able to provide informed consent
Male or Female	

Table 1: Participant inclusion & exclusion criteria

Recruitment began when the researcher contacted nine people from their informal network (friends, colleagues, and family members). This process included explaining the aims and purpose of the research. It is important to note that although these nine participants were



known to the researcher; a professional and consistent protocol was always followed.

These nine participants completed the screening tool, and all provided their contact details. Once it had been established that each participant had the initial characteristics laid out in the inclusion criteria, practical research procedures were undertaken to begin the study. All nine participants received a letter and consent form that detailed more information about the study, as well as the researchers contact details (see appendix 3 & 4). The researcher phoned the participants within a week of distributing the letter and consent form and all nine agreed to take part in the interview process. None required any further information at that time. A suitable time and location to hold the interview was agreed.

Following the completion of each interview, all participants were asked 1) if they would be willing to complete a seven-day travel diary and 2) if they could identify and refer any other potential participants. All participants knew several people that would potentially meet the inclusion criteria; therefore, each were given numerous screening tools, letters, and consent forms to distribute. Only five agreed to complete the travel diary at this stage. The researcher did not want to press this issue or coerce participants in any way, so accepted this decision without question (discussed further in a sub-section below – *The Travel Diaries*). It must also be noted at this stage that the data and findings of the first interview have not been included in this study due to issues encountered during the interview stage (explained in a sub-section below - *The Unintentional Pilot Study*).

Within six months, thirty-six participants had been referred following the process of exponential non-discriminatory snowballing and all followed the process laid out above, which included completing the screening tool and receiving a letter and consent form. Twenty-five were screened as meeting the inclusion criteria and interviews took place. Of these a further five agreed to complete the seven-day travel diary and all agreed to refer acquaintances. Four participants did not meet the inclusion criteria. Three were not yet over the qualifying age for concessionary bus travel and one participant was housebound due to ill health.

The remaining three were not interviewed due to reaching data saturation. According to

Finlay (2011, p. 191), the question of how many people should be recruited depends on the aims of the research and what is suitable. According to Stenfors et al., (2020) it is not the number of responders or the length of the interviews that indicate high-quality research, but the depth, richness, and relevance of the data and when analysed, that this data provides enough evidence to answer the research question(s). Morse (2015) agrees and proposes taking into consideration not only the quality of the data, but the amount of useful information obtained from each participant. Gehrels (2013) also agrees and notes that the number of interviews conducted should follow the saturation of the data. This occurs when each new act of data collection does not add anything new. Therefore, it is advised to stop sampling when the data leads to no new findings being generated (Dyson, & Brown, 2006; Gehrels, 2013). However, this concept is widely debated. For example, Varpio et al., (2017) discuss 'information power' in their work as a better concept, suggesting that researchers should explain how their data is adequate and allows transferability at the same time as being able to answer the research question(s). They suggest using triangulation as a quality marker for example, however this does depend on the research paradigm. In this research, saturation was achieved when concepts and experiences were used regularly and interchangeably. For example, practical concepts such as *access* (choice, options, cost), *infrastructure* (road and pavement safety, the bus stop, local amenities, available information), *bus use* (purpose and routine), and *accessibility* (route, alighting, comfort). As well as psycho-social concepts such as *community cohesion* (tourism, travelling, identity), *social interaction* (meeting people, relying on friends and family, companion travel) and *social connectedness* (quality of life, contributions, maintaining social connectivity). This then allowed for the data to be analysed for transferability.

Overall, the aim was to achieve variation and a diverse sample to ensure a range of responses were captured. When examining the screening tool responses, the first notable variation identified included participants with access to a car and the number of bus trips taken weekly compared to those without access to a car. A category of user was identified, as laid out in table 2 below.

Category	Definition
User Non-Drivers (UND)	Aged 60 or over. Concessionary pass holder and user Does not have access to a car
User Drivers (UD)	Aged 60 or over. Concessionary pass holder and user Has access to a car

*Table 2: Identifying User Driver and User Non-Drivers*

Participants were separated into User Drivers (UD) and User Non-Drivers (UND) to demonstrate and explore the different personal experiences that may be identified between the two groups. Table 3 and table 4 below capture this information, further demonstrating the variety and diversity between the thirty-three participants. All names have been changed to protect the anonymity of the participants. Overall, it can be said that a varied and diverse sample was achieved.

	Name	Age	Gender	Marital status	Status	Pass holder	Bus user	Bus use per week	Car user	Used to drive	Health	Area
1	John	60-74	Male	Widowed	retired	Yes	yes	1 or 2	yes	n/a	Fair	Rural
2	Julie	60-74	Female	Widowed	retired	Yes	yes	3 or 4	yes	n/a	Good	Rural
3	Michael	60-74	Male	widowed	retired	Yes	yes	1 or 2	yes	n/a	Fair	Rural
4	Wendy	60-74	Female	single	retired	Yes	yes	1 or 2	yes	n/a	Good	Urban
5	Robert	60-74	Male	widowed	retired	Yes	yes	3 or 4	yes	n/a	Fair	Urban
6	Dianne	60-74	Female	married	retired	Yes	yes	3 or 4	yes	n/a	Fair	Rural
7	Lynne	60-74	Male	Widowed	retired	Yes	yes	4 or 5	yes	n/a	Good	Rural
8	David	75+	Male	Widowed	retired	Yes	yes	4 or 5	yes	n/a	Poor	Rural
9	Caroline	60-74	Female	married	retired	Yes	yes	1 or 2	yes	n/a	Good	Urban
10	Susan	60-74	Female	widowed	retired	Yes	yes	4 or 5	yes	n/a	Good	Urban
11	Steven	75+	Male	single	retired	Yes	yes	3 or 4	yes	n/a	Fair	Rural
12	Michelle	60-74	Female	married	retired	Yes	yes	1 or 2	yes	n/a	Fair	Urban
13	Nichola	60-74	Female	married	retired	Yes	yes	3 or 4	yes	n/a	Good	Rural
14	Kate	60-74	Female	married	retired	Yes	yes	1 or 2	yes	n/a	Good	Rural

*Table 3: User Drivers screening tool responses*

	Name	Age	Gender	Marital status	Status	Pass holder	Bus user	Bus use per week	Car user	used to drive	Health	Area
15	Jim	60-74	Male	Single	retired	Yes	yes	5 or 6	no	yes	good	Rural
16	Helena	75+	Female	widowed	retired	Yes	yes	5 or 6	no	no	fair	Rural
17	Joan	60-74	Female	widowed	volunteer	Yes	yes	5 or 6	no	yes	good	Rural
18	Jayne	75+	Female	Single	retired	Yes	yes	3 or 4	no	yes	good	Rural
19	Joyce	60-74	Female	widowed	Employed	Yes	yes	5 or 6	no	yes	good	Urban
20	Ryan	60-74	Male	single	retired	Yes	yes	5 or 6	no	yes	fair	Rural
21	Anna	60-74	Female	Widowed	retired	Yes	yes	3 or 4	no	yes	good	Rural
22	Aimee	60-74	Female	single	retired	Yes	yes	3 or 4	no	yes	fair	Rural
23	Alice	60-74	Female	widowed	retired	Yes	yes	5 or 6	no	yes	fair	Urban
24	Ashley	60-74	Male	married	retired	Yes	yes	3 or 4	no	yes	fair	Urban
25	Carl	60-74	Male	Single	Employed	Yes	yes	5 or 6	no	yes	fair	Urban
26	Donald	60-74	Male	single	volunteer	Yes	yes	5 or 6	no	yes	good	Rural
27	Debbie	60-74	Female	widowed	retired	Yes	yes	5 or 6	no	yes	fair	Rural
28	Fiona	60-74	Female	widowed	volunteer	Yes	yes	3 or 4	no	yes	good	Urban
29	Fred	75+	Male	single	retired	Yes	yes	3 or 4	no	yes	fair	Rural
30	Gloria	75+	Female	married	retired	Yes	yes	5 or 6	no	yes	fair	Urban
31	Graham	60-74	Male	married	Employed	Yes	yes	5 or 6	no	yes	fair	Rural
32	George	75+	Male	single	retired	Yes	yes	3 or 4	no	yes	good	Rural
33	Harry	75+	Male	widowed	retired	Yes	yes	7 times	no	yes	fair	Rural

Table 4: User Non-Drivers screening tool responses

### 3.3.8 Phase one – A qualitative Research approach

Qualitative research is an unfolding method that is grounded in an interpretivist theoretical position (i.e., the experiences of the social world and how this is understood and interpreted) (Creswell, 1994). This method has developed overtime and recognises that history and culture influence how knowledge is constructed (Davidsen, 2013). Ultimately, qualitative research is empirical research that places an emphasis on the importance of looking at variables within a natural setting (Williams, 2007). The nature of qualitative research then aims to understand unexplained phenomena by focusing on the quality of what is stated during the data collection process. The idea is not to test a hypothesis or study large data sets, but instead describe, analyse, interpret, and gain an in-depth insight by interpreting the constructive aspects of the social world. To gain this rich, in-depth insight into current perceptions of bus pass use, this method was adopted to allow participants to describe experiences from their own perspective and lived experience.

### 3.3.9 Quality in qualitative research

There is a clear debate amongst academics surrounding the quality in qualitative data, specifically its legitimacy and value. The European Commission (EC) and Leedy and Ormond (2001) argue that some qualitative research is of a poor standard, raising issues of reliability and repeatability for example. Five criteria are used to appraise the trustworthiness of qualitative research: credibility, dependability, confirmability, transferability, and reflexivity (see table 5 for example) (Stenfors et al., 2020) and these have been considered and drawn upon throughout the process of conducting this study.

Criteria	Meaning	How to recognise it
Credibility	The research findings are plausible and trustworthy	There is alignment between theory, research question, data collection, analysis, and results. Sampling strategy, the depth and volume of data, and the analytical steps taken, are appropriate within that framework
Dependability	The extent to which the research could be replicated in similar conditions	There is sufficient information provided such that another researcher could follow the same procedural steps, albeit possibly reaching different conclusions
Confirmability	There is a clear link or relationship between the data and the findings	The researchers show how they made their findings through detailed descriptions and the use of quotes
Transferability	Findings may be transferred to another setting, context, or group	Detailed description of the context in which the research was performed and how this shaped the findings
Reflexivity	A continual process of engaging with and articulating the place of the researcher and the context of the research	Explanations of how reflexivity was embedded and supported in the research process

*Table 5: Criteria in evaluating quality in qualitative research (Stenfors et al., 2020, p. 598)*

To ensure credibility, dependability, and transferability, this chapter has included a critical discussion of the selected framework that has underpinned the study and how this aligns with the research design, questions and methodology used. The researcher is also advised to be transparent and up-front about their own bias and this can be done through reflexivity (Creswell, 1994; Crossan, 2003; Mehra, 2002). To address this, the role of the researcher is discussed in a critical self-awareness sub-section below (specifically personal and professional issues that have occurred throughout the data collection stage and how these have been

addressed). Finally, confirmability has been enhanced by providing a link between the data and findings by including a step-by-step data analysis plan below and detailed findings (chapters 4&5), incorporating verbatim quotes. Overall, this study recognises that researchers bring a distinct perspective to the topic under investigation, which can determine the course of the overall research and the results generated. However, data about human experiences can be powerful and compelling and qualitative researchers can address issues by providing detailed and justified accounts about the processes undertaken to ensure overall quality in qualitative research.

### **3.3.10 Choosing the right qualitative method**

There is no one single approach used in qualitative research, therefore, a researcher's choice is not confined to one specific method. The aim is to make sense of or interpret phenomenon and what this means to those under investigation (Bryman, 2001). However, the choice of qualitative methods employed will be influenced by the researchers philosophical and theoretical perspective and is dependent on the research question(s) being asked (Crotty, 1998). For this reason, there needs to be a clear explanation for using the chosen qualitative method within a research study.

Returning to the interpretivist ontological perspective and epistemological position of this study, academics have noted that implementation of the method makes epistemology visible (Carter & Little, 2007). For example, epistemology influences the relationship between the researcher and the participant as it shapes the researcher's conceptualisation of the participant throughout data collection and analysis (Carter & Little, 2007). In this study for example, the researcher is the instrument, while the participants are viewed as active contributors. The exchange, interaction, and response rely on participants contribution to create data. The interpretivist ontological perspective and epistemological position has shaped the choice of methods being used (and how these will be implemented) and what the researcher will ultimately perceive as a reliable methodology. This will then give meaning to the data and will ultimately shape the method and findings. As the instrument, the researcher interprets empirical material and is considered as being involved in the construction of ideas and the reason of knowledge (Carter & Little, 2007; Pezalla et al., 2012).

In this case, qualitative interviewing is seen as an appropriate instrument as it will allow the researcher (as the instrument) to remain true to the interpretive nature of qualitative analysis, as well as provide a rigorous and scientific approach. This is because interviewing is interactional as it involves face-to-face and verbal exchanges, at the same time as sharing roles, feelings, beliefs, responsibilities, motives, and information (Burgess, 1984; Charmaz, 2006; EC, 2005; Stewart & Cash, 2006).

Conducting interviews is a common method used in qualitative research as Fontana and Frey (2005) put it, 'we now live in an interview society' and it is difficult to reference a phenomenon of the social world that has not been studied using this research method. However, Rubin and Rubin (2005) and Burton and Bartlett (2005) note the complex nature of using interviewing in research as it could be considered as 'responsive interviewing' and may lead to the interviewer influencing and leading the respondent. In addition, the time intensive nature of using this method and the possible variation in interviews can make collating difficult. However, Hammersley (2002) notes that this type of highly context specific research as providing 'moderate enlightenment' and so considers it important. Specifically, this is the case when considering that policymakers and practitioners are, by definition, kept in the dark unless research can shed light on the reality of what is being done, compared to how it could be done (Gehrels, 2013). In this sense, Gehrels (2013) notes that moderate enlightenment takes away generalisations that are made in the natural sciences and their adoption of positivist viewpoints.

Interviews then are both challenging and rewarding forms of measurement as they require a person to be understanding and adaptable while having the ability to stay within the boundaries of the designed protocol (Mehra, 2002). The researcher can respond to changes that occur in a study, while rich phenomena based on the participants own meaning can be described in detail.

### **3.3.11 Designing the Interview Questions**

Having identified the research questions from the literature search and the potential research participants for this study, it was appropriate to design the interview schedule and questions.

As the overall aim of the study is to identify relationships between concessionary bus travel and its implications for the health and wellbeing of older people, interview questions were semi-structured to encourage discussions based around participant's lived experiences. To encourage this process, the interview questions were designed to be open-ended. Rubin and Rubin (2005) and Gehrels (2013) followed a method of formulating main questions and then allowed the discussion to 'open up' based on the answers provided. The idea is to allow participants to answer a main question, and then let the conversation be steered in any direction to allow fluidity in responses. This would also allow the participant to explore anecdotes that were significant to their individual experience.

This method was followed in this study. The following is an example of how a main question from one UND interview led to the 'opening up' of the discussion:

- What is your main reason for travelling by bus?
  - So, you sometimes travel by bus with no destination in mind? That is interesting, can you give me some examples of where you have ended up and what you did on those days?
  - What did you enjoy about this trip?

In addition, as two categories of user was identified, it was necessary to have two interview schedules to differentiate between UD and UND experiences. For example, it was important to explore the reasons why a UD chose to use the bus over the car for example (and vice versa):

- Can you tell me a why you chose to use the bus for 'this' trip as opposed to the car?
  - So, travelling into town is easier by bus than car? What experiences have led you to make that decision?

It is important to note that the interview questions and schedule for both User Drivers and User Non-Drivers was similar, however as noted above, some differentiation was needed (see appendix 9 for example). Overall, the aim of the interview questions was to gain an



understanding of bus pass use, the meaning of concessionary travel and owning a pass, experiences of social connectivity and the overall contribution to social inclusion and health and wellbeing.

### **3.3.12 Phase Two – A quantitative Research Approach**

As already noted, the quantitative phase of this study is supplementary to phase one. The above section has detailed the rationale for the use of an MMR embedded design. This section will now discuss the quantitative method employed in this study and the reason for choosing a seven-day paper-based travel diary.

### **3.3.13 Choosing the right quantitative method**

As discussed, travel surveys have historically incorporated quantitative methodologies and methods. These traditional travel surveys focused on transforming the trajectory into ‘trips, triplets or travel modes’ and were usually paper-based questionnaires that aimed to obtain insight into the travel behaviour of individuals and groups. However, Prelipcean et al., (2018) argue that this created a narrow focus, led to a decrease in the overall response rate that was not representative, and led to a fragmented evidence base that focuses on a narrow application of data collection relating to purpose, destination, or mode. This prompted researchers to consider new ways of obtaining travel survey results (Prelipcean et al., 2018). For example, Andrews (2012a) uses an on-board bus survey in his research to capture quantitative data on bus use in terms of patronage (as a phase two design using MMR), while Clayton (2012) aimed to generate data on travel-time activity and journey experiences (as a phase three design using MMR). Further studies have focused on the activity of travel behaviour through travel diaries. For example, the expansion of the Household Activity-Travel Simulator (HATS) was seen as an extension of the unconventional survey methodology used by researchers at Oxford University in the 1980s. Originally, Jones et al., (1985) developed HATS as a qualitative technique in travel behaviour research and is acknowledged for its contribution to activity-based analysis (Clifton & Handy, 2001). Interviews were undertaken with a small sample of households with the aim of developing a useful framework for describing and understanding travel behaviour. However, the exploratory phase led to the conclusion that there was a need to include activity diaries (see Jones et al, 1985). Based on

their overall results, a new methodology developed to include interdependent structured quantitative questions (looking to discover what people do) and unstructured qualitative questions (looking to discover why people behave as they do). Issues in recording activity patterns were apparent early on however as the method employed a 'freeform diary,' which was later abandoned due to receiving insufficient data. The HATS technique and methodology developed to include a structured activity-travel diary alongside conducting in-depth surveys (Clifton & Handy, 2001; Jones et al., 1985).

Incorporating the themes identified within the literature review, as well as aspects of previous studies (Andrews, 2012a; Clayton, 2012), the rationale behind using a travel diary design in this research is to generate a fuller picture of phase one participants bus use behaviour. The data generated from this 'real time' experience adds a layer of understanding more specific to the journey experience and overall benefits felt at the time of travel. Therefore, it was decided that the appropriate method to achieve these aims is through a seven-day paper-based travel diary.

#### **3.3.14 Quantitative travel diaries**

Several travel diary designs were considered, including self-completion, on-board, static and researcher participation (Schaller, 2005) and all have their own limitations and benefits. Taking into consideration the advantages and disadvantages of the researcher's participation at this stage (see Schaller, 2005, p.11), the researcher taking a participatory role may have led to the data collection becoming more 'interview' or 'discussion' led. The aim was not to add any further context to the questions or answers within the travel diary itself, therefore it was decided that this phase would be a self-administered travel diary. Participants would be given the option of when to complete the diary (either during and/or after travel for example) again noting both static and on-board methods have limitations and benefits. The design of the diary would mean that participants are able to complete different sections throughout the trip as this would mean there are no time limitations (for example, to the time spent on the bus). Giving the participant the choice of when to complete the diary entry would also limit any potential risks (for example rushing to complete while on board could cause panic and anxiety) or potential safety hazards (ethical considerations are discussed further below).

### **3.3.15 Designing the Travel Diary Questions**

The travel diary was designed in tandem with the interview schedule. The questions were designed to be short and the overall document simple and easy to navigate. Each day of travel asked twenty-six questions, or thirteen questions outbound and thirteen questions inbound. The order of the questions followed a pragmatic approach. The overall aim was to understand a little more about concessionary bus pass use focussing on the number of journeys over a seven-day period, the trip origin, destination, and distance, reasons for travel, time of travel and how far respondents typically walk to the bus stop. To gain additional insight, questions also revolved around gaining a deeper understanding of a participant's locality in terms of available bus stops, local amenities, and the built environment. Finally, questions focused on the quality of the journey in terms of comfort and difficulty and if any alternative travel options would have been used in the absence of a concessionary bus pass (see appendix 5 for a full copy of the travel diary questions).

Table 6 below demonstrates the aims and objectives of phase two of data collection and how the responses would add depth to the answers, discussion and experiences provided in phase one and overall, how this links in with the themes identified in the literature search.

Themes identified in the literature search:	Aims and objectives of Phase One: lived experiences	Aims and objectives of Phase Two: practical experiences
1. Current bus transportation options available.	- What is the meaning of concessionary bus travel and owning a pass?	1. Practical experiences relating to when, where and why participants travel (the built environment and local community).
2. The mechanisms in place when using public transportation options.	- What are older people's experiences of concessionary bus travel.	2. The quality of the journey in terms of journey comfort and difficulty.
3. Access to age-friendly communities	- What are the relationships between concessionary bus travel, social connectivity and the health and wellbeing of older people?	3. Overall bus use and experiences, external factors affecting passenger decisions and what other options would have been available at that specific time.

*Table 6: overall aims and objectives of the primary research (phase one and two)*

All participants felt that the diary was simple enough to follow and complete, however some issues were noted. For example, despite placing each question in bold font to help participants clearly identify them, the font size was too small to read for some participants. Additionally, questions were limited to one page per trip (either outbound or inbound) so that they could fit on one side of A4. This presented as an issue and limitation as there was no option to note if multiple journeys had been made each day. Therefore, participants were not able to provide context relating to the trip itself beyond one bus journey.

### **3.3.16 Quantity in quantitative research**

Time and cost had to be considered when determining data collection and participation during phase two of this study. Due to the resources available to the PhD researcher at the time of data collection, it was not possible to conduct phase two of the study on a large scale. This is a limitation within this research as quantitative studies favour larger sample sizes to create reliable data (Andrews, 2012a, Clayton, 2012). The results of the travel diary therefore cannot be generalised to the wider population. However, as this phase of data collection is

embedded into phase one, where the data is idiographic and focusses on depth of analysis within a smaller sample size (common in qualitative studies), the results can be seen as useful. As mentioned above, sample sizes are generally determined when data saturation is achieved within qualitative studies, yet numerically this can vary. The researcher was aware that the overall sample would not be large enough for statistical comparison, however, to generate usable data, the diary was designed to follow a seven-day period of travel activity as this would generate more data and provide a picture of travel behaviour, specifically how phase one concessionary pass users are spreading out their trips over a seven-day period and what experiences they have had while on-board the bus itself.

### **3.3.17 Ethical considerations**

Guidelines for the ethical conduct of research emphasise several key principles to consider. This includes obtaining informed consent before conducting any practical research and ensuring that confidentiality is maintained. Additionally, participants must be protected, respected, and never deceived; and debriefed afterwards (Finlay, 2009; Social Research Association, 2003). Each of these principles have been considered and maintained throughout this study.

Ethical approval for this study was granted by Swansea University's research ethics committee in October 2018 following the submission of an ethics application (see appendix 1).

### **3.3.18 Assessing the risks**

Qualitative research generally involves close personal contact between researcher and participant, therefore there is an element of risk involved when conducting fieldwork. A large body of literature exists to explain these risks, all noting that it is important when designing research to start from the basis of dignity, ensuring welfare, health, and safety and ultimately protection of both the researcher and the participant from physical and emotional harm (Bloor et al., 2010; Fahie, 2014). To ensure all potential risks had been considered, a thorough risk assessment was carried out prior to the submission of the ethics application. However, a large body of research also notes that despite considering ethical issues and risks from the outset, issues can still arise when conducting research (Bloor et al., 2010; Fahie, 2014). This section discusses the ethical considerations and risk assessments put in place prior to

conducting fieldwork, as well as the issues that arose during the process.

Bloor et al., (2010) note that emotional harm can occur through role conflict, seen as a particular problem in medical research. In this case, participants may reveal medical information that should be addressed or shared, which presents as an issue to the researcher who has promised confidence. Emotional upset can also occur if the subject under investigation is painful for the participant due to a traumatic or distressing experience (Fahie, 2014). This can also have an impact on the researcher, who must then negotiate through a complex dynamic that informs the interviewee/interviewer relationship (Fahie, 2014). Finally, a further point relating to emotional harm links to the subject's sensitivity overall. This is defined as research that can possibly pose a substantial threat for those involved (for example research on topics surrounding domestic violence, political activism, and crime) (Fahie, 2014). Arguably, any topic has the potential to be considered sensitive, as sensitivity can be subjective.

The researcher did not consider the topic under investigation a sensitive subject that would cause emotional upset or harm, however considered a potential risk relating to the possible stigma attached to having a bus pass due to age. For example, the literature review had revealed issues of ageism and the extensive variation between this cohort. This was recognised during the ethical application process and the researcher considered wording carefully any questions relating to age and ageing. Unfortunately, mistakes were made during the first interview when the researcher referred to the concessionary pass as 'free' on several occasions. The literature review had revealed that older people welcome the concession as a valuable saving and option to continue to be active, however the researcher did not foresee the possible stigma attached to the concessionary bus pass and poverty, or the assumption of poverty. Jones (1994) in her work *The Social Context of Health and Health work* writes for example that 'concessions' of any kind raise the question of poverty, and in this case the stigma attached to the take-up of the concession can be seen as derived from the label of old people as poor and dependent. This work was read retrospectively following reflection of the first interview (discussed in more detail below). It was then deemed inappropriate to use the word 'free bus pass' and this was subsequently removed from all interview questions to guard against any potential emotional harm.

A consideration was also made relating to role conflict and potential emotional harm. Despite efforts to separate the researcher's dual role, they inevitably collided. Relating to the risk of emotional upset, and considering the above, it can be said that a paradox was created. On one hand, addressing issues relayed during the data collection stage would go against the principle on which informed consent was agreed between researcher and participant. On the other hand, and to the researcher, this presented as a welfare issue. For example, during an interview it was revealed that a participant had difficulty attending hospital appointments due to the lack of a direct bus service. The role conflict could not be ignored yet the researcher was bound by confidentiality. This was not pre-empted during the ethics application stage, and it was decided retrospectively to ask the participant if the information revealed could be shared with local authority transport officers, without breaking the confidentiality agreement. This then presented a new risk, one that may cause emotional harm by association. For example, the participant may then expect the issue would be dealt with and be disappointed if this was not the case. Therefore, the researcher made it explicitly clear that official procedures would need to be followed (in this case contacting the transport department within the authority) and no promises were made to the participant that this would result in additional services being implemented.

As mentioned, fieldwork can be unpredictable, and it is impossible to prepare for every possibility. However, some contingencies can be put in place to reduce potential risks. The location of the interviews was considered a risk to both the participant and the researcher. Interviews took place in cafés, a community building and in people's homes. The researcher followed Swansea University's *Research Integrity Policy Framework* and the Centre for Innovative Ageing's *Personal safety guidelines for researcher and interviewers* when arranging and conducting the interviews. This included ensuring the safety of the researcher by informing the supervisory team, as well as a close family member, what date, and time each interview would take place as well as provide an approximate of the location. The anonymity of the participant was maintained, however, to add an additional layer of safety, the researcher sent a text to a family member on arrival and following the termination of the interview.

Although no specific risk assessment was deemed necessary for the interview stage, a very

basic one was considered appropriate for the travel diary data collection stage. This was structured and developed by the researcher following guidance from the *Centre for Innovative Ageing's Personal safety guidelines* as well as government available Health and Safety information (see appendix 6). The overall risk was deemed low, as participants were not being asked to travel anywhere that they would not usually go. However, as they were asked to complete a diary at the time of travel, this presented a road safety and possible risk of falling issue, as well as a potential layer of anxiety if the participant is not used to completing a form while travelling for example. The first and second page of the travel diary includes detailed information about safety. The participant was encouraged to complete the diary at the conclusion of each journey, and the researcher emphasised the importance of not completing the diary when walking or if standing on public transport. The participant was also asked to note the details of an emergency contact prior to conducting the study to ensure a family member or friend could be contacted in the event of an emergency.

Overall, this study has followed the ethical conduct of research and considered several key principles prior to embarking on the practical aspect of this study. Accepting that the ethical and risk assessment process is fluid meant that these principal risks were revised, but always maintained.

### **3.3.19 Informed Consent and the right to withdraw**

All participants were given a letter that introduced the research and included a participant information sheet (see appendix 7) to ensure that they were fully aware of the nature of the research project and what their participation would involve. To avoid coercion, participants were given a screening tool and completed this in their own time, providing their contact details only if they wanted to take part in the interview. All participants completed an informed consent form prior to the data collection phase. The informed consent process was active before, during, and after data collection as participants were given the opportunity to voice concerns as well as the right to withdraw and end their involvement at any time.



### **3.3.20 Data protection and confidentiality**

To ensure data protection and confidentiality, this study has followed Swansea University's *Research Integrity Policy Framework* in accordance with the Data Protection Act 2018 and the General Data Protection Regulation (GDPR). This means that all participant data that has been collected is kept strictly confidential. To ensure this, the names of all participants have been changed and pseudonyms used instead. All personal contact information is only known to the researcher and where locations have been used, this is approximate to protect participants anonymity further. As per the policy framework, all data must always be secured. All original electronic material relating to this study, including participant information and audio files, have been stored on a password-protected laptop and kept at the home of the researcher. The researcher used OneDrive, a Microsoft password protected cloud service that stores and protects files, providing access from all devices. Using this allowed the researcher to limit transporting the laptop and eliminated the risk of misplacing any data. All paper records have always been securely stored in a locked draw at the home of the researcher, and the researcher is the only person that has a key.

### **3.3.21 The Research Setting**

All empirical data collected for this research took place in Swansea and Llanelli, South Wales. This was selected as the study area as Swansea is the hometown of the researcher and Llanelli is on the doorstep. The choice was considered pragmatic. In addition, the bus transport system links Swansea to Llanelli, therefore the researcher deemed it highly likely that participants would have experiences travelling between the two cities and the connecting towns, rural and urban areas.

### **3.3.22 The interviews**

Interviews were carried out between March 2019 and November 2019. The researcher gave each participant the opportunity to choose a time and venue that was suitable to them and overall, this varied. Out of the thirty-three interviews, eighteen took place at the participants own home, three took place within a local community building and twelve took place at a local café or restaurant.

The interviews conducted at the home of each participant went well overall, however there was some anxiety apparent during the beginning of the interview in some cases. For example, on one occasion, when the researcher entered Michelle's home, it was clear that she was visibly nervous. Michelle was shy and quiet to begin with, however the researcher tried to dispel any anxiety by making small talk and accepting a cup of tea and a biscuit. The biscuits were homemade, so the researcher asked about the cooking techniques used, making light of their own failings as a home baker. Michelle was put at ease by this conversation and relaxed further when the researcher then explained the research aims in more detail and followed the procedures laid out above. Only the researcher and the participants were present for most home-based interviews, however in a handful of cases a spouse was also present. In these cases, the spouse remained upstairs or in another room during the official interview stage. However, there were some occasions when interruptions did occur, and these were distracting for both the researcher and the participant. For example, during one interview a spouse entered the room to offer a fresh cup of tea. On other occasion a participant's home phone rang and the participant answered. Wiles (2012) notes that researchers should be prepared for interruptions when interviewing individuals in their home and implement necessary measures to avoid these disturbances during data collection. The researcher had requested the interview take place in a quiet and private setting before each interview took place, however, the reality of conducting research within a private home setting can mean that day-to-day disturbances inevitably occur.

The interviews conducted in a local community building went well. Participants chose the community building due to the convenience of the location. For example, there is a bus stop directly outside and a free car park directly behind the building. The researcher was able to pre-book a small room within the community building and was informed that no other bookings had been made on the days and times arranged. This meant that the building would be empty and free of any distraction. As with the home interviews, there was some anxiety present at the outset. In this case, it was more challenging to put participants at ease in this setting as it was unfamiliar to both participant and researcher. In addition, it was very quiet, in one case cold (the heating had only been turned on five minutes before entry) and overall, a more formal setting. The researcher had prepared by bringing tea and coffee, milk and biscuits and tried to put participants at ease by making small talk. This helped the situation

and participants began to relax. The formal interview did not start until the researcher felt the atmosphere was more relaxed overall and participants became visibly comfortable.

The interviews conducted in local cafés and restaurants were more difficult overall. No pre-booking was required, as the locations chosen by the participants did not offer this option (the researcher did ring ahead to check). This proved to be an issue in two cases as the establishments were full and both the participant and researcher had to stand and wait for a table to become available (up to ten minutes on one occasion). In one way, this allowed for general chit chat to commence prior to sitting down, which put participants at ease. However, as these settings were very busy, this proved to be an issue when the formal interview took place due to the 'hustle and bustle' of the location. The researcher was quite concerned about confidentiality at this point and did not ask the participant to speak up to avoid being heard by those sitting at the next table. Fortunately, when reviewing the recording, the device had picked up the discussion clearly.

Generally, each interview lasted approximately forty-five minutes to one hour. All participants gave permission for the interview to be recorded, and this was done using the researchers voice recorder application on a mobile device. Using this mobile recording device did affect some participants and the flow of the interview. For example, some spoke in a loud voice and leaned in towards the recorder, however the researcher assured these participants that the device was able to pick up what they were saying. Participants who were affected by the recorder initially, soon relaxed and this behaviour was short lived. Participants were visibly contented further when the researcher made a point of saying written field notes would also be taken during the interview. One participant noting that this was a good idea as technology cannot always be trusted. Overall participants were visibly relaxed and comfortable throughout the interviews and freely answered all questions. No participants stopped the interview at any time.

Following completion of each interview and when the recording device was switched off, the participant and researcher had a general discussion about the next steps of the research. All participants appreciated being told that their contribution had been extremely valuable to the research. All were handed a 'debrief information sheet' (See appendix 8).

### **3.3.23 The travel diaries**

As noted above, participants were asked following completion of the interview if they would also be willing to complete a seven-day travel diary. Those that agreed to take part were handed a paper-based version of the travel diary. The researcher explained the process and the procedure, including the risk assessment aspect. Participants were informed that they could start the diary at any time in the future and were reminded that there was no obligation to take part or fully complete the diary, even after commencement. The researcher asked participants to make contact when the entries were complete and a day, time and location would be arranged for the researcher to collect. Finally, participants were told they could contact the researcher at any time if they had any questions or issues.

Ten completed travel diaries were returned to the researcher by the end of October 2019. Twenty-three participants declined to take part in this second phase of the data collection. The researcher asked only once and did not press the issue to avoid any instance of coercion. Upon reflection, it is assumed that the decisions were based on misunderstanding the aim of the travel diary as the researcher should have made the process clear and known at the start. Participant who declined noted time limitations. Again, upon reflection, it may have benefited during recruitment or when discussing the aims of the interview to mention the travel diary that would follow, including the process involved. Asking participants to take part in a second study at the end of the interview may have caught participants off guard, made them think they were required to do something additional and caused confusion. It is also for this reason that the researcher did not press the issue after asking only once. The researcher made an additional point of thanking participants, noting that their contribution had already been invaluable.

### **3.3.24 Recognising participant contributions**

It is courteous to send participants a letter thanking them for their contribution. Not only does this act demonstrate that their time and knowledge has been valuable, but it can also provide closure to them. A participant debrief information sheet (see appendix 8) was given to all participants at the end of the data collection stage as per the requirements set out in Swansea University's *Research Integrity Policy Framework*. This is formatted as per guidance set out,

which is formal in nature. To further recognise participants for their contribution, time and invaluable knowledge, the researcher also gave a handwritten note expressing a personal thank you for helping to create this research. No remuneration or incentive was provided before, during or after the study.

### **3.4 Critical self-awareness – reflections and development**

The following sections aim to offer a critical self-assessment of the limitations within this research and how these have been recognised and resolved.

#### **3.4.1 The researcher as the instrument**

Finlay (2009; 2013) notes qualitative research involves advocating the importance of acknowledging the role of the researcher. The aim is to show how experiences impact on the research process. This is because it is often said that the credibility of the research depends on the credibility of the researcher (Creswell, 1994; Finlay, 2009; 2013; Mehra, 2002; Patton, 1990).

The level of researcher involvement in qualitative interviewing is widely accepted (Pezalla et al., 2012; Rubin & Rubin, 2005), particularly because the researcher is considered the instrument. In semi structured and unstructured interviews, this is particularly the case as unique researcher attributes can potentially influence the collection of the data. Interviewer reflexivity is advocated as a result, however Pezella et al., (2012) note that few studies address the qualitative interview as a collaborative enterprise in terms of how the interviewer can affect the organisation of the process in terms of the conversation and the talk-in-interaction. In this case, the social interaction that takes place can impact on the responses given, the stories provided, and the depth of the lived experiences shared. This leads to the issue of repeatability (EC, 2005; Leedy & Ormond, 2001). Pezella et al., (2012) discuss this in their paper *Researching the researcher-as-instrument: an exercise in interviewer self-reflexivity*. The three authors conducted the same study separately, using the same procedures, however upon reflection the interviews all turned out to be different. What was particularly striking to the authors was their individual attributes during the interview process and the impact this had on how each interview was conducted and how this affected the primary objectives of

the study. The researchers identify several distinguishing features that characterise them as individual instruments, however, ultimately note that learning about interviewing and doing interviews are different tasks. All are trained in interviewing for example, yet all made classic mistakes such as asking long and complicated questions, leading questions and/or closed ended questions (Pezella et al., 2012). The authors accept that more research needs to be done to understand the complexities of the researchers' impact during a study, however, agree that researchers are 'differently calibrated' instruments. Finlay (2009; 2013) agrees and advises researchers taking a qualitative approach to provide a critical self-awareness of their vested interests, subjectivity, and assumptions and to always be conscious of the way these might impact on the process and any explanations. Overall, the evidence demonstrates the importance of reflection, development and comparison when conducting practical activities as a researcher.

### **3.4.2 The Unintentional Pilot Study**

Following the advice of Pezella et al., (2012), the researcher followed a reflective approach after each interview to ensure attributes were consistent. The aim at this stage was not to transcribe and analyse, but to focus on the researcher as the instrument and to determine if any specific characteristics could be identified that may potentially influence the collection of the data. Aware that a research study is an ongoing process that can change direction at any time, this became the case following the initial reflection of the first interview. Although there was no aim or intention to complete a pilot study, this first interview inevitably became one. It is important to note that for this reason, the findings of this interview are not included in the data analysis of this study.

The location of the interview was a small room in a local community centre (as chosen by the participant) and both the interviewer and the participant were present. The interview followed all official research procedures (as described above) and began without any issues. However, it soon became apparent that the interview schedule questions were not organised well and that this meant there was no overall flow. When listening back to the recording, the participant was asked about their bus usage after the discussion on their experiences of bus use. This was repetitive. In addition, due to nerves and lack of experience, the researcher did

not use sufficient prompts to further explore meanings and experiences. For example, when asked 'where do you usually travel by bus', Michelle provided only a short answer: "... town usually to meet friends". It would have benefited to use a follow-on prompt such as *where would you usually meet your friends, tell me more about the things you do together*. A second major issue related to the final question of the interview. This asked the participant how any changes to the policy would affect them. This caused confusion and although not audible, at the time the participant was slightly taken aback. It is believed that this initial reaction may have been linked to the researchers position as a county councillor. Although the researcher cleared up any ambiguity around this question immediately, it was deemed unfair and unnecessary to continue to ask this question given the circumstances. Finally, there was an overall issue when the researcher kept referring to the word 'free' (as noted above). For example, 'free travel', 'free bus pass' 'travel more because it is free'. This generated a negative response and the researcher felt at the time that using this word may have caused some embarrassment or offence.

Upon reflection, the interview did not achieve what it set out to achieve. It was clear that the overall layout needed to change, and it was decided retrospectively that this first interview would become a pilot study to directly address and strengthen any issues of validity and credibility. A pilot study is a small-scale test of the methods, usually undertaken to examine the feasibility of an approach before completing a larger scale study. This holds the advantage of 'checking' that the data collection functions well and if not, revisions can be made (Bryman, 2004; Patton, 1990). Changes made include restructuring the schedule of questions and adding sections and prompts to make sure that the participant was given the opportunity to expand and ultimately provide depth and rich meaningful data (see appendix 9). The final question about changes to the policy was removed and the word 'free' was no longer used. Overall, it can be argued that removing the first interview from the official study and using this as a 'lessons learnt' and 'what works' pilot study provided several positive outcomes, including insight, credibility and confidence.

### **3.4.3 Researching with two hats on: Inevitable bias**

Continuing with the theme of following Pezella et al., (2012) and their advice on reflection and development, it was also decided to reflect on the overall interview schedule. A review of the literature and chapter 2 confirmed that the original interview schedule questions followed the themes identified and were in line with the aims of the research. However, this reflection (and subsequent reflections) instead raised further issues around the interviewer possibly affecting the subject responses. The aim of this section is to provide an account of how my personal and professional experiences may have influenced this study. For this reason, this part is written in the first person.

As noted in the above sections, the role of the researcher is complex as the researcher is considered an instrument or part of the research process. Patton (1990) writes that “actively participating in the life of the observed means going where the action is, getting one’s hands dirty”. In other words, an active researcher participates where possible and gets to know participants on a personal level. However, all research needs to be credible to be useful. As Patton (1990) also notes, no credible research strategy advocates a biased distortion of the data to serve the researcher’s vested interests and prejudices. For this reason, any credible researcher must adopt a position of neutrality relating to the phenomenon under investigation. When I embarked on this research journey, my aim was not to prove or disprove a particular perspective or manipulate any individual or piece of data to arrive at a predisposed truth. The aim has always been to seek honest, meaningful, reliable, and empirically supported findings.

I am aware that neutrality is not easily obtainable, however. Therefore, it is important to address my professional position as a politician and how this poses a potential bias in and of itself. It could be argued for example that I am too closely aligned to the research and the potential outcomes, or that my political persuasion has impacted on my analysis of government interventions at a national and local level. However, I do not consider these reasons bias in themselves, as it is widely accepted that all researchers begin a study with preconceived ideas, understandings, and knowledge of a phenomenon as well as having a strong and passionate interest in the topic being studied (Crotty, 1998; Heidegger, 1962; Tuffour, 2017). I did consider ‘bracketing’, however ultimately, I agree with Heidegger (1962)



when he notes that this is impossible. I consider my knowledge and understanding of the policy making process an advantage in this case as it allowed me to differentiate between the regulations applied in England and Wales, and what this means at a local county council level. To ensure credibility, I conducted a review of the literature (noted in chapter 2) following Pautasso's (2019) three stage review. Academic research was reviewed in the first instance, as advised by Pautasso (2019), however the literature search took a turn towards government policy and provision when it became apparent that the concessionary scheme differed across the four nations in the UK. Although I was aware of the differences between the four nations, I was not aware of the splintered provision, regulation, funding allocation or that the bus market itself is different. Up to this point, I had assumed that the concessionary pass was a 'one pass for all' policy provision that was provided at a national level but administered at a local level. Further research led to a further narrowing of the literature and the realisation that focusing on the top-down fragmented approach would limit the potential of this study. This understanding led to the decision to split the literature review into sub sections based on a review of academic literature, policy development and the outcomes of these interventions in practice locally (focussing on social connectivity) and this led to the creation of the research questions.

The next stage of the study involved justifying the research design, the theoretical foundations employed, and the approaches taken to data analysis. I have always been aware of my potential personal bias, selective perception, and theoretical predispositions; however, I believe my analysis of the reasons why I employed an interpretivist phenomenological and social constructionist perspective is justified. This process has not been easy however and has been of great concern to me. I have constantly second guessed my data collection choices due to my professional position in the community and this became more evident at the recruitment and data collection phase as there were many ethical issues to contend with.

As discussed above, recruitment began when I informally mentioned the basic principles of my research to several individuals within my personal network. This was a success early on, and on one occasion, I was invited to attend a local weekly older adults club to present my research. This initially presented as an opportunity to recruit participants; however, soon came with its own challenges. The group meet at a community building within the area I

represent and is owned and managed by the Town Council I serve on. I presented my research, and made it known that I was there in my capacity as a PhD researcher. However, despite following this procedure, once the presentation had concluded and all questions had been asked and answered, the conversation turned towards 'local issues' (bus times, uneven pavements etc.). My role as a county councillor involves advocating for residents in several areas, and I felt it would be unfair to stop this conversation and ignore the concerns being raised. I accepted it would be impossible to ignore my role as a councillor in this situation.

I have been critically reflective at all stages of the research process due to my dual role and how this may have affected the research process throughout. For example, during the recruitment phase I was aware that my dual role may have influenced participants' decisions to take part, therefore I considered changing the recruitment process to ensure this would be avoided. Upon reflection, I believe utilising a gatekeeper could have avoided the possibility of influencing a participants' decision to take part, however this would not solve the issue during the snowballing process. This is because I was not prepared to deceive participants by withholding information about my role in the community as a councillor when introducing myself and the research aims. Therefore, to ensure credibility and validity, at the same time as being open and honest, I followed the official research procedures that had been implemented before commencement of the research. This included restating my role as the researcher, reiterating the participant information sheet and consent options, and noting that any involvement was voluntary. I emphasised the point that there was no obligation to continue. All participants indicated that they were willing to continue.

Despite my attempts to avoid any type of overlap however, this inevitably happened in some cases. As noted above, the first interview took the form of a pilot study for several reasons, however I believe that the question relating to changes to the policy as well as constantly saying the word 'free' held some significance to the participant because of my role as a councillor. I addressed this at the time by noting that the question was purely to determine what alternative provision would be available to the participant if changes were made and that this question is not based on anything official currently being considered (to my knowledge). However, I felt that this could be an issue for all participants going forward, not

to mention unethical if this caused any harm or worry. Instead, the question was changed to ask about alternative options available as a travel method.

A final issue to present itself followed the completion of the interview and travel diaries. As noted, it would have been unfair and unethical to deceive participants and withhold information about myself. So, to ensure credibility I emphasised that my role during the data collection phase was that of a PhD researcher. As will be revealed in chapter 4, many issues were raised relating to bus pass use (most already known locally and well-established within the literature – lack of bus stops for example), however, with some of the concerns raised, I felt obligated to highlight to the City and County of Swansea in my capacity as a county councillor. I considered the impact this would have on the credibility of my overall research and on my role as researcher and councillor in this situation. It is important to note that I was not asked by any participants to make any changes during any part of the official data collection stage as all participants accepted and respected my role as a PhD researcher. Equally important to note is that when I made participants aware of my role as the researcher in this context (and not councillor), a further point was made that any personal information revealed to me would not be shared with the authority. I wanted to instil trust as well as address any issues the participant may have about my intentions with their information. When the interviews were complete, if a participant had raised an immediate issue that could be addressed, I asked if I could raise this with the authority as a general query. For example, as mentioned, one participant noted there was a lack of public transport directly to the hospital from their locality. Aware that the authority can subsidise this service in some cases, I asked the participant if I could contact the relevant department to look in to this further. Permission was always granted on the occasions that this did happen. However, I made participants aware that the outcome would be dependent on finance, ability and any decisions made would follow the necessary procedures as laid down by the authority. When I contacted the relevant departments within the authority, it was noted ‘a resident has highlighted the following issue to me’, which is how I would raise any issue in my role as a councillor. I felt obligated to follow up on issues raised in my capacity as a councillor, however made sure I had permission to do this first.

Overall, I believe that my position as researcher has allowed me to gain information rich data ethically and fairly by following the mechanisms put in place. As a councillor, I was able to follow up and enact real change within the community. Therefore, in this case it was inevitable that I became a 'researcher with two hats on'. As Bryman (1990, p. 133) states, "social research is messy and non-linear" and it would be wrong to pretend otherwise. A common activity is compromise because it involves people.

### **3.5 Evaluating the Understanding: The approach taken to data analysis**

The previous sections have followed the theoretical framework and model of Crotty's four level approach (1. epistemology, 2. theoretical perspective, 3. Methodology). This section will now discuss the approach taken to data analysis.

#### **3.5.1 Stage four: Methods**

Crotty (1998, p. 3) defines the methods element as "the techniques or procedures used to gather and analyse data". The aim is to describe the techniques that the researcher has used, and the activities engaged in, to gather and analyse the data. As the aim is to justify the research process, it is important at this stage to be as specific as possible.

#### **3.5.2 Phase one – qualitative approach**

As mentioned above, high-quality qualitative research seeks to find depth and richness within the data gathered. This data, once analysed, should provide enough evidence to answer the research question(s). Also discussed above is the central role of the researcher as the instrument in data collection. During the data analysis phase, the researcher now becomes the co-constructor of reality, alongside the research participants (Noble & Smith, 2014). The aim is to analyse the data and present a cohesive representation of it in a way that is transparent, accurate and rigorous, while also remaining true to the participants account and shared lived experiences (Crotty, 1998; Noble & Smith, 2014).

The approach taken to data analysis can be diverse and identifying an appropriate method can be challenging. For example, a sociolinguistic approach such as discourse analysis and conversation analysis aim to study communication or spoken language in relation to its social context, whereas a quasi-statistical approach (such as content analysis) is used to identify

patterns with the aim of describing and categorising common words and phrases (Noble & Smith, 2014). Thematic analysis is the common approach applied to a set of texts such as interview transcripts where the aim is to closely examine the data to identify common themes (i.e., patterns of meaning that are repeated). This is a flexible method of qualitative analysis that is considered well suited to the dialogues generated in the phase one element of this methodology. This is because thematic analysis is not aligned to one theoretical perspective (Braun & Clarke, 2006). In this case, the themes generated during the analysis are influenced by the researchers' assumptions and ideals (i.e., background knowledge, value judgements, worldview) and these underpin the epistemological position as well as the engagement with the data. Thematic analysis is not restricted to one way of thinking about the data; however, it is important to make clear what assumptions have underpinned the research. As discussed above, this study was influenced by phenomenology and social constructionism as constructionist epistemologies. Discovering knowledge about the relationships between concessionary bus travel and the health and wellbeing of older people and applying a thematic analysis allows openness and the opportunity to report on lived experiences, meanings, and participants reality of the phenomenon (Braun & Clarke, 2006). As Braun and Clarke (2006) state, this is just one way that thematic analysis can be applied and used.

### **3.5.3 Phase one – qualitative analysis plan**

Braun and Clark (2008) provide clear instructions and a step-by-step framework to conducting a thematic analysis (table 7 below). The thematic analysis phase starts when patterns of meaning are noticed in the data (which may take place during the data collection phase), and the endpoint is the reporting of the content and meaning of these themes and patterns. This process is not linear however, and involves moving back and forward between the data, codes, and analysis. In addition, following the principles laid, in each phase needs to be applied flexibly to fit the specific research questions and data of the study (Patton, 1990). Braun and Clarke (2006) recommend a recursive process that develops over time.

Phase	Process
1	Familiarising yourself with your data
2	Generating initial codes
3	Searching for themes
4	Reviewing themes
5	Defining and naming themes
6	Producing the report

*Table 7: six-step data analysis procedure (adapted from Braun & Clarke, 2006)*

*Step 1: getting familiar with the data* involves a time-consuming transcription of the collected data. The level of information needed to be transcribed at this stage depends on the research project. For example, a broad exploratory analysis would require every aspect of what was said and done to be recorded and transcribed. However, if the aim is to search for specific topics, the objective is to transcribe those parts of the data collection. Braun and Clark (2008) and Maguire and Delahunt (2017) advocate the importance of the researcher becoming very familiar with the body of data at this stage. In this study, this involved transcribing each recorded interview verbatim and reading (and re-reading) each transcript as well as jotting down early impressions and initial notes. This systematic process proved helpful as the body of information was significant, however noting early impressions allowed the researcher to begin linking the data collected to the research aims, questions and themes identified within the literature review. Image 4 below shows an example of excerpts from two transcripts, and the notes made at this stage. The two participants talked about ‘meeting people’ and ‘helping people’. While making these initial notes, the researcher was able to notice some initial codes emerging early in the analysis process, which helped develop a narrative and overall sub-theme relating to companion travel.

Joyce (p19): I think you interviewed XXX the other day. You know we met on the bus a few years ago when I was going to my dance club. We started chatting and realised we were going to the same class. We went together and travelled home together. That was nine years ago now, gosh I can't believe it has been that long.

Joyce: We sometimes go to mumbles [by bus] for a walk and an ice cream. Do you go there at all?

Joyce: With friends and sometimes family. I enjoy it, I really enjoy the day out. I have been alone before, but it isn't the same is it plus company is always better as you have someone there to enjoy it with and help you.

Joan (p17): Being able to help someone else at my age makes me feel useful and why wouldn't I if I can? I have a friend that I help on to the bus and we do a lot together through the week. I help her on and she helps me off [laughs].

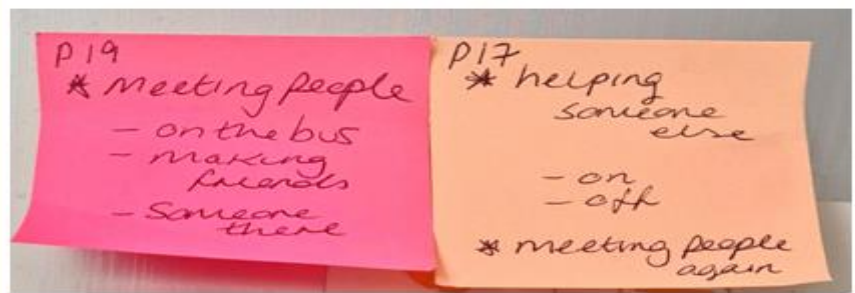


Image 4: example of emerging themes

Step 2: generating initial codes is the process of identifying features of the data that appear interesting (Braun & Clark, 2008). The process of coding is considered part of the analysis as the aim is to organise the data into groups. In this way, the code is a description, not interpretation (Braun & Clark, 2008; Maguire & Delahunt, 2017). Braun and Clarke (2006) note that the point at which the researcher should engage with the literature relevant to the thematic analysis is contested. For example, taking a theoretical approach requires engagement with the literature prior to analysis (deductive approach) whereas a more inductive approach is enhanced by not engaging with the literature during the early stages (Braun & Clarke, 2006)

During this step of the analysis, the researcher was mindful of the initial themes upon which the study's research questions were built. As noted above, the researcher has also adopted an interpretivist perspective (i.e., reality is not static, and exists through human engagement) about discovering knowledge about the relationships between concessionary bus travel and the health and wellbeing of older people and this was influenced by phenomenology and

social constructionism as constructionist epistemologies. Therefore, no limits were placed on the data derived from the transcripts. For this reason, the researcher adopted both inductive and deductive approaches to the thematic analysis. The starting point was the identified themes identified within the literature review (see table 7 above); however, an inductive approach was incorporated to allow for the identification of new themes and sub-themes.

There is no clear cut-off time between step one and step two, and as noted above some initial note taking and highlighting had taken place during step one. Coding at step two added a deeper level of rigour to the process and involved working systematically through the data set, giving equal attention to the data, and identifying interesting aspects, patterns, and repeated phrases (Braun & Clarke, 2006). Braun and Clarke (2006) offer key advice at this stage to code as many potential patterns and/or themes as possible, code inclusively to ensure the context is not lost (see also Bryman, 2004; 2015) and code individual extracts into as many themes as they fit in to. Coding was therefore undertaken manually, using post-it notes and the highlighter function in Microsoft word. The system involved coding aspects relevant to the research question(s). For example, any content relating to the built environment, bus use or alternative options was highlighted in green, red, and yellow, respectively. This was done by computer using Microsoft word as the copy/paste/highlight function was easier to use. The development of this system was a continual process, and each transcript was worked through following this coding system. Each completed transcript was also compared with the previous and any new codes generated were added to post-it notes and sometimes modified existing ones (see image 5 below).



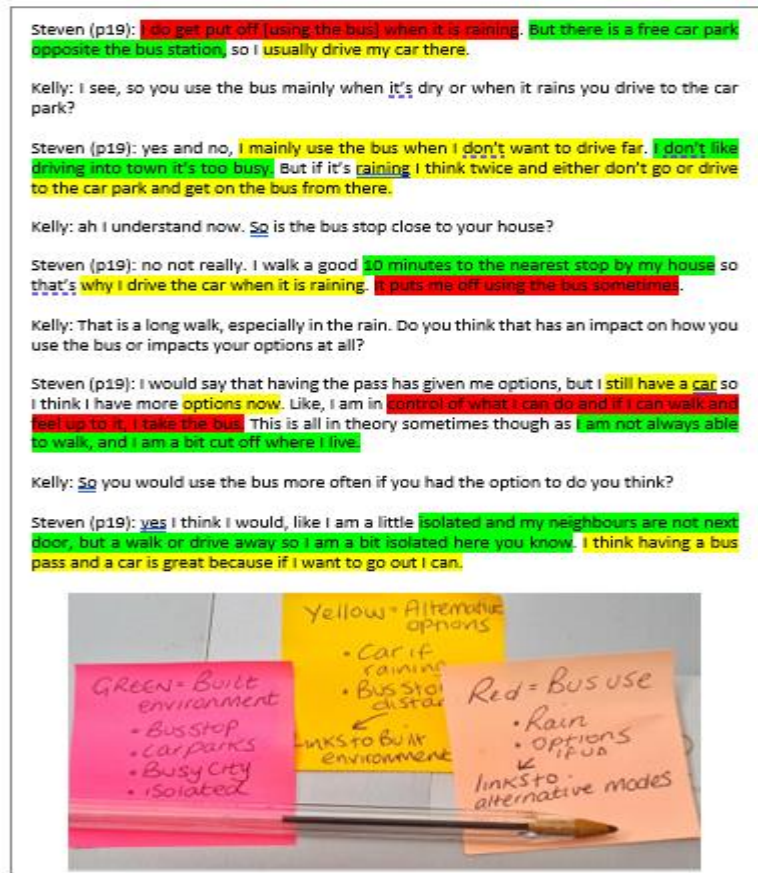


Image 5: Microsoft word and post-it notes coding system

Step 3: searching for themes begins when all data has been initially coded and collated and a list of different codes have been identified (Braun & Clarke, 2006). The aim during this step is to re-focus the analysis to create themes rather than codes. A table was used to list all the different codes in one column, with a brief description placed in the next column (using the cut/paste function in Microsoft word). This allowed the researcher to consider the relationship between codes, themes, and levels of themes (and sub-themes). Evidently, some of the identified codes could be used as themes and sub-themes and some codes were discarded or merged with a more relevant code/theme. For example, in step one 'meeting people' and 'helping people' was coded, however following step two this was re-coded to companion travel, which then became a sub-theme under social interaction. This step ended when the researcher had a collection of candidate themes.

Step 4: reviewing themes is the process of further development and modification of the themes formed in step three. This step involves two levels of reviewing and refining (Braun & Clarke, 2006). Level one involves reading all collected extracts for each theme and

determining a coherent pattern. If this is the case, level two considers the validity of individual themes in relation to the data set and thematic map and if this accurately reflects the meanings that are evident in the data set as a whole. The researcher followed these two levels of further review and refinement, which involved discussing ideas with supervisors, and led to the further refinement of 'alternative options' and 'bus use' as separate sub-themes for example. This step ended when the researcher was confident with the list of overall themes.

*Step five: defining and naming themes* follows further refinement of the themes that have been identified and to create the 'essence' of what each theme captures (Braun & Clarke, 2006). At this stage, the researcher went back to step one to look again at the data, codes, themes, and sub-themes and organised these coherently and consistently with the accompanying narrative. This also involved returning to the literature review and following an inductive and deductive approach. The themes identified within the literature review (see table 6 above) relating to social connectivity and an older persons-built environment and local community were also the main overarching themes of the thematic analysis. The data collected could be incorporated into sub-themes and sub-themes explained (see table 8 below).

Themes	Sub-themes	Sub-themes explained
1) The development of the connection: infrastructure and structural transportation options	The built environment (practical) <ul style="list-style-type: none"> <li>- Access to desired destination</li> <li>- Pedestrian infrastructure</li> </ul>	Access to desired destination <ul style="list-style-type: none"> <li>- The choice of travel</li> <li>- Alternative options</li> <li>- The cost of travel</li> </ul> Pedestrian infrastructure <ul style="list-style-type: none"> <li>- Road and pavement safety</li> <li>- The bus stop</li> <li>- Local amenities</li> <li>- Location (urban vs rural)</li> <li>- Available information</li> </ul>
2) Public travel as a contributor to connection: using public transportation options	The mechanisms in place (practical) <ul style="list-style-type: none"> <li>- Bus Use: the travel routine</li> <li>- Bus Accessibility</li> </ul>	Bus use: the travel routine <ul style="list-style-type: none"> <li>- The purpose of the journey</li> <li>- As a social facilitator</li> <li>- The mixed-use purpose</li> </ul> Bus Accessibility <ul style="list-style-type: none"> <li>- The bus route</li> <li>- Getting on and off</li> <li>- Physical characteristics</li> <li>- Bus Comfort</li> </ul>
3) The outcome of the connection: allowing age-friendliness to exist and continue	Creating connectedness (psycho-social) <ul style="list-style-type: none"> <li>- Community cohesion</li> <li>- Social interaction</li> <li>- The social connections</li> </ul>	Community Connection <ul style="list-style-type: none"> <li>- Increased use for tourism</li> <li>- The cost of travel</li> <li>- Travel identity</li> </ul> Social Interaction <ul style="list-style-type: none"> <li>- Meeting people</li> <li>- Relying on friends and family</li> <li>- Companion travel</li> </ul> The social connections <ul style="list-style-type: none"> <li>- Understanding Quality of Life</li> <li>- Quality of life contributions</li> <li>- Maintaining social connectivity</li> </ul>

Table 8: main themes and sub-themes identified in the thematic analysis of the interviews

*Step six: producing the report* is the final step of the framework. This step involves the final analysis and write up of the report (Braun & Clarke, 2006) and includes telling the story of the data in a way that convinces the reader of the merit and validity of the analysis. This step is two-fold in this study and is structured over two sections in chapter 4. *Section A Interview Findings* is a descriptive write up of the themes and findings. Each theme is addressed in turn, using verbatim quotes and basic analysis to provide some depth. *Section B Travel Diary Findings* includes a description of the travel diary data findings (method explained below). Finally, chapter 5 merges the findings chapters to provide an analytic narrative pertaining to

concessionary travel and the overall health benefits of concessionary travel.

### **3.5.4 Phase two – quantitative approach**

This section will now describe the methods employed when conducting the quantitative analysis of this research. There are multiple methods that can be used when analysing quantitative data and analysis of the data depends on two major factors 1) the types of variables (nominal, ordinals, scale), 2) the number of variables simultaneously analysed, including univariate analysis (i.e., frequency tables), bivariate analysis (i.e., contingency tables), and multivariate analysis (i.e., multiple linear regression) (see Cárdenas, 2019 for example). The overall aim is to use the data to describe results (by synthesizing and visualising the results) and make inferences (draw conclusions and identify relationships) (Cárdenas, 2019).

As discussed, quantitative research assumes a positivist world view and data collection and analysis emphasizes the importance of generalizability and reliability. The overall aim is to apply data to the general (for example the population), therefore the selection of the sample that is seen to be representative of the population is considered essential when using this method (Delice, 2010). This research study recognises that the sample used during the quantitative data collection phase presents a challenge to current standards of design, however as the study employs an MMR approach (QUAL → quan), where the quantitative aspect is supplementary and embedded, the data can be considered useful when the aim is to add depth to the findings collected at the qualitative phase of the research. Therefore, descriptive analysis is helpful in this case, especially as the research is limited to the sample and cannot be generalised to a large population.

### **3.5.5 Phase two – quantitative analysis plan**

The analysis plan for phase two followed a four-step process (table 9 below) as advocated by Cárdenas (2019) and Samuels (2020).

Step	Description
1	Data editing and coding
2	Descriptive analysis
3	Interpret and report on the analysis
4	Merge phase one and phase two findings

*Table 9: Quantitative analysis plan (Cárdenas, 2019; Samuels, 2020).*

### **3.5.6 Step 1: Data editing and coding**

Following the collection of the quantitative data, the responses to the diary entries were manually transferred into an excel spreadsheet. This stage followed a simple process of coding the data by grouping and assigning values to responses (except those with a narrative text). Of the ten returned travel diaries, all questions were answered for each trip taken. The only missing data was when a participant did not travel on a specific day (for example, travelled five days out of the seven). Therefore, the data editing process was relatively easy and straight forward and no data cleansing needed to take place. Image 6 shows an example of one edited and coded diary entry over a seven-day period.

P15 JIM (UND)	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q9 Narrative	Q10	Q10 Narrative	Q11A	Q11B	Q11C	Q11D	Q12
Day 1 Out	Gorsei non	Llanelli	Lunch/ Meeting	1	1	<	<	Uncom fortabl e	2	bumpy journey	1		1	1	2	1	1
Day 1 In	Llanelli	Gorsei non	Home	2	2	<	<	satisfa ctory	2	difficult y getting	1		1	1	2	2	1
Day 2 Out	Gorsei non	Swans ea	Shoppi ng/Me eting partner	2	2	<	<	uncom fortabl e	2	bumpy and loud bus	2	carryin g shoppi ng	1	1	2	1	1
Day 2 In	Swans ea	Gorsei non	Home	4	4	<	<	crowde d/unple asent	2	uncom fortabl e seat	2	carryin g shoppi ng	1	1	2	2	1
Day 3 Out	Gorsei non	Gowert on	Public House	1	1	<	<	satisfa ctory	1		1		1	1	2	1	1
Day 3 In	Gowert on	Gorsei non	Home	5	5	<	<	crowde d/unple asent	2	crowde d and loud	1		1	1	2	2	1
Day 4 Out	Gorsei non	Swans ea/Mor riston	Hospit al appoint	1	1	<	<	Uncom fortabl e	2	bus change difficult	1		2	2	2	1	2
Day 4 In	Morrist on/Swans ea	Gorsei non	Home	3	3	<	<	Uncom fortabl e	2	bus change difficult	1		2	2	2	1	2
Day 5																	
Day 5																	
Day 6 Out	Gorsei non	Llanelli	Lunch/ Meeting	1	1	<	<	satisfa ctory	1		2	falling getting on/off	1	1	2	1	1
Day 6 In	Llanelli	Gorsei non	Home	2	2	<	<	satisfa ctory	1		2	falling getting on/off	1	1	2	2	1
Day 7 Out	Gorsei non	Swans ea	pub	1	1	<	<	satisfa ctory	1		1		1	1	2	1	1
Day 7 In	Swans ea	Gorsei non	Home	5	5	<	<	crowde d/unple asent	2	crowde d, hard to get	1		1	1	2	2	1

Image 6 example of one edited and coded diary entry

### 3.5.7 Step 2: Descriptive analysis

This stage started by creating tables, charts and summary statistics from the raw data relating to locality, reason for travel, time of travel, distance walked to the bus stop and overall number of trips, before tabulating the narrative responses to create charts and graphs. Image 4 shows an example of a chart created to show how the destination and frequency of outbound trips made over the seven-day period were tabulated and charted.

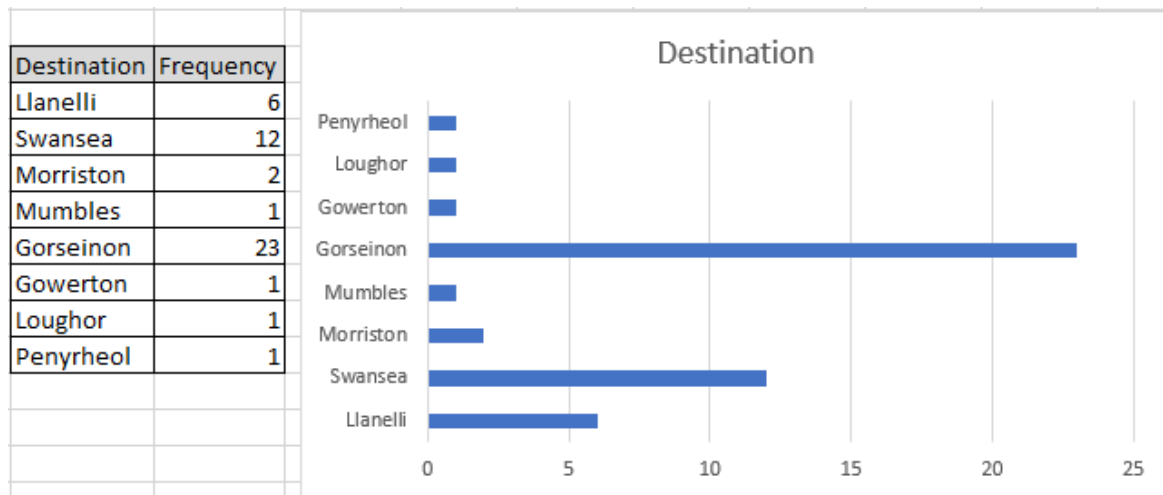


Image 7: example of charted and tabulated diary entry

Narrative responses at this stage were also coded. For example, responses relating to the reason for travel were coded into four categories (shopping, social, medical and community activity) and this allowed the data to be merged and analysed to find links, similarities, and differences between the ten participants. Coded reasons for travel were merged with responses relating to alternative travel mode choice options in the absence of a pass for example (image 8 below).

Jim	Helena	Joan	Aimee	Debbie	Fiona	Fred	JULIE UD	Lynne UD	Susan UD
Lunch/Meeting partner	Shopping	Shopping	Shopping	Shopping	meet friend/lunch	Shopping	Shopping	Meeting friends	Shopping
Shopping/Meeting partner	Shopping	Dance Class		Shopping /lunch	day out		lunch		meet partner
pub	Book Club	Committee Meeting	Lunch with friends	Dentist		visiting a friend		Shopping	
Hospital appointment	Shopping	Appointment	Day out with friend			Meet Friends	Shopping	Library/lunch	meet partner
		Lunch		Lunch	Hospital	Lunch			
Lunch/Meeting partner	Dance Class				day out/Walk			Shopping	Shopping
pub		Shopping	Library	Doctors		Doctors		visiting a	
Reason for travel	Shopping	Social	Medical	Community Activity			Mode option	Frequency	
Car (drive/lift)	12	10		2			Car (drive/lift)	24	
Taxi	10		8	4			Taxi	22	
Paid bus journey	4		10	2			Paid bus journey	16	
Not travelled	16	20		4			Not travelled	40	

Image 8: example of narrative coded diary responses

### **3.5.8 Step 3: Interpret and report on the analysis**

The third stage of the analysis plan compiled the descriptive charts and presents these in chapter 4. Data was also used from the completed screening tools to add further descriptive context, including locality to add context to the environmental characteristics relating to the area participants lived. The overall aim is to present the descriptive breakdown of when, where, and why participants travel (the built environment and local community), including a mapped location of bus stops, local amenities, quality of the journey (comfort and difficulty), experiences, any external factors affecting travel decisions and alternative available options at the time of travel.

### **3.5.9 Step 4: Merge phase one and phase two findings**

The final stage of the analysis plan merges phase one and phase two results into one overall discussion chapter (chapter 5).

## **3.6 Chapter Summary**

This chapter has explained the methodology followed in this study. The research journey has been a difficult one, especially when considering the diversity of research approaches within different fields of study and the number of wide-ranging research frameworks that exist and overlap. Employing a sound research design has included outlining the methodological steps, the theoretical foundations employed, and the approach taken to data analysis. This ensured a systematic process has taken place. Starting with the methodological framework, this detailed the philosophical position adopted in the study. Discovering knowledge about the relationships between concessionary bus travel and the health and wellbeing of older people was influenced by interpretive phenomenology and social constructionism as constructionist epistemologies. This justified the approach taken to studying a small cohort of concessionary bus pass users with the aim of exploring and understanding lived experiences ascribed to bus use and its links to health and wellbeing. Aligning with current research preferences when studying this phenomenon, it was also noted that some aggregate factors would add a dimension to these contextual and subjective experiences. Employing a QUAL->quan embedded MMR design allowed the researcher to generate rich data that has been useful. Following the justification of the practical methods employed, including a critical self-



awareness of the limitations encountered, the chapter ended with a discussion on the activities engaged in to analyse the data. Overall, the two methods used have been successful; phase one generated rich and insightful data that has been useful in addressing the research questions and phase two generated aggregate data that has added a further dimension to the responses provided at the interview stage. The subsequent chapters in this study will go on to present the findings from the qualitative and quantitative data respectively, before being merged into a discussion chapter. These final chapters centre around the research questions and aims, specifically relating to the overall health benefits of concessionary travel and linked to the theme of social connectivity in terms of development, contribution, and outcome from participants own lived experiences. Overall, the study is considered to have both strengths and weaknesses relating to the methods adopted and the scope in terms of how this data can be used to inform new meanings. These limitations have been touched upon and will be further addressed in the conclusion chapter of this study.

# Chapter 4: Findings

## 4.1 Overview

Chapter 4 is structured into two substantive sections: A) Interview Findings B) Travel Diary Findings. Section A draws on the findings from thirty-three interviews that were undertaken with concessionary pass users. Section B presents the findings from the seven-day travel diary

## 4.2 A. Interview Findings

Three research questions emerged from the literature search and have been implemented to meet the objectives of the primary research. This includes:

1. What is the meaning of concessionary bus travel and owning a pass?
2. What are older people's experiences of concessionary bus travel?
3. What are the relationships between concessionary bus travel, social connectivity and the health and wellbeing of older people?

The primary themes drawn upon in this chapter reflect the development of connectedness between the older person and their environment. The concept of connectedness is recognised as important to an older person, especially when referring to lived experiences relating to the built environment and local community, use of the bus and the outcome of this use. Section A has been structured into three main themes:

1. The *development* of the connection in terms of infrastructure and structural transportation options.
2. Public travel as a *contributor* to connection in terms of the mechanisms in place when using public transportation options.
3. The *outcome* of the connection in terms of allowing age-friendliness to exist and continue (i.e., creating connectedness) in terms of greater community cohesion and promoting companionship.

### 4.2.1 The meaning of connectedness

All participants in this study discussed concessionary travel in terms of the practical and psycho-social meanings of travel and transport and how this links to connectedness. Practical and psycho-social meanings of travel and transport relate to those outlined in Musselwhite and Haddad's (2010), however the findings of the interviews show that the meanings placed on concessionary travel can be further categorised into several sub-themes related to the built environment (practical), the mechanisms in place (practical) and the outcome of age friendly travel (psycho-social) (see table 8).

It is important to note that some of the themes/sub-themes are cross cutting and overlap (for example, rurality, weather and winter cross through road and pavement safety), however the final structure represent the lived experiences of participants following the qualitative analysis plan laid out in chapter 3. Finally, participants have been separated into two groups that include User Drivers (UD) and User Non-Drivers (UND) to demonstrate and explore the different personal experiences identified in the thematic analysis (table 10). Verbatim quotes have been used throughout this chapter to demonstrate originality.

Category	Definition
User Non-Drivers (UND)	Aged 60 or over. Concessionary pass holder and user Does not have access to a car
User Drivers (UD)	Aged 60 or over. Concessionary pass holder and user Has access to a car

Table 10: groups identified from screening tool

### 4.2.2 The *development* of the connection

The following section is based upon the perceptions and experiences of UD's and UNDS in relation to the *development* of the connection. This is discussed in terms of infrastructure and transportation options.

### 4.2.3 Access to desired destination

All participants referred to the importance of the built environment when using public transport, particularly when referring to access and their desired destination. In many cases, the built environment and structural transport options available are a key component relating

to the choice of travel, having alternative options and the cost of travel. All three sub-themes are identified as having an overall impact on the connection this gave pass users when the goal was to get to their desired destination.

- *The choice to travel*

The bus pass is seen as providing a crucial structural travel choice option for many older people. For one User Non-Driver living in an urban area, having the choice to travel on the bus itself was considered positive and a key aspect in his daily life when connecting him to his locality and desired destination.

*"It [the bus pass] is a lifeline for me ... I use it every day ... I couldn't go anywhere without it"*  
(Ashley, UND).

For others, the choice of travel was linked to getting to the destination, rather than the destination itself.

*"I use the bus when it is dry and if I am going into Swansea because I don't like driving there...but it is perfect to get me to places like Swansea and Llanelli"* (Michael, UD).

Some linked having a choice to travel not only as a dual option, but as a reason not to misuse the bus pass itself. One male User Driver spoke of using his bus pass in moderation for this reason:

*"I use the bus mostly when I need to go to the doctors ... but mostly I use the bus to get to places that I need to go to ... I don't like to abuse it"* (John, UD).

John's perception of the bus pass is that it is a practical tool that should be used sensibly, and in moderation. In this sense, the pass should not be used as a means of travelling for social reasons or pleasure. However, John still has the choice of mode of transport, which gives him an element of autonomy and control over his decision to use the pass. In contrast, an element of frustration was noted by User Non-Drivers when referring to the choice of travel, especially when the location is rural, and this stemmed from the lack of having an alternative means of travel.

*"I don't have any other options but to use the bus. This does annoy me a lot ... sometimes I just don't want to walk and deal with the busy roads and pavements" (Gloria, UND).*

For User Drivers, the choice of travel method was linked to the wider built environment as well as the weather. To overcome difficulties relating to travelling within a built-up area, as well as taking advantage of local infrastructure, one User Driver noted the ease of driving his car to a local free car park and then walking to the bus stop across the road:

*"I do get put off [using the bus] when it is raining. But there is a free car park opposite the bus station, so I usually drive my car there ... I mainly use the bus when I don't want to drive far. I don't like driving into town it's too busy" (Steven, UD).*

- *Having alternative options*

Having an alternative option to travel was considered important and highly valued by User Drivers. A key theme emerged in terms of the available infrastructure and related to the modal choice of travel available to participants. This is evident when discussing locality and whether this alters their decision to use the bus:

*"I use the car and the bus. Some places I go I can get the bus easily, like to Swansea. I do prefer to use the car if I am going to the shop though" (Lynne, UD).*

*"Sometimes I go [by bus] into Swansea ... I like to be able to choose if I want to use the car or the bus" (Michael, UD).*

One female retired User Driver living in a rural area referred to the decision she has made to give up her car and expressed some concern about losing the option to drive and being reliant on public transport. Losing the option of having an alternative method of transport brought out feelings of anxiety:

*"I have decided to sell my car and I am worried about how this will affect me. The bus service can be hit and miss ... I will miss my car ... I like having the freedom to go where I need to whenever I want" (Dianne, UD).*

This finding is linked to the evidence presented in chapter 2 relating to driving cessation and the consequences of giving up driving (Murray, 2019). In Dianne's case, the consequence of giving up her car is linked to a lack of choice relating to spontaneity and freedom, as well as a feeling that her needs will no longer be met.

For User-Non drivers, the loss of having access to a car was discussed. One retired female User Non-Driver living in a rural area noted that still having the choice to drive a car during the winter would be beneficial, due to the rain and cold weather:

*"This [travelling] depends on the weather if I'm honest. In the winter I avoid going out because it's cold waiting for the bus, and this is Wales, so chances are you are going to get wet. I do miss my car in the winter" (Debbie, UND).*

There were several User Driver comments about the use of the car in comparison to the bus. Interestingly, for User Drivers who have more experience and use the bus more frequently than other User Drivers, there was an element of convenience discussed when choosing to use the bus as opposed to the car:

*"I prefer to travel by bus than by car, especially when going to town. It is too busy, and I get anxious driving there" (Michael, UD).*

There is a theme amongst User Drivers relating to the anxiety of driving in built up areas as well as the convenience of using the car for local travel. This suggests that the car and the bus are a package of modes and User Drivers see the benefits of being able to choose modes based on their circumstances, not ready to become fully reliant on the bus. These findings suggest that there is a shift in use of the car towards the bus for User Drivers and an effort being made to increase bus use. However, this is linked to travel outside of the local area (for example, into town centres or built-up areas).

#### - *The cost of Travel*

Connecting to the community using the bus pass is important and the cost of travel was discussed multiple times, with participants referring to the destination as moot, if the travel

method was free (discussed below). The connection free travel provides is linked to the structural connection of having transportation options. For example, Jim, who is a retired taxi driver, talked about giving up driving and his career at the same time, both of which he found extremely difficult. The loss of being able to drive and work at the same time was a negative memory for Jim but having access to free travel is seen as the positive outcome. This is because it allows him to stay connected to the outside world:

*“I miss driving, I used to do it for a living all day every day. I lost my job and being able to drive in one go. That was hard ... now I use the bus almost every day ... I couldn’t do that if I had to pay you know” (Jim, UND).*

Reducing the cost of travel was a key theme amongst both User Drivers and User Non-Drivers. For User Drivers, the cost of travel referred more to the cost of parking and petrol as well as the choice of mode. Although not referred to in a negative way, User Drivers noted the expense related to owning a car, but made a point of car ownership becoming more expensive when linking this to parking charges and the cost of petrol:

*“I can afford it [the car], but parking costs are getting more expensive ... I never drive into town anymore because of traffic and the cost of parking” (David, UD).*

*“I do find it easier to get on the bus when I am going into town ... If I drive the car all the time, I think it would cost me an extra £20 a week in petrol and parking charges” (Michelle, UD).*

A retired male User Driver living in a rural area also talked about pride of his possession when referring to his car. He noted feelings of anxiety when driving in built up areas and parking in public car parks, which has led to him reducing the amount of overall driving he undertakes:

*“If I couldn’t use my pass, I would have to reconsider doing some of the things I do. I do have a car, but it is a very expensive car and I like to look after it. I worry about cars scratching it in car parks or it being damaged when I drive it in a built-up area like in town” (David, UD).*

Other User Drivers talked about alternative options in relation to both their consumption patterns, destination, traffic, and ability to pay. For example, one female retired driver living

in an urban area talked about choosing different modes of transport depending on the length of the journey, parking charges and traffic:

*“I would try and make the same number of trips [by car], but I think cost would catch up with me. I possibly wouldn’t go into Swansea as much, but I do meet friends in Swansea so I wouldn’t want to miss out on this. Traffic is a nightmare though and the parking charges are ridiculous. They are getting more expensive every year” (Caroline, UD).*

#### **4.2.4 Pedestrian infrastructure**

Pedestrian infrastructure was discussed in detail by most participants and was important to all in terms of providing the means to lead the life they want to lead. In this sense, participants talked about the infrastructure in terms of its connection when accessing the bus stop, local amenities, and available information to allow easy bus travel.

##### *- Road and pavement safety*

Participants discussed road safety while using pedestrian footways and pavements when referring to the built environment and using public transport. For some participants, this was not an issue, however this was only the case when there was a bus stop nearby:

*“... I don’t really have difficulty as the bus stop is close to my house” (Harry, UND).*

Another User Non-Driver referred to the recent resurfacing work completed on the pavement outside her home as a “god send” as this had made the walk easier for her overall:

*“They [the local authority] have just resurfaced the pavements and the road by me ... I can’t tell you how much this has helped me and XXX [elderly neighbour] ... before it was bumpy and full of holes and I stopped walking that way when someone tripped over the drain ... now I can walk that way and it’s shaved off about 5 minutes walking time for me” (Alice, UND).*

This finding that highlights the importance of the surrounding infrastructure when considering the development of the connection. This also shows that it is not the bus service alone that can lead to social exclusion, but the safety of the local environment and its



infrastructure. This is further highlighted by participants who note some of the difficulties faced when accessing public transport. One female User Non-Driver living in a rural area, who is partially blind, noted the practical barriers when trying to use public transport:

*"I am registered blind and there is no zebra crossing by my house, so I am not able to walk across the busy road to catch the bus when it is going to Gorseinon. I get a taxi if I am going that way" (Helena, UND).*

The positive aspect of being able to use public transport was also met with the negative aspect of being physically able to get to the bus stop. One User Non-Driver notes this paradox:

*"I would love to be able to go out more often ... but the walk to the bus stop and back is painful for me, sometimes because of the pavements. I have a walking stick, but they [the pavements] are uneven in some places and it's not easy to navigate them" (George, UND).*

Despite these issues, most User Non-Drivers noted spreading their trips out over the week to take advantage of the free travel, but also because of the difficulty carrying items and navigating the roads and pavements:

*"Yes, I like to do one thing at a time when I go out ... I go to the butchers and fruit and veg shop on the High Street on a Monday usually and then to Asda on a Tuesday. I can't carry too much in one go" (Joan, UND).*

*"I used to do all my shopping and errands in one day ... I can't do that now I take the bus, so I spread it all out over the week" (Ashley, UND).*

A common worry noted by most participants was the difficulty walking to and from the bus stops when carrying items. This is especially the case when it is raining or during the winter when it is cold, gets dark early and is icy. Several participants noted that they would organise multiple appointments and errands in one day to avoid going out too often:

*"The roads by me can get really bad when it's raining ... I try and do as much as I can in one day, especially in the winter. Like if I have a doctor's appointment, I will go shopping from there so*

*that's out of the way. I seize up a bit in the cold see so it's hard to walk ... Just easier to get everything done in one or two days if I can" (Joan, UND).*

Organising errands in one day instead of throughout the week was discussed by another User Driver. In this case, Robert weighed up the pros and cons of driving versus navigating the pavements during winter months because of the roads and pavements:

*"The winter is the worst time, isn't it? I mean there is a lot to worry about. Like what is worse, driving in the dark or walking in the dark and tripping or slipping? Driving in the ice or walking in the ice? ... I don't go out as much over the winter" (Robert, UD).*

This is an important finding and links to evidence presented in chapter 2, specifically that government policy rhetoric is right to focus on preventing social exclusion by investing in local infrastructure to improve active transport links (Welsh Government, 2018d). To ensure pass holders can lead the life they wish to lead, older people need to be involved in the process and overall design, as well as being confident they can navigate the local roads and pavements safely.

#### - *The bus stop*

Road and pavement safety was also mentioned in the context of the bus stop. For some participants, this was linked to the location of the bus stop in terms of distance from their home. One male User Non-Driver noted the distance of the bus stop from his home being problematic, especially as this limits his ability to use the service as much as he would like to:

*"I would use my bus pass everyday if I could but the walk to the bus stop is too much for me ... it is up a steep hill and then down another one. I can do it a few times a week, but that's it" (George, UND).*

Another User Driver noted the difficulty he has when walking to the bus stop and in some cases, this acts as a barrier to choosing to travel by bus:

*"I walk a good 10 minutes to the nearest stop by my house ... It puts me off using the bus sometimes" (Steven, UD).*

Michael, a User Driver, makes a compelling statement about the distance of the bus stop from his home and then the distance he must walk from the bus stop to the hospital department:

*“The bus stop from my house is about half a mile away and the bus stop when you get to the hospital is the same, which is right next to the car park ... So, it’s not easier to go by bus than by car. There were other bus stops in the hospital, but these have been removed since they have refurbished the entire parking structure and some of the buildings ... I arrived at the hospital by bus on time the other day and then had to walk half a mile to my appointment. I can do this now, but I won’t be able to forever” (Michael, UD).*

This highlights three issues in one statement: 1) the walking distance to the bus stop outbound, 2) the walking distance from the bus stop to the desired destination, 3) a failing of the government and local health board to pre-empt the removal of two bus stops at a hospital as creating a barrier to public travel. Evidence in chapter 2 noted that the bus pass is a lifeline for older people in accessing vital services such as hospital appointments (Green et al., 2012) and that barriers can lead to older people sacrificing necessary trips.

Interestingly, and in direct opposition to the issues noted above, one User Non-Driver compared the bus service to a personalised taxi service due to having a bus stop directly outside of her home:

*“I am lucky to have a bus stop outside of my house too, so I make the most of it. It is like a taxi dropping me off and picking me up each day [laughs] ... I feel like I can just jump on and go anywhere I want to” (Fiona, UND).*

Another User Non-Driver noted a similar point about the bus stop being close to his home:

*I live a two-minute walk from the bus station, so I get on the bus from my door. I love it” (Ashley, UND).*

For some participants, the bus stop as a structure was discussed, with a clear distinction being made between rural and urban bus stops, particularly visibility of the stops and the difficulty

or ease when finding them. One User Non-Driver living in a rural area discussed the bus stop by her home:

*“Some stops are a tad run down aren’t they ... the one by my house is an eyesore. It is a panel with roof, and its bright blue ... I guess you can’t miss it then though. It is a bit pointless as there are no sides to it, so if it is windy and raining the roof is pointless” (Gloria UND).*

Another User Driver talks about the bus stop near her home, noting an issue when the bus stop is busy or when youths use the area to ‘hang around.’ This is a small bus station in the centre of Gorseinon. It must be noted here that Gorseinon is defined as a rural area, however, in section B (travel diary findings) the area is mapped as a rural-urban area when the environment and available amenities are plotted in comparison to surrounding rural areas.

*“I don’t mind the bus station in Gorseinon. It is not far for me to walk, and the buses are frequent. The bus stops are okay. They are sheltered and there is a lot of seating so you can sit and wait. The only issue is the kids have vandalised it with spray paint and they also hang around there in the nights ... I won’t get off the bus here passed p.m. because of them” (Katie, UND).*

The bus stop as a structure was also referred to when passengers are carrying items, such as shopping. One User Non-driver notes the difficulty she faces when returning from a shopping trip:

*“The bus stops I don’t have an issue with, but if I have shopping with me, it is difficult when there is no seating, and you have your bags with you. Like the bus stops, you know the ones around that just have a pole and a bus stop sign on it. I don’t like using these ones because you can be waiting up to thirty minutes with your bags, standing the entire time” (Michelle, UD).*

Finally, participants talked both positively and negatively about the bus stop itself. Some could not decide whether they preferred an empty and quiet bus stop, compared to a busy one:

*“Bus stops are in the middle of nowhere and you are lucky to see a sole, or they are in the*

*middle of town, and you are amongst twenty people all waiting to get on” (Harry, UND).*

*“I don’t know what is worse, an empty bus stop or a packed one ... an empty one makes me panic that I have missed the bus ... a packed one makes me panic there won’t be a seat available when I get on” (Caroline, UD).*

From an older person’s perspective, the ideal bus stop is located close to home, visible, well lit, with seating and weather protection.

- *Local amenities*

In chapter 2, it was noted that access to amenities and services have a positive influence on quality of life, however the hypermobile society (Adams, 2001) has created a splintering urbanisation that has increased the distance between activity and opportunity, especially as amenities are now placed on the outskirts of towns and cities. Participants discussed local amenities in relation to their built environment and how this contributes to their connection to their community. Having access to local amenities within the vicinity of a person’s local environment was discussed both positively and negatively. For one User Non-Driver, the closing of the only shop in her village has affected her ability to just ‘pop to the shop’ without having to plan a trip around the bus timetable:

*“I was really disappointed when the local post office and shop closed a few years ago. This was the only shop left in the village. I used to walk there to get the paper and some milk every morning. I miss doing that” (Helena, UND).*

Living in a rural area has led to a feeling of detachment from the local community for one User Driver. Dianne (UD) noted choosing isolation as it can be tedious when the only option to see people is when she travels:

A lack of local amenities was also referred to by Fred (UND) who lives in a rural area. Fred noted the lack of amenities as well as the poor and unreliable bus service, which limits his ability to connect with his local community.

- *Location (urban vs rural)*

Public transport differences between rural and urban infrastructure is a key theme running through many interview responses, therefore is noted here as a multifaceted sub-theme under amenities. This is because it is linked to the location of the bus stop, available amenities, and the bus route itself in terms of frequency and reliability. One male User Non-Driver made a powerful statement relating to living in a rural area, specifically expressing frustration towards the built environment in his locality, overall highlighting location inequality:

*"I walk maybe 5-10 minutes to the bus stop to catch a bus to Gorseinon, wait up to 30 minutes for the next bus, and then get on that bus to go to town. My friend XXX lives by the bus station so the longest she waits is five minutes. It's like post code lottery for old people" (George, UND).*

Specifically, one female User Non-Driver living in a rural area noted feeling completely cut off from society due to the restricted bus service that operates in her locality:

*"We are lucky if we get a bus here. They are either every hour or every two hours, and that's if they turn up ... " (Debbie, UND).*

Debbie discussed this further in relation to transport, demographic and whether she should have considered this when she moved from her family home:

*"Sometimes I wish I had never moved here and away from my friends and family" (Debbie, UND).*

Michael (UD) gave a compelling statement about the inconvenience of public transport when attending the hospital:

*"The bus service in this part of the world is a joke. We are lucky if it turns up and comes through this village ... To go to the hospital there are two buses per day that arrive at 2 and 3 [pm]. If I have an appointment at any other time, I have to go into Swansea and then catch a bus to XXX hospital. The hospital don't make appointments around the bus timetable" (Michael, UD).*

User Drivers continued to discuss access to public transport in a negative light, specifically the location and frequency. The majority revealed this to be a key reason for continuing to use

alternative transport. Interestingly, five out of fourteen User Drivers live in urban areas and did not specifically note access to the bus, or the location of the bus stops as a specific barrier:

*“I don’t have any issues when walking to the bus stops. It [the bus] serves its purpose for me quite well” (Wendy, UD).*

Overall, location was discussed both positively and negatively in terms of the difference between practical connections to amenities in both rural and urban areas.

- *Available information*

Having information about the bus service was considered an important part of the travel experience. Transport infrastructure and improvements were linked to exclusion when an individual noted being unable to travel for reasons beyond their control. For example, one female User Non-Driver, who is partially blind, notes the structure of the city bus station as being problematic and a barrier to inclusion:

*“And the quadrant [Swansea City Bus Station] is not easy. They do not announce the buses when they are there. I cannot see a bus or the number if they pull in and they don’t always pull into the bay you expect them to. It is very stressful there. There is no means of queuing” (Helena, UND).*

For some, using the bus requires pre-planning as there is a need to know and understand every aspect of the trip. This can include identifying the bus times, the drop off points and the walking distance. For this reason, having access to information prior to travel is essential. This is the case for Helena who talked about the planning involved when she is travelling by bus. In this case the bus trip itself before starting the journey can be considered negative and a barrier to connection. Helena continued to mention this barrier as a constant worry due to her disability:

*“I like to go out as often as I can, but it is hard because I am partially blind. I have to be sure I know when the bus is coming and where it is going. I plan every part of my trip. Sometimes, or often actually, things don’t go to plan, and I have to phone a taxi to pick me up” (Helena, UND).*

An element of frustration was also evident when other participants discussed bus information and the disappointment they feel when they have organised and planned their journey, only to later find out information had not been updated or the bus does not turn up and/or is late. Alice talked about this at length:

*“Sometimes the bus can be unreliable. I have planned to meet friends at Swansea train station before for a day of shopping and a bit of lunch in Cardiff ... It was for my friend’s birthday actually ... I planned the trip ... we would all get the bus to the station and then get the train to Cardiff ... But the bus didn’t turn up. I checked online and it was due. Turns out it had been cancelled ... and the next one [bus] wasn’t for another 30 minutes ... why couldn’t they update the information? We did make it to the station on time but had to rush ... this happens a lot” (Alice, UND).*

Additional findings relating to accessible information for passengers were noted. This related to anxiety around changing access to information and a reluctance to move away from using information boards towards smart phone apps or text messaging services:

*“I can’t use the app thing. My phone [mobile] I use to phone people, and I text my grandson. I have always used bus timetables on notice boards” (Harry, UND).*

Overall, having up to date information, which is available in both electronic and paper format, is important. This is because participants noted any changes led to anxiety using the service, which also affected their confidence to continue travelling by bus.

#### **4.2.5 Public travel as a *contributor* to connection**

The following section is based upon the perceptions and experiences of UDs and UNDs in relation to public travel as a *contributor* to connection in terms of the mechanisms in place when using public transportation options. Participants provided their views about bus use and bus accessibility. The views expressed were both positive and negative relating to the overall connection of the mechanisms in place when travelling on the bus and were linked to practical themes.



#### 4.2.6 Bus use: the travel routine

There is a clear distinction in the responses when participants were discussing bus use. Some participants discussed bus use in relation to the purpose of the journey itself. Here the bus is a means to an end. Other participants discussed bus use in relation to how it fits into their travel routine. Here the bus was the means to an end, as well as a social catalyst to community connection (meeting friends and family for example). Finally, participants referred to bus use as both a means to an end, as a social catalyst, and as a social facilitator in and of itself. Each distinction is discussed below.

##### - *Bus use: The purpose of the journey*

There is a pattern of bus use amongst responses. Generally, the bus is used for medical appointments, shopping, and social trips. However, the overall purpose of the journey is diverse, leading to a differentiation in the experience and classification of the trip itself. For example, shopping is both social (window shopping with friends) and purposeful (shopping for weekly groceries) and depending on the reason for shopping, would depend on the response about bus use and the purpose of the journey. One User Non-Drivers talked negatively about bus use when grocery shopping, referring to the bus as a means to an end:

*"I mainly use the bus for shopping or to go to an appointment ... I live in a small village ... I get two buses most of the time, so I just go when I need to." (Aimee, UD).*

In this case the bus is used for a purpose (to go shopping or to a medical appointment). Responses differ between participants however, with UD's seldom using the bus for local shopping trips, noting the bus as not serving a purpose due to difficulty carrying shopping bags:

*"If I am just getting bread and milk, yeah I take the bus. But I usually take the car to the shops" (John, UD).*

Overall, there was a clear element of bus use relating to the bus being a means of travel only for the purpose of the journey, however this was linked to purposeful shopping trips and attending medical appointments within the local area. UD's noting more often that they would

choose to drive for local shopping or medical appointment trips.

- *Bus use: As a social facilitator*

The identification of the bus journey changed when the distance travelled changed beyond a bus pass user's immediate locality and the purpose of travel changed. For example, when the reason for travel became more social, a further theme emerged relating to bus use and the bus acting as a social facilitator. Helena, a User Non-Driver, talked about the bus pass providing her with connection to her community in terms of providing the means to get involved. Her sense of attachment to the local area was clear and this was linked to her strong desire to get involved in as many local events and groups that she could:

*"I am out all of the time and I join random clubs. I ended up in a knitting club once ... I made a hat and a scarf [laughs]. I love going to town and if you ask around you will find something on that you can join" (Helena, UND).*

Another retired female User Non-Driver talked about how she set up a weekly coffee morning in her local area and how the bus has allowed her to do this:

*"I started a coffee morning a while ago ... We get about 10 people who come. It is something to look forward to ... and I couldn't go if I didn't have my pass as I don't drive" (Anna, UND).*

Participants referred to the bus acting as a social facilitator in many ways, some noting the contribution of the bus as being the vessel that takes them to new places to enjoy the scenery and others as an option to be spontaneous and free to travel.

*"I always travel by bus. I enjoy it. Sometimes I get on [the bus] and end up somewhere and then get back on and go home. I love mumbles or the Gower. Especially in the spring" (Ryan, UND).*

- *Bus use: The mixed-use purpose*

Both bus travel for a purpose and bus travel acting as a social facilitator offer different meanings relating to bus use and bus experience, however both are interlinked with the overall connection that bus use provides. In particular, the bus acting as a contributor to the connection relating to the mechanisms in place. A final theme did emerge however when

discussing bus use and identifying the category of the trip itself. For example, not all respondents were specific when categorising their bus trips. Two bus users identified their trips as social in nature, for example 'attending book club' or 'attending dance class'. However, when probed, it became apparent that both participants organise the events they attend as committee leaders:

*"Do you run the event yourself? "Is that where you go when you said you use the bus to go to a dance class" (Kelly, Interviewer).*

*"Oh yes, yes, sorry should I have said that" (Joan, UND).*

*"No no, it's okay. I just wanted to be sure I wrote down you volunteer and run the class yourself" (Kelly, Interviewer)*

Two participants in this study met on a routine bus journey, and now always travel together on the bus.

*"I think you interviewed XXX the other day. You know we met on the bus ... We started chatting and realised we were going to the same class. We went together and travelled home together. That was nine years ago" (Joyce, UND)*

In addition to using the bus for 'voluntary work' and being key leaders in creating connectedness within their communities, the distinction between the two sub-themes, as well as the difficulty participants had in categorising their trip purpose, suggests that respondents do not identify their community activity as volunteer work, nor do they differentiate between the different meanings of bus use. This complex multi-purpose trip has a significant meaning, however, and has been mixed in with the reasons for travel as a contributor to the connection. The identity of the traveller would not have been captured using aggregate data nor would the meaning of the bus in contributing to their connectedness.

This difficulty was noted with several participants. Returning to Aimee (noted above in the sub section *bus use: the purpose of the journey*), there was a clear statement provided about

bus pass use and purpose, specifically:

*“I mainly use the bus for shopping or to go to an appointment (Aimee, UD).*

When probed in the interview and asked to breakdown a typical bus journey and the destination, Aimee went on to say:

*“Most of the time if I have a doctor’s appointment, which is most of the time [laughs], I usually go to Asda café for some lunch afterwards ... I have met XXX in Asda for lunch before ... Yes, I sometimes walk up to the café on the High Street and get the bus from there after a coffee” (Aimee, UD).*

This finding suggests that originally the participant would have been categorised within the ‘bus use – for the purpose of the journey’ type, as the original quote suggests that the purpose of travel by bus was to use it ‘as a means to an end’. However, upon further discussion, the purpose became mixed-use and both a means to an end and as a social facilitator. This mixed-use finding is also reported in the travel diary data (below).

For UDs, as noted above, those with access to a car report alternative means of travel as being an important factor when choosing their travel methods. This means that UDs reported usage as more leisure orientated, as local functional and purposeful trips (medical and shopping) are mainly undertaken using the car. However, UNDs are more likely to report using the bus for both functional ‘purposeful’ use reasons as well as leisure activities. In addition, when discussing the cost of travel (noted above), the destination was not important to some participants, when the method of travel was free. One User Non-Driver was clearly confused when presented with the question “what is your main reason for travelling by bus” and did not understand the importance of stating the reasons:

*“Umm, it’s free. Do I need a reason? [laughs] (Jim, UND)*

*“You don’t need to say a reason no. So, does this mean you travel by bus with no destination in mind? (Kelly, Interviewer)*

*“Sometimes. What are the options?” (Jim, UND)*

*“There are no options, this is your interview about how you travel. There is no right or wrong answer” (Kelly, Interviewer)*

*“Oh right, okay then. Well, everything I do then, sometimes the pub or the bank like yesterday, sometimes I just fancy getting out ... I usually end up in a pub [laughs]” (Jim, UND).*

As discussed above, there is a distinction between rural residents and urban residents (*location: urban vs rural*) relating to the location of the bus stop, available amenities, bus frequency and reliability and this impacted on decisions to travel. In some cases, residents living near a bus station noted having no destination in mind, however this was not the case for those who did not have access to a regular bus service. Here travel by bus always had a purpose.

Overall, it can be said that the results indicate a mixed multi-purpose reason for travel amongst participants. For some concessionary pass holders, it is difficult to categorise the purpose of the trip beyond the initial destination, for others there is no purpose or destination beyond travelling for travels sake because it is free. Others have a specific destination in mind, while some relish the multi-purpose options the pass gives them and can clearly identify this as a catalyst for travel opportunity. It can be said that these trips offer a clear benefit to the pass holder, as there is an option to continue to travel beyond means, and to continue to be independent without relying on another person.

#### **4.2.7 Bus Accessibility**

Bus accessibility was important to all participants and revolved around the bus route, getting on and off the bus, the physical characteristics of the bus (signage, handrails, cleanliness) and the overall comfort of the bus (seating, smooth driving, personal safety, passenger, and operator behaviour). For participants, having a comfortable, easily accessible, and well serviced bus route was essential if public travel was to be a contributor to connection.

- *The bus route*

Having a quality bus service that goes to a range of places was discussed in all interviews. It has been noted above that generally the bus is used for day-to-day needs (shopping and medical appointments) as well as to fulfil social travel needs (meeting friends, attending community events). A further theme emerged relating to the bus route itself. In this case, having a reliable and flexible bus route was key to all and if this was a real opportunity for social inclusion. However, this is not the case for all bus users:

*“I have mentioned this before, but I am lucky to get a bus here every few hours, and then it’s a bus to one place to get on another bus to where I want to go” (Debbie, UND).*

Debbie continued to express frustration when noting she has the physical ability to get to where she wants to go, but is excluded due to the structures in place and the spatial bus route on offer:

*“Do you know how frustrating it is being able to do things and wanting to get out there, but being blocked by a bus ... I know I have more time than others because my kids have moved out and I am retired, but some days the journey alone can be three hours because I have to switch or wait ... it is ridiculous” (Debbie, UND).*

Most participants stated they would not travel if they had to change bus to get to their desired destination, unless the reason for travel was to attend a medical appointment:

*“I don’t like it when I have to change bus ... like when I have a hospital appointment I go to Swansea and then get the bus from there. And then again to come home if I miss the number 46 [bus]. That one [the number 46] is direct, but it runs every two hours I think” (Joan, UND).*

When probed further about bus switching, Joan noted that she would not choose to travel if she had to switch buses.

- *getting on and off*

As noted in chapter 2, the overall design of the bus is an important factor in accessibility and can contribute to the connection when using public transportation. Findings from the

interviews support this view, as getting on and off the bus was of particular importance to participants in this study. One male User Non-Driver living in a rural area expressed concerns that public transport was not geared towards the older age population and ignores their needs:

*“I do struggle to get on the bus a lot of the time and I feel sometimes like I am being rushed on” (Fred, UND).*

This finding is important as it notes Fred has difficulty boarding and alighting the bus. However, interestingly, Fred goes on to note that it is not only the physical structure of the bus that makes boarding and alighting difficult:

*“When I feel rushed, I find I trip more, or it makes me really nervous ... I don’t go slow on purpose” (Fred, UND).*

Linking to this theme, is an issue that was also noted in chapter 2 relating to people having negative experiences due to the attitudes of the bus drivers themselves (Gilhooly et al., 2003). Fred goes on further to note that the bus operators are part of the reason he feels rushed to board and alight the bus:

*“The bus drivers don’t always help ... They are in a rush to get to the next stop and if I am slowing them down, they make it known I tell you ... I dread it when there are roadworks about ... I just know that the bus driver is going to be late and, in a rush, and then I am rushing because I feel bad it’s not his fault he is late” (Fred, UND).*

This finding links to a number of issues that have been a running theme throughout this study and creates a paradox. To improve transport links, there is a need to have road works, however this means buses are late, which in turn makes a person feel rushed when boarding and alighting.

Participants also talked positively about bus operators, including some that ‘go above and beyond’ to help, rather than making an older person ‘feel inadequate’. For example, one User

Driver talked about a negative experience while boarding a bus, however the positive actions of the bus driver when this happened:

*“I was getting on the bus a few weeks ago and I slipped ... It was my fault; I was carrying my bags in the front and wasn’t looking where I was going. The bus driver was marvellous. Such a gentleman. He helped me up and to my seat, checked if I needed any first aid, and then on the journey, every now and again, would pop his head back and check that I was doing okay” (Julie, UD).*

Julie mentioned this experience once more during the interview, which shows the experienced actions of the bus operator has had a lasting impact on her and her perception of the bus. In this case, the negative experience related to the items Julie was carrying when boarding the bus. This is a key theme that emerged regarding difficulty when getting on and off the bus:

*“I do find it really difficult when I carry my shopping on to the bus” (Debbie, UND).*

Design and physical characteristics of the bus are important and older people felt more confident using the bus when it is dry, there is no perceived rush to board and alight, when bus operators are patient and friendly and when they are not carrying items.

- *Physical characteristics*

The physical characteristics of the bus itself is a key theme running through several interview responses, relating to signage, lighting, handrails for boarding and cleanliness. Therefore, *physical characteristics* are discussed here as a multifaceted sub-theme under bus accessibility.

Evidence in chapter 2 highlighted perceived versus objective measures of the built environment (Hess, 2012). Here, older people have trouble using the bus and boarding the bus when there is a lack of signage. The view that signage is visible and readable was important to several participants, not only relating to finding a bus stop, but also when boarding the bus and navigating a busy bus station:



*“I find it difficult to read the timetables at the bus stops ... the writing is so small. And there are posters and lots of information in notice boards, but never information on the different buses ... I mean some buses are easier to use than others. I like to know what bus I am getting on because some of them are difficult you know” (Helena, UND).*

This suggests that the general information about the bus in terms of pick-up time and destination is important, but the informal information about the bus itself would also be useful. Musselwhite and Haddad (2010) also found that little information was available relating to day-to-day informal information about which buses are more accessible, where to put baggage and the procedure for getting off. When probed further, Helena continued to talk about the benefits of knowing the informal information about the bus, particularly because she is registered blind:

*“Some buses you get to know because you use them all of the time, but it took me a while to know what bus is easier to use and which one has the seat next to the handrail when you get on” (Helena, UND).*

Chapter 2 also mentioned the importance of well-designed handrails for boarding the bus and navigating to a seat when on board the bus (DfT, 2005; Shrestha et al., 2017). In addition to Helena noting ease of use when the handrail is close to a priority seat, a further finding suggests that bright colour contrasting handrails also aid visual impairment:

*“I remember when buses used to be all grey or brown ... I like the colourful handrails ... they make it easier to focus on walking without having to find something to lean on to at the same time” (Lynne, UD).*

Finally, referring to physical characteristics, bus cleanliness was also mentioned by participants as an important aspect to contributing to the connection. This was linked to the feeling about the bus overall as well as to comfort (discussed below). Participants talked about the general cleanliness of the bus in a positive way, noting a difference between buses today compared to previously:

*“Most buses are quite clean now ... Some of them do have a bit of a musty smell, but you don’t often see much litter or graffiti. They [bus operators] tend to clean them more than they used to” (Susan, UD).*

- *Bus comfort*

A number of participants referred to the overall comfort of the bus. This was discussed both positively and negatively overall and related to seating, the bumpy ride and the distance and reason for travel.

*“What I don’t like are the seats on the bus. They are really hard and quite uncomfortable if you have a long journey ahead of you” (Susan, UD).*

Being comfortable whilst traveling was very important to several participants. Some User Drivers focussed on comfort and how this can sometimes be the reason they choose to use the car:

*“I prefer to drive for longer distances ... it is just easier and more comfortable when you are in control ... I can stop for a break whenever I need to” (John, UD).*

Being comfortable while on board the bus was referred to by most participants and is related to the practical aspect of using the bus. Participants talked about the different levels of comfort they had when getting on certain buses, specifically how some were more comfortable than others:

*“I don’t like the buses that rattle and sometimes you can feel every bump and jerk” (Jayne, UND).*

A further finding relating to bus comfort linked to passenger behaviour and priority seating. For the most part, participants who referred to passenger behaviour and priority seating talked about this in a positive way, demonstrating that it is a societal norm to give up a seat for someone less able:

*“I find the kids really respectful ... They always move further back so I can use a seat closer to the door ... I went to get up one day for a pregnant mum who had a toddler with her, but two young lads beat me to it ... They helped her with the pram and moved so she could sit close to the exit ... I like to see that” (Steven, UND).*

Unfortunately, this behaviour is not always the case, as Fred discussed in his interview:

*“Not everyone gives up their seat and if I walk to the back of the bus when it is moving that can be difficult, especially if the bus goes when you haven’t sat down. I fall over standing still these days” (Fred, UND).*

In addition to this, the overall comfort experienced was linked to the reason for the journey itself. As noted above, passengers differentiate between the purpose of the journey and how they feel about bus use. When the purpose of the journey changes, the experience of the bus itself changes. For example, Carl noted above that he likes to visit new places (parks and beaches) and enjoys the scenery while travelling on the bus. When probed about bus comfort, his description of the experience changed depending on the purpose of travel and the length of time on the bus:

*“I do find the bus to be uncomfortable at times ... going to the shop or into town is a short ride for me so it’s not too bad .... But it can be bumpy and loud” (Carl, UND).*

*“You mentioned earlier that you like to visit new places on the bus. I imagine the bus journey is longer when you go to the beach or to a new park ... have you experienced any issues on the bus when travelling for these reasons” (Kelly, Interviewer).*

*“I did say that ... yes, sometimes. But I suppose it is less obvious when you have something to look forward to ... I love to go to Carmarthenshire in the summer. The hills on the way down to Tenby are amazing ... it’s Welsh beauty at its finest” (Carl, UND).*

This finding suggests that comfort on the bus is a second thought when distracted by the scenery. Although it cannot be said with certainty that an older person does not experience discomfort when travelling for leisure purposes, it could be argued that comfort is less

noticeable when the nature of the journey itself is more positive and meets social needs.

A final theme emerged when discussing bus comfort and the time of the journey itself. A retired female User Driver talked about missing social events because of the discomfort when travelling at night. This is linked to it being dark, cold, and daunting:

*“I don’t like to travel on the bus at night-time. It makes me anxious. Sometimes I won’t go out because the bus at night is quite intimidating ... It is cold and dark, and I just don’t feel right” (Wendy, UD).*

When Wendy was asked about her experiences on the bus during the daytime, the reason for discomfort changed:

*“I know if I use it mid-morning it isn’t too bad. But if I am going to Swansea and it is early, or I am coming back around 3 or 4 o’clock, it is busy, and people sit next to you. I find that uncomfortable” (Wendy, UD).*

Overall, these findings correspond to the literature (see chapter 2, Shrestha et al., 2017). The ideal bus is stepless, or low floored, with bright colours that contrast from the handrails to aid visual impairment. The bus will have priority seating, audible information that can be heard easily and an overall easy boarding and alighting experience that instils confidence when travelling. Participants note that the bus system in many ways has improved overall (in terms of safety, reliability, cleanliness and in some cases is easy to use). However, several barriers still exist, namely location, design of the bus and the bus stop, the physical ability to board the bus and the cognitive ability to navigate bus travel. When the overall economic and health benefits of these measures are related to improved quality of life (as discussed below) this justifies the need to ensure economic and health benefits are given equal weighting when assessing age-friendly travel and age-friendly communities, and this should be reflected in the development of transport policy.

#### 4.2.8 The *outcome* of the connection

The following section is based upon the perceptions and experiences of User Drivers and User Non-Drivers in relation to the *outcome* of the connection and relates to bus use allowing age-friendliness to exist and continue. Participants provided their views and experiences about public transport in terms of greater community connection, social interaction, and overall social connections.

#### 4.2.9 Community connection

There is a clear distinction in the responses when discussing the outcome of the connection related to community connection. Some participants discussed the bus acting as a social facilitator allowing increased use for tourism, others noted the cost of travel and how this allows age-friendliness to exist and continue. Finally, participants discussed the pass in terms of it being the link between them and their community participation, providing them with a travel identity. Each distinction is discussed below.

##### - *Increased use for tourism*

A theme emerged relating to the bus acting as a social facilitator, allowing pass holders to undertake journeys for tourism purposes, which has led to an increase in planned, long-haul bus trips. Those that discussed travel for this purpose, also noted an increase in their quality of life. For example, several participants talked about using the concessionary pass to visit new destinations:

*“I can visit so many new places now using my pass. XXX [friend] had this idea to go to Conwy by bus and we loved it. It was a long journey, but we go every year now” (Jim, UND).*

Many participants noted the benefits of being able to use the concessionary pass for tourism purposes:

*“I go to Llandudno ... I usually spend at least a weekend in Llandudno because of how long it takes to get there” (Ashley, UND).*

*“Would you say taking trips like this has improved your quality of life?” (Kelly, Interviewer).*

*“yes ... As long as I can do that [travel to Llandudno] I will. It’s such a lovely place and right on the sea front ... beautiful in the summer” (Ashley, UND).*

A further theme noted when discussing pass use for tourism purposes included a distinction in how pass holders feel about the length of time a trip takes. As mentioned above, when discussing day to day travel, it was noted that the length of time on the bus contributed to the comfort of the journey. Specifically, the longer the local journey, the more uncomfortable the bus felt. However, when discussing long leisure trips taken by bus, the length of time on the bus was an advantage and contributed to the overall experience of the trip. Ashley, a User Non-Driver, talked about the long trip he takes to Llandudno:

*“The journey itself is around nine hours on the bus give or take ... I don’t mind as you pass through Snowdonia National Park ... No matter how many times you pass through it [Snowdonia National Park], there is something different to see and enjoy” (Ashley, UND).*

When probed about the length of time the journey took and would he feel the same if the destination were not for leisure purposes, this was met with a different view:

*“Oh no, I don’t think I would be as interested in the dual carriageway going to Llanelli [laughs]. It’s nothing special [laughs]” (Ashley, UND).*

However, this was not the case for all participants, some noting that the experience on a local bus is enough to put them off travelling at length for leisure on the bus:

*“Being on the bus for more than thirty minutes is too much ... when is it crowded it feels worse. The bus can also be bumpy and that can be painful when my hip flares up” (John, UD).*

John also talked about the physical pain he has when on a bumpy bus. It could be argued that this experience and the perception that a long-haul journey may inflict the same pain, is the reason John does not use the pass to travel for long periods of time. In addition, John stated that he only uses the bus for practical reasons (medical appointments) as the pass should be used in moderation. However, as noted, John has an option to choose his mode of transport.

- *The cost of travel*

A further finding relates to the cost of travel and how this allows age-friendliness to exist and continue. This is because the pass is seen as providing the financial freedom of travel which is recognised as an important aspect of holding a bus pass. The cost of travel is discussed above in relation to the structural connection having transportation options gives (for example, reducing the costs of petrol and parking). Here the cost of travel is discussed in relation to free travel allowing some users to enjoy activities that they would not have been able to afford had they paid for travel:

*"I can go anywhere ... and without worrying about how I am going to pay for it" (Donald, UND).*

For User Non-Drivers, the ability to choose where to go, and when, without worrying about the cost of the trip was important and seen as something to cherish. This is summed up by one statement made by Carl:

*"I don't care where I go ... And I have this freedom without the cost ... I feel really lucky because I don't go without anything if I want to travel" (Carl, UND).*

For local and day to day travel, the free pass led to an increase in participants being able to meet friends and have a weekly meal:

*"I used to spend a lot on travel. Now, I go to The XXX every Friday as they have a fish Friday meal deal for £6.75 and that will fill me for the whole day. I only pay for the meal ... We sometimes go to mumbles [by bus] for a walk and an ice cream ... You can't go to mumbles and not have a Joe's ice cream can you [laughs]" (Joyce, UND).*

A similar story was discussed with a UD, who takes advantage of the 'all you can eat' local carvery:

*"I go to XXX with XXX [friend] every Tuesday. The bus stops almost right outside [XXX] ... We always laugh about this because I phone her [friend] and tell her that I'm on my way to pick her up [on the bus]. We make a right day of it. My daughter even signed me up to weekly offers and one week I had 50% off ... I am a bargain hunter now for meal deals [laughs]" (Susan, UD).*

- *Travel identity*

For many participants, having a pass was linked to having an identity in the community. For Joan, the pass allows her to volunteer, which has provided a connection to her community and given her a newfound identity:

*“I volunteer at a dance class now a few times a week. It is really building momentum. It is for older people to come and exercise through dance and then we have tea and cake [laughs]. I use my bus pass to get there and back ... When I finished work, I didn’t know what to do with myself ... I feel like a new person with a purpose. And I feel like this is good for people you know? Good for the mind and the body” (Joan, UND).*

Another retired female User Non-Driver discussed her extensive volunteer work within her local community and how this gives her life a meaning and a purpose:

*“I would say that this [volunteering] is my way of contributing in a small way. I wouldn’t be able to do it if I had to pay [for travel]” (Joyce, UND).*

Another UD talked with pride about her ability to drive or catch the bus to her children’s homes and babysit during the weekend:

*“I can get on the bus and go straight to my daughter’s house ... I try and spend every weekend at one of my children’s houses and look after my grandchildren. It is important to me that I can go to them and don’t they know it ... Without fail there is a pile of ironing or garden work for me to get on with [laughs]” (Julie, UD).*

Joan, Julie, and Joyce talked with such pride when referring to helping others. This formed part of their identity as they linked having a bus pass to giving them independence, as well as the opportunity to volunteer and promote community engagement. This is not the case for all participants, however. As already noted above, the built environment prohibits several users from being able to participate in their community. This also links to findings presented in chapter 2 (Graham et al., 2018; Musselwhite & Haddad, 2010).



#### 4.2.10 Social interaction

Social interaction is something that was considered extremely important to all participants in this study. All responses refer to different connections related to social interaction, however there is a clear theme relating to the meaning and importance of social inclusion and interaction. Participants discussed the bus as acting as a social facilitator to meet people, providing freedom to visit friends and family and enjoy companion travel. Each distinction is discussed below.

##### - *Meeting people*

A key part of using public transport related to social interaction when travelling by bus. A theme emerged relating to meeting people and rekindling old relationships. For some User Drivers, travelling by bus provided an opportunity for social engagement:

*“I ran in to XXX the other day. I haven’t seen her for years ... she has two new grandchildren now and I told her about my new grandson ... we have plans to meet up next week” (Michael, UD).*

*“I get most of my gossip on the bus [laughs] ... I am a regular on the rounds and I do know quite a lot of people ... it’s great to chat and see people I haven’t seen for ages” (Susan, UD).*

*“What I like about it [the bus] is when you see someone you haven’t seen for ages. Last month I saw XXX on the bus. I haven’t seen her since last year” (Michelle, UD).*

Meeting new people was another key theme identified by participants. This was especially the case for two widowed participants who shared very similar experiences in terms of travelling by bus and how this has provided them with an opportunity for social interaction and engagement, as well as companion support. The following retired female User Non-Driver talked about making the effort to integrate back into society following the death of her husband:

*“When my husband died, if I hadn’t made the effort to get out there, meet people and join groups ... well I don’t know what would have happened” (Helena, UND).*

The participant also discussed how her best friend provides emotional support by listening and being there for her, having experienced the same loss. This was of crucial importance to her, which also acted as a trigger for using public transport:

*“XXX has experienced the same loss as me so she understands how I am feeling and can help me through it. Sometimes we plan a day trip by bus when one of us is feeling low just to talk face to face without any distractions” (Helena, UND).*

Public transport in this case allows a level of connection and interaction that cannot be achieved when one person is driving for example. This was the case for one User Driver when referring to the bus acting as a social facilitator. This positive experience may not have been possible had they driven to their destination:

*“I was travelling to Swansea on the bus last year and bumped into XXX on the way. We talked for the whole journey and then went for lunch together ... We meet up at least once a month now” (Michelle, UD).*

For some participants, the negative experiences of the bus journey itself (comfort, crowded, smells, bumpy ride noted above), are outweighed when met with a positive social experience:

*“I am not a fan of the bus as it can be difficult and uncomfortable ... they smell and are loud ... but it isn't so bad when you are travelling with someone” (Katie, UD).*

However, this was not always the case:

*“Sometimes I get a headache on the bus because of the noise and bumps. I just want to get on and get off ... I don't want to speak to people and try and avoid it if I can” (Caroline, UD).*

Overall, the finding relating to meeting people on the bus was positive as it allows for increased social interaction and in some cases improved access to social networks and greater community cohesion.

- *Relying on friends and family*

Participants had similar experiences to one another and similar feelings about independence. All talked with love and affection when mentioning family and friends, however also noted a reluctance to ask for help or show they need companion travel or support. David, a male User Driver, talked at length about his family and friends and the support they have offered due to his declining health issues. However, David also talks about the struggle he faces when taking the bus to the hospital for his treatment:

*"I attend the hospital for treatment a few times a week and I can't drive after it, so I take the bus, which can be uncomfortable after [the treatment] ... A lot of my friends are scattered around the city ... My son is very busy in work" (David, UD).*

Harry, a User Non-Driver, provided a similar account to David:

*"I am diabetic and 22 years ago when I was really ill my family and friends bent over backwards for me ... It took its toll on all of us. They all helped me so much I don't like to ask for anything now if I can help it ... I even make a point of not asking for a lift" (Harry, UND).*

In this instance it can be said that David and Harry do not want to feel like a burden to their friends and family. This finding does not correlate with evidence presented in chapter 2. Graham et al., (2018) noted that lifts from family and friends were more occasional and only acceptable for primary travel needs (hospital appointments). For David and Harry, asking for a lift even in this instance was not acceptable.

Jayne, a User Non-Driver, refers to the connection she has with friends, talking at length about her weekly coffee catch ups and meals at restaurants. However, when probed Jayne noted she takes the bus, while her friends sometimes drive. When asked if they share a lift, Jayne talks about not wanting her friends to go out of their way to pick her up:

*"I could have a lift, but we meet mostly in Swansea and asking for a lift from XXX would mean her adding time to her journey, so I just catch the bus and meet them" (Jayne, UND).*

Nichola, a User Driver provides a similar account, however from the perspective of the person

offering and providing lifts, which echoed the importance of her identity and role when helping others:

*“I do everything for my husband and mother ... I do the shopping and take them to appointments or give them a lift ... I don’t mind ... I do worry about what happens if or when I can’t take them anymore” (Nichola, UD).*

These findings relate to evidence presented in chapter 2. Graham et al., (2018) also found that older people are reluctant to ask family and friends for a lift to meet ‘non-essential’ travel needs. This highlights that older people place a great importance on self-reliance and avoid instances of being a burden.

#### - *Companion travel*

Social interaction on the bus was discussed in more detail and highlighted a significant key theme relating to companion travel as the outcome of the connection. For one User Non-Driver, travelling by bus was instrumental in providing social interaction and engagement, and added a layer of companion travel:

*“One of my group meetings takes me five different bus journeys there and back ... which is a pain ... I would never not go. One of my friends gets on the bus halfway through my journey ... she is partially sighted so I help her to get on and off ... and it means we can have a catch up on the way and the way back” (Helena, UND).*

Companion travel was referred to as providing Joan with an element of identity and gave her purpose:

*“... being able to help someone else at my age makes me feel useful ... I have a friend that I help on to the bus and we do a lot together ... I help her on and she helps me off [laughs]” (Joan, UND).*

A common theme emerged about companion travel relating to safety, comfort, and ease. A further finding also suggests that older people benefit from companion travel, especially if they have restricted mobility, as this provides them with support and assistance, increasing

overall confidence when travelling:

*“I like to travel with someone [on the bus] ... it makes the journey a bit more bearable and easier if I’m carrying bags ... My grandson helps me sometimes as he can carry the bags so I can concentrate on not falling” (Graham, UND).*

This finding supports evidence presented in chapter 2 (Age UK, 2019b) surrounding the benefits of companion travel and bus buddying. Both have the potential to help people with physical and sensory disabilities as well as those who face barriers due to a lack of confidence when using public transport (PT Access, 2008).

#### **4.2.11 The social connections**

Social connections are considered here in terms of the overall outcome of the psycho-social connections being facilitated when age friendliness can exist and continue. Quality of life contributions are discussed, as well as the pass in maintaining social connectivity in relation to social inclusion and reducing isolation, loneliness, and depression.

##### *- Understanding Quality of Life*

As expected, when participants were asked the question “what does quality of life mean to you” most paused to think about their answer, some finding it difficult to articulate a clear response:

*“oh um ... maybe not taking each day for granted and doing the things that I like and enjoy” (John, UD).*

*“I think it means being healthy and happy and having friends around you and love in your life (Helena, UND).*

*“My family and my friends being healthy and being able to live life to the fullest (Carl, UND).*

Evidence in chapter 2 highlighted that travel is essential to the success of achieving a positive quality of life, and that physical inactivity is a major contributor to loneliness, isolation, and

depression (Graham et al., 2018). This is confirmed in this study as participants discuss quality of life, mental health and social exclusion when referring to the bus pass:

*“Like I said earlier, staying active is important to me and I enjoy life when I can ... I live alone and the peace and quiet can get really lonely and deafening” (Gloria, UND).*

Debbie refers to the difference between her own quality of life compared to that of her mother’s, at the same age. Here value is placed on the conceptual meanings of quality of life relating to isolation and loneliness, as well as the personal responsibility of the individual to improve their own quality of life:

*“When I think of my mother’s quality of life when she was my age it was very restricted compared to mine. She was always in the house and not because she was ill, but because she had no opportunity to go anywhere. ... I am always out ... It [quality of life] means getting out there and meeting people, having relationships, keeping active you know ... But you need to want to do that. You can’t give up and just sit at home” (Debbie, UND).*

This shows that that combining objective and subjective understandings of quality of life, in general and in relation to bus use, can help to understand pass holders beyond aggregate data. In chapter 2 it was noted that poverty is a sign of poor life quality, however this is an external factor that is linked to deprivation. The responses given in the interviews are rich in meanings that go beyond the definition of poverty, social exclusion, and deprivation. Pass holders talk about quality of life in terms of having opportunities to continue to be active, meeting friends, participating in their community as well as being healthy.

#### - *Quality of life contributions*

All participants noted that the pass has contributed to their quality of life in some way. There was a clear element of positivity about the overall benefit of the concessionary bus pass. When asked “what does having a concessionary bus pass mean to you” and “has this improved or maintained your quality of life”, respondents answered this more easily:

*“Improved it so much ... I can go anywhere I need to without worrying about the cost” (Julie, UD).*

*“Yes, more than you know ... It [the pass] has kept me active; I walk more now and despite my health issues I feel I am healthier now than I was ten years ago” (Harry, UND).*

However, and as noted above, there is an element of disadvantage to using the bus for some participants, relating to the bus stop, the reliability of the bus and the difficulty faced when using the bus (for example, getting on and off). Interview participants who noted this difficulty, did not respond as positively:

*“I think the pass is important and I have the ability to get around now that I don’t have the car ... But the bus is no good to me sometimes when I find it difficult to walk to the bus stop. I can walk most of the time, but that may change ... this worries me a lot and I don’t know what will happen if I can’t use it [the bus/pass]” (Anna, UND).*

The point Anna makes here creates a paradox. Considering the importance of being active (walking to and from the bus stop for example) and the nature of the travel helping to reduce isolation, loneliness, and depression, this is only achievable when pass holders are physically able to do so. Ensuring there are additional bus stops in all communities would allow people like Anna more opportunity for travel, however this would reduce the amount of active travel undertaken overall.

There was also a clear differentiation between UDs and UNDs relating to pass use and quality of life. User Drivers for example linked the pass to adding value to their life. Julie, a User Driver, talked about the social aspect of using the bus and how just taking a trip for no reason at all can help her when she is feeling lonely or depressed:

*“This may sound silly, but I sometimes go on the bus if I am having a bad day ... I like the social side of being on the bus you know ... I mean I can talk to people or listen to people having a conversation ... You hear all sorts [on the bus] and it can be nice to hear others are struggling or have issues you know” (Julie, UD).*

Steven, a User Driver, talks about the pass adding value to his life, relating this to providing him with options due to living in an isolated area, however he refers to this in theory:

*“I would say that having the pass has given me options ... I am in control of what I can do and if I can walk and feel up to it, I take the bus. This is all in theory sometimes though as I am not always able to walk, and I am a bit cut off where I live ... Neighbours are not next door, but a walk or drive away so I am a bit isolated ... Having a bus pass and a car is great because if I want to go out I can” (Steven, UD).*

In contrast to linking the pass to providing options and adding value to quality of life, User Non-Drivers linked the pass to being the only thing between them and a reduced quality of life, depression, loneliness, and isolation. Helena, a User Non-Driver talks about the pass being the only thing between her and total isolation:

*“This pass has improved my life so much ... I know I have mentioned a few times that I struggle a lot using the bus, but what is the alternative? ... Yes, improvements can and should be made, but I refuse to be one of those old people who mopes around in the house all day doing nothing ... I have mobility problems, but I still get out there. No bus pass for me means I am housebound” (Helena, UND).*

Overall, the concessionary pass means different things to different people. The internal meaning of what the pass can represent and how this can improve or maintain quality of life differs depending on circumstances, location, available service, and personal situation. There is no ‘one pass fits all’ model when considering contribution to quality of life. The pass is a lifeline that many older people have become reliant upon, especially as it provides the means to reduce isolation, loneliness, and depression, however this is not always the case and will depend on the service being accessible, safe, and reliable. A persistent theme within all answers was that the concessionary pass can maintain quality of life, however, also has the potential to improve it. This is also dependent on overall accessibility.

#### *- Maintaining social connectivity*

One theme that has emerged is that active travel encourages older people to get out and about and this in turn improves their chances of meeting people and leading richer social lives. Active travel also has the benefit of decreasing social exclusion, isolation, loneliness, and depression.



The findings of the interviews suggest that participants clearly recognise the connections that they make on the bus journey itself (as discussed above) as well as how attending organised events in their community (library events, committee meeting, book club, dance class, coffee mornings) provide a level of social interaction and connection to their community. As discussed, the bus is seen as a social facilitator and a catalyst for social interaction. For example, participants recognised the social benefits of bus use when the aim of the journey was to participate in community events or to visit friends and family. For example, a female User Non-Driver links having the bus pass to her community involvement, as it has provided the opportunity for her to continue to volunteer and help her community, at no cost to her financially:

*“Part of being healthy is keeping busy and volunteering I reckon, plus I love having something to do ... I volunteer a lot ... I volunteer at the church and run a coffee morning and I litter pick ... I think it’s important to help in my community without worrying about finding change in my purse if I need to catch the bus” (Fiona, UND).*

David, a User Driver, talks about the community work that he organises and how others that attend also benefit from the social interaction that the group provides, especially as this is a community group specific to those who have lost a loved one. For them, according to David, having the concessionary bus pass provides the opportunity to take part and connect with others who have experienced a similar loss:

*“I run a bereavement group and we started off with only a few members, but we are expanding which is both great and sad at the same time ... Others that attend I know also get the bus and I know some wouldn’t be able to if they didn’t have a bus pass” (David, UD).*

A further finding in this research is that the health benefits of concessionary travel are linked to physical health improvements as well as indirect improved mental health and wellbeing:

*“Me and my friends organise shopping trips. I know this may not be exciting to most people, but it is a day out for me. It doesn’t matter where we go. Even to mumbles for an ice-cream I think is a day trip [laughs]” (Joan, UND).*

Joan talked about the benefits of the bus pass in terms of how it can contribute to wellbeing related to facilitating social connections. As noted above, others have referred to the bus in terms of how it can act as a facilitator for increased tourism, providing travel identity and opportunity to participate in travel experiences. Further physical health benefits include weight loss, reduced morbidity, and increased levels of physical fitness. It is important to note that the researcher is not a medical doctor, and these findings are based on participants own perceptions of their overall physical health. In addition, these have not been compared against older people who do not use their bus pass or are completely inactive:

*“Since my wife passed away, I have been trying to forge a new life by adding activities and that includes using the bus more and the car less... I mentioned my health issues and the struggles I have [using the bus], but I do think that adding that short walk to the stop is better for me in the long run ... I have been able to keep active and healthy ... When I can’t do these things, well what is the point of life” (David, UD).*

These findings suggest that the concessionary pass is a catalyst for improved quality of life and that it can facilitate connections.

Finally, when participants were asked if they had any further comments to make, most noted that they were happy that they have the option of free travel, but that they hoped the service would continue to improve for them. The consensus of these comments is summed up by Michael, a User Driver:

*“I am grateful to have the pass and am glad to see there are people working to improve the service for people like me ... I have a few suggestions. I would like to see it [concessionary travel] extended to trains as I think this would add a layer of travel for older people. The Heart of Wales [a free seasonal train service for pass owners], is brilliant and so well used. It would be good to have this all year round as it is hard to get a seat or ticket because it is so well used. I would like the council to think of passengers when they make decisions about integration ... Those living in rural and remote areas cannot get about as they don’t have buses as often as other places ... These people are isolated. Last one. A pass for jet flights may help too [laughs]” (Michael, UD).*

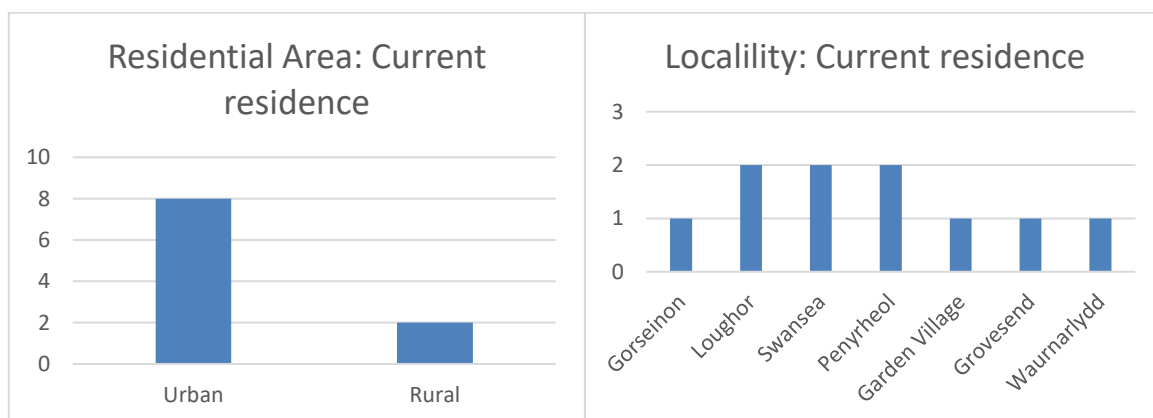
### 4.3 B. Travel Diary Findings

Section B of this chapter presents the findings from a seven-day travel diary completed by ten interview participants and concessionary pass holders between April 2019 and October 2019. It begins with a descriptive breakdown of travel diary responses in terms of residential area and environmental characteristics before exploring participants bus using trends, the quality of the journeys undertaken, and alternative travel choice options available at the time in the absence of a concessionary pass.

#### 4.3.1 Descriptive data

- *Residential Area*

Graphs 9 and 10 below show the residential area that participants live. Graph 9 shows that 8 respondents live in urban areas and 2 in rural areas.



Graph 9: Residential area

Graph 10: Locality

- *Environmental Characteristics*

The environmental characteristics of the respondents in terms of their residential area are dissimilar, despite all living relatively close to one another. Image 9 below represents the residential area that all ten participants currently reside. Note, the pins represent approximate locations to protect participants anonymity.

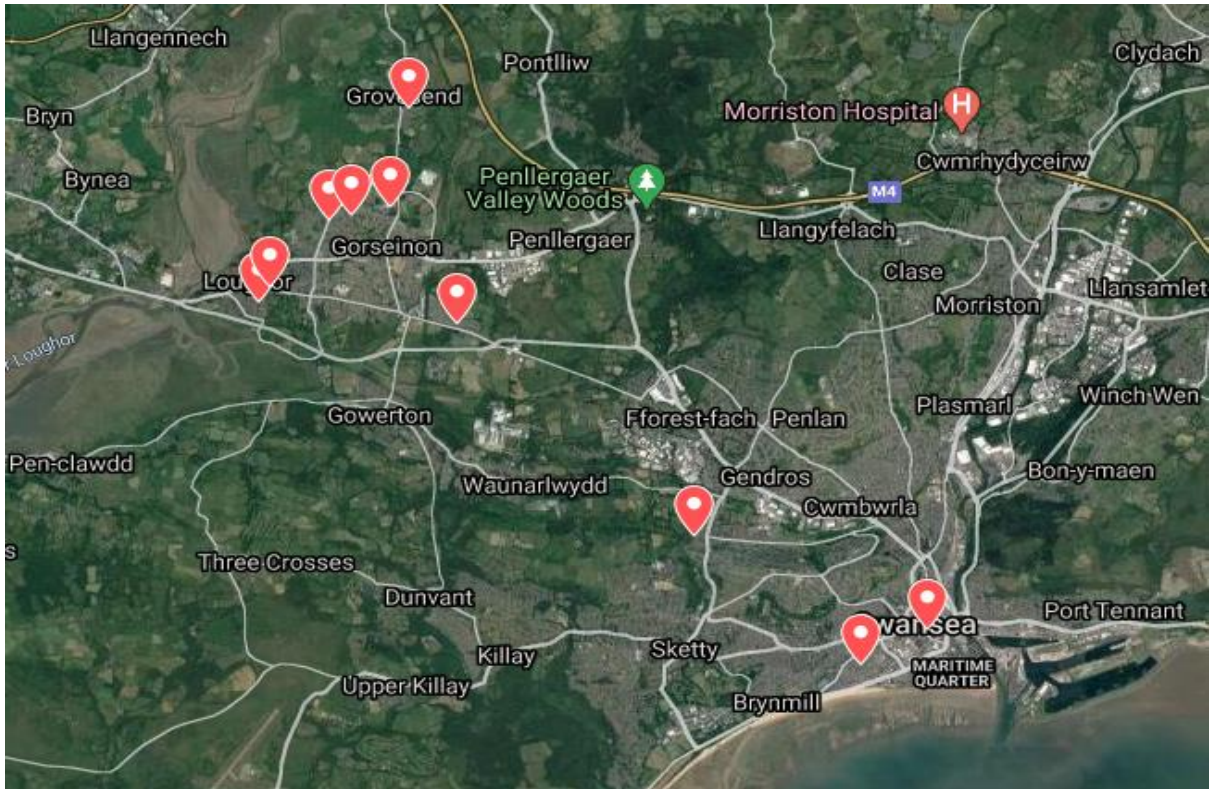


Image 9: Residential area of Travel Diary Participants (Google Maps, 2021)

The aerial distance between each participant is 102km<sup>2</sup> (estimated area).

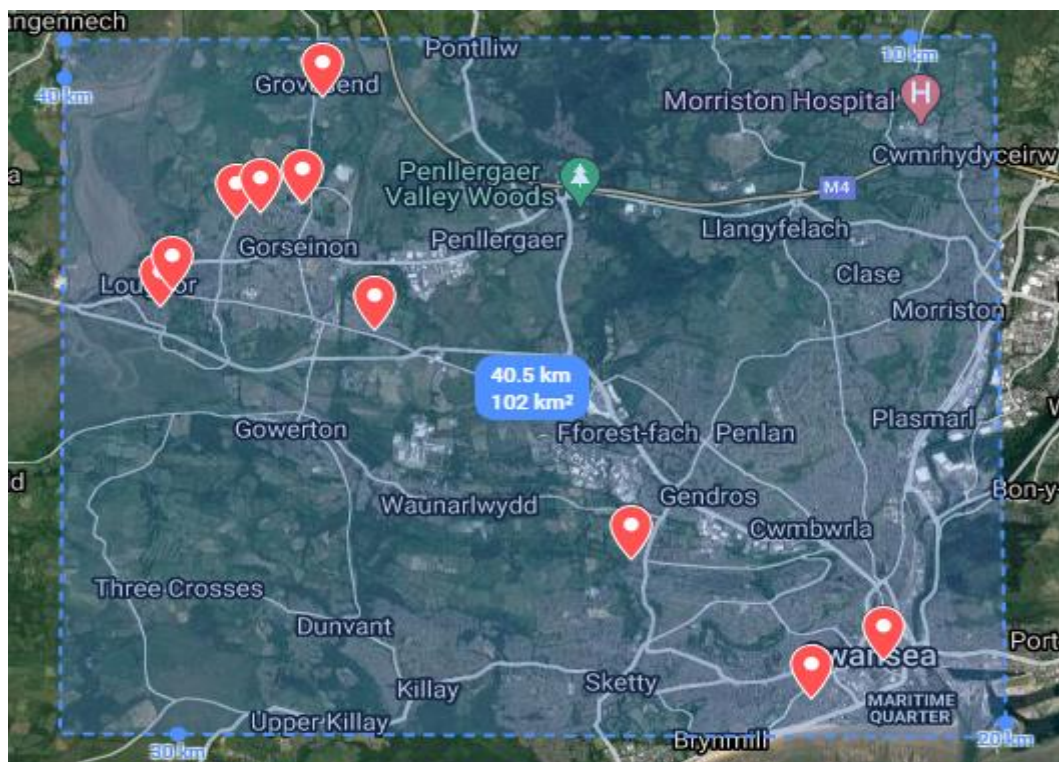


Image 10: Aerial distance between participants (Google Maps, 2021)

Interestingly, despite their proximity to one another, the environmental characteristics and available local amenities are very different for each participant. For example, eight participants are categorised as living in rural areas (small towns and villages), however their individual built environments have disparate amenities, access to a bus stop and opportunity for public travel.

Loughor (also known as Llwchwr) is classified as a small historical town (also referred to as a village) situated in Gower, Swansea. Available services and facilities include a town hall, two primary schools, churches, and chapels, two general stores, a park (with play area and bowling green) and foreshore area (Collins & Begum, 2008). Located one mile from Loughor is Gorseinon, which is also classified as a small town (Swansea Council, 2021). However, comparing available services and amenities to that of Loughor, Gorseinon has a busy High Street consisting of charity shops, local stores, bakeries, restaurants, pubs and clubs, hairdressers, and food outlets. Other available amenities also include a library, one primary school, churches, and chapels, three parks, a police station, three large superstores (Asda, Aldi, Sainsbury's), two food banks, a local hospital, two doctors' surgeries, three dentist surgeries, and four chemists. Therefore, it could be said that Gorseinon can be considered a rural-urban town. Gorseinon ranks as one of the most deprived areas in Wales overall (1030 out of 1909) (Swansea Council, 2021), however the Lower area of Loughor ranks in the top 10% of deprived areas in Wales for physical environment (Collins & Begum, 2008).

According to mid-2019 population estimates, the age profile of Gorseinon is slightly lower than the Swansea average, with 16.9% of the population being over the age of 65, however the age profile of Loughor has a slightly higher proportion compared to Swansea overall (Swansea Council, 2021).

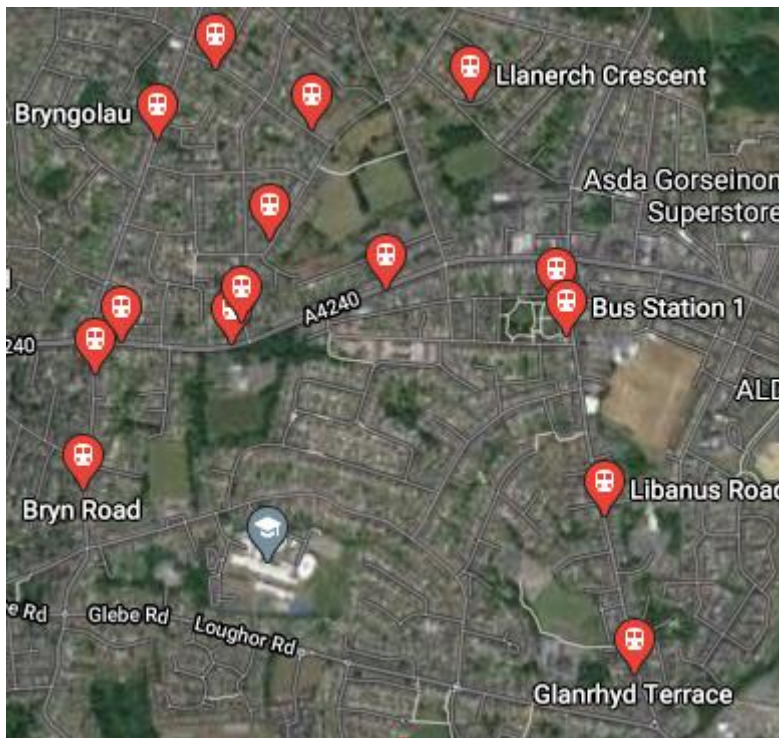
- *Available Bus Stops*

Images 11 and 12 below show the number of available bus stops for Loughor and Gorseinon.





*Image 11: Loughor bus stops (Google Maps, 2021)*



*Image 12: Gorseinon bus stops (Google Maps, 2021)*

The disparity in available bus stops is evident between the two locations. In addition, Gorseinon has a bus station situated in the middle of the town, which links to Llanelli, Swansea, Morriston and Pontarddulais (see image 13 below).



*Image 13: Gorseinon bus station (Google Maps, 2021)*

Evidence presented in chapter 2 noted that there is an increasing area of transport research linked to the hypermobile society, including evidence that some older people can experience issues such as reduced accessibility to opportunities, social networks, and services. Noting the disparity between the age profiles in Loughor and Gorseinon, as well as the disparity between available bus stop locations, it could be argued in this case, that one mile is the difference between connectivity and accessibility to opportunities within these communities. For example, someone living in the lower area of Loughor would have to walk approximately 800 metres to their nearest bus stop.

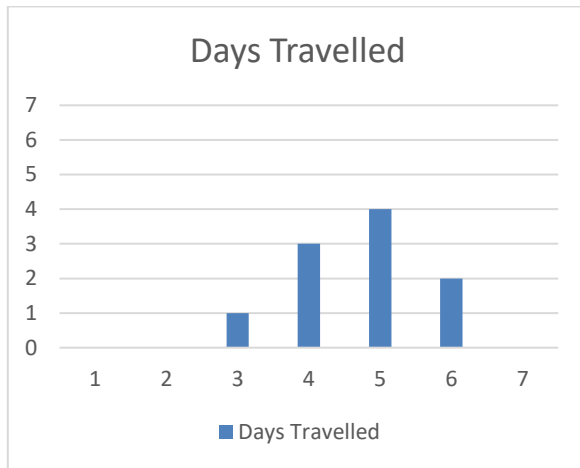
### **4.3.2 Bus using trends**

This section explores bus using trends, specifically the number of journeys made, trip origin and destination, trip distance, reasons for travel, time of travel and how far respondents typically walk to the bus stop.

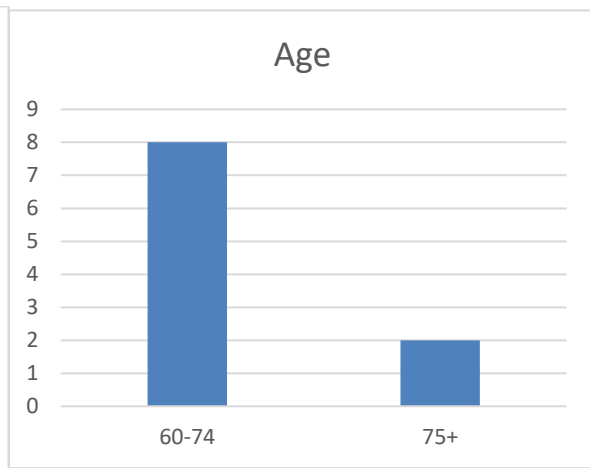
#### *- Number of Journeys*

Over the 7-day period, a total number of 47 trips were recorded. There is some variation in the frequency of use over the days travelled, for example, of the ten respondents, one travelled over three days, three travelled over four days, four travelled over five days and two travelled for six days out of seven (see Graph 11 below). All respondents travelled by bus to

and from their destination, therefore the number of journeys recorded on the bus is 94. The data does not show a difference in bus use frequency between those aged 60-74 and those aged 75+. Graph 12 below shows that 8 respondents were aged 60-75, and 2 aged 75+. Those aged 75+ travelled for five days out of the seven. Respondents that recorded less frequency of bus usage were also user drivers (UDs), however this also varied. Of the three UD, one travelled by bus over three days, one over four days and one five days out of seven.



Graph 11: Days Travelled



Graph 12: Age of Participants

- *Trip Origins and Destination*

Image 14 (below) shows the mapped locations of all travel diary entries. The pins are colour coded to show the origin and destination. The red pins (home icon) represent the origin and return destination of all ten participants. The yellow pins (bus icon) represent the destination travelled to.



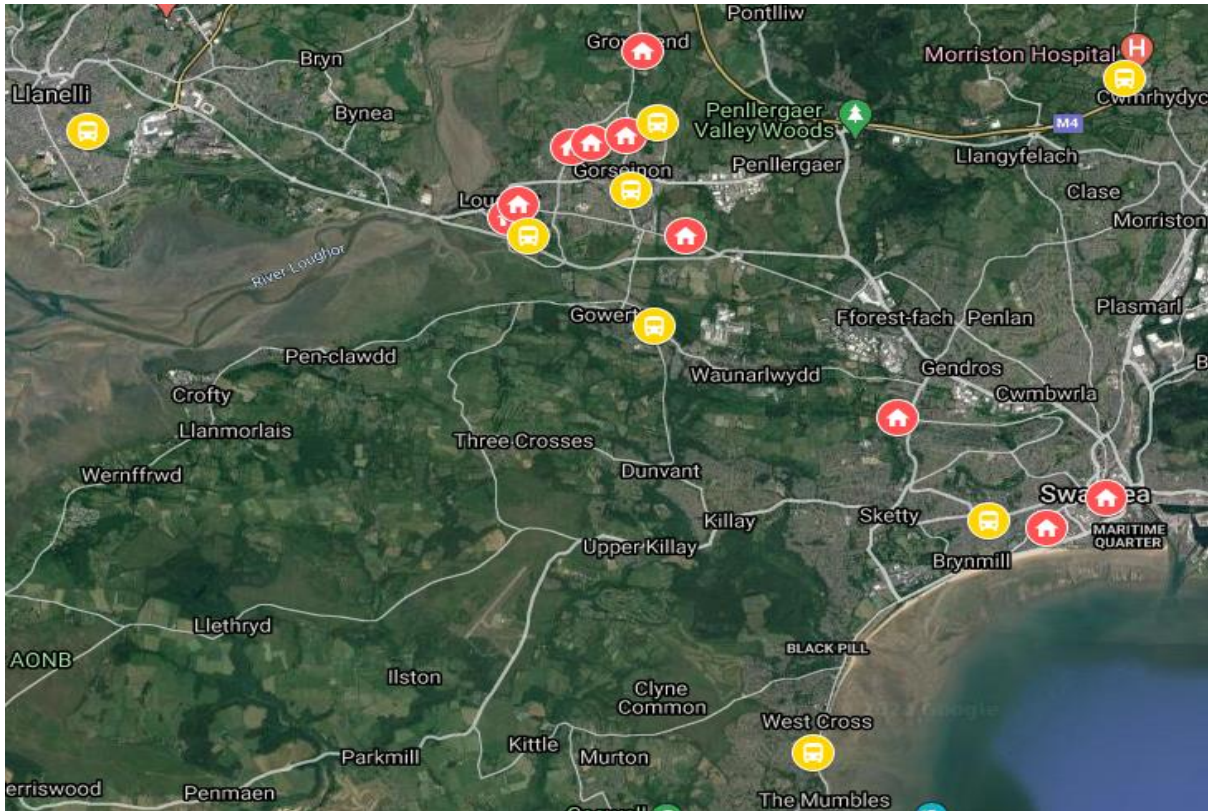
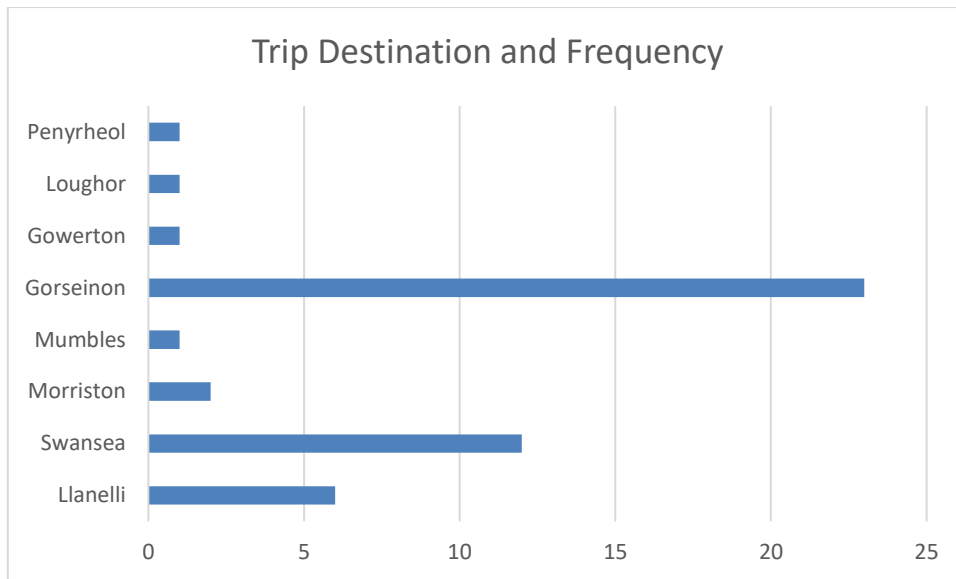


Image 14: Mapped location of travel diary entries (Google Maps, 2021)

- *Trip Distance*

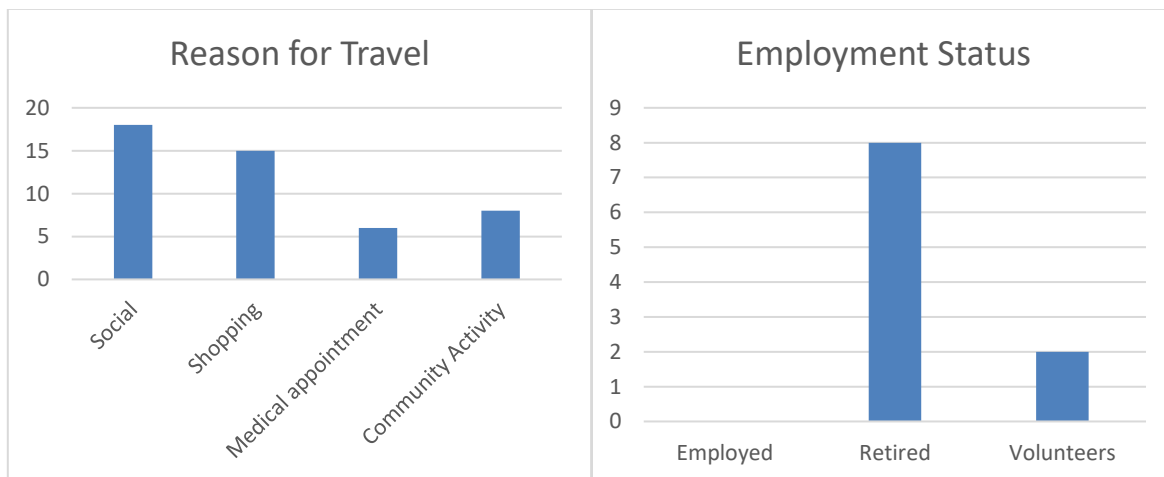
The results show that the majority of outbound trips undertaken (26 out of 47) are for inner-town travel within a five-mile radius of destination origin. Graph 13 below shows the destination and frequency of the trips undertaken and reveals that most participants travel to Gorseinon (within five miles of origin destination), as well as Swansea and Llanelli (outside a five-mile radius of destination origin). This is expected, considering the available amenities in all three town areas (shops, medical facilities, restaurants).



Graph 13: Trip Destination

- *Reasons for Travel*

Respondents were asked to note the reasons for travel, both outbound and inbound. Graph 14 shows that the reasons provided for travel varied. Of the 47 outbound trips recorded, 18 noted that the main purpose for travel was for social reasons, 15 for shopping, 6 for medical appointments and 8 for community activities.



Graph 14: Reason for Travel

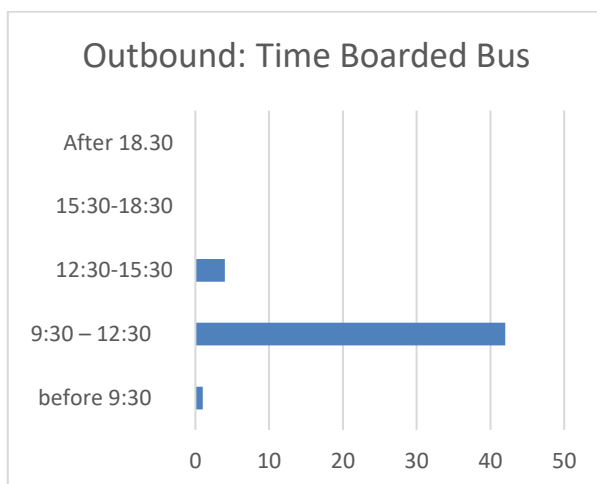
Graph 15: Employment Status

Overall, the reasons for travel are expected, as evidence presented in chapter 2 relating to bus using trends and trip purpose showed a higher frequency of social and shopping trips amongst concessionary pass holders (DfT, 2020). It is recognised that shopping, community activity and social can reflect a diverse range of possible activities. For example, shopping can

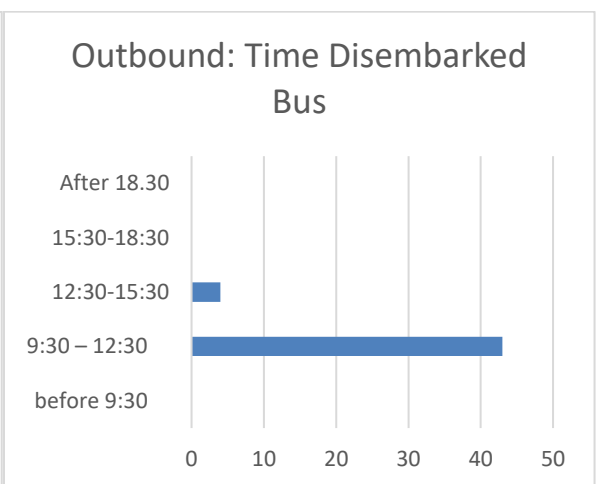
mean grocery shopping or window shopping. The responses provided do not differentiate between the variations in shopping, although some responses noted shopping and lunch, or shopping for clothes. Respondents were specific when noting social reasons and community activity participation, however. In the context of this research, social relates to visiting friends, meeting friends, walking, and visiting the local public house. Community activity relates to attending a community led or organised event (library, committee meeting, book club, dance class, coffee morning). Interestingly, two respondents noted their reason for travel as ‘attending book club’ or ‘attending dance class’, which falls under the identified ‘community activity’ response (see Graph 14 above). However, both participants also note their employment status as ‘volunteer’ (see Graph 15 above). In addition, both respondents noted in their interview that they are committee leaders within their community groups. In this case it would have been expected to see ‘voluntary work’ as the reason for travel, however it can be assumed that respondents do not identify these community activities as work.

- *Time of Travel*

The time of travel outbound was similar for all respondents, both at the start of the journey and in terms of length of time on the bus. Graphs 16 and 17 show the outbound time details for the start of each journey. Of the 47 trips recorded, 42 started between 9:30 and 12:30. The one journey undertaken before 9:30 was due to a medical appointment, whereas the remaining four from 12:30-15:30 were for varied reasons. Similar findings relate to the time respondents noted they disembarked the bus.

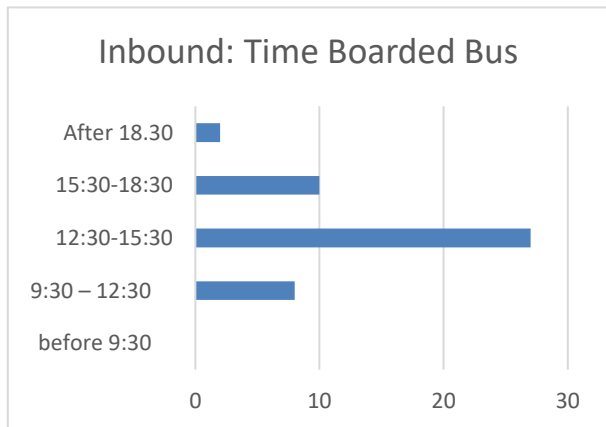


Graph 16: Outbound Boarding

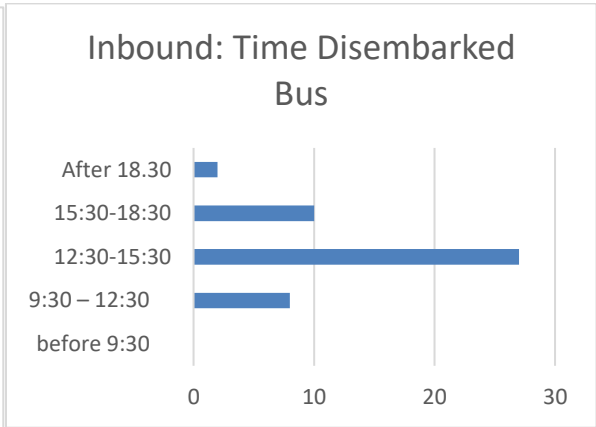


Graph 17: Outbound Disembarked

The time of travel inbound shows more variation compared to outbound (see Graph 18 and 19 below). Those travelling within the same time bracket (9:30-12:30) for both outbound and inbound journeys were mostly traveling locally for shopping or medical reasons. Most of those that started their travel at 12:30-15:30 also started their outbound bus journey at 15:30-18:30 noting non-local travel, as well as travelling for social reasons to meet friends for lunch or shopping with friends.

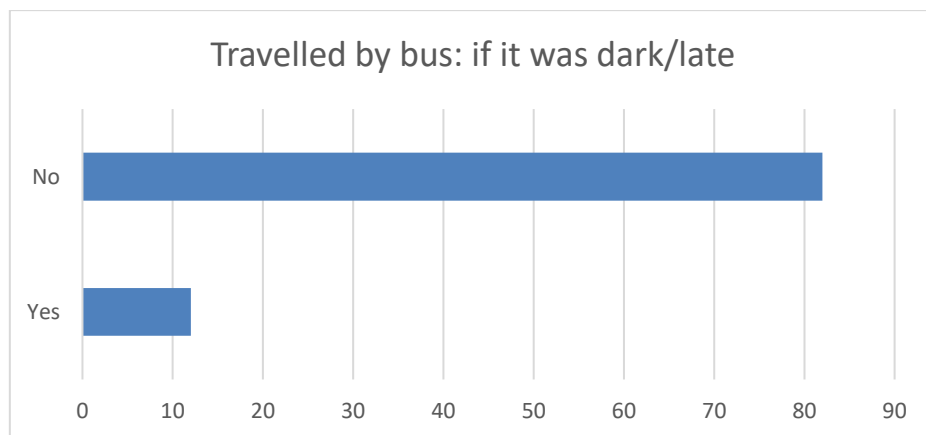


Graph 18: Inbound Boarding



Graph 19: Inbound Disembarked

Of the 47 inbound trips recorded, 2 started after 18:30. Both journeys were undertaken by the same participant, a male between the age 60-74, on two separate days and the destination noted was 'public house'. When participants were asked 'would you have travelled on this bus today if it was dark/late', only one respondent noted yes, each time (see Graph 20 below).

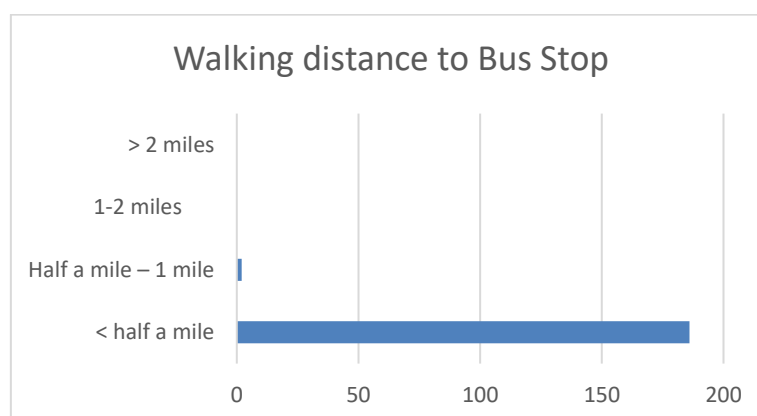


Graph 20: Travelled if dark/late

This shows that there is similarity between the time that pass holders tend to start and end their journey. This supports the evidence presented in chapter 2 relating to local authorities substituting bus services for social reasons, specifically providing additional access to transport services during the day (Bus Users, 2019).

- *Walking Distance: Bus Stop*

Of the 47 journeys recorded, respondents noted the distance they walked to and from each bus stop, as well as to and from their destination (total 188 recorded). All respondents noted walking less than half a mile from and to the bus stop (both outbound and inbound), except for one. One responded noted a social activity as ‘walking’, which involved taking the bus to a popular walking destination. The walk to and from the bus stop was recorded as half a mile - 1 mile in distance. No comments were made about the walk to or from the bus stop being difficult, however this was not specifically asked (only a section at the end to note additional comments about the journey). Therefore, it cannot be said that the walk was difficult or easy. Evidence in chapter 2 noted that older people report difficulty walking even a short distance, as well as this being a barrier to accessing public transport (Sundling, 2015). Interestingly, all respondents made a comment about the walk to the bus stop from their homes in the interview stage, most noting it can be difficult during the winter months when it is dark or when it is raining. As this travel diary was completed during the summertime, it could be argued that these barriers were not present and therefore not recorded at the time of the diary completion.



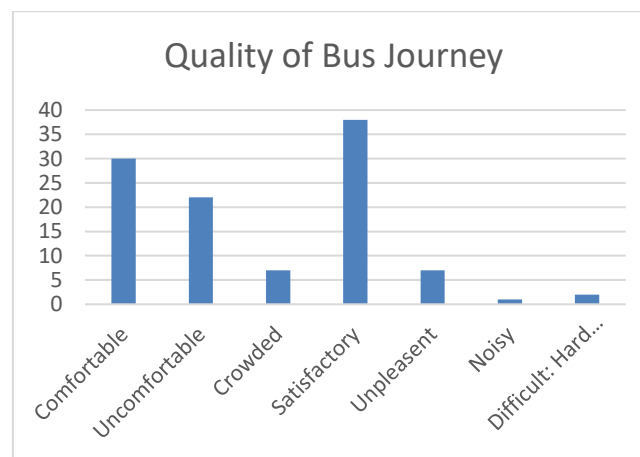
*Graph 21: Walking Distance to the Bus Stop*

### 4.3.3 Quality of the journey

This section will discuss the quality of the journey recorded, relating to bus comfort and difficulty as well as external barriers to bus use.

#### - *Bus Comfort and Difficulty*

Passengers were asked to rate the quality of their journey on the bus in terms of comfort and difficulty. Options available to circle included comfortable, uncomfortable, crowded, satisfactory, unpleasant, and then asked for any further comments. There were 107 comments recorded (see Graph 22 below).



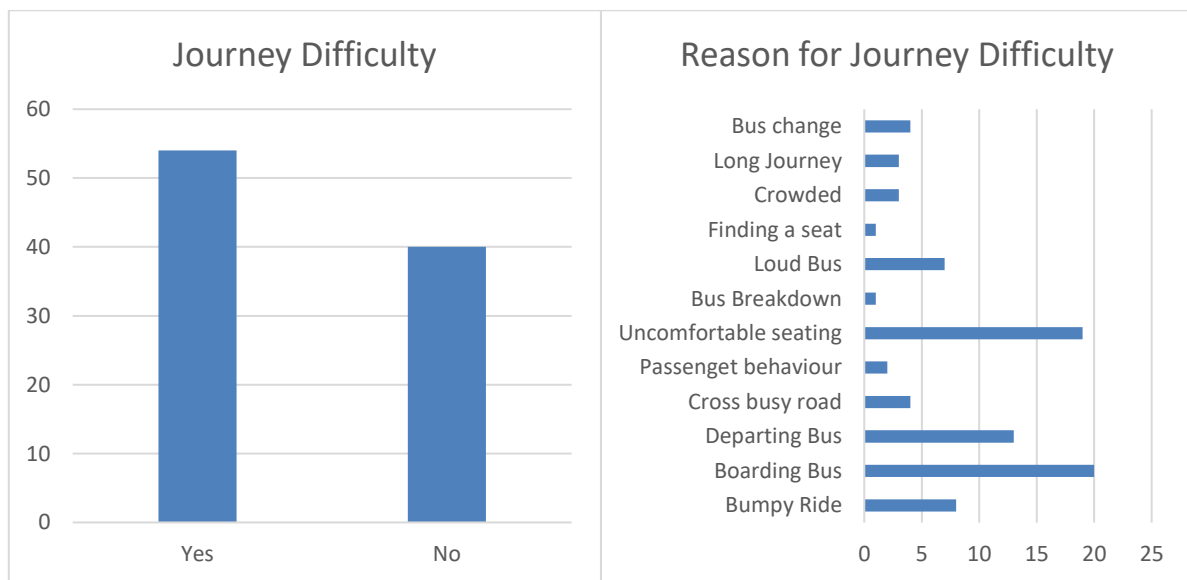
Graph 22: Quality of the Bus Journey

Most passengers recorded the quality of the journey as satisfactory (38 responses), with 30 responses recording the journey as being comfortable, 22 as uncomfortable, 7 as crowded and 7 as unpleasant. Additional comments were added noting the journey as being noisy and particularly difficult due to the hard brakes on the bus.

Responses show that the quality of the journey varied according to the spatial distance and time of the bus journey itself. As noted above, the built environment for most respondents has been labelled as rural village or small town, with only 20% starting their journey from an urban area. The responses show that passengers noted either satisfactory or comfortable for short local journeys, however for longer non-local journeys they noted uncomfortable or unpleasant. This corresponds with the findings presented in chapter 2 (Age UK, 2019b) relating to passengers noting key issues with comfort when the journey on the bus is long. In

addition, passengers that noted the quality of the journey as being unpleasant, crowded, and noisy were travelling between 12:30 and after 18:30. It could be argued that this is the case due to additional travellers using the bus during these times when returning from school and work.

Passengers were also asked if any part of their journey had been difficult, with an option to elaborate if the answer was yes. Of the 94 journeys recorded (47 outbound and inbound), 54 noted yes (see Graph 23 below). All those that noted yes, also made comments stating the reasons for the difficulty (see Graph 24 below).



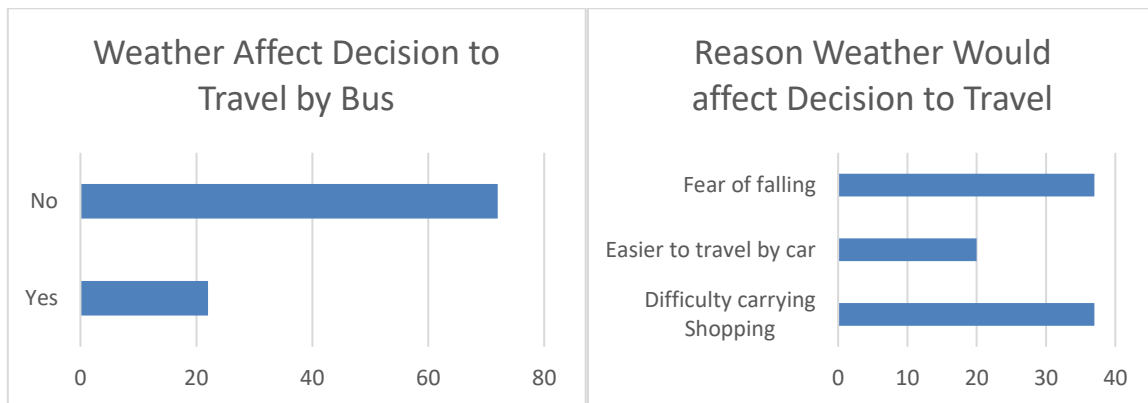
Graph 23: Journey Difficulty

Graph 24: Journey Difficulty Reason

The most frequently cited reasons for the journey difficulty include uncomfortable seating, boarding, and departing, and the bumpy ride of the bus itself. This links to the responses provided above when asked about comfort. In addition, this relates to the findings presented in chapter 2 (Age UK (2019b; De Witte et al., 2000; Metz, 2003), as well as the responses provided by participants at the interview data collection stage of this study (see chapter 4). Specifically, that passengers find the journey difficult when there are additional barriers to contend with that are beyond their control. This includes crossing a busy road, changing buses, alighting, the length of the journey and the comfort of the seating, passenger behaviour, finding a seat and a noisy and crowded bus. However, findings in chapter 3 relating to the nature of the trip itself suggest that when a long bus journey is for leisure and utility,

specifically a day out or short weekend break, the same issues relating to comfort and time of the on-board journey are considered an advantage to the overall trip. Participants specifically noting at the interview stage that the long bus journeys contributed to the experience of the leisure trip.

Most respondents noted that weather would not have affected their decision to travel by bus (see Graph 25 below). Those that noted yes, gave similar reasons (see Graph 26 below). For example, if the travel purpose were noted as shopping, it was more likely weather would have influenced the decision to travel by bus for fear of slipping and because of difficulty carrying shopping in the rain.



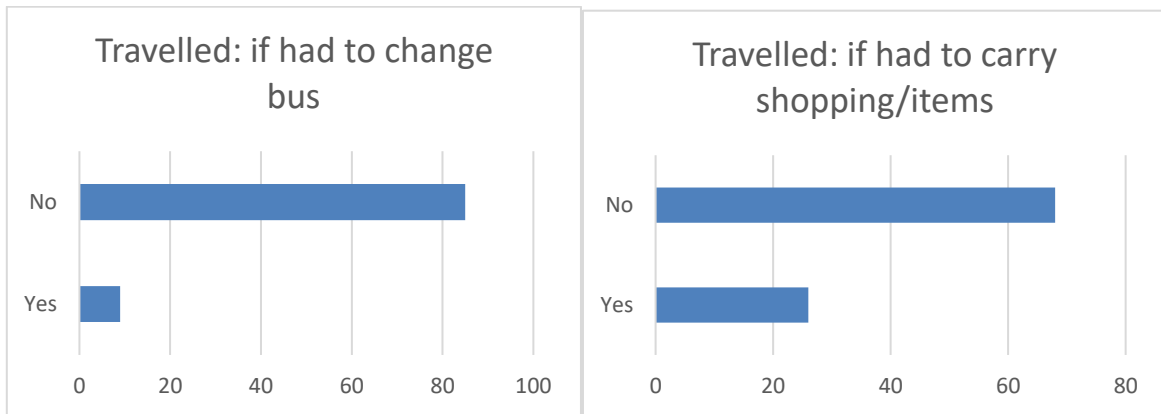
Graph 25: decision to travel (weather)

Graph 26: weather affect decision to travel

All UDs noted that it would be easier to travel by car if it were raining and the purpose was local travel to the shops. This was expected, as during the interview stage most UDs noted that they prefer to travel by car when completing local errands such as shopping, going to the bank and post office.

When asked ‘would you have travelled on this bus today if you had to change bus to get to your destination’, 85 responses stated no (see Graph 27 below). Those that responded yes, had all noted the reason for travel that day as ‘medical appointment’. In addition, when asked ‘would you have travelled on this bus today if you had to carry shopping/items’, as expected, only those who had noted they were going (or returning from) shopping, noted yes (26 responses – see Graph 28 below). Both results link to responses received at the interview stage, with participants noting a reluctance to travel by bus if they are expected to change bus mid journey, as well as difficulty when carrying shopping bags, especially if it is raining.





Graph 27: Travelled if had to change bus

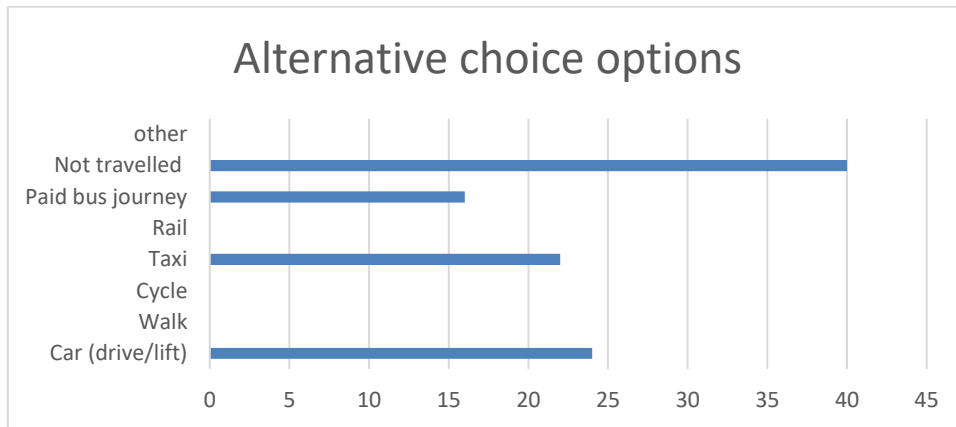
Graph 28: Travelled if had to carry items

Overall, the quality of the journey in terms of travel comfort and difficulty noted in these diary responses suggest that concessionary travel is considered comfortable and easy when there is easy access and no physical or cognitive barriers when travelling. This supports evidence discussed in chapter 2 relating to travel difficulty (Age UK, 2019b) as well as the findings presented in chapter 4. This further supports the notion that additional measures be put in place to improve the ease of boarding and using public transport. However, relating to the bus being crowded, and worry when boarding/departing because it is raining as well as difficulty crossing a busy road, these are considered external issues that cannot be resolved by improvements and adaptations to the physical bus itself. In this case, passengers may feel supported and assisted from having the option of a companion traveller to help with carrying shopping, communicating, and to increase confidence when using public transport.

#### 4.3.4 Alternative travel options

Finally, this section will discuss what alternative travel options were available to respondents at the time of travel and in the absence of a concessionary bus pass. This information is useful when the aim is to understand the benefits of concessionary travel.

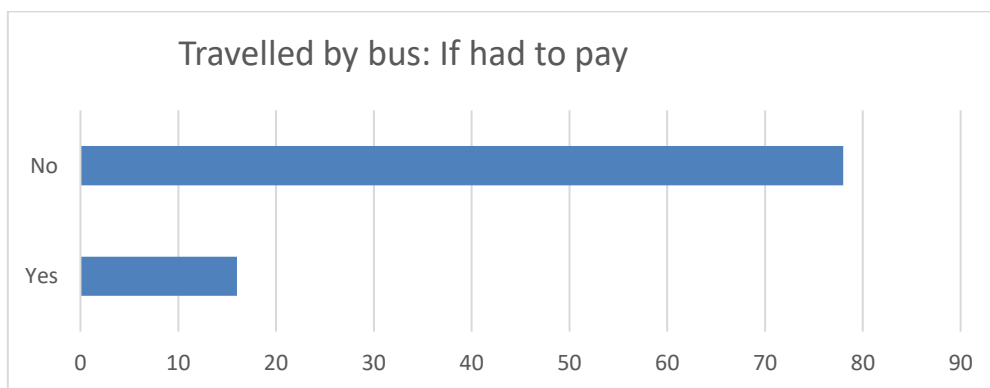
Of the 47 trips recorded, passengers provided numerous and mixed responses during both outbound and inbound journeys and depending on the reasons for travel (see Graph 29 below). There was a zero-response recorded for choosing to walk, cycle, travel by rail, or any other mode of transport in the absence of a free bus journey.



Graph 29: Alternative Choice Options

There is a link between the reason for travel and the choice of travel mode had no concessionary pass been available, however. Of the responses provided, it was noted 40 times that respondents would not have travelled in the absence of a free bus journey. Of these, the reasons for travel were noted as shopping, social or community activity. Relating to those that noted shopping as their reason for travel, they had also noted 'meeting friends for lunch' as well as shopping when stating they would not have travelled. It can be assumed that shopping in this context related to 'window shopping' rather than grocery shopping.

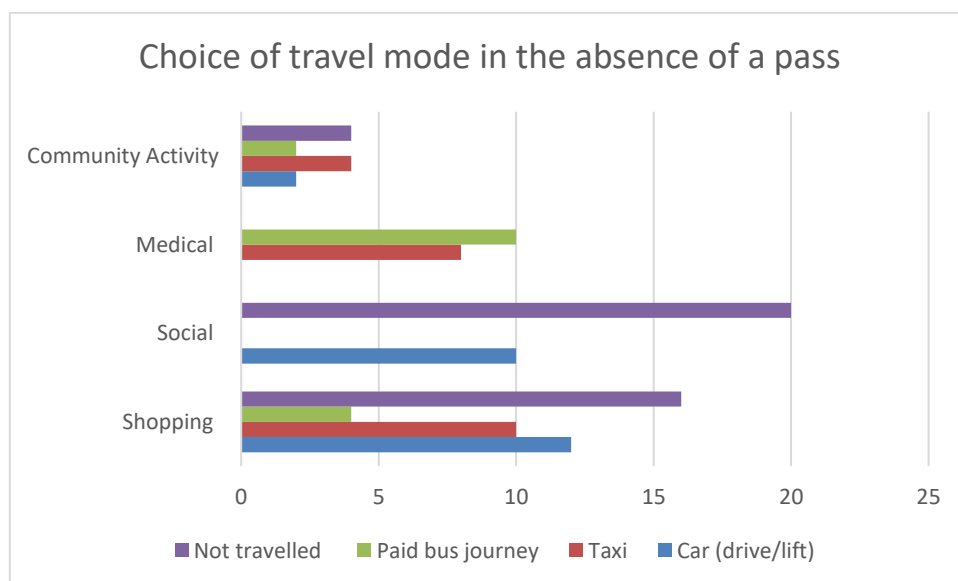
It was noted sixteen times that respondents would have paid for the bus journey in the absence of concessionary travel (see Graph 30 below). Most that said they would have paid if they were traveling to a medical appointment (10 responses), shopping (4 responses), or community activity (2 responses). Other respondents noted they would have paid for a taxi twenty-two times, again for shopping, medical or community activity travel purposes.



Graph 30: Travel if had to Pay

All those that chose the car as an alternative option for travel (three participants) are UDs. In this case they all noted they would have used the car for all types of journeys in the absence of concessionary travel. This finding was expected, not only because it was an option for these participants but because evidence presented in chapter 2 notes convenience as a reason for continued car use in later life (Murray, 2019).

Responses show no differentiation between those making non-local and local trips when asked what other travel methods they would have chosen in the absence of a concessionary bus pass, except for those that had access to a car. In addition, all those that were travelling for social reasons noted they would not have travelled in the absence of a concessionary bus pass. However, the two participants who reported volunteering as a social travel choice, also noted a mix of alternative travel methods to attend their volunteer work commitments. This implies that these trips are highly valued by these respondents. However, this cannot be generalised to the wider community or to other participants who noted ‘social’ as reasons for travel, but that they would not have travelled if they had to pay. Further research and the potential effects of the free bus pass on volunteering amongst pass users would help to understand the differences in meanings behind choosing to pay for an alternative method for ‘social volunteer work’ commitments and not for ‘social’ travel reasons.



Graph 31: Choice of travel mode

Overall, the results suggest that most respondents would bypass social reasons for travel at

the expense of a bus ticket. It is not assumed that these findings suggest that travellers place more importance on travelling if the reason is for shopping or medical appointments, rather this could have affected their decision to only travel for this purpose had the fare been payable. This links to research highlighted in chapter 2 that notes the consequences of the hypermobile society, such as out of town superstores and amenities being placed on the outskirts of towns and cities (Adams, 2001). This could also be linked to the choices being made not to travel for social reasons, as travelling 'for the sake of it' may not justify the reason for travel due to the additional expense. Therefore, it could be argued that if travel is not free, a paid journey could exclude older people reliant on public transport when the purpose of travel is to meet social needs. In the context of this cohort, there is a potential for the bus pass to stimulate shopper modal shift, as well as providing a sustainable travel option to those that use the bus for social and community use. However, it is recognised that the travel diary did not ask participants for personal financial information or if the decision would have been the same had they been travelling for multiple reasons that day, all of which could potentially affect alternative travel choices at the time of travel.

#### **4.4 Chapter Summary**

The overall findings show there are similarities in the way pass holders use their concessionary pass in the context of their daily lives, as well as subtle differences between the mobility needs of older people in relation to levels of health, wellbeing, and overall quality of life. Chapter 5 forms the discussion section.

# Chapter 5: Discussion

## 5.1 Overview

This study set out to examine the relationships between concessionary bus travel and its implications for the health and wellbeing of older people in maintaining social connectivity. Using thematic and descriptive analysis when evaluating the data has given the researcher the ability to look for common themes that show there are shared experiences of concessionary pass use. Ten key findings have developed from this study and form the structure of this chapter:

- 1. The relationships between concessionary bus travel, health and wellbeing relate to the built environment (practical), the mechanisms in place (practical) and the outcome of age friendly travel (psycho-social).*
- 2. Concessionary bus travel means independence and freedom.*
- 3. Older people find it difficult to categorise the meanings of bus use.*
- 4. User Drivers use the bus for more leisure orientated purposeful trips, whereas the car is used for more functional travel purposes (medical appointments for example). User Non-Drivers on the other hand report their bus use as both functional and for social purposes.*
- 5. The concessionary pass has stimulated a model shift for those that have alternative travel options and is being used in conjunction with the car as opposed to or instead of the car.*
- 6. Reducing the cost of travel is a fundamental reason for changing travel behaviours.*
- 7. Concessionary travel for both User Drivers and User Non-Drivers is dependent on bus accessibility.*
- 8. Companion travel has the potential to increase bus use for older people.*
- 9. Concessionary bus travel provides opportunities for community connection, social interaction, and social connectedness.*
- 10. The concessionary bus pass has the potential to improve life quality.*

## 5.2 Creating The Maintaining Social Connectivity Model

### 5.2.1 The relationships between concessionary bus travel, health and wellbeing relate to the built environment (practical), the mechanisms in place (practical) and the outcome of age friendly travel (psycho-social)

A persistent theme within all answers in this study was that the concessionary pass can maintain quality of life, but that it also has the potential to improve it in several areas. For example, bus use was referred to as a need (primary and secondary), but also as a facilitator in creating connections and meeting social needs (tertiary). In this case, the findings are consistent with Musselwhite & Haddad's (2010) *hierarchal model of mobility needs* and Clayton's (2012) *Contingency Map of factors influencing passenger perception and journey experience on the bus*, as they propose ways to meet needs within travel with the aim of improving health, wellbeing, and passenger experience. As a bottom up, person-centred approach, both models provide a framework that has been useful to this research, specifically locating bus travel within individual circumstance and understanding what significance is given to the bus travel taking place, especially in the context of declining mobility and social exclusion.

To establish a link between concessionary pass use, quality of life and overall health benefits, the notion that concessionary bus travel is a mechanism for social connectedness has been explored. This relates to Menec's *conceptual model of social connectivity* (2017) (introduced in chapter 2), which suggests that communities cannot become age-friendly without considering the broader policy, economic, and political context, and societal influences. The findings in this study suggest that mobility needs, health and wellbeing, social interaction, ride quality, design, bus comfort and societal influences all play a major role when assessing the health benefits of the concessionary bus pass for older people. Social connectivity is the interplay between the individual and the environment in creating or maintaining the health and wellbeing of older people (thus avoiding social exclusion and reduced quality of life) and can be understood as the development of policy and transport in creating an age-friendly community environment. To the knowledge of the researcher, this is an innovative approach. To examine the relationships between concessionary bus travel and its implications for the health and wellbeing of older people in maintaining social connectivity, this study has created

a new model, informed by the important findings and supported by existing literature (Clayton, 2012; Menec, 2017; Musselwhite & Haddad, 2010).

The *maintaining social connectivity model* (relating to concessionary bus travel) expands on the notion of social connectivity and is presented as a way to assess the different factors related to bus travel and as a way to capture the practical interventions of concessionary pass use and how this has a direct and indirect impact on an older person's health and wellbeing. Similar to Musselwhite & Haddad (2010), Clayton (2012) and Menec (2017), the model uses a bottom up, person-centred approach when assessing the benefits of the concessionary bus pass. However, the subtle difference here is that this model is based on 'connectivity' and the bus pass acting as a contributor in maintaining the health and wellbeing of concessionary pass users. This is because user drivers and user non-drivers discussed concessionary travel and bus use in terms of the practical and psycho-social meanings of travel and transport and how this links to connectedness. The *maintaining social connectivity model* (relating to concessionary bus travel) has been developed and constructed from the qualitative and quantitative findings of this study, and in conjunction with available literature and can be understood as the development of policy and transport opportunities in creating an age-friendly community environment and older people's experiences of this. Overall, social connectivity is explored in the context of older people and bus use in terms of 1) the *development* of the connection (infrastructure and structural transportation options), 2) public travel as a *contributor* to connection (the mechanisms in place when using public transportation options) and 3) the *outcome* of the connection in terms of allowing age-friendliness to exist and continue (i.e., creating connectedness such as greater community cohesion and promoting companionship) (see figure 6).

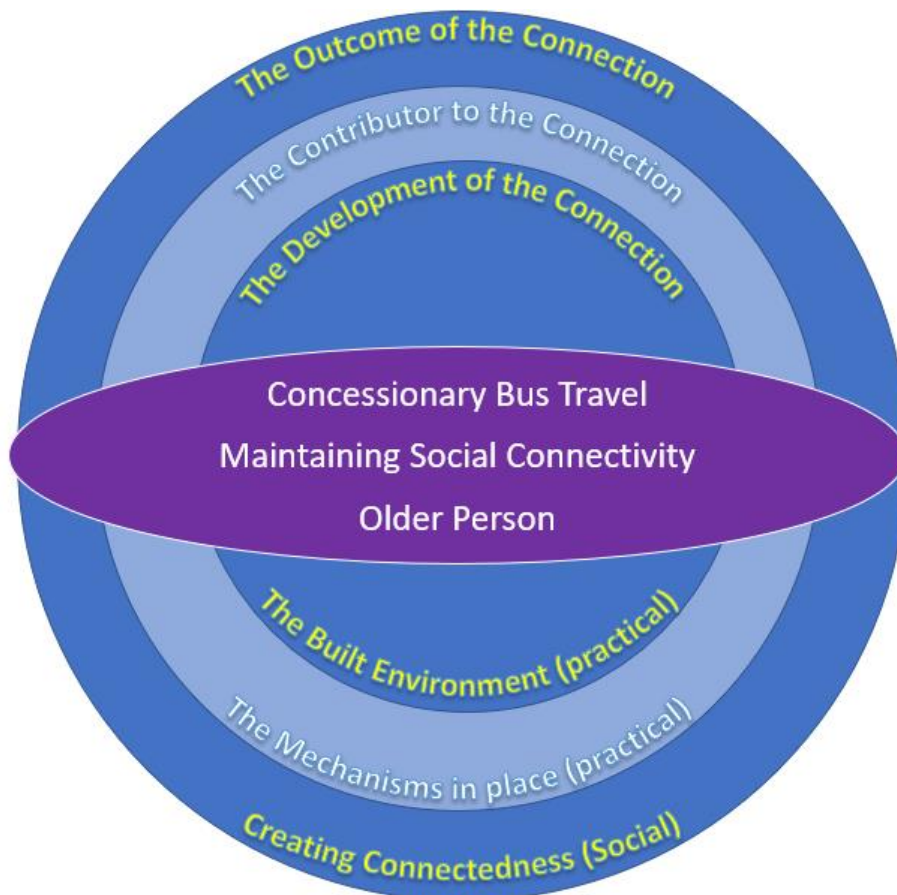


Figure 6: The Maintaining Social Connectivity Model: (relating to concessionary bus travel)

The overall findings of this study focus on these three components in relation to the individual, organisation and community and concludes that the implications for implementing age friendly communities go beyond local communities themselves. Specifically, social connectivity cannot be separated from the broader policy, economic and political context (see Menec, 2017). As such, communities cannot become fully age-friendly without considering broader societal influences. This is because the importance of an older person’s-built environment and local community become central when considering public transportation options (as noted in chapter 2).

### 5.2.2 Developing the connection

The first level of connectedness refers to the development of the connection in terms of infrastructure and structural transportation options. More specifically, this includes the built environment as a practical theme and concessionary travel providing access to the desired



destination as well as pedestrian infrastructure providing the means to lead the life people want to lead.

### **5.2.3 Contributing to the connection**

The second level of the model relates to public travel acting as a contributor to the connection in terms of available transportation options. More specifically, this includes the mechanisms in place as a practical theme and concessionary travel allowing bus use and bus accessibility.

### **5.2.4 The outcome of the connection and creating connectivity**

The third level of connectedness refers to the outcome of the connection in terms of the concessionary bus pass and bus travel allowing age-friendliness to exist and continue (as a psycho-social theme). More specifically, this includes the relationships between bus travel, health and wellbeing and the concessionary bus pass creating connections by allowing community cohesion, social interaction, and social connectedness.

To this study, active travel and transport relating to concessionary bus use is considered attractive and usable when all three elements of connectedness are considered and can be met. For example, David (User Driver) chooses to use the bus over the car and noted cost (petrol, parking), difficulty parking, and traffic as key reasons. Having an alternative travel choice option is important for David, however if he did not have a pass he would not travel as often for leisure reasons. The bus contributes to the connection for David as it provides an additional transport option that allows him to access services in the community independently and more frequently. The outcome of the connection is two-fold as David runs a community bereavement group and noted the majority of members rely on bus transport to attend. David is able to interact, connect with, and meet new people through the shared experience of losing a loved one, made possible through the shared connection of having a bus pass. However, it is important to note that David will choose to drive his car for local and more functional travel purposes (medical appointments/shopping) due to the difficulty he can sometimes have when walking to the bus stop. For other participants, the three elements are not always met, and this has implications on their overall experiences of connectedness. For example, infrastructure and structural transportation options relating to bus travel are

crucial for Joan (User Non-Driver) who has very limited access to any other forms of transport. For Joan, having a bus pass and a reliable service has allowed her to volunteer in her community and live the life she wishes to lead. However, bus accessibility is a barrier at times, meaning the contribution to the connection is sometimes broken. Joan finds it difficult to navigate the roads and pavements (heightened during bad weather) and will choose not to travel (for leisure) if she has to switch buses mid journey. This has an impact on Joan's ability to maintain and create connections, which is especially important to Joan as the bus has acted as a personal social facilitator that has led to new friendships. The outcome of the connection for Joan is not measurable. However, the concessionary pass has given her an identity within her community, has provided independence, companionship and something to look forward to. Overall, Joan and David's experiences are different; however, one similar theme emerges relating to both forgoing travelling for leisure reasons when there is a break in the chain (i.e., external structural issues relating to infrastructure). When this happens, this has an impact on the decisions being made to travel by bus, which can ultimately break the connection relating to maintaining health, wellbeing and quality of life.

### **5.3 The meaning of concessionary bus travel and owning a pass**

Starting with research question one – *what is the meaning of concessionary bus travel and owning a pass?* - the findings in this study suggest that the answer is not linear. This research discusses two specific findings relating to the meaning of concessionary bus travel and owning a pass.

#### **5.3.1 Concessionary bus travel means independence and freedom**

There is a consensus in academic research that mobility is important to the health and wellbeing of older people (Gabriel & Bowling, 2004; Green et al., 2012; Metz, 2003). However, mobility can have a range of meanings. The approach of this study has been to use interpretive phenomenology to study a small cohort of older people. Using this approach has allowed the researcher to explore and understand the meanings older people have ascribed to bus use, travel, mobility and from their own perspective and lived experience. This is the overall goal of phenomenology, specifically seeking individual, complex, fresh and rich meanings of the social world, at the same time as pursuing common perceptions (Crotty, 1998). It was noted in chapter 2 that these rich meaningful benefits cannot be understood

from a wholly quantitative investigative approach as high levels of statistical data are not suitable when the aim is to understand participants thoughts, feelings and behaviours. This study looked for meanings and reasons for travel beyond the trip destination and aggregate data and found that positive connections can be made through public travel and social interactions. When participants were referring to concessionary travel, quality of life and meanings, the bus pass was linked to hopes, dreams, improved mental health and inclusion and having the opportunity to be independent. In this case, the concessionary bus pass can have a positive impact on health, wellbeing and the overall quality of life of the individual pass holder, and this is because concessionary bus travel meant independence and freedom to participants.

Independence in later life is considered the main goal when the aim is to live a successful life (Gabriel & Bowling, 2004; Mokhtarian & Salomon, 2000; Musselwhite & Haddad, 2010) and synonymous with this is the notion that travel in later life means freedom. Musselwhite and Haddad (2010) found those able to independently meet their mobility needs reported increased levels of wellbeing and overall quality of life. This became apparent when participants in this study talked about feeling like a burden if they need to rely on family and friends for their travel needs. The results of this study show participants are reluctant to ask for help from family and friends for their personal travel needs. David and Harry go out of their way to avoid asking for a lift for example, despite their declining health status. Participants were also reluctant to ask for or accept a lift, even if the person offering is travelling to the same destination. Again, this links to feelings of not wanting to be a burden and asking friends and family to go out of their way (also observed in Musselwhite & Murray, 2019). Graham et al., (2018) also observed that older people are reluctant to ask family and friends for a lift to meet travel needs, however this was mainly acceptable for primary travel needs (hospital appointments). In this study participants were even reluctant to ask in this case. David and Harry felt that asking for a lift (even for medical treatment) was not acceptable. However, for User Drivers, an importance was placed on their ability to provide lifts to others who need transport. In Nichola's case, driving makes her feel important and helpful in her role as a carer for her mother and husband, however she would not herself rely on someone else. Overall, older people place a great importance on the meaning of self-reliance and independence and avoid instances of being a burden to their family and friends.

Encouraging active travel promotes social integration, however, Kelly (2011) found no evidence of significant spill over. The key implication in this research is that the cost of travel (for example) is not a determining factor that limits social participation, but the transport itself. This suggests that the concessionary pass is not the determining factor in reducing social exclusion, but public transport and the role this plays. In this study, bus travel (and general travel) was considered essential to achieving a good quality of life, and responses linked inactivity as a major contributor to loneliness, isolation, and depression. (which is also well established in the literature, see Graham et al., 2018). Debbie compared herself and her own quality of life to that of her parents when they were the same age. In this case, the parent was restricted, with no opportunity to socialise, travel and stay connected (there was no concessionary travel option at the time), whereas Debbie placed a high value on the meaning of the concessionary pass in relation to reducing her own isolation and loneliness. Most participants in this study referred to the bus acting as a facilitator to improving their overall health, wellbeing and fitness in some way. Evidence supports this as there is an increasing awareness of the links between transport, health and physical activity. Coronini-Cronberg et al., (2012) found that physical inactivity cost to the UK economy was an estimated £10.7bn annually. Specifically, older people are the least likely to achieve recommended levels of physical activity, leading to weight gain and health problems. However, Webb et al., (2012) found that active older people who use public transport had reduced the chance of becoming obese (compared to those who do not). This suggests that increased activity (in this case by using public transport) can reduce, or protect, older people from becoming obese. For participants in this study, staying active and healthy was important, and the bus acts as a facilitator to a persons desired destination and meeting their travel needs. There was some differentiation between the meaning of the concessionary bus pass depending on the travel options available to the participant, however. Those with access to a car for example linked the concessionary pass to adding social value to their life, especially as it serves as an additional option to get up and go when feeling lonely or depressed. Those with no alternative travel options linked the pass to the only thing between them and activity, isolation, loneliness, depression and a reduced quality of life. In addition, for participants who noted elements of structural disadvantages relating to location, access and active travel (discussed in more detail further down), the response was not overly positive, however the pass was still

considered important. A paradox was created by Anna, who noted that the pass is important and a lifeline to her, however Anna has great difficulty walking to and from the bus stop. For Anna, independence and quality of life means staying active as much as she can, and this is achieved through travel. For continued bus pass use however, this is only an option while she is physically able walk a distance (to the bus stop and from the bus stop for example).

Participants in this study found it difficult to explain what quality of life means to them in general, which was expected as the concept is extremely complex, reflecting subjective, objective, positive and negative influences that impact on people every day. However, when referring to the meaning of bus use, travel and owning a pass, participants saw the bus as providing travel opportunities to get to their desired destination. This is consistent with Musselwhite and Haddad's (2010) findings relating to the importance of travel (specifically driving) meeting basic utilitarian needs (grocery shopping, medical appointments, banking etc.). As noted, their model encapsulates the subtle difference between preventing social exclusion and encouraging better quality of life. For example, failure to perform utilitarian needs can result in people being cut off from society, ultimately increasing the risk of social exclusion; yet the inability to fulfil psycho-social needs may not result in direct isolation, instead a lower perceived quality of life for the individual (Andrews, 2012a; Scharf et al, 2003). Findings in this study are similar and suggest the concessionary bus pass allows an older person to maintain a level of independence and social interaction by using the bus to travel to meet primary needs. In this case it can be said that concessionary travel is seen as allowing access to services within communities that are fundamental to life and living. However, psychosocial aspects of travel also relate to independence, choice, freedom, control, autonomy, and self-identity. In addition to meeting utilitarian needs, participants in this study placed an equal importance on travelling by bus to meet their psychosocial needs. This differs to Musselwhite and Haddad's (2010) findings, as the model notes that older people are least aware of aesthetic and affective needs of travel. However, participants in this study placed a high importance on the social aspect of bus travel, including meeting friends, window shopping, going to the library, community events, pubs, caf  s, bingo, volunteering, babysitting, visiting family and accessing open spaces such as parks, local holiday destinations and beaches. Despite having difficulty categorising the purpose of the journey itself (discussed below), participants in this study recognised the importance of all types of travel

and how this reduces the likelihood of being lonely and isolated. In this sense the bus was seen as important in providing the connection to informal networks of support to be formed, and new recreational trips to be taken.

### **5.3.2 Older people find it difficult to categorise the meanings of bus use**

A key theme emerged in this study showing a diverse range in responses when participants talked about the purpose of bus use and what this means to them. The findings of this study show that the main purpose for travel was for social reasons, then shopping, community activity and medical appointments. This was expected as research shows a higher frequency of social and shopping trips amongst concessionary pass holders (DfT, 2020). However, one main finding demonstrates the difficulty in categorising the meanings behind the reasons given for bus travel. For example, 'shopping' is seen as a primary need (utilitarian) in Musselwhite and Haddad's Hierarchical model of mobility needs (2010), however participants in this study referred to 'shopping' as 'grocery shopping' or 'window shopping with friends' as equally important. The latter could be considered a tertiary travel need (aesthetic), however due to the equal importance placed on both activities, this study categorised any form of shopping as both a functional and social travel need. The same can be said when an older person is travelling to a 'community activity' or 'social event'. Respondents in this study were more specific when noting social reasons for travel and their community activity participation. The meaning of bus use was viewed as extremely important when older people were able to visit/meet friends, go to the local public house/local attractions, attend a community led or organised event (library, committee meeting, book club, dance class, coffee morning).

Referring to the purpose of the journey and the bus acting as a means to an end, a pattern emerged when participants referred to bus use for medical appointments, shopping and some social trips. As noted above, the findings in this study suggest that shopping can be both social (window shopping) and purposeful (grocery shopping), however interestingly depending on the specific purpose would depend on how participants would respond about their experiences of bus use. Shopping for groceries was considered negative to some participants for example (as a weekly chore). In this case bus use is considered a means to an

end, only used for the purpose of the journey due to lack of alternative transport options. This was confirmed when most User Drivers noted they purposely chose the car for this travel purpose (more so when the trip is local). When the reason for bus travel became more social in nature, the identification of the journey and the overall meaning of bus use changed. This led to the emergence of a second theme within this finding and the bus acting as a social facilitator or vessel that allows spontaneity and freedom. Helena and Anna talked about the bus acting as a social facilitator and providing connections to their community by allowing them the freedom and choice to get involved with local events, something they both treasured. Here the bus contributes to social connections as a practical mechanism providing the opportunity for continued (or new) social attachment to the local community. Overall, it can be said that the bus can be seen as either a means to an end in relation to the purpose of the journey itself (to get to medical appointments, conduct shopping), or both a means to an end and a catalyst to community and social connections (meeting family and friends, window shopping).

A final finding did emerge however when participants talked about the bus acting as a vessel or facilitator and what this means to them. Helena talked about arranging to meet a friend on the bus when feeling low and this providing an opportunity to talk with no distraction. This level of interaction cannot be achieved when one person is driving (for example). However, Joan and Joyce struggled identifying the category of the trips they take or the importance of the individual role they themselves play. Both Joan and Joyce noted their employment status as 'volunteer', however further exploration found they are also community leaders who have set up different weekly community activities to combat social exclusion. Both participants also described the bus as a means to an end (to get from A to B), however further exploration revealed that they met on the bus (now long-term friends) and arrange to meet on the bus regularly. An important point to make here is that although Joan and Joyce see the bus as a means to an end, how they referred to the bus and talked about what this vessel or has given them (friendship, mobility, freedom, something to look forward to) had a different meaning. For example, when noting their reason for travel, Joan and Joyce noted 'coffee morning' and not 'attending voluntary work'. The salient point here is that Joan and Joyce downplayed the importance of their reasons for travel until prompted further. This is not to say that bus travel always means more than simply being a vessel connecting a person facilitator to their desired

destination, but that the classification of the purpose of the trip can lead to a differentiation of overall meanings if not explored fully. Overall, it can be said the bus can be a means to an end in relation to the purpose of the journey itself, or both a means to an end and a social facilitator. This demonstrates that meanings relating to bus use are diverse, which makes it difficult to categorise need and importance. The finding suggests participants do not identify their reasons for travel as primary or territory or multifunctional, which again poses a problem for data collection. This shows that a distinction needs to be made, specifically when referring to the practical and psycho-social benefits and meanings of bus use and concessionary travel. Joan and Joyce first described the bus as a means to an end, but essentially the bus acts as social facilitator (as a vessel and travel option) and has contributed to creating friendships and overall independence. Had the researcher not probed further about meanings of bus use, these differentiations would have been missed. This was confirmed by several participants who initially classified their bus use as a means to an end, yet when probed further, bus use held significant meanings. This led to a differentiation when identifying the meaning of bus use. The bus acts as a contributor to connectedness as purely a vessel for providing opportunities for independence, bus also contributes to the connections being made. This leads to the finding that the bus is a complex multi-purpose travel option that can hold significant meanings for older people. However, it is accepted that participants view their own experiences and contributions differently and these distinctions may not have been captured fully in this study.

#### **5.4 Older people's experiences of concessionary bus travel: Car use and access**

Continuing the discussion with research question two - *What are older people's experiences of concessionary bus travel?* the findings in this study suggest that older people's experiences are diverse as participants described bus travel in various ways. This reflects the differences in the experiences they have when using their concessionary bus pass. Participants in this study show some differences in their trip making, with User Non-Drivers noting a desire to make more trips by bus, however noting barriers relating to physical, structural, and cognitive ability. For this reason, User Non-Drivers make more functional local trips by bus compared to User Drivers. This research discusses three specific findings relating to car use, access, and concessionary bus travel.



**5.4.1 User Drivers use the bus for more leisure orientated purposeful trips, whereas the car is used for more functional travel purposes (medical appointments for example). User Non-Drivers on the other hand report their bus use as both functional and for social purposes.**

The car is generally seen as a simple and straightforward mode of transport when considering practical needs. Therefore, private mobility is centred around the car and to hyper-connectivity as this allows more choice over the destination and provides a better opportunity to stay connected to friends, family, services, and shops. Last (2010) notes although there could be a net decrease in overall concessionary bus use, this is not due to responsiveness to the scheme itself, but due to pass holders (in Last's case younger pass holders) each individually making fewer trips per person than older pass holders. Research has noted the mixed success of the concessionary bus pass in encouraging more longer term and sustainable modal shifts however (see chapter 2: Andrews, 2012a; Hine & Mitchell, 2003). User Drivers in this study indicated that as their concessionary travel increased, their car usage decreased, with some noting this has led to a lack of wanting or needing to use the car as much as they did previously. Dianne (a User Driver) noted an increase in bus usage per week and has made the decision to sell her car and give up driving. However, some concern was expressed by Dianne relating to this decision, specifically that this would lead to a loss of spontaneity and freedom (a findings also observed in Murray, 2019). For example, Murray (2019) found a reluctance amongst older people to shift their modal behaviours (from car use to bus use) and related this to a lack of valid alternative transport modes, waiting times and overcrowded conditions, and focusses on convenience as a key reason for continued driving in later life. However, the opposite is true for David (User Driver). David did not use the bus for travel prior to receiving his concessionary pass, however noted a weekly use of 4-5 times. For David the increase in bus use is linked to the social events he attends and their location. David regularly visits Swansea town to attend rugby and football matches, the theatre and cinema and noted feelings of anxiety relating to driving in a built-up area and his expensive car being damaged in a public parking lot. Andrews (2012a) found a modal shift from car to bus and attributed this to the bus providing a more relaxed and sociable journey experience as well as offering the ability to avoid the cost of parking and the hassle of driving in congested

centres. The findings of this study show in some cases participants are using their concessionary pass to improve their own quality of life by finding ways to overcome driving in built up areas. Michael noted a preference to using the bus if travelling to a built-up area, linked to feelings of anxiety for example. The loss of having a dual option and access to alternative transport modes is feared amongst User Drivers; however, responses in this study generally show there is a shift in use from the car towards the bus, linked to travel outside of the local area (for example, into town centres or built-up areas with access to amenities).

The shift in modal use for User Drivers is dependent on the bus route and the opportunities this provides for social travel. A key theme for all User Non-Drivers is that generally the bus is used for day-to-day needs (for example, grocery shopping and medical appointments) as well as to fulfil social travel needs (for example, meeting friends, attending community events). Musselwhite (2011) found it is common for older people to mention the importance of the journey itself, sometimes choosing certain routes to view certain scenery. His research is linked to car use; however, some similarities can be found in the findings of this study. For example, participants placed a high importance and value on travelling by bus for 'aesthetic' reasons, especially in terms of accessing nature and open spaces and the bus acting as a facilitator and a vessel that takes them to familiar and new places. The need for contact with nature has been termed Biophilia (coined by Kellert & Wilson, 1993) and refers to the human instinct to connect with nature and these promoting levels of mobility, relaxation, and physical health. Carl and Ryan (both User Non-Drivers) talked about using the bus to visit old and new places to enjoy the scenery (parks and beaches), sometimes getting on the bus just for the purpose of ending up somewhere new (even if this involved bus switching). Joyce (User Non-Drivers) and Susan (User Driver) take advantage of concessionary travel to 'make a day of it'. They talked of using the bus to 'pick each other up' on the way to their organised destination, and in some cases add to their journey by taking another bus to a local tourist area for an ice cream by the sea. Musselwhite and Haddad (2010) link this aspect of travel to aesthetic needs surrounding nature and scenery (and travel for travels sake) in their *Hierarchal model of mobility needs*, noting the level of participants' self-awareness or consciousness of these needs varied. However, participants in this study demonstrated a level of awareness about the benefits of affective and aesthetic needs, placing an equal importance on these levels when discussing bus travel. For example, Julie (User driver) noted a social

activity as regular 'walking', and this involves taking two buses to a popular walking destination. Julie linked concessionary travel to adding value to her life, specifically the social aspect of the bus journey and how taking a trip by bus for no apparent reason can help her when she is feeling lonely or depressed, particularly as she enjoys the landscape and the option to be spontaneous.

However, depending on the reason for travel and the area the participant lives, will depend on the impact that bus switching has in terms of choice to travel. Having a quality bus service that goes directly to the desired destination was considered important and can have an impact on User Drivers and bus use for leisure oriented purposeful trips. For example, this study has noted that Swansea has a diverse bus network, but the service starts and ends in the city centre. Participants noted travelling by bus in outlying areas as difficult if travel is not geared towards the city centre first. User Driver travel diary responses indicate that participants would not have travelled by bus that day if they had to change buses to get to their destination. User Non-Drivers in this study are more likely to 'switch buses' to get to their destination if the reason for travel is for leisure, however this is not always the case. For example, User Non-Drivers only said yes when the reason for travel was for a medical appointment. This corresponds with some of the responses received at the interview stage as well as literature relating to bus switching (Age UK, 2019b). For example, Debbie (User Non-Driver) expressed frustration when noting she has the physical ability to get to where she wants to go but is excluded due to the spatial bus route on offer. Jim (User Non-Driver) shared this frustration and sometimes chooses not to travel if expected to change bus. Jim specifically mentions the journey he takes to visit his partner, noting the first bus goes directly to Swansea bus station, however, would only need to detour about a mile to take him directly to his destination. A particular finding noted the lack of a direct bus route to the hospital for several participants for example. This issue is not unique and is well documented (Davey, 2007; Hine & Mitchell, 2003), however, more significant is that evidence also shows that two-thirds of hospital patients are aged 60 and over (DfT 2019b; ILC, 2015). This demonstrates the importance of providing a direct service available to all older people. However, it is recognised that subsidising a bus service or ensuring that all bus routes provide a direct link to a local hospital is not feasible as there are a variety of appointment times. It would be difficult to ensure this Monday-Friday (and on weekends in some cases). However, this demonstrates

the importance of joined up working between transport providers, local government, and hospitals to provide a sustainable long-term option for patients that are using public transport. Chapter 2 noted examples of a *Total Transport* approach in Devon, Oxfordshire and Swindon (CTA, 2017) where older people are able to attend appointments at diverse health care facilities through the increased utilisation of vehicles. Some barriers and obstacles have been noted when developing *Total Transport* approaches, including the division of responsibilities – and funding – between the NHS and local authorities, as well as issues scheduling services to timed outpatient appointments. Further research around the benefits of providing Total Transport options could have an impact on the difficulties faced by older people attending these necessary appointments. In addition, further research could also investigate the cost of subsidising local private bus services to determine if it would be more cost effective, inclusive, and easier for local authority's and national governments to provide a more specific and tailor-made service, rather than a scattered haphazard subsidised bus service that is not directly meeting the needs of all older people. However, it is important that cost and usage is not the only mitigating factor when determining feasibility. As noted, all levels of the connection must be considered when determining age friendly travel and accessibility. This includes the development (the transportation option), the contribution (the mechanism in place) and the outcome of the connection using participants own personal experiences and descriptions.

To ensure a shift in modal use from the car to the bus, there is a need to ensure the bus route itself goes to a range of places as this provides older people with choice, flexibility, and overall opportunity for social inclusion. As previously noted in the literature, austerity measures and cuts to the bus service has led to a reduction in available services, especially in outer rural areas. However, this has created a paradox. Barriers to inclusion commonly cited include spatial constraints (SEU, 2003), however older people make up a larger proportion of the rural population (Graham et al., 2018). Significant to this is the risk of social exclusion if older people are expected to change bus to get to their desired destination, as well as a reluctance for older people to shift modal use from the car to the bus when there is a lack of spatial bus route options available. Significant investment is being made to improve active travel options (Welsh Government, 2019); therefore, it is important that policy rhetoric surrounding social inclusion goes further than recognising spatial constraints in rural areas, towards combating

the barriers that have aided in creating it. If the aim is to encourage modal shifts for User Drivers, any structural changes to the service and local area need to ensure a bus service provides a route to the right places for all as the rule, not the exception.

#### **5.4.2 The concessionary pass has stimulated a modal shift for those that have alternative travel options and is being used in conjunction with the car as opposed to or instead of the car.**

Relating to the *development* of the connection, it has been noted that infrastructure is important to participants and the bus is used in conjunction with the car as opposed to or instead of it. Following on from Adams' (2001) research relating to the creation of a hypermobile society, the effects of splintering urbanisation has meant that many amenities are now being placed on the outskirts of towns and cities. This has created a challenge for older people as 'popping to the local shop' requires planning and preparation. Without a nearby bus stop, frequent bus service, access to alternative modes of travel and because of reduced barriers (relating to infrastructure, roads, and pavements), evidence shows that this increases the chances of isolation, loneliness, and reduced quality of life (Graham et al., 2018; Hess, 2012; Shrestha et al., 2017). Evidence in chapter 2 noted that in some ways the hypermobile society being created is positive as mobility is empowering, creating opportunities for leisure activities, consumption, and work. However, the lack of car access in a car-centric society is seen as a fundamental issue increasing the risk of social exclusion (Davey, 2007; Hine & Mitchell, 2003). Governments investing in local infrastructure to improve active transport links (Welsh Government, 2018d) have the potential to reduce this, however, opportunities and activities made available due to the new hypermobile society can inadvertently exclude those older people reliant on public transport (such as the bus). Ashley talked of spreading his errands out throughout the week, however this was discussed in a negative way relating to the loss of his car. Owning a car meant he could complete weekly errands in one day (seen as a preferable to him). Evidence in chapter 2 noted the rising popularity of out-of-town superstores, which have been constructed around easy accessibility by car (Andrews, 2012a), however, car centric locations have resulted in a less physical landscape within which older people can navigate. As people age their desire to travel does not reduce, which creates a deficit between desired mobility and actual mobility. Participants

in this study talked about their location and barriers relating to access to amenities, the difficulty faced when carrying shopping and navigating the roads and pavements (linked to infrastructure and weather below). However, Robert (User Driver), weighing up the pros and cons of driving in the winter (on icy roads) or walking to the bus stop (icy pavement and shopping bags), chooses to drive to complete local errands in one day. This finding shows that the bus service alone nor the splintered access to amenities is the main cause for modal shifts but includes the safety of the local environment and infrastructure prior to bus use. In most cases, participants either choose to drive to complete their errands (if this is an option) or organise multiple appointments and errands in one day, which increases the risk of social exclusion, isolation, and loneliness. Michael and John also noted the importance of the surrounding infrastructure when considering travelling by bus. Both User Drivers rarely use the bus for their travel needs, noting negative experiences and splintered access to services. Helena (who is partially blind) spoke of the positive aspects of being able to use the bus, but this was met with negative experiences of navigating large shopping areas and being physically able to get to (or find) the bus stop. Overall, when considering the locality in general, participants confirmed that there has been a splintering of access to available amenities and services which has led to an increased distance between activity and opportunity in their local communities. The overall effects of the hypermobile society stretch beyond the simplicity of car ownership and encompasses those unable to travel as much as they would like to (Adams, 2001). Older people need to be confident that they can navigate the local roads and pavements safely as this is a key concern and can also be a reason why User Drivers choose not to travel by bus.

White and Baker (2010) in their study of free concessionary travel in a rural English town found that older people with access to a car were making significant use of concessionary bus travel. The findings in this study also suggest that some older people with car access have taken advantage of their available infrastructure. For example, participants who have alternative options (such as those with access to a car) are using the car and the bus as a package of modes. Steven noted in his interview that he drives his car to his local free car park and walks to the bus stop across the road for example. For Steven, the convenience of driving his car to a car park and taking a short walk to the bus stop allows him the convenience of accessing additional services and amenities, and this is seen as a positive influence on his

quality of life (Steven also noted his nearest bus stop was difficult to walk to). Park and Ride systems have generally become synonymous with bus-based systems in the UK, often seen as facilitating shortened car trips and contributing to more sustainable mobility (Clayton et al., 2014). On the other hand, evidence also suggests that Park and Ride sites are rarely commercially viable in terms of recovering the costs of infrastructure investment and operations (Clayton et al., 2014). Instead, the scheme receives public subsidy due to the social function of improving accessibility. This creates a paradox. The schemes are developed and subsidised at the expense of other public transport investment opportunities (Parkhurst, 2003), but are only beneficial to those with car access. Providing free parking and subsidised bus fares to incentivise Park and Ride also have the inadvertent effect of raising market-rate fares on mostly deregulated, privatised bus services (Parkhurst, 2003). Clayton et al., (2014) note Park and Ride created the best of both worlds for older people (free parking and free bus transport), however the concessionary fares subsidy contributes to reducing rather than increasing sustainability due to the 'double subsidy'. This is in opposition to the aim of the concessionary fares policy as this was put in place to allow greater mobility for older people as well as gain sustainability benefits for the rest of society (Clayton et al., 2014). To reduce this counter-policy incentive, charges have been applied at Park and Ride sites in Oxford and Cambridge for example (Clayton et al., 2014). The benefits of Park and Ride for concessionary pass users' needs further exploration, specifically relating to increased public transport travel allowing greater mobility and improved accessibility for older people and in relation to the behavioural impacts of combined parking, costs, and public transport strategies.

### **5.4.3 Reducing the cost of travel is a fundamental reason for changing travel behaviours**

The provision of free travel can be said to have been successful in encouraging modal shift towards the bus for those with alternative travel options. This finding is not consistent with White and Baker (2010) who argue that increased car ownership could lead to a decrease in the use of concessionary travel over time. Chapter 2 found that car use (as a driver or a passenger) has increased, while bus use has decreased for those aged 60+ (Office for National Statistics, 2020b), which would support White and Bakers findings and suggests that the car is generally seen as the preferred mode of transport for older people. However, reducing the

cost of travel was seen as a fundamental reason for changing travel behaviours amongst participants in this study (linked to the built environment, the cost of parking and petrol, and the financial burden of car ownership). For example, most participants talked about reducing their driving habits and increasing their use of the bus when they received their concessionary pass. All participants in this study (User Drivers and Non-User-Drivers) increased their weekly bus usage when they became eligible for concessionary travel. Andrews (2012a) found that statistically, younger pass holders (under 70) were least likely to pay for the bus journey in the absence of a pass, and most likely to have driven in the absence of a pass. This implies that User Drivers are susceptible to modal shift and challenges White & Baker's (2010) finding which suggests older people who drive are less responsive to concessionary bus travel compared to those who do not drive.

Findings in this study show a link between the reason for travel and the choice of travel mode if the concessionary pass was not available or free to older people. Here the cost of travel is considered an important aspect to participants, and in some cases the destination is considered moot when the travel method is free. However, again this depends on the built environment as having access to free travel at the age of 60 was mainly discussed in terms of providing a mechanism to allow people to continue to connect to the community. For example, most participants in this study would bypass social reasons for travel at the expense of a bus ticket. If the reason for travel was for social reasons (shopping with friends), it was noted several times that participants would not have travelled in the absence of a free bus journey. However, participants in this study were more likely to pay for the bus journey (or hire a taxi) if attending a medical appointment. Two Travel Diary participants (Joan and Joyce) did note they would pay for the ticket (or alternative travel) to attend their volunteer work commitments but would not pay for travel to attend social events. This implies volunteering is highly valued by Joan and Joyce and is considered a primary need for them. Further research around the potential effects of the concessionary bus pass on volunteering amongst older people could help to understand why an older person may place such an importance on travelling to attend 'social volunteer work', but not for 'social travel reasons'. For others, the destination was not seen as important when the method of travel was free. Jim was clearly confused when asked his main reason for travelling by bus. As a User Non-Driver, Jim noted no other alternative (financially or otherwise) and that he travels by bus for all his travel need



purposes. Indeed, research suggests there is a higher risk of transport disadvantage imposed on the individual for not owning a car (Cobb & Coughlin, 2004; Currie & Delbosc, 2011). For example, the relationship of transport to income, employment and inequality are similar whether the barrier is availability or cost (Gates et al., 2019). The value here is placed on the conceptual meaning of the concessionary bus pass (relating to meeting all travel needs), rather than the cost of a ticket. This links back to the previous finding (relating to meanings) as it suggests that the concessionary pass holds the meaning of being more than a free ticket to get from one place to another.

In many cases concessionary travel was seen as something to enjoy and cherish, providing participants with the option of freedom and choice. The ability to travel without worrying about the costs adds to the connection by allowing day-to-day travel to exist and continue for many participants. This has led to an increase in participants being able to meet friends and family. Some participants have merged the ability to travel for free with local dining offers, making use of the opportunity to reduce isolation and loneliness. Joyce (UND) and Susan (UD) shared similar stories of finding ways to meet friends and take advantage of discounted meals, with free travel allowing them to enjoy these activities. Interestingly however, one participant (John) spoke of purposely using his bus pass in moderation, noting it should not be abused or used for social reasons or pleasure. However, an important point to make here is that John is a User Driver and still has the choice of mode of transport. This gives him an element of autonomy, freedom, and control over his decision to use free bus travel. Evidence in chapter 2 shows that older people without access to a car are five times as likely to use it frequently (Age UK, 2020b), while the costs and benefits arising from concessionary travel for older and disabled people delivers excellent value for money with each £1 spent generating approximately £2.87 in benefits. Bus operators are reimbursed on the basis that they are 'no better and no worse off' as a result (Greener Journeys, 2014), therefore government spending on concessionary travel is based on demand and the principle of operator reimbursement. When considering transportation options, concessionary travel benefits those who are in lower income households and have no access to a car, including indirectly and directly to pass holders and their extended families. This became more evident in 2020 during a UK wide lockdown because of the coronavirus pandemic, especially when England placed a temporary suspension on free travel for older people at peak times in London. One older person noted

in a live interview that as an informal care provider for her grandchildren this has meant an additional cost of £50 per week for travel (Braddick, 2020). It can be assumed that if the concessionary scheme were withdrawn, older people (especially User Non-Drivers) would still use the bus and buy a ticket. However, as noted in chapter 2, this would divert funds away from other services that include an expenditure tax, and the government would experience a reduction in indirect tax as a paid for ticket may mean diverting funds from taxed services to an untaxed bus ticket (Greener Journeys, 2014).

In addition, evidence also suggests that owning a car can also lead to transport disadvantage due to the costs involved (Cobb & Coughlin, 2004; Currie & Delbosc, 2011). Andrews (2012a) found that the cost of travel was seen as a particular barrier among those with access to a car and the bus is seen as a more likely option to be considered. Therefore, choosing to use concessionary travel to meet social needs allows age friendliness to exist and continue as it provides the financial freedom of travel. It is not assumed that these findings suggest that travellers place more importance on travelling if the reason is for shopping or medical appointments, rather this could have affected their decision to only travel for this purpose had the fare been payable. This could also be linked to the choices being made not to travel by car (for social reasons), as travelling 'for the sake of it' may not justify the reason for travel due to the additional expense. Overall, the concessionary bus pass has stimulated modal shift, as well as providing a sustainable travel option. It is important to note however that this study did not ask participants for personal financial information or if their decision to travel by bus would have been the same had they been travelling for multiple reasons (relating to the travel diary), all of which could potentially affect alternative travel choices at the time of travel. Further research relating to personal financial information, alternative travel choices at the time of travel, multiple mode options and the reason for the travel taking place (door to door) could provide further understandings around travel in the absence of a concessionary bus pass, especially in understanding choices to continue to use the car.

## **5.5 Bus Accessibility and companion travel**

Continuing the discussion with research question two - *What are older people's experiences of concessionary bus travel?* The focus moves on to bus accessibility and companion travel. The findings in this study are synonymous to published literature relating to bus accessibility

(Broome et al., 2013; Gilhooly et al., 2002). Specifically, public transport is considered accessible when it is safe, reliable, and easy to use. The findings below make the same observations, however, also suggest bus accessibility, and companion travel have an overall impact on health and wellbeing as this provides pass users with a connection to the goal of getting to their desired destination.

### **5.5.1 Concessionary travel for both User Drivers and User Non-Drivers is dependent on bus accessibility**

The findings in this study suggest that having a comfortable, easily accessible, and well serviced bus service and route was essential if public travel is to be a contributor to the connection. Older people are confident using the bus when they are fully aware of the journey taking place, there is no perceived rush to board and alight, and when the journey is comfortable and easy to use. These findings are well established within the literature; however, it would be amiss not to mention these in this study, especially as these are a continued issue and barrier for older people.

It is noted above that infrastructure is important to participants and for some User Drivers the bus is used in conjunction with the car as opposed to or instead of it, for this reason. In addition, bus travel is used less amongst User Drivers for more local functional travel purposes (such as attending medical appointments or going grocery shopping), and this is linked to the built environment and accessibility. During the interview stage most User Drivers noted that they prefer to travel by car when completing local errands such as shopping, going to the bank and post office. Functional concessionary travel for most travel diary responses (User Non-Drivers) was more frequent when the destination was for local, inner-town travel within a five-mile radius. These findings are linked to the creation of a hypermobile society, as older people noted they have difficulty 'popping to the local shop' due to a number of accessibility issues. The lack of access to a car in a car-centric society is a fundamental issue, especially for those with a desire to travel but who live in a rural area. For example, research shows that location has a major influence on bus accessibility and use, yet rural areas have lower levels of bus service provision but make up the larger proportion of older residents (Graham et al., 2018; Hess, 2012; Shrestha et al., 2017). Chapter 4, section B presented the environmental characteristics of participants in this study and show these are dissimilar, despite their

proximity. For example, although 8 of the travel diary participants live in rural areas, their available amenities are different in terms of their access to a bus stop, opportunity for public travel and access to local amenities (Loughor is a rural village, whereas Gorseinon is a rural-urban town). There is a clear disparity in available bus stops between Loughor and Gorseinon. One mile is the difference between connectivity and accessibility to opportunities within these communities as an older person living in the lower area of Loughor could walk approximately 800 metres (at least) to their nearest bus stop. All participants noted they walk less than half a mile to and from each bus stop (with one exception who noted walking as a social activity), however most stated in the interview that the walk can be difficult, especially during the winter months when it is dark or when it is raining. In this study, User Drivers living closer to a bus stop with a frequent service choose to walk to the bus stop and use the bus over the car as they find this to be more convenient. As noted above, Susan (User Driver) and Joyce (User Non-Driver) use the bus as a taxi service to 'pick each other up', whereas Julie (User Driver) regularly takes two buses to attend a preferred walking route, and in some cases travels by bus with no destination in mind (to enjoy the landscape). All three participants live in a rural area but described living relatively close to a bus stop and noted their health status as 'good'. This is not the case for all participants, however. For example, David (User Driver) prefers to drive his car for functional travel purposes relating to local doctors' appointments due to the difficulty he has walking to the bus stop. This finding suggests that pedestrian infrastructure has an impact on the decisions made to travel by bus or car.

Without access to a nearby bus stop, a frequent bus service, and alternative modes of travel, and because of reduced barriers (relating to infrastructure, roads, and pavements), a pass holders' ability to use the service is affected. This in turn increases the chances of isolation, loneliness, and reduced quality of life (Graham et al., 2018; Hess, 2012; Shrestha et al., 2017). Most participants who reported their trip origin as rural also raised issues relating to the location of the bus stop and the availability of the bus service. Anna (User Non-Driver) uses her pass regularly, however, finds it extremely difficult to walk to the bus stop (Anna also noted her health status as good). On some occasions, Anna is not able to walk the distance and chooses not to go out. In addition, because of the distance to the bus stop, Anna notes that she always travels with a planned destination in mind. This suggests that travel for Anna is always done with a purpose, and her trips are planned to the time, location, and

destination, ultimately removing the option of independence, spontaneity and freedom. The destination location of the bus stop is also seen as a significant barrier to bus use (including a major barrier for one participant when discussing the walking distance to a hospital appointment). Michael (User Driver) raised three issues relating to bus stop locations: 1) the walking distance to the bus stop outbound, 2) the walking distance from the bus stop to the desired destination, 3) a failing of the government and local health board to pre-empt the removal of two bus stops at a hospital as creating a barrier to public travel. Michael noted this change led to his decision to drive to hospital appointments rather than take the bus. This is in opposition to the aims announced by the Welsh Government (2018), specifically to tackle the structural problems relating to a decrease in bus use (including accessibility). The removal of two bus stops at a local hospital demonstrates a failing of the government and local health board to pre-empt creating a barrier for older people and is the reason for increased car use (in Michael's case). Participants noted that barriers such as this mean they sacrifice taking necessary trips by bus (and in some cases miss hospital appointments), which demonstrates the importance of including older people and ensuring they are involved in any decision to remove a provision they are reliant upon and will affect them.

Finally, rurality and the time of travel demonstrate a common theme as findings suggest negative experiences relating to travelling by bus at night. It is noted above that David (User Driver) has increased his bus use, regularly attending social events weekly (sporting events, theatre, cinema). This contributed to the finding that User Drivers use the bus for more leisure orientated purposeful trips. However, David also noted feeling anxious walking the distance to the bus stop alone at night (especially in the winter) and in some cases this will affect his decision to travel by bus. This creates a paradox for David, who will choose not to drive to attend these events at night and when the roads are busy (due to anxiety driving at night time). Many participants have a similar issue relating to the time of travel, deciding not to walk to the bus stop because it is isolated, dark and lacking shelter from the elements. Helena described her bus stop as being a blue panel with one side for shelter, with no seating. Others described their bus stop as a pole in the middle of the pavement, easily missed if you are not a local and aware of the location. These accessibility issues have a major impact on decisions made to travel by bus, again creating a paradox. Users are reliant on improved facilities that are age friendly, however reduce usage when faced with accessibility issues. The lack of use

leads to discontinued services and results in abandoned shelters and a disused bus stop that degrades due to lack of use and funding. This discussion demonstrates the importance placed on the bus stop itself during this study (for both User Drivers and User Non-Drivers). This is consistent with the literature presented in chapter 2 (Graham et al., 2018; Hess, 2012; Shrestha et al., 2017) and suggests the structure of the stop, available seating, visibility in general, and how these differ depending on locality (rural vs urban, inner city vs town). From an older person's perspective, the ideal bus stop is located close to home, visible, well lit, with seating and weather protection.

Bus design is a further barrier to accessibility and extremely important to participants. This is also well established in the literature (DfT, 2005; Shrestha et al., 2017; UNDP, 2010). Participants find the journey difficult when there are additional barriers to contend with that are beyond their control. The ideal bus will have low floors for boarding and alighting, visible handrails, priority seating and clear information. This is synonymous with the literature presented in chapter 2 (DfT, 2005; Shrestha et al., 2017 UNDP, 2010). As noted in chapter 2, the regulations laid out in the *Bus and Coach Accessibility and the Public Service Vehicle Accessibility Regulations 2000* (DfT, 2005) required all buses to be fully accessible, however full compliance was not expected until 2022. This is important and suggests a move to ensure that bus fleets are similar in design to provide consistency for users, especially those with mobility and visual impairments. Helena (User Non-Driver) noted a preference for buses in one locality, admitting they are more comfortable whereas others are difficult to navigate. This shows that getting on and off remained a critical barrier suggesting satisfactory universal progress has not been made. If bus fleets are consistent, the contribution to the connection could mean that users do not actively avoid using bus routes or buses they may not be familiar with out of fear and anxiety of not knowing how to navigate to a priority seat, or where to place their luggage for example.

The physical structure of the bus itself is not the only barrier to accessibility as participants also noted feelings of being rushed, sometimes due to the attitudes of the bus drivers and operators (also noted in Gilhooly et al., 2003) and other times due to buses being late because of roadworks. Overall, participants referred to passenger behaviour and priority seating as a positive experience, noting examples where people have helped them. Julie (User Driver)

explained a negative experience while boarding a bus (due to carrying heavy items), but how the actions of the bus driver made her feel protected and important as a passenger. This had a lasting impact on Julie personally and contributed to her decision to continue to use the bus service. However, in some cases it was noted that the bus pulling off before an older person has sat down is frustrating, especially when there is no available priority seating or visible handrails. In one case, rushing led to stress and anxiety as Fred (User Non-Driver) panicked to navigate to the next available seat. This creates a paradox, however. Road works are necessary to improve the structures of the highway, however this inevitably means that buses can be late, which in turn may lead to the operator rushing or the person feeling obligated to rush when boarding and alighting. This can also link to issues around information changes and cancelled services. For example, buses occasionally have to change course at the last minute due to unforeseen circumstances (for example, road works), leading to a change in the daily service and negative experiences relating to changing information (explored in more detail below).

### **5.5.2 Companion travel has the potential to increase bus use for older people**

Social interaction on the bus was discussed at length in this study and the findings show companion travel is instrumental in providing purpose and identity as well as confidence when travelling (relating to safety, comfort, and ease). One issue noted numerous times during the interview stage was location, barriers relating to access, and the difficulty faced when carrying shopping and navigating the roads. Joan (User Non-Driver) noted she has no choice but to spread out weekly errands due to difficulty carrying items and navigating roads and pavements. Although it could be argued that this increased bus use is positive (as Joan is not at risk of being isolated), Joan also noted that this is not sustainable for her, as she sometimes finds it difficult to complete her weekly chores, especially in the winter months. Most travel diary responses for User Non-Drivers noted that weather would not have affected their decision to travel by bus (the opposite is true for User Drivers if it is raining and the destination is local), but the majority noted adverse weather as a concern when travelling by bus (relating to trips, lack of confidence walking). Graham and Joan (both User Non-Drivers) talked about weather, restricted mobility, and discussed difficulties getting on and off the bus, especially when carrying items. Both mentioned the support, assistance, and

companionship that they gain when travelling with another person. Interestingly, the majority of participants noted being physically able to get on the bus but having a slower reaction time and difficulty carrying their items when alighting. Graham (User Non-Driver) talked about travelling on the bus with his grandson and raised two important points. The financial burden he feels when paying the cost of the ticket (for his grandson), but the relief, support and confidence he feels for the help, especially when his grandson is carrying his items.

Companion travel can also be linked to bus comfort and the overall experience of the bus journey. For example, bus comfort and the quality of the journey varied; however, a link was made between the spatial distance and the reason and time of the journey taking place. Those travelling during peak times noted the quality of the journey as being unpleasant, crowded, and noisy, however this differed when travelling with a friend. Helena (User Non-Driver) takes five different buses to attend one group meeting. Although Helena noted the discomfort she feels on the journey (these are five short trips on each bus), she noted this is made more comfortable when her friend is able to join her on occasion. Short off-peak local journeys were considered more comfortable and satisfactory, however longer non-local journeys were considered uncomfortable or unpleasant. This corresponds with evidence presented in chapter 2 (Age UK, 2019b) relating to passengers noting key issues with comfort when the journey on the bus is long. Interestingly, when a long journey is for leisure purposes, and a participant is travelling with a companion, bus comfort was a second thought. Joan (User Non-Driver) referred more to the assistance, support and companionship that she receives from her friend than the difficulty or discomfort of the journey itself. Descriptions of bus comfort also changed depending on the reasons for the travel taking place and if a participant was travelling alone. Longer journeys for day-to-day travel was generally experienced as uncomfortable, however, leisure travel was discussed more positively. For example, Carl (User Non-Driver) mentioned the short, bumpy and loud ride when travelling to Llanelli (shopping), however referred to admiring the scenery and beauty of the landscape when on a longer bus journey with a friend. However, decisions to use the bus for long haul leisure trips have been affected by experiences on local buses. In Wendy's case (User Driver), the bumpy, uncomfortable, loud and overcrowded experience of a local bus trip have led to the perception that this will be the case for a long-haul leisure trip.



Finally, relating to confidence using the bus, research suggests that access to the bus can be restricted if pass holders do not possess the cognitive capabilities needed to use the service, specifically noting barriers relating to being confident in knowing what bus to take, alighting, using the pass, and knowing how to return home from the journey (De Witte et al, 2008; Lyons et al, 2002; Metz, 2003; Mackett, 2017). An older person's experience of using the bus can be negative when there is uncertainty about the trip itself, particularly relating to a lack of available information. Findings in this study show that having available information about the bus service was an important part of the travel experience. Debbie and Jim (UNDs) noted feeling excluded or unable to travel for reasons beyond their control when there was poor visibility (signage, bus stops, announcements), when services changed without warning, and when they could not pre-plan all aspects of the trip (including identifying the bus times, the drop off points, walking distance, bus design). This could be related to research that suggests older people are more likely to experience a lack of spatial awareness and cognitive skills, as well as the ability to remember information previously obtained and the comprehension of that information. Findings also show that uncertainty about the daily practice of bus use and knowing how to use the bus prevents car drivers from shifting their mode of travel from the car to the bus entirely. This was evident with Steven and Lynne (User Drivers) who find it easy to travel by bus to the city centre and home but noted they do not fully understand the system. For this reason, having access to information prior to travel is essential and without this, travel is considered negative and a barrier to the connection. Musselwhite and Haddad (2010) noted in their research that little information is available relating to the day-to-day informal information that older people need to have confidence in using public transport. Today, improvements in technology mean that bus routes, maps, bus stop locations and timetables can be updated in real time, however, there is still a gap in access to informal information. Similarly, Shrestha et al., (2017) found only a small number of survey participants moved towards an entirely electronic system when using the service. Arguably then, caution needs to be taken when implementing any future changes to bus service information. Any new approaches (i.e., updating bus information) need to be age-friendly to limit any confusion, and this cannot be an alternative to traditional provision (i.e., a printed timetable). For example, participants in this study mentioned using the Traveline Cymru app and the 'bus times via text message' service and considered these relatively simple to use, however there is still a preference for official timetabling information and a reluctance to move away from

traditional information methods. Harry (User Non-Driver) noted a preference for using a notice board as his phone is only used for calling people and texting for example. This is consistent with literature discussed in chapter 2, for example, Musselwhite and Haddad (2010) also found older people are mostly content with official timetabling information about the functional trip itself. To ensure the continuation of connectedness in terms of travel and providing opportunity, there needs to be confidence in travel ability. This includes ensuring up to date information is available in both electronic and paper format so older people can choose the easiest format for them when organising and planning their trips. No system is perfect, and participants recognise that day to day issues are beyond control in some cases, however any long-term or abrupt changes lead to anxiety when using the service, which also affected overall confidence to continue travelling by bus. Helena made a comment when noting difficulty reading timetables and navigating through the information relevant to her journey for example (due to recent changes and being distracted by posters and irrelevant information). This demonstrates that providing various forms of consistent, relevant information (printed, real time at bus stops, on board, and web/app/phone based) is considered extremely useful to older people. These findings are synonymous with already established findings, however evidence presented by Age UK (2019b) and PT Access (2008) surrounding the benefits of companion travel and bus buddying found the schemes have the potential to help people who are facing location inequality, physical and sensory disabilities as well as those with barriers due to a lack of confidence when using public transport systems. PT Access (2008) also note good practice examples that have been put in place (relating to the bus buddy programme in Leeds) and the outcomes show the scheme led to the creation of independent travellers. The concept was considered ground-breaking (as a partnership scheme between local operators, local authorities, and the community) and a step towards lowering the barriers to accessibility (Touchstone, 2021; Urban Transport Group, 2021).

There is limited research available relating to the outcomes of companion travel, however. The findings in this study suggest that companion travel has the potential of serving a dual purpose. First, it can aid in creating independent and confident travellers, leading to increased and more frequent use of the bus service. Second, it can provide the help an older person needs without them feeling like they are a burden (or from being burdened by cost). In this case, the companion would have free travel provided as an extension to the concessionary

bus pass scheme. This reinforces the need to pursue a national scheme that includes universal companion entitlement and provide an opportunity to further explore the benefits this can have on older people. It is recognised however that for companion travel to be successful, this must go hand in hand with a fully accessible transport system as there is still a need to ensure convenience.

## **5.6 The relationship between older people and concessionary bus travel, social connectivity, health, and wellbeing**

Continuing the discussion with research question three - *What are the relationships between concessionary bus travel, social connectivity and the health and wellbeing of older people?* the findings in this study suggest that there is no 'one pass fits all' model when considering contribution to quality of life, health, and wellbeing. However, the findings do suggest that the pass can mean a lifeline that many older people have become reliant upon, especially as it provides the means to reduce isolation, loneliness, and depression. This is not always the case however and depends on the service being accessible, safe, and reliable.

### **5.6.1 Concessionary bus travel provides opportunities for maintaining community connection, social interaction, and social connectedness**

Concessionary bus travel and owning a pass is linked to providing opportunities for community connection, social interaction, and social connectedness. The literature presented in chapter 2 and the findings of this study suggest that owning a bus pass and using it has more value than providing independence and freedom. Older people rely on the bus for both direct and indirect benefits, including accessing goods, services, and their social networks. Concessionary bus travel also means connection to the wider society, and this is linked to community cohesion and social interaction. Findings in this study show the specific ways in which the concessionary bus pass has facilitated access to services, health care, opportunities to exercise and improved social life. Here the concessionary bus pass has the benefit of creating connections and improving physical and mental wellbeing. The bus acts as a facilitator to the connection, allowing for increased tourism, providing a travel identity and opportunity to participate in travel experiences.

---

Chapter 2 noted two indicators of social integration: 1) participation in society and enabling

social interaction (shopping, medical appointments, social clubs, social roles) and 2) interaction with social support or social networks (the ability to visit relatives, friends, and neighbours, and reducing isolation, loneliness, and depression). The bus can act as a facilitator in achieving this mobility, reducing isolation, loneliness, and depression. The overall outcome of the connection is positive when it allows psycho-social benefits to be achieved, leading to greater community cohesion, companionship, health, and well-being. These findings are well established; however, it is important to look beyond these concepts to understand what independence and social interaction mean from an individual's perspective and personal experience. Social inclusion is understood as the process of improving an individual's opportunity to take part in a society and this has been related to independence, choice, freedom, control, autonomy, and self-identity. Exploring quality of life through the different needs and characteristics of older people however highlights the subtle differences between mobility needs in relation to levels of health, wellbeing, and connectivity. For example, as already noted, Joyce and Joan (both User Non-Driver) met on the bus and use this as a social facilitator to catch up on the way to committee meetings for example. This is not always the case and however as Caroline (User Driver) noted actively avoiding speaking to people on the bus (however it must be noted that this was related to the noise of the bus and the discomfort she felt on the trip).

Social interaction was important to most participants, especially relating to the relationships formed on the bus itself. The bus acting as a social facilitator also aided in improving psycho-social benefits and provided the means for older people to meet new people, family and friends and enjoy companion travel. For participants, social interaction and social engagement is considered extremely important. Interestingly, the negative experiences of the bus journey (relating to comfort, overcrowding, bumpy ride etc.), are outweighed in responses when the participant is referring to positive social experiences on the bus, particularly relating to companion travel. One example is where bus use led to two older people meeting by chance and rekindling an old relationship. Helena made a particular effort to use the bus and integrate back into society following the loss of her husband. This had a positive impact on Helena personally, who met an old friend on a chance trip, and they now meet regularly, sometimes travelling with no destination in mind. These benefits extend further and relate to companion travel. The level of interaction and connection between

Helena and her friend could not be achieved or made possible if one person is driving to their destination.

Overall, community connection, social interaction, and social connectedness relates to the bus acting as a facilitator and the outcome being meeting people or on the bus within the community. This is seen as positive as it allows for increased social interaction and in some cases improved access to social networks and greater community cohesion. The findings suggest that the outcome of owning a pass can mean improved quality of life. The bus can facilitate connections between people and their community, however fractured connections to bus use can lead to a failure to perform basic needs (as well as higher level social needs) and can result in social exclusion, increasing the likelihood of an older person experiencing isolation, depression, and loneliness in later life. Participants recognise the benefits of the concessionary pass, and all noted they are happy with the option of free travel; however, all agree that there is potential for the service to improve. A main finding relating to quality of life as a concept shows that the meaning can be customised around each individual based on their personal needs and experiences. Capturing this individual need through the promotion of active travel is important, however there is also an opportunity to extend the policy beyond reducing social exclusion towards promoting both active travel and universal community connectedness.

### **5.6.2 The concessionary bus pass has the potential to continue to improve quality of life**

The separate concessionary bus pass schemes that operate in England, Scotland, and Wales are aimed at improving social inclusion amongst older people. Findings in this study (and within the literature) show that concessionary travel generates substantial individual, economic, social, and environmental benefits, including more efficient transport networks. Recent policy narratives focus on healthy and active ageing, representing a more positive view of active participation and productivity (DfT, 2009, 2012; SEU, 2003; Welsh Government, 2018c). Originally, the focus of attention of transport policies was short-sighted as this was framed around an intergenerational conflict where older people were either seen in hostile ageist terms (consuming society's resources at the expense of the younger generation) or as

dependant vulnerable victims in need of support (a burden, lacking social autonomy). This is established in the literature (Andrews, 2012a; Cobb & Coughlin, 2004; Nelson & Dannifer, 1992; Swift & Steeden, 2019; Victor; 1987), where it has been argued policymakers should view older people as active agents with individual responsibility and proactively anticipate the needs of this population. As discussed in chapter 2 and three, social exclusion is a reoccurring process, and policymakers face significant challenges, as well as opportunities, when planning for a future where a considerable number of people will be over the age of sixty. The consequences of raising the age of entitlement in England for example (relating to retirement age changes - differs across the UK) has led to a decline in usage (Age UK, 2020a; 2020b), demonstrating the negative impact this has already had on active travel. This age-related policy change also suggests that narratives have not changed, and the focus of policy provision is still based on age as a number, rather than ageing as a process. The findings in this study suggest that raising the age of eligibility for concessionary travel could lead to individuals continuing to drive later in life (to meet their travel needs), which will have an overall impact on modal shift upon receipt of concessionary travel. This is because evidence already shows that concessionary travel decreases significantly as people age (See DfT, 2010, 2011, 2020), linked to social, physical, and cognitive barriers. Therefore, further research on the impact of this entitlement change relating to the social, economic, health and wellbeing effects could be explored (focusing on those aged 60-66).

Taking the difficulties of defining age and its meaning into account, any policy and process put in place for older people should consider their changing needs and differing characteristics or may run the risk of providing provision that is supply orientated rather than based on what is required. The simple numeric approach to ageing relating to concessionary bus travel does not acknowledge the diversity and heterogeneity of those over the age of sixty. Chapter 2 and three explored what it means to be 'old' as a socially constructed concept, noting this has consequences for older people who experience the ageing process differently (individually, locally, nationally and internationally). This is because ageing itself is a biological process. A person can report 'feeling old' in one context and 'not old' in another. This was the case with George (User Non-Driver – aged 75+) who noted he attends his local pub and drinks like he is "one of the rugby boys" but the location of the bus stop is too much for him, referring to the discrepancies between available amenities: "it's like post code lottery for old people".

These differences in experiences and perceptions are what present difficulties when attempting to measure the concept of age. For participants in this study, receiving the pass at a specific milestone (at pension age for example) was not important. What was important was the additional opportunities the pass gave them. This was evident with Jim (User Non-Driver), who gave up his job as a taxi driver and subsequently driving at the same time (due to losing his taxi car). SHARE survey results show that an older person living in a household where no-one else is working will find it hard to make ends meet due to changes in economic status and circumstances following retirement (Najsztub et al., 2015; Wahrendorf et al., 2015). For Jim, the loss of his job (and his car) meant that he became reliant on public transport, which in turn had an impact on his overall health and wellbeing. Receiving the concessionary pass was a positive outcome at a difficult time for Jim, allowing him to stay connected to the outside world. Jim did not mention retirement or his age as a reason for applying for or using his concessionary pass but noted applying because ‘that is when I was eligible.’ The same applies to all other participants when asked when they applied for their concessionary bus pass. All stated when they became eligible, but all have different underlying reasons for bus use. This suggests that the focus be placed on experiences, multidisciplinary perspectives, and various levels of analysis (not age) when assessing concessionary bus travel. A move away from burden or benefit, ageing or decline towards a more meaningful approach recognises older people are not a single homogeneous group that experience ageing in a vacuum. Rather, there is a recognition that transport holds life together and provides a link between a persons desired activities and their locations.

A further finding relating to concessionary travel improving life quality goes beyond the service being available, usable and accessible. There is also a potential to have a positive impact on health, wellbeing and overall quality of life through the creation of a travel identity. For example, some participants spoke of the concessionary pass being their lifeline to the outside world, while others referred to themselves as being a lifeline for their friends when travelling by bus (relishing the opportunity to be useful and helpful to someone else). Participants in this study also talked about having choices to travel, relating this to a sense of identity and freedom both through independence and autonomy but also through caring relationships and the roles they have in the places they live. Several roles have been linked to bus travel (or to the bus acting as the facilitator) including volunteering, community groups,

caring responsibilities and social events. The impact this has on participants is significant, allowing older people to continue to provide informal support to their families through babysitting grandchildren as well as immersing themselves into their community through volunteering. This has also provided a continued sense of pride, belonging, purpose, and identity. For Joyce volunteering has given her a continued purpose in life. She linked this to the concessionary bus pass allowing her to maintain her independence and provide opportunities for continued companionship and friendship. Many participants also talked about the bus as a social facilitator giving them a sense of belonging and identity. Joan talked about her travel identity, linking this to friendship and companion travel, having made a long-term friend on the bus. These psychosocial aspects of travel and self-identity demonstrate the importance older people place on meeting their utilitarian and psychosocial needs while on the bus. Joan for example made the link between bus travel and how this reduces the likelihood of her being lonely and isolated. The bus was her connection to support, friendships and recreational trips.

This mixed multi-purpose reason for concessionary travel and how this creates a travel identity needs further exploration. Creating a travel identity through concessionary bus use is only possible when the bus is able to act as the facilitator and there are no barriers to the connection. When the connection is broken, concessionary bus travel is not a contributor to the overall health and wellbeing of older people. For example, Michael mentioned isolation being a key issue for those living in rural areas, noting the difficulty he faces if he wants to visit his friend (due to an irregular bus service and distance to the bus stop). Michael talked of this friend being a regular darts player, a volunteer, a local in the pub. However, a reduction in his mobility has ultimately led to his isolation. Michael referred to his friend as a bus regular – “everyone knew John on the bus” but noted the walk to the bus stop and difficulty alighting being too much for John. Michael recognises the identity the bus gave John, and the positive connections he made on the bus journey itself. Here, the overall outcome of this connection was positive when bus travel allowed John’s psycho-social and practical travel needs to be achieved, leading to greater community cohesion, companionship and health and well-being through the creation of a travel identity.



## 5.7 Chapter summary

Overall, the findings suggest when *developing the connection*, infrastructure and structural transportation options are key and include the built environment providing access to the desired destination. When *contributing to the connection*, bus accessibility, travel routine and bus use are important and relate to the bus acting as the social facilitator. When there are barriers to accessibility this has a negative impact on the bus travel taking place. Finally, the *outcome of the connection* is positive when bus travel facilitates opportunities relating to community cohesion, social interaction, and social connectedness.

# Chapter 6: Conclusion

## 6.1 Overview

This section summarises the findings and key contributions from the overall study in relation to the research questions, before exploring recommendations and the study limitations.

## 6.2 Findings and Contributions to knowledge

The aim of this study has been to critically examine the relationships between concessionary bus travel and its implications for the health and wellbeing of older people in maintaining social connectivity. Common themes suggest there are shared experiences of concessionary pass use, linked to mobility, social exclusion, and quality of life. Figure 7 below provides a combined schematic overview of the research questions and corresponding findings.



Figure 7: Schematic Overview of the Research questions and findings

### **6.2.1 The relationships between concessionary bus travel, health and wellbeing**

The relationships between concessionary bus travel, health and wellbeing relate to the built environment (practical), the mechanisms in place (practical) and the outcome of age friendly travel (psycho-social). There is a strong and established literature on definition and measurement of quality of life and a range of definitions used according to the context, however there is no specific mobility related measure to evaluate concessionary fares schemes against mitigating the effects of social exclusion and improving quality of life. Concessionary bus travel is a mechanism for social connectedness and is the interplay between the individual and the environment in creating or maintaining health and wellbeing (thus avoiding social exclusion and reduced quality of life). The importance of an older person's-built environment and local community are central when considering public transportation options, therefore communities cannot become fully age-friendly without considering these broader societal influences. *The Maintaining Social Connectivity model* can be understood as the development of policy and transport in creating an age-friendly community environment in terms of 1) the *development* of the connection (infrastructure and structural transportation options), 2) public travel as a *contributor* to connection (the mechanisms in place when using public transportation options) and 3) the *outcome* of the connection in terms of allowing age-friendliness to exist and continue (i.e., creating connectedness such as greater community cohesion and promoting companionship) (see figure 7). The model can be used to assess and evaluate the different factors relating to bus travel. To this study, active travel and transport relating to concessionary bus use is considered attractive and usable when all three elements of connectedness are considered and can be met.

### **6.2.2 The meaning of concessionary bus travel and owning a pass**

Those with no alternative travel options link the pass to the only thing between them, isolation and loneliness. Those with access to alternative modes of transport link the pass to a fail-safe option and to continued mobility. The significance of the journey was difficult to categorise due to diverse meanings, however concepts relating to increased independence, opportunity and freedom were used when referring to concessionary travel.

Older people find it difficult to categorise the meaning of bus use however, as there was difficulty classifying purpose beyond the initial destination, especially when there is no destination in mind. In this case, the bus is a means to an end and/or a catalyst for travel opportunity. Therefore, a distinction needs to be made when referring to the practical and psycho-social benefits and meanings of concessionary travel. The bus, as a vessel, can act as a contributor to connectedness, but it can also contribute to the connections being made. When exploring these distinctions, bus use holds significant meanings for older people (whether the trip is for social or purposeful reasons) and it is important these are captured fully when exploring the bus travel taking place. Using *The maintaining social connectivity model*, meanings were discovered by exploring the transportation option (the development of the connection), the mechanism in place (how these contribute to the connection) and the relationships and connections this has created using participants own personal experiences and descriptions (the outcome of the connection). Overall, concessionary travel is complex, diverse, personal, and dependant on a number of circumstances. Therefore, *all* travel taking place is important and meaningful. The importance is the journey is able to take place, and the bus is the facilitator. The outcome of its use is positive when this allows psycho-social and practical travel needs to be met, leading to greater community cohesion, companionship, health, and well-being. When this connection to travel is broken at this stage, concessionary travel is not contributing to health and wellbeing.

### **6.2.3 Older people's experiences of concessionary bus travel: Car use, access, and concessionary travel**

User Non-Drivers generally use the concessionary pass for day-to-day needs (grocery shopping and medical appointments) and to fulfil social travel needs (meeting friends, attending community events, local attractions). This means that User Non-Drivers are more likely to encounter negative experiences of bus use compared to User Drivers, however this is mainly because they make more trips by bus (especially functional local trips). User Drivers use the bus for more leisure orientated purposeful trips, whereas the car is used for more functional travel purposes (medical appointments). User Non-Drivers on the other hand report their bus use as both functional and for social purposes.

User Drivers have increased their bus use (to meet social needs), recognising the benefits of using concessionary travel when travelling to built-up, inner-city areas. However, this is linked to avoiding negative car-based experiences relating to congestion or driving at night time. User Drivers are reluctant to become fully reliant on the bus due to local transport links and sustainable alternative travel options being inaccessible, especially in rural locations. A direct bus service is considered important, whereas bus switching is considered a negative travel experience. User Drivers choose not to travel by bus if this is the case.

The concessionary pass has stimulated a model shift for those that have alternative travel options and is being used in conjunction with the car as opposed to or instead of the car (for example, using informal and formal park and ride services). This is linked to the location of the bus stop for example and available infrastructure. Specifically, the creation of a hypermobile society, and the rising popularity of out-of-town superstores have resulted in a less physical landscape within which older people can navigate. Participants confirmed there has been a splintering of access to available amenities and services, which is a key concern and can also be a reason why User Drivers choose not to travel by bus. However, User Drivers are taking advantage of their available infrastructure and in some cases are using the car and the bus as a package of modes.

Reducing the cost of travel is a fundamental reason for changing travel behaviours. In some cases, the travel destination was not important when the travel method was free, which suggests the concessionary pass offers more than the financial freedom of travel. Participants use innovative ways to combine free travel with local dining offers making use of an opportunity to reduce isolation and loneliness. The popularity of concessionary bus travel amongst older people in Wales has increased since its inception (as well as in this study) and this relates to having the ability to choose where to go and when, without worrying about the cost of the trip. In this case the concessionary pass is seen as important and something to cherish. However, there is a recognised decline in take up relating to poor services, also linked to austerity measures and ironically to an overall decline in bus use per head. The result has led to operators cutting back on commercial routes deemed unfeasible, which again raises the issue of usability in rural areas that are more diverse, disparate, and geographically

dispersed.

Findings in this study also suggest that many participants would not pay for travel (in the absence of a pass) unless it was for shopping or a medical appointment. Interestingly, volunteering was considered a primary travel; however, participants did not classify this role as important. This suggests that travelling 'for the sake of it' may not justify the additional expense. However, this study did not ask participants for personal financial information or if their decision to travel (and pay) would have been the same had they been travelling for multiple reasons.

#### **6.2.4 Older people's experiences of concessionary bus travel: Bus accessibility and companion travel**

Public transport relating to concessionary travel is considered accessible when it is safe, reliable, and easy to use. Several barriers have been accepted and addressed in many ways (including lower floor buses, friendly drivers, timetabling and scheduling, bus stops and shelters, infrastructure, and accessible information), however, older people still have difficulty using the service. These findings are synonymous with already published literature suggesting there is still a need to ensure public transport is easy to use (physically and relating to available information), has a consistent design and is accessible to all.

Bus accessibility, location inequality and disparities in access to amenities has affected how participants in this study travel and this has an impact on how they participate in their community. Considering the local public transport differences between rural and urban infrastructure, location inequality is a major barrier to social inclusion. Concessionary travel for both User Drivers and User Non-Drivers is dependent on bus accessibility. The disconnection here related to the location of the bus stop, bus route, and accessing the bus and available amenities when using concessionary bus travel. Participants noted feeling detached, isolated and cut off from society and even questioned choices made to move to quiet (rural) areas following retirement.

The destination of the bus stop has an impact on the choice of alternative travel options as

the majority of User Drivers noted purposely choosing the car over the bus if they have accessibility issues and difficulty getting to the bus stop. In some cases, User Drivers arrange alternative options (as noted above - such as using park and ride facilities or driving to the bus stop) for convenience, which is in opposition to the aim of the concessionary fares policy. Literature and participant responses noted innovative examples of services providing a door-to-door service (community car schemes for example), however these are haphazard, and are not available to all older people in areas where they do operate. In addition, these services are not always free and require pre-booking, removing the element of spontaneity and freedom.

Bus accessibility is important to participants, especially in providing the means to lead the life they want to lead and companion travel has the potential to increase bus use and accessibility for older people. The physical ability to board the bus and the cognitive ability to navigate bus travel are not always structural and related to the physical bus and local area. When older people are worried about a crowded bus, have difficulty boarding due to carrying items (and wet weather), or navigating the bus route, these are considered external issues that cannot be resolved solely by improvements and adaptations to the physical bus itself. Older people are reluctant to travel by bus alone for a number of reasons, and participants also noted going out of their way to ensure they are not a burden to their friends and family, sometimes to their own personal detriment. Providing universal companion travel, without adding a financial burden, could potentially remove some of these barriers. In this case passengers may feel supported and assisted from having the option of a companion traveller to help with carrying shopping, communicating, and this may lead to increased confidence when using public transport. For companion travel to be successful, there is still a need for a fully accessible transport system to ensure convenience, however.

To ensure the bus service is accessible, the *maintaining social connectivity model* considers all three levels relating to usage and available services. Specifically, 1) the development (the built environment, local travel needs, barriers to road and pavement safety, the bus stop, local amenities, and location), 2) the contribution (the mechanism in place and ability to get to the desired destination) and 3) the outcome of the connection using participants own personal experiences and descriptions (overall impact on health and wellbeing). When these

connections are broken, users can be prohibited from accessing and using the service.

### **6.2.5 The relationship between older people and concessionary bus travel, health, and wellbeing**

Concessionary bus travel provides opportunities for community connection, social interaction, and social connectedness. However, owning a pass and using the pass are two different entities. For example, owning a pass but having a fractured connection to bus use can lead to a failure to perform basic needs (as well as higher level social needs) and this can result in social exclusion. There is a consensus that when a person has full access to the benefits of concessionary travel, this holds more than the value of providing free travel, independence and freedom. The direct and indirect benefits include accessing goods and services, as well as connecting to the wider society through community connections and social interactions. This in turn can limit the likelihood of an older person experiencing isolation, depression, and loneliness in later life. In this way, the bus is the facilitator to the connection and can aid in providing access to services (health care, improved social life) and this in turn can provide a travel identity and opportunity to participate in travel experiences.

Policy development and practical interventions in England, Scotland, Northern Ireland, and Wales focus on the importance of creating and promoting concessionary travel to improve health and wellbeing, and social inclusion is placed at the core. The concessionary bus pass has the potential to continue to improve life quality, allowing an older person to have the freedom of travel to meet their own primary and social needs and this can aid in achieving overall social connectedness. However, there are subtle differences between mobility needs in relation to levels of health, wellbeing, and connectivity.

Overall, the benefits of mobility and concessionary bus use go beyond travelling from one place to another. Having the ability to travel provides independence and social interaction (between neighbours, fellow bus travellers, community members) and this interaction improves mental wellbeing and provides connections. When the service allows these connections to be made, the bus is a facilitator in achieving mobility allowing for greater community cohesion, companionship, health, and well-being. However, social exclusion is a reoccurring process, and policymakers face significant challenges, as well as opportunities,



when planning for a future where a considerable number of people will be over the age of sixty. Raising the age of entitlement will have a negative impact on modal shifts from the car to the bus and may mean that bus use and concessionary travel reduce. Therefore, this policy change is not based on what is required and needed as raising the age of entitlement has ignored well established evidence that shows older people experience the ageing process differently (individually, locally, nationally and internationally). Participants in this study did not focus on the age they received the pass, but the additional opportunities the pass gave them at the time. This suggests that the focus be placed on experiences, multidisciplinary perspectives, and various levels of analysis (not age) when assessing concessionary bus travel policy provision.

Finally, the concessionary bus pass has the potential to continue to improve life quality through travel identity. For example, increased community cohesion, social interaction, and increased use for tourism, allowed for increased social interaction (i.e., meeting people) and this in turn created a travel identity. The psycho-social benefits of mobility go beyond travelling from one place to another as creating a travel identity allows a level of independence and social interaction (between neighbours, fellow bus travellers, community members) and it has been noted that this interaction improves mental wellbeing and physical activity. Indicators of social integration include participation in society (shopping, medical appointments, social clubs, social roles) and interaction with social support or social networks (visiting relatives, friends, and neighbours, joining clubs, volunteering). This shows that maintaining social connectivity is extremely important. Participants all referred to bus travel and active travel giving them the opportunity to get out and about, improving social interaction and providing the opportunity to lead a rich and meaningful life. This finding is well established in the literature, however participants in this study also referred to the bus providing, creating, and allowing connectedness by giving them an identity. Quality of life, health and wellbeing as concepts in this case can be framed around the individual's experience of bus use and their perception of hopes, concerns, and pleasures. This is because travel is central to the success of achieving hopes and pleasures and exclusion can thwart an individual's capacity to lead a life they aspire to lead or the identity they are yet to create. In this sense, the bus acts as the facilitator in achieving travel identity through independence and freedom, as well as increased mobility, reduced isolation, loneliness, and depression. To

explore these opportunities, the *maintaining social connectivity model* considers all three levels relating to the outcome of the connections being made. Specifically, 1) the development (experiences of the built environment), 2) the contribution (experiences of external factors affecting accessibility) and 3) the overall outcome of the connection (experiences of the overall impact on health and wellbeing). The connection is positive when bus travel facilitates opportunities relating to community cohesion, social interaction, and social connectedness.

## **6.3 Recommendations**

### **6.3.1 Addressing Barriers - The Policy Approach**

Barriers to inclusion via the concessionary fares policy are national and dependant on finance, as well as local and dependant on local authority provision, infrastructure, and the private bus industry, and relate to mobility, usage, and social connectivity. It is short sighted to suggest improving these issues solely at a national policy level. The transport system is not simply a matter for national policy implementation, but also local level provision.

- The benefits and drawbacks of the concessionary fares policy spans an array of disciplines. This multidisciplinary approach can help to ensure studies are robust, however it is recommended that local authority transport policymakers are included in this approach and a county wide working group is created. This would have the benefit of ensuring any findings and recommendations are shared within a local and national context, and any potential implications addressed by service providers working with older people (for example Local Area Coordinators, third sector organisations, social care providers, policymakers, and any other relevant service provider or user).
- It is recognised that social exclusion is a reoccurring process, and policymakers face significant challenges (and opportunities), however this study does not agree with recent changes made to increase the age of entitlement to concessionary travel in England. The decision is a direct result of the rising cost of the pass (due to increased usage); however, this is the salient point of concessionary travel. This policy change is not based on what is required and needed and will have a negative impact on modal

shifts from the car to the bus. It is recommended that further research on the impact relating to the social, economic, health and wellbeing effects be explored (focusing on those aged 60-66), specifically relating to modal shifts, social exclusion and transport disadvantage.

### **6.3.2 Addressing Barriers - The Practical Approach**

There are several barriers when using public transport, however the focus has been on three key areas (the location and design of the bus stop, the physical ability to board the bus, the cognitive ability to navigate bus travel using technology). Creating an age-friendly transport system is essential and improving bus accessibility has been accepted and addressed in many ways, however, there is still a gap between accessibility and exclusion for many older people.

- To encourage bus use, accessibility must be a priority, and this means the bus stop needs to be close to homes and destinations. It is recommended that local authorities complete a mapping exercise of current available bus stops to determine condition, available amenities (seating, weather protection) and gaps in current serviced locations. It is also recommended that research relating to bus stop locations, specifically what would constitute a 'fair amount' of strategically placed bus stops is undertaken. The outcome of this research and mapping exercise could lead to the installation of up to date and strategically placed bus stops in all communities, ones that provide maximum coverage (rural and urban), as well as purposeful shelter. This in turn can encourage modal shift and increased usage.
- It is recommended that local authorities review all local bus fleets to determine accessibility based on the regulations laid out in the *Bus and Coach Accessibility and the Public Service Vehicle Accessibility Regulations 2000*. This requires all buses across the UK to be fully accessible by 2022. This is because boarding and alighting remain a significant barrier which suggests satisfactory progress has not been made.
- It is recommended that caution needs to be taken when implementing any changes to bus service information as new approaches (i.e., updating bus information) need to be age-friendly to limit confusion. Upgrades to bus technology cannot be an alternative to traditional provision (i.e., a printed timetable) as there is still a preference for official timetabling information and a reluctance to move away from

traditional information methods. Providing various forms of consistent, relevant information (printed, real time at bus stops, on board, and web/app/phone based) is considered extremely useful to older people. However, it is recommended that there be more information relating to training or data on how to use technology services for travel as reluctance stemmed from a lack of knowledge and confidence to use new services.

### **6.3.3 A Total Transport Approach – Shifting Modal Use**

Policy rhetoric surrounding social inclusion needs to go further than recognising spatial constraints (especially in rural areas), towards combating the barriers that have aided in creating it. If the aim is to encourage modal shifts for User Drivers, any structural changes to the service and local area need to ensure a bus service provides choice and flexibility for all as the rule, not the exception.

- It is recommended that older people be provided with appropriate information and training relating to bus use, including information about the different bus fleets within their locality and available amenities (this is linked to the above recommendation relating to bus stop mapping). An information leaflet provided when a person receives their bus pass for example could include local age-friendly information strategies to promote both active travel and confidence in using the local bus service.
- It is recommended that further research focus on concessionary travel, personal financial information, alternative travel choices at the time of travel, multiple mode options and the reason for the travel taking place (door to door). This could provide further understandings around choices to continue to use the car. There is a potential to compare and contrast User Drivers and Non-User Drivers (a group not included in this study) to understand reasons for non-use, and this could provide further understandings related to achieving modal shifts towards increased use of public transport.
- It is recommended that a focus be placed on evaluating the micro level changes of User Drivers as they shift modal use. There is little information on the differences between User Drivers as a single cohort and their bus using behaviours (and choices).

Car access and its relationship with bus use is considered a complex, multidimensional construct, exasperated by the interaction between land use patterns, the changing transport system, and personal individual circumstances. Evaluating the meanings of these changes in relation to contributions to health, well-being and quality of life could be explored across the life course to further understand the reasons (and reluctance) for modal shift, as well as what encouragement exists to support this in different localities.

- It is recommended that more joined up working between transport providers, local government, and hospitals (for example) is implemented to provide a sustainable long-term, direct travel option that considers a synchronised approach (drawing on the success of a *Total Transport* approach). Further research has the potential to explore this approach, focussing on specific and tailor-made local services. A key point to make however is that cost and usage are not the only determining factors when analysing outcomes. Following the *maintaining social connectivity model* would mean including a consideration of all three levels to ensure focus is placed on the overall trip taking place – from door to door – and to capture individualistic concepts, experiences, and behaviours.
- Park and Ride has created the best of both worlds for User Drivers (free parking and free bus transport); however, the concessionary fares subsidy contributes to reducing rather than increasing sustainability due to the ‘double subsidy’. This is in opposition to the aim of the concessionary fares policy. It is recommended that the benefits of Park and Ride for concessionary pass users be explored in relation to modal shifts and multi-purpose travel options, increased mobility and improved accessibility for older people as well as the behavioural impacts of combined parking, costs, and public transport strategies.

#### **6.3.4 Concessionary Travel - Improving Health and Wellbeing**

When the quality of the journey is difficult, the bus is difficult to use creating barriers to accessibility or negative experiences. Concessionary pass holders are less likely to continue to use (or increase) the trips they take by bus when this is the case (which is an obvious finding). As an older person ages, their mobility can decrease, therefore they are less likely to travel by bus. This presents an irony relating to the concessionary travel scheme, as recent changes in

England mean that a person is no longer eligible at age 60 (noted above), therefore can become excluded from the very thing that has been designed to increase their inclusion.

- Older people are used to concessionary travel as an option, and this is an expected 'perk' to receive when turning sixty. User Drivers choose to take the car and would not pay for travel (in the absence of a pass) unless it was for shopping or a medical appointment. It is recommended that further research explore the importance placed on travelling 'for the sake of it' and if the decision to travel (and pay) would be the same if the person is travelling for multiple reasons (that day). This could help to understand why an older person may place more of an importance on travelling to attend 'social volunteer work' (and pay), but not for 'social travel reasons'.
- It is recommended that companion travel has the potential to increase bus use for older people and local and national governments consider providing universal free companion travel to all eligible pass holders. This scheme holds the potential to help people who face location inequality, physical and sensory disabilities as well as those with barriers due to a lack of confidence when using public transport systems
- It is recommended that research further explores the opportunities and benefits of a national companion travel scheme. Specifically, how this could aid an older person without them feeling like they are a burden (or being burdened by cost), and the success this scheme may have in assisting the creation of independent and confident travellers.
- It is recommended that research explore concessionary travel and how this can lead to individual travel identity, and if there is a link to increased use for tourism, and social interaction related to meeting people, relying on friends and family and companion travel. Studies could explore what this means in terms of overall social connections relating to understanding quality of life and contributions to maintaining social connectivity.
- Studies of older people and mobility have begun to move away from 'getting from A to B' and towards unpacking the many ways travel is tied to health and wellbeing. There is no typical pass holder and any attempts to create one would run the risk of accepting 'average behaviour' or 'average need'. Capturing individual need through the promotion of active travel is important, however there is also an opportunity to

extend the policy beyond reducing social exclusion towards promoting both active travel and universal community connectedness. It is recommended that Including quality of life into assessments when considering transport and infrastructure improvements (through the use of the maintaining social connectivity model) could strengthen knowledge about local public transport accessibility and have the potential to improve inclusion. This presents an opportunity to extend the policy so that it incorporates a universal community connectedness approach at a local level.

Overall, policy narratives continue to focus on healthy and active ageing, which represents a more positive view of active participation and productivity. It is recommended that policymakers continue to see older people as active agents with individual responsibility, however it is imperative they also proactively anticipate the needs of this population. With this in mind, the impact of the Covid-19 pandemic should be explored relating to bus travel, the impact this will have on older people, their mobility, experiences and future implications for accessibility.

#### **6.4 Limitations of the Research**

Chapter 3 discussed the limitations of the methodology and included a detailed critical self-awareness reflection. The following will briefly refer to additional limitations that have been recognised.

First, the method of participant selection is limited to purposive network sampling and a word of mouth and snowball sampling strategy. The methods section addressed the bias that is built into this method, as well as the researcher's own limitations relating to their position as a county councillor. Any bias relating to participants being influenced by the dual role of the researcher could not be avoided at any stage of the research study, unless the researcher was willing to deceive participants and withhold information. Also noted in the methods sections, the researcher followed all official research procedures that were implemented to avoid bias as much as possible.

The findings of this study are also limited due to the sample size. Quantitative studies favour larger sample sizes to create more reliable data, whereas qualitative research aims for

breadth and depth. Quantitative studies therefore aim to find data that can be generalised, while qualitative seeks understandings of personal experiences and hidden meanings. There is no 'average pass holder' therefore concessionary travel will be personal and based on individual experiences. Purely qualitative studies have the advantage of examining the person in their natural environment, however the natural environment for the purpose of this study was also on the bus and within the older persons locality. MMR was adopted to incorporate the strengths of qualitative and quantitative approaches and provide a fully contextualised approach. However, the small sample of travel diary responses is a limitation (the reason for this low sample has been discussed). To address this, the travel diary phase of data collection is embedded into phase one, where the data is idiographic and focusses on depth of analysis within a smaller sample size (common in qualitative studies). Therefore, the results can be seen as useful as the data gathered bolstered findings from phase one and were similar to previous study findings, suggesting that commonalities and generalisations can be made.

A major limitation, as noted in the methodology chapter, is the travel diary failed to include context relating to the trip beyond the reason for the specific bus journey. The travel diary did not ask where participants were going after bus travel took place, if multiple journeys were taking place or if participants had walked from home before starting their journey. This was a missed opportunity to add context to the journey itself. It is also recognised that the study did not ask participants for personal financial information or if decisions made to travel by bus would have been the same if travelling for multiple reasons, all of which could potentially affect alternative travel choices at the time of travel. Finally, the travel diary data was collected during the summer months, therefore different answers relating to trip patterns and uses could have been given had the diaries been completed in the winter months (dark earlier, wet, slippery and cold).

Overall, this study does not assume to have found one type of pass holder, nor findings that can be generalised to the wider population. It was not expected or intended that these findings would have relevance beyond the travel taking place within the study area, however some of the results relating to structural issues can be said to represent county level issues. Therefore, the findings could have implications for future research, as noted above, specifically in relation to exploring companion travel, modal shifts for those that have



alternative travel options, mapping (bus stops) and bus accessibility. The *Maintaining Social Connectivity Model* can be used as a tool or framework to explore social connectivity and concessionary bus travel in any local settings and in relation to a wide range of research disciplines.

# Chapter 7: Reference List

- Adams, J. (2005). Hypermobility: a challenge to governance. In C. Lyall, and J. Tait, (Eds). *New Modes of Governance: Developing an Integrated Policy Approach to Science, Technology, Risk and the Environment* (pp. 1-17). Aldershot.
- Adams, J. (2001). *The Social Consequences of Hypermobility*. <http://john-adams.co.uk/wp-content/uploads/2006/hypermobilityforRSA.pdf>
- Age UK. (2020b). *Free bus pass and transport concessions*.  
<https://www.ageuk.org.uk/information-advice/money-legal/benefits-entitlements/free-bus-pass-and-transport-concessions/>
- Age UK. (2019a). *Later Life in the United Kingdom*.  
[https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/later\\_life\\_uk\\_factsheet.pdf](https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/later_life_uk_factsheet.pdf)
- Age UK. (2019b). *Painful Journeys*. [https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/reports-and-briefings/active-communities/rb\\_dec17\\_painful\\_journeys\\_indepth\\_report.pdf](https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/reports-and-briefings/active-communities/rb_dec17_painful_journeys_indepth_report.pdf)
- Age UK. (2020a). *TV licence concessions*. <https://www.ageuk.org.uk/information-advice/money-legal/benefits-entitlements/tv-licence-concessions/>
- Age Northern Ireland (NI). (2020, June 16). *Transport Concessions*. Retrieved March 9, 2021, from <https://www.ageuk.org.uk/northern-ireland/information-advice/money-matters/benefits-entitlements/transport-concessions/>
- Anable, J., & Gatersleben, B. (2005). All work and no play? The role of instrumental and affective factors in leisure and work journeys by different travel modes. *Transportation Research Part A: Policy & Practice*, 39(3), 163-181.
- Andrews, G. (2012a). *Just the Ticket? Exploring the Contribution of Free Bus Fares Policy to Quality of Later Life*. [Doctoral Dissertation, University of the West of England].  
[https://www2.uwe.ac.uk/faculties/FET/Research/cts/projects/reports/andrews\\_2012\\_thesis.pdf](https://www2.uwe.ac.uk/faculties/FET/Research/cts/projects/reports/andrews_2012_thesis.pdf)
- Andrews, G., Parkhurst, G., Susilo, Y.O., & Shaw, J. (2012). The grey escape: investigating older people's use of the free bus pass. *Transportation Planning and Technology*, 35, 3–15.
- Andrews, M., Squire, C., & Tamboukou, M. (Eds.). (2013). *Doing narrative research*. Sage.

- Andrews, T. (2012b). What is Social Constructionism? *Grounded Theory Review: An International Journal*, 1(11), 1-9.
- Aspers, P. (2015). Empirical Phenomenology: A Qualitative Research Approach (The Cologne Seminars). *Indo-Pacific Journal of Phenomenology*, 9(2), 1-12.  
10.1080/20797222.2009.11433992.
- Baltes, M. & Carstensen, L. (1996). *The process of successful ageing. Ageing and Society*, 16(1), 397-422.
- Banister, D. & Bowling, A. (2004). Quality of life for the elderly: the transport dimension. *Transport Policy*, 11(2), 105-115.
- Bauchinger, L., Reichenberger, A., Goodwin-Hawkins, B., Kobal, J., Hrabar, M., & Oedl-Wieser, T. (2021). Developing Sustainable and Flexible Rural–Urban Connectivity through Complementary Mobility Services. *Sustainability*. 13, 1280
- Baxter, J. & Boyce, S. (2011). *The ageing population in Wales*.  
<https://senedd.wales/NAfW%20Documents/ki-020.pdf%20-%2003112011/ki-020-English.pdf>
- Benwell, M. (1976). Bus passes and the elderly: A need for more informed policy making? *Local Government Studies*, 2, 51-57.
- Berger, P., & Luckmann, T. (1966). *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*. The Penguin Society
- Better Transport. (2019). *The future of rural bus services in the UK*.  
<https://bettertransport.org.uk/sites/default/files/research-files/The-Future-of-Rural-Bus-Services.pdf>
- Blome, C. & Augustin, M. (2016). Measuring Change in Quality of Life: Bias in Prospective and Retrospective Evaluation. *Value in Health*. 18(1), 110-115.
- Bloor, M., Fincham, B., & Sampson, H. (2010). Unprepared for the worst: Risks of Harm for Qualitative Researchers. *Methodological Innovations Online*, 5(1), 45-55.
- Bogatz, T. (2016). Quality of life in old age – a concept analysis. *International Journal of Older People in Nursing*. 11(1), 55-69.
- Boghossian, P. A. (2001). *What is social construction?*  
<http://philosophy.fas.nyu.edu/docs/IO/1153/socialconstruction.pdf>

- Boisjoly, G., Grisé, E., Maguire, M., Veillette, M., Deboosere, R., Berrebi, E., El-Geneidy, A. (2018). Invest in the ride: a 14-year longitudinal analysis of the determinants of public transport ridership in 25 North American cities. *Transport Research*, 116, 434-445.
- Bourner, T., & Greener, S. (2016). The Research Journey: Four Steps to Success. In T. Greenfield, & S. Greener (Eds.), *Research Methods for Postgraduates (3rd ed., pp. 7-12)*. Wiley. <https://doi.org/10.1002/9781118763025.ch2>
- Bowling, A. (2005). *Ageing Well*. Open University Press
- Bowling, A., Gabriel, Z., Dykes, J., Dowding, L., Fleissig, A., Banister, D., & Sutton, S. (2003). Let's ask them: A national survey of definitions of quality of life and its enhancement among people aged 65 and over. *Aging and Human Development*, 56, 269-306.
- Bowling, A. (1995). What things are important in people's lives? A survey of the public's judgements to inform scales of health-related quality of life. *Social Science and Medicine*, 41, 1447- 1462.
- Boyd, D. & Ellison, N. (2007). Social Network Sites: Definition, History, and Scholarship. *Journal of Computer-Mediated Communication*. 13:210–230. <https://doi.org/10.1111/j.1083-6101.2007.00393.x>
- Braddick, I. (2020). *My journey obviously doesn't matter': Sadiq Khan challenged by pensioner over scrapping of free bus pass*. <https://www.standard.co.uk/hp/front/sadiq-khan-lbc-pensioner-free-bus-pass-scrapped-a4488016.html>
- Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. 10.1191/1478088706qp063oa
- Braithwaite, V., & Gibson, D. (1987). Adjustment to retirement: what we know and what we need to know. *Ageing and Society*, 7(1), 1-18.
- Brants, K. & Frissen, V. (2005). Inclusion and Exclusion in the information society. In R. Silverstone (Ed.). *Media, Technology and Everyday Life in Europe: From Information to Communication*. Ashgate.
- Broome, K., Worrall, L., Fleming, J., & Boldy, D. (2013). Evaluation of age-friendly guidelines for public buses. *Transportation Research Part A: Policy and Practice*, 53, 68-80.

- Broome, K., McKenna, K., Fleming, J., & Worrall, L. (2009). Bus use and older people: A literature review applying the person-environment-occupation modal in macro practice. *Scandinavian Journal of Occupational Therapy*, 16(1), 2-13.
- Brown, J., Bowling, A. & Flynn, T. (2004). *Models of Quality of Life: A Taxonomy, Overview and Systematic Review of the Literature*.  
<https://lemosandcrane.co.uk/resources/European%20Forum%20on%20Population%20Ageing%20Research%20-%20Models%20of%20Quality%20of%20Life.pdf>
- Bryman A. (2006). Integrating quantitative and qualitative research: how is it done? *Qualitative Research*, 6, 97–113. doi: 10.1177/1468794106058877
- Bryman, A. (2004). *Social research methods* (2<sup>nd</sup> ed.). Oxford University Press.
- Bryman, A. (2015). *Social research methods* (5<sup>th</sup> ed.). Oxford University Press.
- Bryne, D. (2005). *Social Exclusion* (2<sup>nd</sup> ed.). Open University Press.
- Burgess, R. (1984). *In the Field: An Introduction to Field Research*. Allen and Unwin
- Burr, V. (2015). *Social Constructionism* (3<sup>rd</sup> ed.). Routledge.
- Burton, D. & Bartlett, S. (2005). *Practitioner Research for Teachers*. Sage Publications.
- Bus Users. (2019). *Rural Buses: Reversing the Decline*. <https://bususers.org/wp-content/uploads/2019/07/Reversing-the-decline-in-rural-bus-services-2019.pdf>
- Butcher, L. (2009). *Buses: Concessionary Fares*.  
<https://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN01499>
- Butcher, L. (2015). *Concessionary bus fares* (SN01499). House of Commons.
- Button, K. (2010). *Transport Economics* (3<sup>rd</sup> ed.). Edward Elgar Publishing.
- Campbell, C. (2001). Juggling inputs, outputs and outcomes in the search for policy competence: Recent experience In Australia. *American Journal of Policy and Administration*, 14 (2), 253-282.
- Cárdenas, J. (2019). *Quantitative Analysis: the guide for beginners*.  
[https://www.researchgate.net/publication/337826695\\_Quantitative\\_Analysis\\_the\\_guide\\_for\\_beginners](https://www.researchgate.net/publication/337826695_Quantitative_Analysis_the_guide_for_beginners)
- Carp, F. (1980). Environmental Effects Upon the Mobility of Older People. *Environment and Behaviour*, 12(2), 139-156.
- Carter, N., Bryant-Lukosius, D., DiCenso, A., Blyth, J. & Neville, A. (2014). The use of Triangulation in Qualitative Research. *Oncology Nursing*, 41(5), 545-547.

- Castro, F. G., Kellison, J. G., Boyd, S. J., & Kopak, A. (2010). A Methodology for Conducting Integrative Mixed Methods Research and Data Analyses. *Journal of mixed methods research, 4*(4), 342–360. <https://doi.org/10.1177/1558689810382916>
- Charmaz, C. (2006). *Constructing grounded theory. A practical guide through qualitative analysis*. Sage.
- Church, A., Frost, M., & Sullivan, K. (2000) Transport and Social Exclusion in London. *Transport Policy, 7*(3), 195-205.
- Clarke, J. (2001). Social problems: Sociological perspectives. In M. May, R. Page, & E. Brunson (Eds.). *Understanding social problems: Issues in social policy* (pp. 3-15). Blackwell.
- Clayton, W. (2012). *Bus tales: travel-time use, technologies, and journey experiences on the bus*. [Doctoral Dissertation, University of the West of England]. <https://uwe-repository.worktribe.com/preview/941995/Billy%20Clayton%20-%20Bus%20Tales%20complete%20%28R-Rep%20edit%29.pdf>
- Clayton, W., Ben-Elia, E., Parkhurst, G., & Ricci, M. (2014). Where to park? A behavioural comparison of bus Park and Ride and city centre car park usage in Bath, UK. *Journal of Transport Geography, 36*, 124-133.
- Clifton, K. & Handy, S. (2001). *Qualitative Methods in Travel Behaviour Research*. [https://www.researchgate.net/publication/228811651\\_Qualitative\\_Methods\\_in\\_Travel\\_Behaviour\\_Research](https://www.researchgate.net/publication/228811651_Qualitative_Methods_in_Travel_Behaviour_Research)
- Clifton, K. (2001). *Mobility Strategies and Provisioning Activities of Low-income Households in Austin* (Publication No. 2001. 3008305) [Doctoral dissertation, The University of Texas at Austin]. ProQuest Dissertations Publishing. <https://www.proquest.com/openview/687ccc2b38b24bea1e17669ccf463439/1?pq-origsite=gscholar&cbl=18750&diss=y>
- Cobb, R. & Coughlin, J. (2004, November 7-9). *Transport policy for an aging society: keeping older Americans on the move* (Conference presentation). Transportation in an Aging Society: A Decade of Experience, Washington, <https://trid.trb.org/view/702085>
- Collins, S., & Begum, H. (2008). Community Profile for Loughor Castle. <http://www.llwchwrwrtowncouncil.gov.uk/Llwchwr-TC/UserFiles/Files/LoughorCastleCommunityProfileDec08.pdf>

- Community Transport Association. (2017). Total Transport: a better approach to commissioning non-emergency patient transport?  
[https://www.urbantransportgroup.org/system/files/general-docs/UTG%20CTA%20Total%20Transport%20Report%20FINAL\\_0.pdf](https://www.urbantransportgroup.org/system/files/general-docs/UTG%20CTA%20Total%20Transport%20Report%20FINAL_0.pdf)
- Coronini-Cronberg, S., Millett, C., Lavery, A. A., & Webb, E. (2012). The impact of a free older persons' bus pass on active travel and regular walking in England. *American journal of public health, 102*(11), 2141–2148.  
<https://doi.org/10.2105/AJPH.2012.300946>
- Costanza, R., Fisher, B., Ali, S., Beer, C., Bond, L., Boumans, R., Danigelis, N., Dickinson, J., Elliott, C., Farley, J., Gayer, D., MacDonald Glenn, L., Hudspeth, T., Mahoney, D., McCahill, L., McIntosh, B., Reed, B., Rizvi, A., Rizzo, D., Simpatico, T., & Snapp, R. (2007). Quality of life: An approach integrating opportunities, human needs, and subjective well-being. *Ecological Economics, 61*, 267-276.  
<https://doi.org/10.1016/j.ecolecon.2006.02.023>
- Creswell, J.W. & Clark, V. (2007). *Designing and conducting mixed methods research* (3<sup>rd</sup> ed.). SAGE.
- Creswell, J.W. (1994). *Research design: Qualitative and quantitative approaches*. SAGE.
- Creswell, J. W. (2009). *Research design: qualitative, quantitative and mixed methods approaches* (3<sup>rd</sup> ed.). Sage.
- Cribb, J. & Emmerson, C. (2019). *Retiring at 65 no more? The increase in the state pension age to 66 for men and women*. <https://www.ifs.org.uk/publications/13949>
- Cristea, M., Noja, G., Stefea., & Sala, L. (2020). The Impact of Population Aging and Public Health Support on EU labor Markets. *Environmental Research and Public Health, 17*(4).  
 Doi: 10.3390/ijerph17041439
- Crossan, F. (2003). Research philosophy: towards an understanding. *Nurse Researcher, 11*, 46-55.
- Crossman, A. (2019, January 22). *The Major Theoretical Perspectives of Sociology*.  
<https://www.thoughtco.com/theoretical-perspectives-3026716>
- Crotty, M. (1998). *The foundations of social research process: meaning and perspective in the research process*. Sage.

- Currie, G. & Delbosc, A. (2011). *Transport Disadvantage: A Review*.  
<https://www.emerald.com/insight/content/doi/10.1108/9781780522012-002/full/html#:~:text=Transport%20disadvantage%20is%20a%20complex,likely%20to%20suffer%20transport%20disadvantage.>
- Davey, J. (2007). Coping without a car. *Ageing & Society*, 27(1), 49-65.
- Davidson A. S. (2013). Phenomenological Approaches in Psychology and Health Sciences. *Qualitative research in psychology*, 10(3), 318–339.  
<https://doi.org/10.1080/14780887.2011.608466>
- Davis, D.F., Golobic, S.L. & Boerstler, C.N. (2011). Benefits and challenges of conducting multiple methods research in marketing. *Journal of the Academy of Marketing Science*, 39, 467–479 (2011). <https://doi.org/10.1007/s11747-010-0204-7>
- Delice, A. (2010). The Sampling Issues in Quantitative Research. *Educational Sciences: Theory and Practice*, 10(4), 1-18.
- Department for Transport. (1998). *A New Deal for Transport: Better for Everyone?* [White paper]. Crown.  
[https://www.open.edu/openlearn/ocw/pluginfile.php/630978/mod\\_resource/content/1/new\\_deal\\_for\\_transport.pdf](https://www.open.edu/openlearn/ocw/pluginfile.php/630978/mod_resource/content/1/new_deal_for_transport.pdf)
- Department for Transport. (2005, June 24). *Bus and coach accessibility and the Public Service Vehicle Accessibility Regulations 2000*.  
<https://www.gov.uk/government/publications/accessible-buses-and-coaches/bus-and-coach-accessibility-and-the-public-service-vehicle-accessibility-regulations-2000>
- Department for Transport. (2019b, December 17). *Concessionary Travel Statistics England, 2018/19*.  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/852526/concessionary-travel-statistics-2019.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/852526/concessionary-travel-statistics-2019.pdf)
- Department for Transport. (2011). *Creating Growth, Cutting Carbon. Making Sustainable Local Transport Happen*. [White Paper]. Crown.  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/3890/making-sustainable-local-transport-happen-whitepaper.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/3890/making-sustainable-local-transport-happen-whitepaper.pdf)



- Department for Transport. (2020, August 5). *Frequency of bus use for those aged 60 years and over*.  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/906012/nts0621.ods](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/906012/nts0621.ods)
- Department for Transport. (2011, July 28). *National Travel Survey 2010*.  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/8932/nts2010-01.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/8932/nts2010-01.pdf)
- Department for Transport (2010). *National Travel Survey. Travel by age and gender*  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/8937/nts2010-06.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/8937/nts2010-06.pdf)
- Department for Transport. (2019a, April 11). *Vehicle Licencing Statistics: Annual 2018*.  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/800502/vehicle-licencing-statistics-2018.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/800502/vehicle-licencing-statistics-2018.pdf)
- Department of the Environment, Transport & the Regions. (2000). *Social Exclusion and the Provision and Availability of Public Transport*. Technical Report. TRaC
- DePoy, E. & Gitlin, L. (1998). *Introduction to research: understanding and applying multiple strategies* (2<sup>nd</sup> ed.). Mosby.
- De Witte, A., Macharis, C., & Mairesse, O. (2008) How persuasive is 'free' public transport?: A survey among commuters in the Brussels Capital Region. *Transport Policy*, 15 (4), 216-224.
- Donnison, D. (1998). *Policy for a Just Society*. Macmillan.
- Docherty, I., Shaw, J. & Gather, M. (2004). State intervention in contemporary transport. *Journal of Transport Geography*, 12, 257-264.
- Dyson, S. & Brown, B. (2006). *Social theory and applied health research*. Open University Press.
- Easterby-Smith, M., Thorpe, R. & Jackson, P.R. (2008). *Management research* (3<sup>rd</sup> ed.). Sage.
- Elder-Vass, D. (2013). *The Reality of Social Construction*. Cambridge University Press.
- Ellaway, E., Macintyre, S., Hiscock, R., & Kearns, A. (2003). In the driving seat: psychosocial benefits from private motor vehicle transport compared to public transport. *Transportation Research Part F: Traffic Psychology & Behaviour*, 6 (3), 214-231.
- Erlander S., Stewart N.F., (1990). *The gravity model in transportation analysis: theory and extensions*. VSP BV.

- European Commission. (2005). *Quantitative versus qualitative methods*.  
[http://forlearn.jrc.ec.europa.eu/guide/4\\_methodology/meth\\_quanti-quali.htm](http://forlearn.jrc.ec.europa.eu/guide/4_methodology/meth_quanti-quali.htm)
- Fahie, D. (2014). Doing Sensitive Research Sensitively: Ethical and Methodological Issues in Researching Workplace Bullying. *International Journal of Qualitative Methods*, 13(1), 19-36. <https://doi.org/10.1177/160940691401300108>
- Felce, D. & Perry, J. (1997). Quality of life: the scope of the term and its breadth of measurement. In R. Brown & S. Thornes (Eds.). *Quality of Life for People with Disabilities. Models, Research and Practice*. Nelson Thornes Publishers.
- Finlay, L. (2009). Debating Phenomenological Research Methods. *Phenomenology & Practice*, 3, 6-25.
- Finlay, L. (2011). *Phenomenology for Therapists: Researching the Lived World*. Wiley.
- Finlay, L. (2013). Unfolding the phenomenological research process: Iterative stages of “seeing afresh”. *Journal of Humanistic Psychology*, 53(2), 172-201.
- Flick, U. (2006). *An introduction to qualitative research* (3<sup>rd</sup> ed.). Sage
- Fonda, S. J., Wallace, R. B., & Herzog, A. R. (2001). Changes in driving patterns and worsening depressive symptoms among older adults. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 56(6), 343-351
- Fontana, A., & Frey, J.H. (2005). The Interview: From Neutral Stance to Political Involvement. In N.K. Denzin, & Y.S. Lincoln, (Eds.), *The Sage Handbook of Qualitative Research* (3<sup>rd</sup> ed, 695-727). Sage Publication
- Gabalton-Estevan, D. & Kaufmann, C. (2006). *Environmental innovation through transport policy: the implementation of a free fare policy on public transport in Tallinn, Estonia*. 10.4995/CIT2016.2016.3532
- Gaber, S.N., Nygård, L., & Kottorp, A., Charlesworth, G., Wallcook, S. & Malinowsky, C. (2020). Perceived risks, concession travel pass access and everyday technology use for out-of-home participation: cross-sectional interviews among older people in the UK. *BMC Geriatrics*. 20, 192. <https://doi.org/10.1186/s12877-020-01565-0>
- Gabriel, Z. & Bowling, A. (2004). Quality of life from the perspectives of older people. *Ageing and Society*, 24, 675-691.
- Gadamer, H. (1976). *Philosophical Hermeneutics*. University California Press.

- Gale, W., Gelfond, H., Fichtner., & Harris, B. (2020). *The Wealth of Generations, With Special Attention to the Millennials*. <https://www.brookings.edu/wp-content/uploads/2020/05/Generations-Working-Paper-2.pdf>
- Gardiner, C., Geldenhuys, G. & Gott, M. (2018). Interventions to reduce social isolation and loneliness among older people: an integrative review. *Health and Social Care in the Community, 26*(2), 147-157 [doi: 10.1111/hsc.12367](https://doi.org/10.1111/hsc.12367)
- Galliger, C., Tisak, M., & Tisak, J. (2008). When the wheels on the bus go round: Social interactions on the school bus. *Journal of Psychology of Education, 12* (1), 43-62.
- Gascon, M., Marquet, O., Gràcia-Lavedan, E., Ambròs, A., Götschi, T., de Nazelle, A., Panis, L., Gerike, R., Brand, C., Dons, E. (2020). What explains public transport use? Evidence from seven European cities. *Transport Policy, 99*, 362–374.
- Gates, S., Gogescu, F., Grollman, C., Cooper, E., & Khambhaita, P. (2019). *Transport and inequality: An evidence review for the Department for Transport*. NatCen Social Research
- Gehrels, S. (2013). Grounded theory application in doctorate research. *Research in Hospitality Management, 3*(1), 19-25.
- Gelinas, L., Pierce, R., Winkler, S., Cohen, I. G., Lynch, H. F., & Bierer, B. E. (2017). Using Social Media as a Research Recruitment Tool: Ethical Issues and Recommendations. *The American journal of bioethics, 17*(3), 3–14. <https://doi.org/10.1080/15265161.2016.1276644>
- Gergen, K. J. (2009). *The relational being: Beyond self and community*. Oxford University Press.
- Gilhooly, M., Hamilton, K., Gow, J., Pike, F., & Bainbridge, K. (2003). *Transport and aging: Extending quality of life for older people via public and private transport*. [https://www.researchgate.net/publication/49400108\\_Transport\\_and\\_Ageing\\_Extending\\_Quality\\_of\\_Life\\_for\\_Older\\_People\\_Via\\_Public\\_and\\_Private\\_Transport](https://www.researchgate.net/publication/49400108_Transport_and_Ageing_Extending_Quality_of_Life_for_Older_People_Via_Public_and_Private_Transport)
- Glasgow, N., & Blakely R. (2000). Older nonmetropolitan residents' evaluation of their transportation arrangements. *Journal of Applied Gerontology, 19*(1), 95-116.
- Gleason, S. (2017). The Social Construction of Old Age in the Modern West: A Literature Review. *Undergraduate Journal of Humanistic Studies, 4*, 1-8
- Goeverden, C. V., Rietveld, P., Koelemeijer, J. & Peeters, P. (2006). Subsidies in public transport. *European Transport, 32*, 5-25.

- Gorman, M. (1993). Development and the rights of older people. In J. Randel. (ed.) *The Ageing and Development Report: Poverty, Independence and the World's Older People*, 3-21. Earthscan Publications.
- Gossling, S., Cohen., & Hibbert, J. (2018). Tourism as connectedness. *Tourism*, 21, 1586-1600.
- Gough, D., Oliver, S., & Thomas, J. (2012). *An Introduction to Systematic Reviews*. SAGE.
- Gould, P. (1999) *Local Transport Histories*.  
[http://www.petergould.co.uk/local\\_transport\\_history/mainindexA.htm](http://www.petergould.co.uk/local_transport_history/mainindexA.htm)
- Government Office for Science. (2019, January). *A time of unprecedented change in transport system*.  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/780868/future\\_of\\_mobility\\_final.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/780868/future_of_mobility_final.pdf)
- Graham, H., de Bell, S., Flemming, K., Sowden, A., White, P., & Wright, K. (2018). The experience of everyday travel for older people in rural areas: A systematic review of UK qualitative studies. *Journal of Transport & Health*, 11, 141-152.  
<https://doi.org/10.1016/j.jth.2018.10.007>
- Green, A. (1975). *Social Problems: Arena of Conflict*. McGraw-Hill Book Company
- Green, J., Jones, A., & Roberts, H. (2012). More than A to B: the role of free bus travel for the mobility and wellbeing of older citizens in London. *Ageing & Society*, 34(3), 472-494
- Greenbank, P. (2003). The role of the values in educational research: the case for reflexivity. *British Educational Research Journal*, 29, 6.
- Greene, J. C., Caracelli, V. J., & Graham, W. F. (1989). Toward a conceptual framework for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis*, 11, 255–274. doi: 10.3102/01623737011003255.
- Greener Journeys. (2014). *The costs and benefits of concessionary bus travel for older and disabled people in Britain*. Greener Journeys.
- Grengs, J. (2005). The abandoned social goals of public transit in the neoliberal city of the USA. *City*, 9, 51-66.
- Grigsby, J. (1996). The Meaning of Heterogeneity: An Introduction. *The Gerontologist*. 36, 145-146

- Grix, J. (2002). Introducing students to the generic terminology of social research. *Politics*, 22(3), 175–186.
- Guba, E.G., & Lincoln, Y.S. (1994). *Competing paradigms in qualitative research*. In N.K. Denzin & Y.S. Lincoln (Eds.). *Handbook of qualitative research* (pp. 105–117). Sage Publications.
- Gunn, S. (2018). *The history of transport systems in the UK*.  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/761929/Historyoftransport.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/761929/Historyoftransport.pdf)
- Gwilliam, K. (2001). Competition in Urban Passenger Transport in the Developing World. *Journal of Transport Economics and Policy*, 35, 99-118.
- Hacking, I. (1999). *The Social Construction of What?*  
<https://larvalsubjects.files.wordpress.com/2011/01/hacking-the-social-construction-of-what2.pdf>
- Haddaway, R., Collins, A., Coughlin, D., & Kirk, S. (2015). The role of Google Scholar in evidence reviews and its applicability to grey literature. *PLoS One*. 17(9).  
DOI: 10.1371/journal.pone.0138237
- Haigh, C. (2011). *Bus 2020: The Case for the Bus Pass*. Greener Journeys.
- Haladin, S., & Antic, M. (2003). *The importance of social sciences in the education of civil engineers*. <https://bib.irb.hr/datoteka/438737.DHaladin.pdf>
- Hammersley, M. (2002). *Educational research, policy making and practice*. Paul Chapman Publishing.
- Heale, R. & Forbes, D. (2013). Understanding triangulation in research. *Evidence Based Nursing*, 16(4).
- Hennessy, C. (2012). Grey and Pleasant Land? An Interdisciplinary Exploration of the Connectivity of Older People in Rural Civic Society: ESRC End of Award Report, RES-353-25-0011. Swindon: ESRC
- Hennink, M., Hutter, I., & Bailey, A. (2011). *Qualitative research methods*. Sage.
- Hess, D.B. (2012). Walking to the bus: perceived versus actual walking distance to bus stops for older adults. *Transportation*, 39, 247–266. <https://doi.org/10.1007/s11116-011-9341-1>
- Hibbs, J. (2005). *The Dangers of Bus Reregulation*. IEA publishers

- Hine, J. & Mitchell, F. (2003). *Transport Disadvantage and Social Exclusion: exclusion mechanisms in transport in urban Scotland*. Ashgate Publishing Ltd.
- Hirst, E., & Harrop, B. (2011). *Getting Out and About: Investigating the Impact of Concessionary Fares on Older People's Lives*. Transport Action Group.
- HM Government. (2021). *Check your State Pension age*. Retrieved March 2, 2021, from [https://www.gov.uk/state-pension-age/y/bus\\_pass/1961-03-02](https://www.gov.uk/state-pension-age/y/bus_pass/1961-03-02)
- HM Government. (2011). *Open Public Services White Paper [White Paper]*. Crown. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/255288/OpenPublicServices-WhitePaper.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/255288/OpenPublicServices-WhitePaper.pdf)
- Hull, R. (2020, April 21). Number of registered cars and vans in Britain exceeds 40 MILLION for the first time EVER - at a time when most aren't driving due to the lockdown. <https://www.thisismoney.co.uk/money/cars/article-8236779/Car-van-ownership-UK-exceeds-40-MILLION-time-ever.html>
- Hycner, R.H. (1999). Some guidelines for the phenomenological analysis of interview data. In A. Bryman, & R.G. Burgess (Eds.). *Qualitative research* (pp 143-164). SAGE
- Hyde, M., Wiggins, R., Higgs, P., Blane, D. (2003). A measure of quality of life in early old age: the theory, development and properties of a needs satisfaction model (CASP-19). *Ageing Mental Health*, 7, 186-194.
- Ingvardson, J. (2017). *Attractiveness of public transport systems in a metropolitan setting*. DTU Management.
- International Longevity Centre. (2015). *Age and the national travel survey*. <https://ilcuk.org.uk/age-and-the-national-travel-survey/>
- International Longevity Centre. (2019). *Government's support package for the self-employed risks excluding older workers*. <https://ilcuk.org.uk/governments-support-package-for-the-self-employed-risks-excluding-older-workers/>
- Inman, P. (2018). *UK pensioners' income growth outstrips wage rises; figures suggest*. <https://www.theguardian.com/money/2018/jul/25/uk-pensioners-income-growth-outstrips-wage-rises-ons-estimates>
- Izaks, G.J., & Westendorp, R.G. (2003). Ill or just old? Towards a conceptual framework of the relation between ageing and disease. *BMC Geriatrics*, 3(7). <https://doi.org/10.1186/1471-2318-3-7>

- Jackson, S., Firth, J., Firth, J., Veronese, N., Gorely, T., Grabovac, I., Yang, L., & Smith, L. (2019). Social isolation and physical activity mediate associations between free bus travel and wellbeing among older adults in England. *Journal of Transport & Health*, 13, 274-284. DOI: 10.1016/j.jth.2019.03.006
- Jacobs, K., & Manzi, T. (2000). Performance indicators and social constructivism: conflict and control in housing management. *Critical Social Policy*, 20(1), 85-103
- Jahan, N., Naveed, S., Zeshan, M., & Tahir, M. A. (2016). How to Conduct a Systematic Review: A Narrative Literature Review. *Cureus*, 8(11).  
<https://doi.org/10.7759/cureus.864>
- Jawle, K. (2012). Methods of sampling design in the legal research: Advantages and disadvantages. *Online International Interdisciplinary Research Journal*, 11(6), 183-190.
- Jones, K. (2004). Mission Drift in Qualitative research, or Moving Toward a systematic Review of Qualitative Studies, Moving back to a more Systematic Narrative Review. *The Qualitative Report*, 9, 95-112.
- Jones, L. (1994). *The Social Context of Health and Health Work*. Macmillan Press LTD.
- Jones, P., Dix, M., Clarke, M., & Heggie, I. (1985). *Understanding Travel Behaviour*. Gower Publishing Company Limited.
- Jick, T. D. (1979). Mixing qualitative and quantitative methods: Triangulation in action. *Administrative Science Quarterly*, 24(4), 602–611.  
<https://doi.org/10.2307/2392366>
- Kellert, S. & Wilson, E. (1993). *The Biophilia Hypothesis*. Island Press.
- Kelly, E. (2011). *A Ticket to Ride: Does Free Bus Travel Promote Active Ageing? University College London & Institute for Fiscal Studies Job Market Paper*.  
[http://leahbrooks.org/leahweb/teaching/pppa6022/2014/papers\\_for\\_class/kelly\\_elaine\\_bus\\_travel.pdf](http://leahbrooks.org/leahweb/teaching/pppa6022/2014/papers_for_class/kelly_elaine_bus_travel.pdf)
- Kemeny, J. (1992). *Housing and Social Theory*. Routledge
- Kemeny, J. (1984). The social construction of housing facts, Scandinavian Housing and Planning Research. *Scandinavian Housing and Planning Research*, 1(3), pp. 149–164.
- Kenyon, S., Rafferty, J., & Lyons, G. (2003). Social exclusion and transport: A role for virtual accessibility in the alleviation of mobility related social exclusion? *Journal of Social Policy*, 32(3), 317-338. doi: 10.1017/S0047279403007037

- Książkiewicz, S. (2012). Quantitative or qualitative transport planning? An interdisciplinary geographic perspective. *Prace Geograficzne*, 130, 131-139.  
10.4467/20833113PG.12.024.0665.
- Last, A. (2010, October 11-13). *Smartcard Data on Use of Free Concessionary Travel by Older and Disabled Bus Passengers* (conference presentation). European Transport Conference, Glasgow, Scotland. <https://trid.trb.org/view/1116396>
- Leedy, P.D., & Ormond, J.E. (2001). *Practical Research: Planning and Design* (7<sup>th</sup> ed.). SAGE Publications.
- Lehtinen, V., Näsänen, J., & Sarvas, R. (2009, September). A little silly and empty-headed: older adults' understandings of social networking sites. In *Proceedings of the 23rd British HCI Group Annual Conference on People and Computers: Celebrating People and Technology* (pp. 45-54). British Computer Society.
- Levers, M. (2013). *Philosophical Paradigms, Grounded Theory, and Perspectives on Emergence*. SAGE
- Levitas, R. (1998). Defining and measuring social exclusion: A critical overview of current proposals. *Radical Statistics*, 71 (1), 10-27.
- Ling, D., & Howcroft, K. (2007). *The Costs and consequences of free local public transport for older people Greater Manchester*. Transport Canada.
- London Transport Museum. (2021). *Public transport in Victorian London – on the surface*. <https://www.ltmuseum.co.uk/collections/stories/transport/public-transport-victorian-london-surface#:~:text=In%201828%20George%20Shillibeer%2C%20a,Regent's%20Park%20to%20the%20City>
- Loseke, D.R. (2007). The study of identity as cultural, institutional, organisational and personal narratives: Theoretical and Empirical Integrations. *The Sociological Quarterly*, 48(4). <https://doi.org/10.1111/j.1533-8525.2007.00096.x>
- Loseke, D.R. (1999). *Thinking about Social Problems: An Introduction to Constructionist Perspectives*. Aldine de Gruyter
- Loseke, D.R. (2017). *Thinking about Social Problems: An Introduction to Constructionist Perspectives* (2<sup>nd</sup> ed.). Routledge.



- Lucas, K. (2013). Qualitative methods in transport research: the 'action research' approach. In: J. Zmud, M. Lee-Gosselin, and JA. Carrasco, (eds.). *Transport Survey Methods: Best practice for decision making*. Emerald Publishing
- Lum, T., & Lightfoot, E. (2005). The Effects of volunteering on physical and mental health of older people. *Research on Ageing*, 27 (1), 31-35
- Lyons, G., Rafferty, J., & Kenyon, S. (2002). Transport and social exclusion: investigating the possibility of promoting social inclusion through virtual mobility. *Journal of Transport Geography*, 10(3), 207-219.
- Machi, L.A., & McEvoy, B.T. (2009). *The Literature Review: Six steps to success*. Sage Publications Ltd
- Mackett, R. (2017). *Building Confidence – Improving travel for people with mental impairments*.  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/662737/report-on-mental-impairments\\_final.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/662737/report-on-mental-impairments_final.pdf)
- Mackett, R. (2013). Impact of Concessionary Bus Travel on the Well-Being of Older and Disabled People. *Transportation Research Record*. 2352(1), 114-119. doi: 10.3141/2352-13
- Mackie, P., Preston, J., & Nash, C. (1995). Bus deregulation: ten years on. *Transport Reviews*. 15(3), 229-251. Doi: 10.1080/01441649508716914
- Mackinnon, D., Shaw, J., & Docherty, I. (2008). *Diverging Mobilities: Devolution, Transport and Policy Innovation*. Elsevier.
- Maguire, M. & Delahunt, B. (2017). Doing a Thematic Analysis: A practical, step-by-step guide for learning and teaching scholars. *Journal of Teaching and Learning in Higher Education*, 8(3), 3351-33514.
- Mars, L., Arroyo, R. & Ruiz, T. (2016). Qualitative Research in Travel Behaviour Studies. *Transportation Research Procedia*, 18, 434-445. doi: 10.1016/j.trpro.2016.12.057
- Mehra, B. (2002). Bias in Qualitative Research: Voices from an online classroom. *The Qualitative Report*, 7(1), 1-19, <https://doi.org/10.46743/2160-3715/2002.1986>
- Menec, V. H. (2017). Conceptualising social connectivity in the context of age-friendly communities. *Journal of Housing for the Elderly*, 31(2).  
<https://doi.org/10.1080/02763893.2017.1309926>

- Metz, D. (2000). Mobility of older people and their quality of life. *Transport Policy*, 7(2), 149-152.
- Metz, D. (2003). Transport policy for an ageing population. *Transport Reviews*, 23(4), 375-386.
- MHA. (2021). How many older people are there in the UK? <https://www.mha.org.uk/get-involved/policy-influencing/facts-stats/>
- Mills, C.W. (1959). *The Sociological Imagination*. Oxford University Press
- Mokhtarian, P. & Salomon, I. (2000). How derived is the demand for travel? Some conceptual and measurement considerations. *Transportation Research*, 34 (1), 675-691.
- Morris, S., Ison, S. & Enoch, M. (2005). The Role of UK local Authorities in promoting bus use. *Journal of Public Transportation*, 8, 25-40.
- Morse, J. M. (2015). Critical analysis of strategies for determining rigor in qualitative inquiry. *Qualitative Health Research*, 25(9), 1212– 1222.
- Morse, J. M. & Niehaus, L. (2009). *Mixed method design: Principles and procedures*. Left Coast Press.
- Munoz-Olivias, R. (2004). Screening analysis: an overview of methods applied to environmental, clinical and food analyses. *TrAC Trends in Analytical Chemistry*, 23(3), 203-216.
- Murray, A. (2019). *Older adults, informal support, and the process of driving cessation* (Unpublished doctoral dissertation or master's thesis). Swansea University.
- Musgrave, R. (2006). *Pensioners' travel concessions-a misallocation of resources*. [https://www.researchgate.net/publication/23543831\\_Pensioners'\\_travel\\_concessions\\_-\\_a\\_misallocation\\_of\\_resources](https://www.researchgate.net/publication/23543831_Pensioners'_travel_concessions_-_a_misallocation_of_resources)
- Musselwhite, C., & Haddad, H. (2010). Mobility, accessibility and quality of later life. *Quality in Ageing and Older Adults*. 11(1), 25-37.
- Musselwhite, C., & Haddad, H. (2018). Older People's travel and mobility needs: a reflection of a hierarchical model 10 years on. *Quality in ageing: Policy, Practice and Research*, 19, 3-20.
- Musselwhite, C. & Murray, A. (2019). Older peoples' experiences of informal support after giving up driving. *Research in Transportation Business & Management*, <http://dx.doi.org/10.1016/j.rtbm.2019.100367>

- Musselwhite, C., & Scott, T. (2019). Developing A Model of Mobility Capital for An Ageing Population. *International Journal of Environmental Research and Public Health*. 16(2), 1-13. 10.3390/ijerph16183327
- Musselwhite, C., & Shergold, I. (2013). Examining the process of driving cessation in later life. *European Journal of Ageing*, 10(2), 89-100. doi: 10.1007/s10433-012-0252-6
- Musselwhite, C. (2017). Public and community transport. In C. Musselwhite, (Ed.). *Transport, Travel and Later Life* (pp. 117-128). Emerald Publishing Limited.
- Musselwhite, C. (2011). The importance of driving for older people and how the pain of driving cessation can be reduced. *Signpost: Journal of Dementia and Mental Health Care of Older People*, 15(3), 22-26
- Najstutub, M., Bonfatti, A., & Duda, D. (2015). 7. Material and social deprivation in the macroeconomic context. In A. Börsch-Supan, T. Kneip, H. Litwin, M. Myck & G. Weber (Ed.), *Ageing in Europe - Supporting Policies for an Inclusive Society* (pp. 79-90). Berlin, München, Boston: De Gruyter. <https://doi.org/10.1515/9783110444414-009>
- NatCen. (2019). *Transport and inequality: An evidence review for the Department for Transport*.  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/953951/Transport\\_and\\_inequality\\_report\\_document.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/953951/Transport_and_inequality_report_document.pdf)
- National Assembly for Wales. (2011). *Inquiry into the impact of Welsh Government policy on the accessibility of transport services for disabled people in Wales*. National Assembly for Wales.
- Nelson, A. & Dannefer, D. (1992). Heterogeneity: Fact or fiction? The Fate of Diversity in Gerontological Research. *The Gerontologist*, 32(1), 17-23.
- Noble, H. & Smith, J. (2014). Qualitative data analysis: a practical example. *Evidence-Based Nursing*, 17, 2-3.
- OECD. (1998). *A Caring World: The New Social Policy Agenda*. OECD.
- Office for National Statistics. (2009). *2008-based National Population Projections. UK. Mid-2008 to mid-2108*. <http://www.ons.gov.uk/ons/rel/npp/national-population-projections/2008-basedprojections/index.html>
- Office for National Statistics. (2019). *Overview of the UK population: August 2019*.  
<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/articles/overviewoftheukpopulation/august2019>

- Office for National Statistics. (2020a, August 5). *Full car driving licence holders by age and gender*. Retrieved October 17, 2020, from <https://www.gov.uk/government/statistical-data-sets/nts02-driving-licence-holders>
- Office for National Statistics. (2020b, August 5). *Average number of trips (trip rates) by age, gender and main mode*. Retrieved October 17, 2020, from <https://www.gov.uk/government/statistical-data-sets/nts02-driving-licence-holders>
- Older People's Commissioner for Wales (2010). *Concessionary Bus Pass Research*. Mott Macdonald.
- Older People's Commissioner for Wales. (2020). *Strategic Equality Plan: Annual Report 2019-2020*. [https://www.olderpeoplewales.com/Libraries/Work\\_Programme\\_201920/SEP\\_Report\\_2019-20.sflb.ashx](https://www.olderpeoplewales.com/Libraries/Work_Programme_201920/SEP_Report_2019-20.sflb.ashx)
- Open Education Sociology Dictionary (2013). *Relative Poverty*. <https://sociologydictionary.org/relative-poverty/>
- Owen, R. (1995). *Social Constructionism and the theory, practice and research of psychotherapy: A phenomenological psychology manifesto*. <http://www.intentionalitymodel.info/pdf/SOCCONST.pdf>
- Pardede, P. (2018). *Mixed Methods Research Designs in EFL*. [https://www.researchgate.net/publication/335110970\\_Mixed\\_Methods\\_Research\\_Designs\\_in\\_EFL](https://www.researchgate.net/publication/335110970_Mixed_Methods_Research_Designs_in_EFL)
- Parkhurst, G. (2004). Air quality and the environmental transport policy discourse in Oxford. *Transportation Research Part D Transport and Environment*, 9, 419-436.
- Parkhurst, G. (2003). Social inclusion implications of park and ride. *Engineer*, 156, 111-117
- Parkhurst, G. & Shergold, I. (2008). Stagecoach: Impact of free travel for senior Citizens: Collation of Evidence.
- Parkinson, A., Griffiths, E., & Trier, E. (2018). *A review of the basic principles of sustainable community-based volunteering approaches to tackling loneliness and social isolation among older people*. <https://gov.wales/sites/default/files/statistics-and-research/2019-06/180419-tackling-loneliness-social-isolation-older-people-en.pdf>
- Patton, M. Q. (1990). *Qualitative evaluation and research methods*. Sage Publications.

- Pautasso, M. (2019). The Structure and Conduct of a Narrative Literature Review. In M. Shoja, A. Arynchyna, M. Loukas, A. V. D'Antoni S. M. Buerger M. Karl R. Tubbs (Eds.). *A Guide to the Scientific Career: Virtues, Communication, Research and Academic Writing* (chapter 31). Wiley.
- Pezalla, A. E., Pettigrew, J., & Miller-Day, M. (2012). Researching the researcher-as-instrument: an exercise in interviewer self-reflexivity. *Qualitative research*, 12(2), 165–185. <https://doi.org/10.1177/1487941111422107>
- Phillipson, C. (1982). *Capitalism and the Construction of Old Age*. Macmillan Publishers.
- Prelipcean, A., Susilo, Y., & Gidofalvi, G. (2018). Collecting travel diaries: Current state of the art, best practices, and future research directions. *International Steering Committee for Transport Survey Conferences*, 32, 155-166.
- Preston, J., & Rajé, F. (2007). Accessibility, mobility, and transport-related social exclusion. *Journal of Transport Geography*, 15, 151-160.
- PT Access (2008). *Report on Good Practice Examples of Accessible Public Transport*. [https://www.eltis.org/sites/default/files/PTaccess\\_-\\_good\\_practice\\_2009\\_6.pdf](https://www.eltis.org/sites/default/files/PTaccess_-_good_practice_2009_6.pdf)
- Rantanen T. (2013). Promoting mobility in older people. *Journal of preventive medicine and public health*, 46, S50–S54. <https://doi.org/10.3961/jpmph.2013.46.S.S50>
- Richards, L. & Morse, J. (2007). *Read me first for a user's guide to qualitative methods*. Sage.
- Ragland, D., Satariano, W., & MacLeod, K. (2005). Driving cessation and increased depressive symptoms. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, 60(3), 399-403.
- Roper, T., & Mulley, G. (1996). Caring for Older People: Public transport. *British Medical Journal*, 313, 415-418
- Rosenbloom, S. (2004). Mobility of the elderly. *Transportation in an Aging Society: A Decade of Experience*. *Transport Research Board*, 2-21.
- Rosenthal, R. & Rosnow, R.L. (2008). *Essentials of behavioural research: methods and data analysis* (3<sup>rd</sup> ed.). McGraw-Hill.
- Rothe, J. (1994). *Beyond traffic safety*. Transaction Publishers.
- Rubin, H. & Rubin, I. (2005). *Qualitative interviewing: the art of hearing data* (2nd ed.). Sage.
- Rye, T. & Carreno, M. (2008). Concessionary fares and bus operator reimbursement in Scotland and Wales: No better or no worse off? *Transport Policy*, 15(4), 242-250.

- Rye, T. & Scotney, D.S. (2004). The factors influencing future concessionary bus patronage in Scotland and their implications for elsewhere. *Transport Policy*, 11(2), 133-140.
- Ryuichi, K., Laidet, L., Mokhtarian, P., Buckinger, C., & Gianelli, F. (1994). *Land Use and Travel Behaviour*. Institute of Transportation Studies.
- Sager, T. (2006). Freedom as mobility: implications of the distinction between actual and potential travelling. *Mobilities*, 1 (2), 465- 488.
- Santoni, G., Angleman, S., Welmer, A. K., Mangialasche, F., Marengoni, A., & Fratiglioni, L. (2015). Age-related variation in health status after age 60. *PLoS one*, 10, e0120077. <https://doi.org/10.1371/journal.pone.0120077>
- Samuels, P. (2020). A really simple guide to quantitative data analysis. Technical Report. [https://www.researchgate.net/publication/340838762\\_A\\_Really\\_Simple\\_Guide\\_to\\_Quantitative\\_Data\\_Analysis](https://www.researchgate.net/publication/340838762_A_Really_Simple_Guide_to_Quantitative_Data_Analysis)
- Saunders, P. (2003). *Can social exclusion provide a new framework for measuring poverty?* SPRC Discussion Paper No. <http://unsworks.unsw.edu.au/fapi/datastream/unsworks:1950/SOURCE01?view=true>
- Schaller, B. (2005). *On-Board and Intercept Transit Survey Techniques*. Transit Cooperative Research Program.
- Scharf, T., Phillipson, C. & Smith, A. (2003). Social exclusion of older people in deprived urban communities of England. *European Journal of Ageing*, 2, 76-87.
- Schneider, A., & Ingram, H. (1993). The Social Construction of Target Populations. *American Political Science Review*, 87(2), 334-347
- Schoonenboom, J., & Johnson, R. B. (2017). How to Construct a Mixed Methods Research Design. *Kolner Zeitschrift für Soziologie und Sozialpsychologie*, 69(2), 107–131. <https://doi.org/10.1007/s11577-017-0454-1>
- Schwanen, T. & Ziegler, F. (2011). Wellbeing, independence, and mobility: an introduction. *Ageing & Society*, 31(5), 719–33
- Scottish Executive. (2004). Monitoring Free Local Off-Peak Bus Travel for Older and Disabled People. <https://www.webarchive.org.uk/wayback/archive/20180518233734/http://www.gov.scot/Publications/2004/06/19401/37618>
- Sen, A. (2000). *Social Exclusion: Concept Application and Scrutiny*. <https://think-asia.org/bitstream/handle/11540/2339/social-exclusion.pdf?sequence=1>

- Sener, I. N., Lee, R. J., & Elgart, Z. (2016). Potential Health Implications and Health Cost Reductions of Transit-Induced Physical Activity. *Journal of transport & health*, 3(2), 133–140. <https://doi.org/10.1016/j.jth.2016.02.002>
- Shrestha, B. P., Millonig, A., Hounsell, N. B., & McDonald, M. (2017). Review of Public Transport Needs of Older People in European Context. *Journal of population ageing*, 10(4), 343–361. <https://doi.org/10.1007/s12062-016-9168-9>
- Simmons, D. (2012). *What is the environmental value of investment to increase the use of buses?* David Simmons Consultancy.
- Silver, H. (1994). Social exclusion and social solidarity: Three paradigms. *International Labour Review*, 133, 531-579
- Social and Transport Research Services. (2001) *Social Exclusion and the Provision and Availability of Public Transport*. [http://test.ricerchetrasporti.it/wp-content/uploads/downloads/file\\_459.pdf](http://test.ricerchetrasporti.it/wp-content/uploads/downloads/file_459.pdf)
- Social Exclusion Unit. (2003). *Making the Connections: Final Report on Transport and Social Exclusion*. [https://www.ilo.org/wcmsp5/groups/public/---ed\\_emp/---emp\\_policy/---invest/documents/publication/wcms\\_asist\\_8210.pdf](https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_policy/---invest/documents/publication/wcms_asist_8210.pdf)
- Spector, M., & Kitsuse, J. (1977). *Constructing Social Problems*. Cummings
- Spector, M., & Kitsuse, J. (1987). *Constructing Social Problems*. Aldine de Gruyter.
- Spector, M., & Kitsuse, J. (1973a). Social Problems: A Re-Formulation. *Social Problems, Official Journal of the Society for the Study of Social Problems*. 21(2), 145–159
- Spector, M., & Kitsuse, J. (1973b). Toward a Sociology of Social Problems: Social Conditions, Value-Judgments, and Social Problems. *Social Problems, Official Journal of the Society for the Study of Social Problems*, 20(4). 407-419
- Spiegelberg, H. (1978). *The phenomenological movement. A historical introduction* (2nd ed.). The Hague
- Stenfors, T., Kajamaa, A., & Bennett, D. (2020). How to ... assess the quality of qualitative research. *The Clinical Teacher*, 17(6), 596-599. <https://doi.org/10.1111/tct.13242>
- Stradling, S., Carreno, M., Rye, T., & Noble, A. (2007). Passenger perceptions and the ideal urban bus journey experience. *Transport Policy*, 14(4), 283-292.
- Stewart, C. & Cash, W. (2006). *Interviewing: principles and practices*. McGraw-Hill.

- Strauss, J. & Breier, A. (1984). *The role of Social Relationships in the Recovery From Psychotic Disorders*.  
<https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.466.3570&rep=rep1&type=pdf>
- Sundling C. (2015). Travel Behavior Change in Older Travelers: Understanding Critical Reactions to Incidents Encountered in Public Transport. *International journal of environmental research and public health*, 12(11). 14741–14763.  
<https://doi.org/10.3390/ijerph121114741>
- Sustainable Swansea (2022). *Swansea City Bus Station*.  
<http://www.sustainableswansea.net/swansea-bus-station.html>
- Swansea Bay City Deal. (2019). *Step forward for Swansea Bay Metro Plans*.  
<https://www.swanseabaycitydeal.wales/news/step-forward-for-swansea-bay-metro-plans/>
- Swansea Council. (2019). *Bus service funded by the council*.  
<https://www.swansea.gov.uk/article/7026/Bus-services-funded-by-the-council>
- Swansea Council. (2020a). *Bus Times*. <https://www.swansea.gov.uk/bustimes>
- Swansea Council. (2020c). *Concessionary bus passes*.  
<https://www.swansea.gov.uk/buspasses>
- Swansea Council (2021, March 26). *Ward Profiles*. Retrieved April 14, 2021, from  
<https://www.swansea.gov.uk/wardprofiles>
- Swansea Council. (2020b). *Gorseinon Ward Profile*.  
[file:///C:/Users/kelly/Downloads/Gorseinon\\_Ward\\_Profile\\_February\\_2020.pdf](file:///C:/Users/kelly/Downloads/Gorseinon_Ward_Profile_February_2020.pdf)
- Swanson, R & Chermack, T. (2013). *Theory building in applied disciplines*. Berrett-Koehler Publishers.
- Swift, H. & Steeden, B. (2019). *Exploring representations of old age and ageing*.  
<https://www.ageing-better.org.uk/sites/default/files/2020-03/Exploring-representations-of-old-age.pdf>
- Tashakkori, A. (2010). Are we there yet?: The state of the mixed methods community. *Journal of Mixed Methods Research*, 3(4), 287–291.  
<https://doi.org/10.1177/1558689809346151>
- Teddlie, C. B. & Tashakkori, A. (2009). *Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioral sciences*. Sage.



- The British Psychological Society. (2014). *BPS Code of Human Research Ethics*.  
<https://www.bps.org.uk/sites/www.bps.org.uk/files/Policy/Policy%20-%20Files/BPS%20Code%20of%20Human%20Research%20Ethics.pdf>
- The Equality Trust. (2015). *Taken for a Ride – How UK public transport subsidies entrench inequality*. Retrieved November 16, 2018, from  
<https://www.equalitytrust.org.uk/taken-ride-how-uk-public-transport-subsidies-entrench-inequality>
- Touchstone. (2021). Be a buddy for a new Leeds resident.  
<https://touchstonesupport.org.uk/be-a-buddy-for-a-new-comer-to-leeds-volunteersweek/>
- Transport for Wales. (2021). *Swansea Bay Metro*. <https://trc.cymru/swansea-bay-metro>
- Transport for Wales. (2020). *Transport for Wales renew over half million bus passes*.  
<https://news.tfwrail.wales/news/transport-for-wales-renew-over-half-million-bus-passes>
- Transport Scotland. (2020). *Concessionary Travel*. Retrieved March 2, 2021, from  
<https://www.transport.gov.scot/concessionary-travel/>
- Tuffour, I. (2017). A Critical Overview of Interpretative Phenomenological Analysis: A Contemporary Qualitative Research Approach. *Journal of Healthcare Communications*, 2, 1-5
- United Nations Development Programme (2010). *A Review of International Best Practice in Accessible Public Transportation for Persons with Disabilities*. UNDP.
- Urban Transport Group. (n.d.). *pteg: good practice guide*. Accessed 5<sup>th</sup> March, 2021,  
[https://www.urbantransportgroup.org/system/files/general-docs/TransportandSocialInclusionGoodPracticeGuide2005\\_0.pdf](https://www.urbantransportgroup.org/system/files/general-docs/TransportandSocialInclusionGoodPracticeGuide2005_0.pdf)
- Urry, J. (2016). *Mobilities: New Perspectives on Transport and Society*. Routledge.
- Vanderstoep, S. & Johnson, D. (2008). *Research methods for everyday life: Blending qualitative and quantitative approaches* (Vol. 32). John Wiley & Sons.
- Varpio, L., Ajjawi, R., Monrouxe, L., O'Brien, B., & Rees, C. (2017). Shedding the cobra effect: problematising thematic emergence, triangulation, saturation and member checking. *Medical Education*, 51(1), 40– 50. <https://doi.org/10.1111/medu.13124>
- Vickerman, R. (1974). Accessibility, attraction, and potential: a review of some concepts and their use in determining mobility. *Environment and Planning A*, 6(1), 675-691.

- Victor, C. (1987). *Old Age in Modern Society: a textbook of Social Gerontology*. Cambridge University Press
- Wacker, R., & Roberto, K. (2011). *Aging Social Policies: An International Perspective*. SAGE.
- Wahrendorf, M., Akinwale, B., Landy, R., Matthews, K., & Blane, D. (2017). Who in Europe Works beyond the State Pension Age and under which Conditions? Results from SHARE. *Population Ageing*, 10, 269–285. <https://doi.org/10.1007/s12062-016-9160-4>
- Walker, A., & Maltby, T. (1997). *Ageing Europe*. Open University Press
- Warwick (2018, February 28). *What is phenomenology?*  
<https://warwick.ac.uk/fac/soc/ces/research/current/socialtheory/maps/phenomenology/>
- Waterson, M. (2019). *The vanishing bus rider: what are the reasons for the great decline in bus ridership in the UK?*  
<https://warwick.ac.uk/newsandevents/knowledgecentre/business/economics/busfares/>
- Walsh, K., Scharf, T., & Keating, N. (2016). Social exclusion of older persons: a scoping review and conceptual framework. *European journal of ageing*, 14(1), 81–98.  
<https://doi.org/10.1007/s10433-016-0398-8>
- Webb, E., Netuveli, G., & Millett, C. (2012). Free bus passes, use of public transport and obesity among older people in England. *Journal of Epidemiology & Community Health*, 6 (2), 166-180.
- Welsh Government. (2018a, March 23). *Bus grants to keep Wales moving*. Retrieved November 16, 2018, from <https://gov.wales/bus-grants-keep-wales-moving>
- Welsh Government. (2018b). *Bus Services Policy Discussion: Consultation Outcome Report*. Retrieved March 2, 2021, from <https://gov.wales/sites/default/files/consultations/2018-05/consultation-summary-outcome-report-public-consultation-on-mandatory-concessionary-fares.pdf>
- Welsh Government. (2020a, November 28). *Concessionary Fares*. Retrieved March 2, 2021, from <https://www.carmarthenshire.gov.wales/home/council-services/travel-roads-parking/concessionary-fares/#.YD1xdWieSM8>
- Welsh Government. (2018c, December 10). *Consultation Document: Improving Public Transport*. [https://gov.wales/sites/default/files/consultations/2018-12/improving-public-transport\\_0.pdf](https://gov.wales/sites/default/files/consultations/2018-12/improving-public-transport_0.pdf)

- Welsh Government. (2017, October 10). *Consultation Document: Mandatory Concessionary Fares Schemes in Wales*. [https://gov.wales/sites/default/files/consultations/2018-02/mandatory\\_concessionary\\_fares\\_en.pdf](https://gov.wales/sites/default/files/consultations/2018-02/mandatory_concessionary_fares_en.pdf)
- Welsh Government. (2019, May 3). *National Transport Finance Plan: 2018 update*. <https://gov.wales/national-transport-finance-plan-2018-update>
- Welsh Government. (2016, September 20). *Taking Wales Forward 2016-2021*. <https://gov.wales/sites/default/files/publications/2017-08/taking-wales-forward.pdf>
- Welsh Government (2019a, November 4). *Wales Infrastructure Investment Plan: project pipeline 2019*. [https://gov.wales/sites/default/files/publications/2019-11/wales-infrastructure-investment-plan-project-pipeline-2019\\_0.pdf](https://gov.wales/sites/default/files/publications/2019-11/wales-infrastructure-investment-plan-project-pipeline-2019_0.pdf)
- Welsh Government. (2020b, July 15). *Welsh Government introduced over 50 laws to deal with coronavirus*. <https://gov.wales/welsh-government-introduced-over-50-laws-deal-coronavirus>
- Welsh Government. (2020c, May). *Welsh Government Supplementary Budget 2020-2021*. <https://gov.wales/sites/default/files/publications/2020-05/1st-supplementary-budget-2020-2021-note.pdf>
- Welsh Government. (2019b, July 24). *Written Statement: Update on the Public Transport (Wales) Bill and wider bus reform agenda*. <https://gov.wales/written-statement-update-public-transport-wales-bill-and-wider-bus-reform-agenda>
- Weston, M. (2011). *Improving the environment credentials of London's bus fleet*. Retrieved November 16, 2018, from <https://www.intelligenttransport.com/transport-articles/3939/improving-the-environmental-credentials-of-londons-bus-fleet/>
- White, P. & Baker, S. (2010). Impacts of concessionary travel: Case study of an English rural region. *Transport Policy*, 17(1), 20-26.
- White, P. (2001.) *Public transport: its planning, management and operation*. Spon.
- Wiles, J., Leibing, A., Guberman, N., Reeve, J., & Allen, A., (2012). The Meaning of "Aging in Place" to Older People. *The Gerontologist*, 52(3), 357–366.
- Wiles. R. (2012). *What are Qualitative Research Ethics?* Bloomsbury Academic
- Williams, C. (2007). Research Methods. *Journal of Business and Economics Research*, 5, 65-72.

- Wilkinson, A., Bowen, L., Gustavsson, E., Håkansson, S., Littleton, N., McCormick, J., Thompson, M., & Mulligan, H. (2019). Maintenance and Development of Social Connection by People with Long-term Conditions: A Qualitative Study. *International journal of environmental research and public health*, 16(11), 1875.  
<https://doi.org/10.3390/ijerph16111875>
- Wilkinson, P., Edwards, P., Steinbach, R., Petticrew, M., Goodman, A., Jones, A., Roberts, H., Kelly, C., Nellthorp, J., & Green, J. (2011). The Health Impact of Free Bus Travel for Young People in London: Protocol for an Observational Study. *Transport and Health*.  
<http://www.lshtm.ac.uk/php/hsrp/buses/publications/4wilkinson2011protocol.pdf>
- Wilson, G. (2000). *Understanding Old Age: Critical and Global Perspectives*. Sage Publishers.
- Wolfensberger, W., Goode, D. (1994). *Quality of Life for persons with disabilities: International perspectives and issues*. Brookline Books.
- Xie, B., Watkins, I., Golbeck, J., & Huang, M. (2012). Understanding and changing older adults' perceptions and learning of social media. *Educational gerontology*, 38(4), 282-296
- Yurday, E. (2021). *Average car mileage UK 2022*. <https://www.nimblefins.co.uk/cheap-car-insurance/average-car-mileage-uk#:~:text=Average%20Mileage%20per%20Day%2C%20Week%2C%20Month%20and%20Year&text=On%20a%20daily%20basis%2C%20cars,and%207%2C400%20miles%20a%20year>.
- Zientek, L., Werner, J., Campuzano, M., & Nimon, K. (2018). The use of Google Scholar for research and research dissemination. *New Horizons in Adult Education and Human Reseaource Development*. 30(1), 39-46. DOI: <https://doi.org/10.1002/nha3.20209>

# Chapter 8: Appendices

## 8.1 Appendix One: Ethical Application

Principal Investigator	Kelly Roberts
Date	25/3/2018
School	Centre for Innovative Ageing, College of Human and Health Sciences
E-mail address	██████████
Title of Proposed Research	The Health and Wellbeing Benefits of the Concessionary Bus Pass.
Type of Researcher (please tick)	Postgraduate student
Name of course & supervisor	PhD Gerontology and Ageing Studies, Charles Musselwhite

1. Briefly describe the rationale and the main aims of the research you wish to undertake, including a statement of the intended benefits of the research. Please use non-technical language wherever possible.

Wales's Concessionary Fares policy has the aim of improving the quality of life of older people by reducing the likelihood of becoming socially excluded in later life. However, there is a lack of research that evaluates its success in achieving this. This is synonymous with a lack of understanding of how the pass is linked with maintaining social connectivity, as well as directly allowing older people to contribute to the economy as workers and shoppers and maintain health and wellbeing. Overall, there is a distinct lack of research that evaluates why pass holders are using their passes in the context of their daily lives and the benefits derived from its use.

- To understand the experience of using the concessionary bus pass
- To understand attitudes towards concessionary bus pass, use for users and non-users
- To address what the bus pass is used for, what types of journey and purpose
- To examine how far the bus pass is linked to quality of life
- To understand if the use of the concessionary bus pass has increased and if yes, why.
- To examine whether the pass is linked with maintaining social connectivity, as well as directly allowing older people to contribute to the economy and maintain health and wellbeing
- To address the barriers and enablers to bus use among older people and how the barriers might be overcome

The benefits of this study will be to understand if the concessionary pass is improving the quality of life of older people by examining and evaluating why pass holders are using their passes in the context of their daily lives and the benefits derived from its use.

2. Briefly describe the overall design of the project including dates and/or the proposed period of investigation

The part of the study is using interviews and mapping as methods for primary data collection. This will lead to the emergence of conceptual categories.

1. Interviews: using a semi-structured questionnaire on topics relating to their own experiences and perceptions of using the Concessionary bus pass.
2. Travel diary and mapping: participants who have taken part in the interview process, and who are bus pass users, will be asked if they are willing to complete a travel diary.

Recruitment will take the form of snowballing, commencing with people already known to the researcher who live in her home town. Constant comparative analysis through coding and revisiting the field on an iterative basis will continue until the research has reached a saturation point. Data collection will commence in July/August 2018 and continue for approximately eight to ten months.

3. Briefly describe the methods of data collection and analysis. Please describe all measures to be employed. If

questionnaire or interviews are to be used, please provide the questionnaire / interview questions and schedule.

The methods of data collection and analysis are explained below:

#### Stage 1 – Interviews

1. Identify participants (see participant information in boxes 5 and 6 below).
  - 1.1. The research will employ a purposive sampling strategy to identify participants. An initial sample will be identified with the collaboration of local organisations and screened using the screening form (**appendix A**). Data collection will involve using the screening tool to identify participants.
  - 1.2. Seek informed consent (**Appendix B**).
  - 1.3. Those who have consented to a follow up interview will be contacted via telephone to set up a convenient date and time for an individual interview (expected time is 1-2 hours).
  - 1.4. Participant information sheets and consent forms (**appendix B**) will be posted to all research participants prior to the interview date to give them time to read them.
  - 1.5. Following the signing of the consent form, participants will be interviewed using a semi-structured questionnaire on topics relating to their own experiences and perceptions of using the Concessionary bus pass (**Appendix C**).
  - 1.6. Interviews will be transcribed for analysis.
  - 1.7. A saturation technique will be utilised in terms of participant numbers, but there will be a maximum of 40 participants.
  - 1.8. This data will be used to identify links between different frequency and type of uses of the bus with health and social care behaviour through quantitative analysis and modelling.
  - 1.9. This data will also be used to examine overall use with the aim of comparing economic and social behaviour.

#### Stage 2 - Travel Diary and mapping

2. Participants who are bus users will be asked to complete a travel diary.
  - 2.1. The aim is to understand how, when where and why people travel around, and how they feel about their movements, locations in their locale and any changes to the environment that may have affected their reasoning for choosing this mode of transport (**see appendix D for example of travel diary**).
  - 2.2. Participants will be asked to complete a consent form before undertaking this phase of the research (**see appendix G**).
  - 2.3. Travel Diary data will be analysed.
  - 2.4. Data will be compared with existing interview data as a comparative analysis.

#### 4. Location of the proposed research (i.e., Departmental labs, schools, etc)

The location of the interviews will take place at the home of the participant or in a public space, for example a community building. The researcher and participant will choose an area that is quiet. The conversation will be stopped if members of the public can overhear it. Any space that makes either the participant or researcher uncomfortable will be avoided or moved on from. Please also see box 8 for participant safety and box 9 for researcher safety.

The participant will leave the interview with a travel diary to complete over the period of 7 days, where the researcher will arrange to collect the diary in from the participant at a mutual convenient location and place. The participants will be encouraged to complete the diary at the conclusion of each journey emphasising not to complete the diary when they are walking or standing on public transport or the highway (see risk assessment H).

#### 5. Describe the participants: give the age range, gender, inclusion and exclusion criteria, and any particular characteristics pertinent to the research project.

Participants will be people over the age of 60 as the Concessionary Bus Pass is only available to people aged 60 and over (it is also available to people with certain disabilities, but these are not being assessed for this study).

Men and women are of equal interest. The inclusion criterion is use of bus pass or any form of transport. It is of interest to the study why people choose to use/not to use their bus pass.

Inclusion criteria	Exclusion criteria
Over 60	Under 60
Can give informed consent	Cannot provide informed consent

#### 6. How will the participants be selected and recruited? Please describe in detail the process of recruitment, including how and by whom initial contact is made with participants (e.g., advertisement, e-mail).

Participants will be recruited through word of mouth and snowballing methods using the researchers own informal personal network to make suggestions about who might meet the inclusion criteria. Participants who fit the inclusion criteria will be contacted by the researcher. These individuals will also be asked to suggest people who might be willing to take part. No disclosure will be made from one person to the next whether any suggested people actually took part. People who take part in the research will be informed that there is a chance that they may be identified by other people who know the researcher if they are seen talking in a public place, as this is part of the research process. They will be informed that no comparisons between participants or relationships between people will be discussed. The people, places and any data will be anonymised and not identifiable.

The researcher, who is a community councillor, was informed of a local friendship clubs called 'the recycled teenagers and 'the bus pass cowboys' and has been along to discuss her research with a number of these members. Following this, attendees asked if they could participate. They were informed that the research needs to gain ethical approval before it can actually begin data collection, but that the researcher would return on receipt of this.

If any of these individuals are recruited, the fact that there will be no prejudice if they decide not to withdraw and have nothing to gain personally will be reinforced. It will be made explicit that the researcher is doing this work in the capacity of PhD researcher and not a local community councillor.

Participation is not limited to the researchers' home town or the surrounding rural areas as some participants may be drawn from personal networks in Swansea and/or Carmarthen.

A saturation technique will be utilised in terms of participant numbers, but there will be a maximum of 40 participants.

7. What procedures (e.g., interviews, computer-based learning tasks, etc.) will be used to gather information from participants?

Observation, map data, interviews, conversations and stories told by participants to the researcher, also of interactions between participants' and other people (who have also consented).

8. What potential risks to the participants do you foresee and how do you propose to ameliorate/deal with potential risks? Declare any relationship with the participants.

BPS Code of Human Research Ethics (2014, p. 5) states that researchers must respect the dignity and rights of participants in research. It is an important basic principle to start from this basis of respect and dignity when approaching research design to ensure that 'dignity, rights and welfare are protected.'

The researcher is likely to know some of the participants, but not so well that any of them will feel coerced into participating. None of these participants are friends of the researcher.

It will also be made clear that participation is voluntary, and withdrawal can take place at any time.

No risk assessment is deemed necessary for an interview, but a very basic risk assessment is carried out for completing the travel diary (see appendix H). This notes that the diary must be completed with the participant sitting down and away from the transport, not standing or walking

There is a chance that stigma is likely to be discussed, but that is about the stigma of using a concessionary bus pass which is already used. If they wish to suggest a conversation in private that will of course be arranged (for confidentiality of data see item 16), any discussions whilst in public would be only those expected to be held in public anyway.

The research will be conducted with integrity, respecting the needs and wishes of participants whilst intending to contribute to the development of research and understanding. It is also hoped some elements of this research will contribute directly to the community with visits to local community groups to both gain and provide understanding at the beginning and end of the research process with an introductory presentation and presentation of results for participants to comment on the findings if they choose (member validation). It will be made clear to participants that the research cannot directly influence local decision-making processes, how the knowledge gained within this process will add to wider understanding of concessionary bus pass use.

9. What potential risks to the interests of the researchers do you foresee and how will you ameliorate/deal with potential risks?

I will follow the Centre for Innovative Ageing's 'Personal safety guidelines for researcher and interviewers' by making sure a family member and first or second supervisor always knows when I am actively collecting data and where I am by telephoning or texting on arrival and cessation of research practice/interview/observation. The anonymity of the participant will be maintained at all times and if the interview takes place at a participants address, only the first or second supervisor will know the researcher's location.

10. How will you brief and debrief participants? *(Please attach copy of participant information sheets and relevant*

<p><i>debrief information)</i></p> <p>Participants will receive a participant information sheet following completion of the screening tool as part of an informed consent process. Debrief will take the form of a thank you leaflet again outlining the aims of the research, providing contact details of the researcher and supervisor and useful numbers for Bus pass queries.</p> <p>Each new potential participant will be contacted via a telephone call, email, note through their door, or letter (<b>Appendix E</b>) depending on the information provided by the participant making the referral.</p> <p>This first contact will be to determine whether the person is interested in participating in the study by providing a brief explanation of the purpose and methods used. Following the initial contact, a letter, email or visit (depending on individual preference and circumstances) will <b>brief</b> participants (with Participant Information Sheet, Appendix B) about what participation involves. This will outline what participants might expect from taking part in the study, the possible benefits and any possible risks. Right to withdraw, data protection and anonymity will also be explained at this point. The researcher will ensure potential participants understand what they will be expected to do before continuing with participation. Once both researcher and participant are happy that informed consent has been understood, the researcher will ask the participant to take away the forms to read further and sign if happy to participate in the research. The participant will be asked to contact the researcher if they wish to continue, and a date will be made for participation to take place.</p> <p>Following participation, individuals will be given a debrief sheet (<b>Appendix F</b>) thanking them for taking part and reiterating the aims and use of the research.</p> <p>A Member validation process is intended, whereby all participants will be invited to comment on the main findings of the study, which will be included in the final report. This will be done with a presentation at the 'recycled teenagers and Age concern clubs, following analysis of the finding, ensuring confidentiality and anonymity, and one to one meetings with those who wish to opt to give this feedback (who are not members of the clubs or are unable to attend). Participants will also be informed that they may opt to receive a summary of the final report/PhD or copy of the full PhD if they wish.</p>
--

This table shows the comments made to amend first ethics application and the researchers' response.

Comment	Response
<p><b>Section 1:</b> To use these administrative datasets along with primary data collection and qualitative data analysis and modelling to directly compare the health of different types of users and non-users and to investigate how far the concessionary fares scheme allows older people to contribute to the wider economy. How is the health of types of users going to be linked to administrative data? More clarification needed on how these different types of data will be managed. Will the primary data collection be data-linked to the administrative data? If so, how will anonymity be managed as researcher is using personal networks? What datasets will be used?</p> <p>Aims to determine if the pass is reducing the likelihood of older people becoming socially excluded in later life by assessing the differences/ barriers to inclusion for users and non-users. Where does social exclusion come in? The title suggests the focus is health.</p>	<ul style="list-style-type: none"> <li>• This aim has been removed from the study as this is no longer the focus of this study at this point</li> <li>• The title is now 'The Health and Wellbeing benefits of the Concessionary Bus Pass'</li> <li>• The aim of the concessionary pass is to reduce social exclusion/isolation by encouraging older people to 'get out more' and lead richer social lives, leading to improvements in their mental as well as their physical health and wellbeing. It seems appropriate to assess the differences/barriers to inclusion for users and non-users</li> </ul>
<p><b>Section 2-</b> Lacks detail doesn't describe the overall design of the study.</p>	<ul style="list-style-type: none"> <li>• Detail added to section two</li> </ul>
<p><b>Section 3-</b> Not sure this describes the phases of the research more the stages of consent and process. Where does the analysis of the administrative data come in? Which phase will that be undertaken? More clarity and thought needed in this section as too many unanswered questions.</p>	<ul style="list-style-type: none"> <li>• Analysis of administrative data is no longer an aim of the study</li> <li>• Clarity added – methods of data collection and analysis explained.</li> </ul>
<p><b>Section 4:</b> How will confidentiality be maintained in public spaces?</p>	<ul style="list-style-type: none"> <li>• Content added to section – the researcher and participant will choose an area that is quiet. The conversation</li> </ul>



	will be stopped if members of the public can overhear it.
<b>Section 5:</b> No real exclusion criteria. States that concessionary pass is available to people with certain disabilities. What about people who are ageing with disability are they excluded? Or is it just younger users. Will non-English speakers be included? What about those with cognitive impairment? Needs to be more explicit in exclusion/inclusion criteria.	<ul style="list-style-type: none"> <li>• Exclusion/Inclusion criteria table added to section</li> <li>• Anyone over the age of 60 is eligible for a concessionary bus pass, regardless of disability.</li> <li>• Anyone under 60 is not eligible.</li> </ul>
Section 6: Here it states that sample will be drawn from personal networks. Is this data be data linked to the administrative data? This is not clear and if so how will confidentiality and anonymity be maintained. Too many unanswered questions need clarification.	<ul style="list-style-type: none"> <li>• This section has been updated. No data will now be linked to administrative data</li> </ul>
Terms such as 'recycled teenagers, the bus pass cowboys, age concern' need defining.	<ul style="list-style-type: none"> <li>• The Recycled Teenagers and The Bus Pass Cowboys are local clubs. Age concern is a charity that works with older people. This has been clarified below.</li> </ul>
<b>Section 7</b> This section states that: Observation, map data, interviews, conversations and stories told by participants to the researcher, also of interactions between participants' and other people (who have also consented). This wasn't mentioned previously. More detailed information needed on methods to be used, how the data will be merged and a proper timeline.	<ul style="list-style-type: none"> <li>• This has now been changed to interviews and map data</li> <li>• Data collection timeline added in section 3</li> </ul>
<b>Section 8-9</b> It is stated that the research will be conducted whilst carrying out normal routines and practices, the risks will mainly be the same faced in day-to-day life i.e., risks of falls, issues of road safety. Are these go along interviews? Will a risk assessment be required? How will risk be managed? How will it be managed if a participant falls? What about bias. If the sample is known to the researcher and she is a local councillor will she only get a 'socially desirable' response? <b>Researcher safety-</b> states that family members will know where the researcher will be? What about anonymity of the participant? This should be managed with the supervisor.	<ul style="list-style-type: none"> <li>• Section 8 has been updated</li> <li>• A risk assessment will be undertaken (see appendix H)</li> <li>• The researcher does not know the participants so well that any of them will be perceived as socially desirable.</li> <li>• Section 9 has been updated.</li> </ul>
<b>Section 12-</b> more detail on how capacity will be assessed	<ul style="list-style-type: none"> <li>• Detail added</li> </ul>
<b>Section 16</b> – needs more detail on how anonymity will be maintained. Will participants be given an ID number or pseudonym?	<ul style="list-style-type: none"> <li>• Added to the section: All data will be collected with a pseudonym</li> </ul>
<b>Section 17-</b> More detail on how data will be audio recorded and will the audio recording be destroyed once the data is transcribed? How long will the data be kept for. May be useful for student to read new GDPR regulations.	<ul style="list-style-type: none"> <li>• Section 17 has been updated.</li> </ul>
<b>Appendix 1-</b> screening tool –why is data being collected on receipt of benefits? How will this data be used? It's not mentioned elsewhere, and concessionary passes are age based not means tested. <b>Appendix 2 letter-</b> Shouldn't include personal mobile number. Should use supervisor work number as recommended by ethics panel or work phone if available. Need to be removed <b>Appendix 3</b> – doesn't mention the time limitation on withdrawal of data specified elsewhere in the ethics form. <b>Appendix 4-</b> No tick boxes but initials required <b>Appendix 9</b> travel diary consent- initialled boxes not tick boxes	<ul style="list-style-type: none"> <li>• This question has been removed from the screening tool</li> <li>• This number is the researchers work telephone number</li> <li>• Time limitation now added</li> <li>• Initials now added</li> <li>• Initials now added</li> </ul>

## 8.2 Appendix Two: Screening Tool

Hello, my name is Kelly Roberts, and I am a student based at Swansea University. I am currently completing a PhD about bus travel and the health benefits of the Concessionary Bus Pass. The aim of this questionnaire is to identify whether you are a bus user and ask some initial questions about you. To help me complete my research, please answer the questions below. You are not obliged to complete this questionnaire and the information you provide will be anonymised in my research project to protect your identity.

Q1. What is your age? 18-30/31-59/60-74/75+/prefer not to say

Q2. What is your gender? Male/Female/prefer not to say

Q3. What is your marital status? Married/Cohabiting/Single/Widowed/divorced

Q4. Are you currently employed? Yes/No

Q5. Do you have a concessionary bus pass? Yes/No

Q6. Do you travel by bus at all? If no move to question 7 Yes/No

If yes, how many times per week?.....

Q7. Do you own and drive a car? If yes move to question 8 Yes/No  
If no, did you used to own and drive a car? Yes/No

Q8. Which of the following describes your current state of health? Very good/good/fair/poor/very poor

Q9. Which of these best describes the area you currently live? Urban/Rural/Town

Thank you for taking the time to complete this questionnaire.

I would like to now ask whether you would be willing to take part in an informal interview with me as part of my research project. If so, please leave your contact details below and I will send you further information about the study and how you can get involved. Please note: the information that you provide here and, in the interview, will be anonymised in my research project to protect your identity and won't be shared with anyone outside of the research team (myself and my supervisor).

### Contact details:

Name: .....

Address: .....

Tel Number: .....

### 8.3 Appendix Three: Participant letter

Dear

**RE Participant in research project**

I am a PhD research student at Swansea University undertaking research on the Concessionary Bus Pass in Wales.

I am writing to ask whether you would be willing to volunteer to be interviewed as part of my research. The interview will take approximately 1-2 hours and any information given during the interview will be kept private, anonymous, and confidential.

Your participation will be on a voluntary basis, and you have the right to withdraw from the interview and process at any time with no obligation.

I have enclosed an information sheet describing in more detail what the research is about.

If you would like to take part in this study, please could you return the 'consent form' attached with this letter in the stamped and addressed envelope provided.

Your participation in this research would be very much appreciated.

Thank you for your assistance

Yours Sincerely

Kelly Roberts  
Research student



## 8.4 Appendix Four: Participant Consent Form

### Consent Form

Name: \_\_\_\_\_

Email: (Optional) \_\_\_\_\_

Age \_\_\_\_\_

Male/Female \_\_\_\_\_

I agree to take part in the above research. I have read the Participant Information Sheet, which is attached to this form \_\_\_\_\_ (Please initial)

I understand what my role will be in this research, and all my questions have been answered to my satisfaction \_\_\_\_\_ (Please initial)

I understand that I am free to withdraw from the research at any time, for any reason and without prejudice \_\_\_\_\_ (Please initial)

I have been informed that the confidentiality of the information I provide will be safeguarded \_\_\_\_\_ (Please initial)

I understand I am free to ask any questions at any time before and during the study. \_\_\_\_\_ (Please initial)

I have been provided with a copy of this form and the Participant Information Sheet. \_\_\_\_\_ (Please initial)

Data Protection: I agree to the University processing personal data that I have supplied. I agree to the processing of such data for any purposes connected with the Research Project as outlined to me.

Name of participant  
(print)..... Signed.....Date.....

Witnessed by:  
(print)..... Signed.....Date.....

## 8.5 Appendix Five: Travel Diary Questions

Example: outbound journey

Day 1: journey outbound

Date: .....

Q1. Where did you get on the bus? .....

Q2. Where did you get off the bus? .....

Q3. What is the main reason for your bus journey today?.....

Q4. What time did you get on the bus today? Please circle

Before 9.30    9.30 – 12.30    12.30-15.30    15.30-18.30    After 18.30

Q5. What time did you get off the bus today? Please circle

Before 9.30    9.30 – 12.30    12.30-15.30    15.30-18.30    After 18.30

Q6. How far did you walk to the bus stop?

Less than half a mile                      1 mile+                      More than 2 miles

Q7. How far did you walk to your destination when you get off the bus?

Less than half a mile                      1 mile+                      More than 2 miles

Q8. How would you describe the quality of your journey? Circle all appropriate answers

Comfortable    Uncomfortable    Crowded    Satisfactory    Unpleasant

Any further comments.....

Q9. Has any part of your journey on the bus been difficult today?      Yes / No

If yes, what? .....

Q10. Would weather affect your decision to travel on the bus today?    Yes / No

If yes, why? .....

Q11. Would you have travelled on this bus today if you had to:

a) Change bus to get to your destination Yes / No                      b) Pay Yes / No

c) If it was dark/late Yes / No                      d) Carry shopping/other items Yes / No

Q12. Had you been unable to travel by bus today, what other transport method could you have used? Please circle

Car (drive/lift)                      Walk                      Cycle                      Taxi                      Rail  
Paid bus journey                      Would not have travelled                      other.....

Q13. Are there any other comments about your journey that you would like to note?

.....  
.....

## 8.6 Appendix Six: Travel Diary Consent Form and risk assessment

I agree to complete a travel diary for seven days. I have read the Participant Information Sheet, which is attached to this form \_\_\_\_\_ (Please initial)

I understand what my role will be in this research, and all my questions have been answered to my satisfaction \_\_\_\_\_ (Please initial)

I understand that I am free to withdraw from the research at any time, for any reason and without prejudice \_\_\_\_\_ (Please initial)

I have been informed that the confidentiality of the information I provide will be safeguarded \_\_\_\_\_ (Please initial)

I understand I am free to ask any questions at any time before and during the study. \_\_\_\_\_ (Please initial)

I have been provided with a copy of the Travel diary and Participant Information Sheet and am happy to continue as a participant in this research \_\_\_\_\_ (Please initial)

Data Protection: I agree to the University processing personal data that I have supplied. I agree to the processing of such data for any purposes connected with the Research Project as outlined to me.

Signed..... Date.....

### Risk Assessment

To be completed by the participant and researcher before completing the travel diary

Name: .....

Any Emergency Medication Carried: .....

Name of Emergency Contact: .....

Telephone number: .....

Address: .....

Relationship: .....

What are the Hazards?	Who might be harmed and how?	What needs to be done to manage the risk?	Likely Occurrence
Risk of falling	Participant	Do not complete the travel diary while walking to reduce the likelihood of falling.	1
Road Safety	Participant	To ensure your safety do not complete the travel diary while walking on the public highway.	1

Score	3	2	1
Likely Occurrence	Highly Likely	Possible	Unlikely

## 8.7 Appendix Seven: Participant Information Sheet

Thank you for volunteering to take part in a Research Study. This sheet tells you more about the research you have agreed to take part in. Please ask if there is anything that is not clear to you, or if you would like more information.

### **What is the purpose of the study? What are we looking at?**

The reason for the research is to look at how people experience using the concessionary bus pass and to understand if the pass is improving the quality of life of older people by examining and evaluating why pass holders are/are not using their passes in the context of their daily lives and the benefits derived from its use.

The research is being conducted by Kelly Roberts as part of her PhD (Doctorate) in Gerontology. Her supervisor is Dr. Charles Musselwhite who is an Associate Professor in Gerontology at the Centre for Innovative Ageing (CIA) at Swansea University. Contact details are at the end of this form.

### **Why have I been chosen to take part?**

This research is seeking to understand the everyday experience of anybody over 60 years of age who uses public transport or a car in their daily lives.

### **What will be required of me if I take part?**

You will be asked to take part in an interview with Kelly Roberts and following this to complete an activity map of your day to day travels. This will help to create a picture of the places different people go to and whether there are places people who use the bus pass avoid. Your name and identity will not be associated with the information you provide.

### **What are the possible benefits, disadvantages and risks of taking part?**

This research aims to understand how people over the age of 60 travel and why. Planning and policymakers often assume what it is like to travel as an older person, so it is important to clarify what the reality is.

You may consider the inconvenience of giving up some of your time. However, we hope that participants will find the experience interesting and rewarding.

If you choose to withdraw from the study, we can destroy all the information collected and will not use it, unless you are happy for us to retain it.

### **Do I have to take part?**

No. Taking part in this study is completely voluntary. You can decide not to take part at any time. You will be given this information sheet to keep and will be asked to sign a consent form.

You can change your mind at any time up to the start of data analysis (one month after your interview has been recorded) and withdraw without giving us a reason. If you withdraw, we would destroy any information (data) that you have given us. To withdraw contact one of the named people at the end of this form.

On the day, you can opt not to answer any particular question, ask to take a break or

reschedule your participation.

**Will my taking part in this study be kept confidential?**

Yes. All the information gained through the research will be kept strictly confidential. Your personal details will be accessible to the main researcher on the project, Kelly Roberts, and her supervisor Charles Musselwhite only. As soon as your information is analysed, it will be anonymised so your name will not be associated with the information you have given. Electronic data held on computers will be password protected. Procedures for handling, processing, storage and destruction of your data will be compliant with the Data Protection Act 1998. All data will be destroyed at the end of October 2020, which will be a year after the research is completed.

**What will happen to the results of the research study?**

The results will form the basis of an PhD Thesis at Swansea University.

We hope that the research findings will add to the growing body of knowledge relating to social inclusion and mobility, and help to inform policymakers.

Thank you for taking the time to read this information. If you have any further queries please contact Kelly, who will do her best to answer any questions you may have.

Her contact details are:

Kelly Roberts  
PhD Researcher  
Swansea University  
Email: [REDACTED]

For any additional information, please contact Kelly's supervisor:

Dr. Charles Musselwhite,  
Associate Professor of Gerontology,  
Swansea University, Singleton Park, Swansea SA2 8PP.  
Email: [REDACTED]



## 8.8 Appendix Eight: Participant debrief information sheet

Thank you for volunteering to take part in a Research Study. This sheet tells you more about the research you have taken part in.

### **The aims of the research**

This research is looking at how people over 60 experiences using their concessionary bus pass. As you were informed before agreeing to take part, the research aims of this study will be to understand if the concessionary pass is improving the quality of life of older people by examining and evaluating why pass holders are using their passes in the context of their daily lives and the benefits derived from its use. The best way to know how well included people are, and how easy or difficult it is to get around in their everyday life, is to ask them, which is what this research does.

The researcher (Kelly) will be happy to present a summary of her findings when she has finished processing the information she has collected. This will give you a chance to give her feedback on what she has found out. A summary of the findings can also be sent to you in written form, or you can receive a copy of the PhD Thesis if you would like to. Please let Kelly know if you would like to receive either of these options.

### **Will my taking part in this study be kept confidential?**

Yes. All the information gained will be kept strictly confidential. Your personal details will be accessible to the main researcher on the project, Kelly Roberts, and her supervisor Charles Musselwhite only. Electronic data held on computers will be password protected. Procedures for handling, processing, storage, and destruction of your data will be compliant with the Data Protection Act 1998. All data will be destroyed at the end of September 2020 which will be a year after the research is completed.

### **What will happen to the results of the research study?**

The results will form the basis of a PhD thesis at Swansea University. The information collected from people who use the concessionary bus pass will be used to add to the growing body of knowledge relating to social inclusion and mobility.

Thank you for taking the time to read this information and choosing to participate. We hope that you have found the experience interesting and rewarding.

If you have any further queries please contact Kelly, who will do her best to answer any questions you may have. Her contact details are:

Kelly Roberts  
PhD Researcher  
Swansea University  
Email: [REDACTED]

## 8.9 Appendix Nine: Interview Prompt Changes Post Pilot Study

	Note: refer to screening tool to determine age/user/non-user/weekly use/car owner/current driver/health/residential area. Bus pass users, non-drivers (UND) AND User Drivers (UD)	
Section	Pre-Pilot Interview	Post Pilot Interview
A: Travel history pre bus pass	<ul style="list-style-type: none"> <li>You have indicated that you have a concessionary bus pass.</li> <li>How often did you use the bus (PW) before you received your free bus pass?</li> <li>What was the main reason you used the bus for before you received your free bus pass? (If applicable)</li> <li>Where would you usually travel by bus?</li> <li>What are your experiences of bus use when using the free bus pass</li> </ul>	<ul style="list-style-type: none"> <li>You have indicated you used to drive a car. Can you tell me why you no longer drive? (Affected daily life? Travel patterns?)</li> <li>Did you use the bus at all when you had access to a car?</li> <li>What would you say you mainly used the bus for before you received your bus pass, and how often? (If applicable)</li> <li>Was the cost of travelling by bus preventing you from using this mode at all?</li> <li>How long have you been using your bus pass?</li> <li><b>or</b></li> <li>You have indicated you did not used to drive before having your bus pass:</li> <li>Have you always used the bus to travel?</li> <li>What would you say you mainly used the bus for before you received your bus pass and how often? (If applicable)</li> <li>Was the cost of travelling by bus preventing you from using this mode at all?</li> <li>How long have you been using your bus pass?</li> <li><b>UD</b></li> <li>You have indicated you own and drive a car. How often do you use your car each week?</li> <li>Did you use the bus at all before having the bus pass?</li> <li>What would you say you mainly used the bus for before you received your bus pass and how often? (If applicable)</li> <li>Was the cost of travelling by bus preventing you from using this mode at all?</li> <li>How long have you been using your bus pass?</li> </ul>
Current Usage: day to day	<ul style="list-style-type: none"> <li>How often do you use your free bus pass per week?</li> <li>Would you travel as you do by bus if you did not have the bus pass?</li> <li>Are you a car user?</li> <li>What do you mainly use the free pass for?</li> <li>Do you use the bus more now that you have a free bus pass?</li> <li>Has having the free bus pass changed how you travel (by bus)</li> <li>Do use the bus more now?</li> <li>Do you meet up with friends (family) on the bus?</li> <li>Without free travel, do you think you would change the things you do or how you travel? (Less likely to spread out the trips made)?</li> </ul>	<ul style="list-style-type: none"> <li>How often do you use the bus each week? (Purpose – leisure/shopping – explore)</li> <li>Has your bus usage changed since having the bus pass? (Prompt – destination in mind/order of trips organised/times/activities)</li> <li>Do you spread your trips out over the week?</li> <li>Would you travel by bus as often as you do if you did not have the bus pass? (Why – what would change?)</li> <li>Do you find it easy to find information about bus timetables/stops/information? (Prompt: ask about day/night, bus stop vs bus station, online vs paper timetable)</li> <li>What other methods of travel are available to you, for example if you were not able to use the bus (or car if applicable)?</li> </ul>
Current usage: reason	<ul style="list-style-type: none"> <li>You use your bus pass <b>xx</b> times per week. Would this be the same if you if you did</li> </ul>	<ul style="list-style-type: none"> <li>What do you mainly use the bus for? (Prompts – tell me more about this - note differences between leisure/shopping/appointments)</li> </ul>

<p>s for travel</p>	<p>not have a bus pass? If yes/no, why? (Is this because it is free)? How would you have made these journeys? Would you still travel to do these things if there was no longer a free bus pass?</p> <ul style="list-style-type: none"> <li>• Are you making some trips because it's free?</li> <li>• Would you say you do activities by bus that you didn't do before you had a free bus pass?</li> <li>• Do you use your bus pass for leisure and holidays?</li> </ul>	<ul style="list-style-type: none"> <li>• You use your bus pass <b>xx</b> times per week. Would this be the same if you if you did not have a bus pass? If yes/no, why? <ul style="list-style-type: none"> <li>○ Prompts: can you tell me more about that please? Why wouldn't you/would you make the journeys? How would you have made these journeys?</li> </ul> </li> </ul> <p><b>Or UD</b></p> <ul style="list-style-type: none"> <li>• What do you mainly use the bus for? (Prompts – tell me more about this - note differences between leisure/shopping/appointments)</li> <li>• As you drive, are there any trips you prefer to take by car? If yes/no, <b>why?</b></li> <li>• You use your bus pass <b>xx</b> times per week. Would this be the same if you if you did not have a bus pass? If yes/no, why? <ul style="list-style-type: none"> <li>○ Prompts: can you tell me more about that please? Why wouldn't you/would you make the journeys? How would you have made these journeys?</li> </ul> </li> </ul>
<p>Current usage: comparisons</p>		<ul style="list-style-type: none"> <li>• What prompted you to get a bus pass?</li> <li>• Do you find it easier to use the bus now, compared to when you first started using the bus? If yes/no, why? (Prompts – is this related to the built environment? Bus itself?)</li> </ul>
<p>Current usage: companion travel</p>		<ul style="list-style-type: none"> <li>• Do you travel alone when using the bus? Yes/no, why? (Prompt – difficulty if alone/ease if companion?)</li> <li>• What are the main differences for you when travelling alone by bus than with a friend, or family member for example?</li> <li>• Are you more likely to travel by bus if you have a companion or are going to meet someone? Prompt: where do you meet - on the bus – prompt for positives/negatives.</li> </ul>
<p>Current usage: built environment/length of travel?</p>		<ul style="list-style-type: none"> <li>• How far do you walk to the nearest bus stop from your home?</li> <li>• What about returning home? Depending on where you go, do you find bus stops easily accessible? <ul style="list-style-type: none"> <li>○ Prompt: condition of bus stops/does this make a difference to where you choose to travel?</li> <li>○ Prompt: what about walking to and from the bus stop/the facilities available?</li> </ul> </li> <li>• Do you use your bus pass outside of your local area, for leisure and holidays? <ul style="list-style-type: none"> <li>○ Prompt: is this something you do with family/friends/other pass users?</li> <li>○ Prompt: car user – why did you use the bus for these trips as opposed to the car?</li> </ul> </li> <li>• When using your pass how far do you travel each way (prompt for average miles, difference between travel for leisure purpose/shopping/hospital appointments)</li> </ul>
<p>Current usage: the buses themselves</p>		<ul style="list-style-type: none"> <li>• Have you encountered any issues when on board a bus? <ul style="list-style-type: none"> <li>○ Prompt: difficulty getting on/off, when carrying shopping</li> <li>○ Prompt: signage/lighting/comfort</li> <li>○ Prompt: bus drivers/passengers</li> </ul> </li> <li>• Have you encountered any positive experiences when on</li> </ul>

		board a bus? Can you tell me more?
current usage: contributions to quality of life	<ul style="list-style-type: none"> <li>• What does having a good quality of life mean to you?</li> <li>• Does having free travel improve or maintain your quality of life?</li> <li>• What stops you from using the bus?</li> <li>• What recommendations do you have about the bus service?</li> <li>• Would changes to the bus pass policy would have a negative effect on your quality of life (for example if you had to pay a small fee per trip).</li> </ul>	<ul style="list-style-type: none"> <li>• What does having a good quality of life mean to you? – prompt on key words – family/friends (do you travel to see them etc.)</li> <li>• What does having the bus pass mean to you?</li> <li>• Has having and using a bus pass improved or maintained your quality of life? Prompt: can you tell me more about that? Health and wellbeing</li> <li>• What are the main things that would stop you from using the bus?</li> <li>• What recommendations do you have about the bus service?</li> <li>• Do you take part in any local activities (such as join community events)? If no, why not, if yes, do you travel by bus to get to these events? <ul style="list-style-type: none"> <li>○ Prompt: has having the bus pass enabled this to continue?</li> </ul> </li> </ul> <p><b>Or UD</b></p> <ul style="list-style-type: none"> <li>• Are there certain trips or activities you take part in that you make by bus as opposed to the car?</li> <li>• Has this given you opportunities? Prompts - to meet new friends or make new ones</li> </ul>
End	Do you have any other questions or further comments to make?	
Follow up	Would you be willing to complete a seven-day travel diary?	