LIFE SPACE MOBILITY AND QUALITY OF LIFE OF OLDER ADULTS IN A RURAL CONTEXT

A qualitative research in the village of Vlagtwedde

Daniëlle Ruikes
S2734974
Supervisor: Bettie Oosterhoff
Population Studies
University of Groningen
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university of groningen

faculty of spatial sciences

Abstract

The population in the Netherlands continues to age in the coming decades. Earlier research has shown that a lot of these older adults will face serious mobility issues, which may influence their quality of life. These mobility issues may vary in different life spaces and across space. The objective of this research is to get a better insight in the role of life space mobility in the quality of life of older adults in Vlagtwedde. A literature review has been conducted to develop a conceptual model, based on theory concerning life spaces, dimensions of mobility, and domains of quality of life. This model includes three life spaces (outside the house; the neighbourhood; the town), five dimensions of mobility (access to desired places and people; psychological benefits; exercise benefits; involvement in the local community; potential travel), and six domains of quality of life (emotional wellbeing; interpersonal relation; material wellbeing; physical wellbeing; self-determination; social inclusion), as these are considered important in the role of life space mobility in quality of life.

The model was used to compose the interview guide for conducting semi-structured in-depth interviews and follow-up walking interviews. In total twelve in-depth interviews and five walking interviews are conducted. Participants were older adults that are 65 years or older, mobile or less mobile, living still independently in the village of Vlagtwedde.

The findings show that all five dimensions of mobility are important, although not only in these three life spaces of the model but also in three other spaces. Moreover, not all six domains of quality of life have the same impact and religion was identified as an inductive seventh important domain. Mobility plays an important role in some domains of quality of life, but not in the overall quality of life. There is a mutual relation, and therefore, the different domains of quality of life play a role in the different dimensions of mobility too. Three other important inductive themes that could be identified are 'activities', 'important ideals', and 'dealing with changes'. Therefore, an adjusted model is developed.

This study contributes to policymaking and to existing literature, because it shows how dimensions of mobility in different life spaces play a role in the different domains of the quality of life of older adults in a rural context. In this ageing population policymaking should focus on accessible amenities, suitable housing, places for volunteering and activities, proper walking- and biking paths, street safety and the use of public transport. Future research could address other villages or different regions to investigate whether the outcomes of the study in this context are indicative for other contexts.

Keywords: mobility, life space, quality of life, older adults, rural context

Acknowledgements

Table of contents

List of tables and figures

1. Introduction

1.1 Background

The population in the Netherlands continues to increase the coming years. In 2017 the total number of people that lived in the Netherlands was 17,081,507. According to the population projections this number will increase to 18,293,320 in 2040 (CBS, 2017c). This is an increase of 7.09%. In addition to this population growth, ageing is also occurring. In 2017 the percentage of people that were 65 years or older was 18.5% (CBS, 2017a). The population projections show that this percentage will continue to grow the coming years. The peak of this increase will be reached in 2040. By then, 26.2% of the people in the Netherlands will be 65 years or older (CBS, 2017c). Therefore, the growth of the population consists for a large part of the increase in older people. The growth in the percentage of people over 65 is partly due to the fact that life expectancy at birth has increased tremendously in recent years. In 2001 the life expectancy at birth was 75.8 years for males and 80.7 years for females. In 2016 the life expectancy at birth for males was 79.9 years and for females 83.1 years. Despite this, the life expectancy in well-experienced health is lower and remained relatively stable in previous years. The life expectancy in well-experienced health at birth for males was 64.9 years and for females 63.3 years in 2016. There will be an increasing amount of Dutch people in poor health, because of this continuous increase in life expectancy at birth and the relative stability of the well-experienced health at birth (CBS, 2017b).

This ageing of the population has various implications for society. This ageing population that spends longer in poor health causes a great concern about the potential rise in the number of people facing age-related disabilities (Metz, 2000). More people living longer in poor health causes that more people will face mobility issues (PBL, 2013). Older adults face age-related disabilities, such as mobility reductions. As a result of these disabilities they have a lower capacity to move within and outside their homes (Ziegler & Schwanen, 2011). The prevalence of disability is closely related to age. In the Netherlands one out of ten older adults between 65 and 74 years old that do not live in institutions or care homes experience serious mobility issues. Regarding adults who are 75 years or older, two out of ten experience serious mobility issues. In daily life these issues consist of problems with walking, lifting and bending (CBS, 2004). When people reach older ages, mobility reductions become more evident. Therefore, when the group of older people is increasing, the group of people with mobility reductions also increases (Alsnih & Hensher, 2003).

People with serious restrictions in their mobility are more often less satisfied with their overall quality of life and have less social contacts than people without mobility restrictions (CBS, 2004). In academic research from different fields there is also a growing interest in older adults' everyday mobility outside the home. In these studies, the relationship between mobility and quality of life in older ages is shown as a positive relationship (Bannister & Bowling, 2004; Metz, 2000; Spinney et al., 2009; Ziegler & Schwanen, 2011). Therefore, with the increasing life expectancy, more people will live in poor health with mobility reductions, which will cause an increase in the group of people that experience a lower quality of life.

With this increase in mobility reductions and the increase of people that experience a lower quality of life it is important to look at factors that can contribute to the mobility of people. Physical built environments and social environments may contribute to the health and mobility of people. Among older adults it is particularly relevant how the close environment influences health, because this age group may be more bounded to a place than younger age groups. A consequence of this is that the influence of the living conditions of the environment can increase when people become older (Kestens et al., 2016). Several studies (Peel et al., 2005; Webber et al., 2010) have been done about how mobility reductions can lead to limitations in

accessing different life spaces. Life spaces are the entire environment that surrounds individuals. Different zones of the environment have different influences on mobility, therefore it is important to look at the life spaces separately when studying mobility. When studying the influence of the environment on phenomena in demographic ageing research, the focus is often on national trends and urban contexts instead of regional, local and rural contexts. Experiences and consequences of ageing will vary across space and therefore there are a lot of opportunities for doing research in more rural contexts. This adds to the field of literature that concentrates on urban contexts and may create a broader understanding of different contexts, instead of focusing on one part of the story (Stockdale, 2011).

Percentage of people in the Netherlands that are 65 years or older on a municipal level (2017)
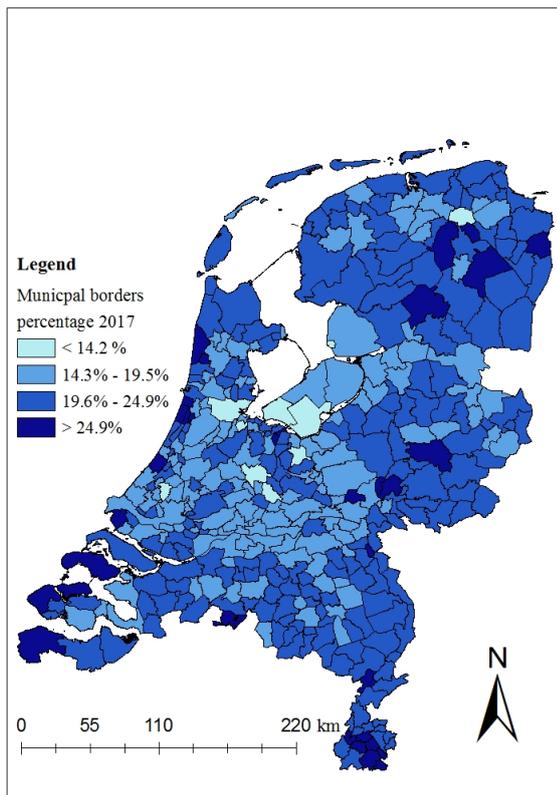
Percentage of people in the Netherlands that are 65 years or older on a municipal level (2040)

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Municpal borders
percentage 2017
- < 14.2 %
- 14.3% - 19.5%
- 19.6% - 24.9%
- > 24.9%

Legend
Municipal borders
percentage 2040
- < 21.3%
- 21.4% - 27.1%
- 27.2% - 32.9%
- > 32.9%
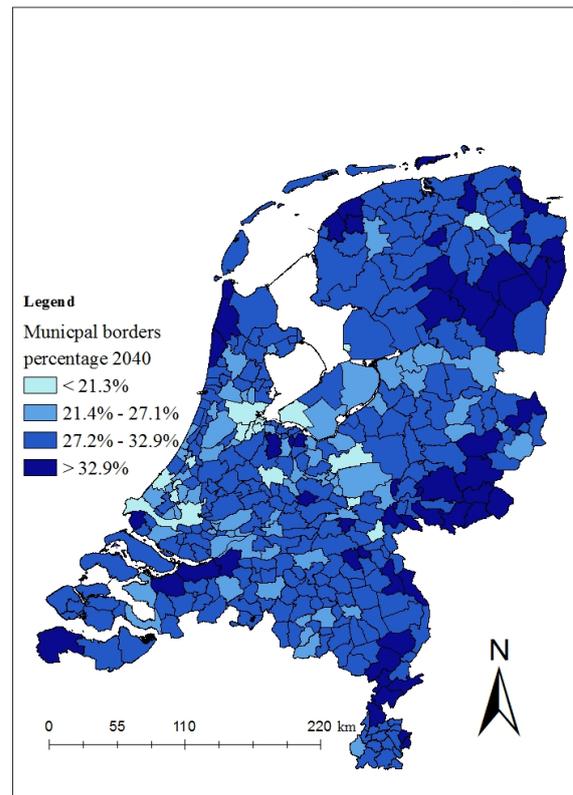
Figure 1 and 2 | Percentage of people in the Netherlands that are 65 years or older in 2017 and 2040 | Maps made with ArcGIS | Source data: CBS (2017d)

Since less attention has been paid to the ageing population in rural areas, this research focuses on how older adults experience the role of mobility in their life spaces in their quality of life in a rural area. In the Netherlands rural or non-urban areas are defined as areas were the 'address density' is less than 500 addresses per square metre (SER, 2009). The share of older adults in the Netherlands is traditionally highest in border areas, for example the eastern part of the province of Groningen. The people in these border regions are generally older than the national average and will continue to age in the next decades, as shown in figure 1 and 2 (CBS, 2011). Therefore, the focus of this research is the village of Vlagtwedde, a rural village in East-Groningen. In 2017 around 3,400 people were living in Vlagtwedde. Since 1 January 2018, Vlagtwedde belongs to the municipality of Westerwolde. This municipality consists of the former municipalities Bellingwedde and Vlagtwedde. Table 1 shows the population prognosis of the municipality of Vlagtwedde according to this old municipal classification (CBS, 2017d; Provincie Groningen, 2018).

Population	2017	2025	2040
Total population	18,900	17,800	14,600
Population aged 65 years and older	3,900	4,600	5,500
Percentage of people aged 65 years and older	20.63%	25.84%	37.67%

Table 1 | Total population and population aged 65 years and older according to the municipal classification of 2015 | Source: CBS (2017d)

1.2 Problem statement

It has become clear that an ageing population results in a larger share of people in the population that are in poor health (CBS, 2017b). As statistics and earlier research showed this may influence the mobility and the experienced quality of life (Bannister & Bowling, 2004; CBS, 2004; Metz, 2000; Spinney et al., 2009; Ziegler & Schwanen, 2011). It is important to look at both the physical and social environments in the different life spaces, because these may contribute differently to the health and mobility of older people (Kestens et al., 2016). Since consequences of an ageing population will vary across space and the rural context is less researched in this field there are a lot of opportunities for ageing research ahead (Stockdale, 2011). Creating a better understanding of how older adults in a rural context experience their mobility and how this affects their quality of life can contribute to this existing field of literature and to policymaking.

1.3 Objective and research questions

In this research, in the field of ageing, the goal is to create a better understanding of how older adults living in a rural context experience their mobility in their near surroundings and what role this plays in their quality of life. The following question is leading for this research:

How do older adults in the village of Vlagtwedde experience the role of life space mobility in their quality of life?

The central research question will be answered through the following sub-questions:

1. How do older adults perceive their life space mobility?
2. How do older adults experience their quality of life?
3. How do older adults perceive their life space as contributing to their mobility and quality of life?

1.4 Outline

In the coming sections of this thesis an answer will be sought for the research questions that are formulated above. First, the existing theories about life spaces, mobility and quality of life of older adults will be discussed and a literature review will be conducted about the relations that are found between these aspects. This is the basis for the conceptual model that is used in this research. Then, the research design will be discussed, including the research location, data collection, the participant recruitment, data analysis, reflections and ethical considerations.

Thirdly, the research findings of the interviews will be presented. This will be followed by a discussion section. Finally, conclusions will be drawn and recommendations for future research as well as policy will be presented. Figure 3 shows the outline of the research.

| Introduction | Theoretical framework | Research design | Findings | Discussion and reflection | Conclusion and recommendations |

Figure 3 | Outline of the research

2. Theoretical framework

2.1 Theory

2.1.1 The life space framework

Various definitions of the life space of a person have been developed that vary over time and across research. The term is generally used to denote the extensive environment that surrounds an individual (Brackett & Mayer, 2007). Initially the term was conceptualized by Lewin (1936) as the totality of factors that influences a person. He saw the life space as the first requirement for understanding actions of individuals. Life space was divided in the physical world, psychological world and imaginary world. In the end he never provided guidelines for what is and what is not part of the life space. After this, other researchers borrowed and redefined the concept of life space and made a prime structure for the concept (Brackett & Mayer, 2007). This led to four domains that surround a person. The first domain, biological, consists of the physical attributes of an individual. The second domain, situational elements, consists of the surroundings in which an individual interacts. The third domain, interactive, consists of the individuals' interactions with other individuals. The fourth domain, incorporative, consists of the interaction of the individual with socio-cultural groups. These four domains could assess the life space of an individual (Mayer et al., 1998). Mayer et al. (1998) used these life spaces to provide a comprehensive and thorough understanding of the daily contexts of college students' lives. In this way the study could discover what the students own, what they do in their daily life, which relations they have and what groups they belong to. This shows that the life space can provide an in-depth description of the lives of people in their daily context (Bracket & Mayer, 2007).

After these first conceptualizations, the framework is used to evaluate the mobility of people. When mobility is assessed in the life space, the mobility is seen as a pattern of areas that are defined by the distance extending from the location where a person lives. Therefore, the life space was divided into six concentric zones, that expresses the surroundings of an individual. From the inner to the outer circle the zones are: the bedroom, the home, outside the house, the neighbourhood, the town and the unlimited zone, shown in figure 3 (Peel et al., 2005). Requirements for independent mobility increase with every expansion of the concentric zones (Webber et al., 2010). In the life space the mobility of people can be documented based on how far and how often they travel to different zones and if they need any assistance to get to a particular zone. This life space model was created to assess the mobility of older adults in their homes and their environments (Peel et al., 2005).

Since these different zones have different influences on how often and with how much independence older adults can travel to each zone, all the zones are important to research. But the spaces surrounding the house, in the neighbourhood and the in village are often the places were older adults will spend most of their time. Therefore, it is particularly relevant to study the close environment of older adults, because this age group may be more bounded to a place than younger age groups (Kestens et al., 2016; Wahl & Oswald, 2010). Besides this, this research is about the rural context, therefore the bedroom, home and unlimited will not be included in the research since these do not have specific rural characteristics.
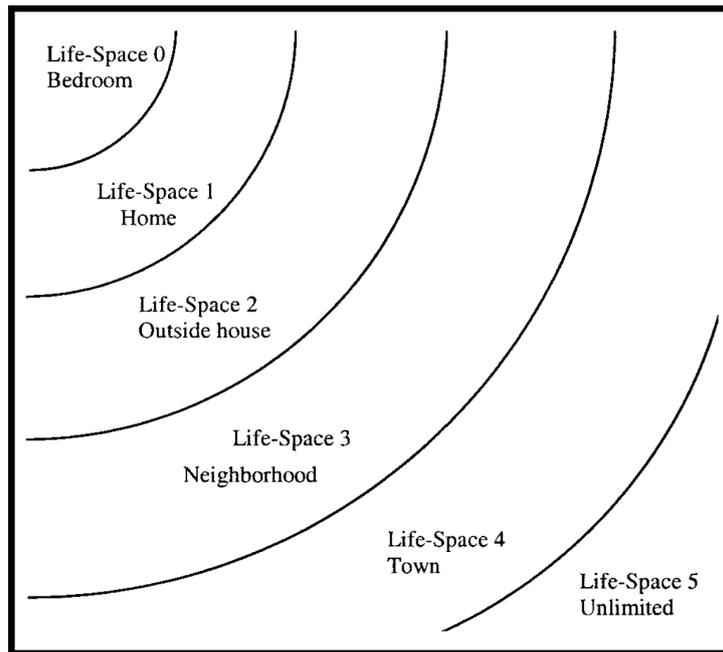
Figure 4 | The life space framework | Source: Peel (2005)

2.1.2 Dimensions of mobility

Older adults often report limitations in their mobility. The definition used to identify limitations is important when looking at the prevalence of mobility restrictions. The definitions in the existing literature vary from broad to narrow (Webber et al., 2010). Ziegler & Schwanen (2011) reviewed definitions of mobility in academic literature about ageing. Mobility is primarily understood as movement in the physical space. There are three understandings of mobility as movement in the physical space that are leading in research: actual realised movement, potential for movement, and physical functioning. These three definitions have several similarities. The focus on movement from A to B, the focus on movements to daily activities, and they have no attention for older adults' own experiences of movement. In the literature review of Nordbakke & Schwanen (2014) about wellbeing and mobility they also identified mobility as potential movement and actual movement, both accessing destinations and during the movement. Webber et al. (2011) provides a more expansive definition for mobility and, besides the movements, also adds cognitive, psychosocial, physical, environmental, and financial influences as key determinants of mobility. How important each determinant is, depends on the different life space where the mobility takes place.

Alsnih & Hensher (2003) and Metz (2000) created a more comprehensive, almost similar to each other, definition that divides mobility in different dimensions. To a large extent these dimensions correspond to the key determinants of Webber et al. (2011), but these dimensions of mobility are especially focused on the mobility of older adults. According to Alsnih & Hensher (2003) the five dimensions that should be considered are: access to destinations, psychological benefits of travel, benefits of physical movement, maintaining social networks, and potential travel. This concept was particularly developed for transport mobility and derived from the concept that Metz (2000) developed. Researchers should focus on the causes of and responses to impairment and disability in these five dimensions (Alsnih and Hensher, 2003). Metz (2000) wanted to capture the key elements of mobility, since this is a common human experience, to allow for a valid empirical measurement of the concept. Therefore, the following five key elements of mobility are important when looking at mobility in later life: travel to achieve access to desired people and places, psychological benefits of

movement – "getting out and about", exercise benefits, involvement in the local community, and potential travel. Existing literature often overlooks the psychological benefits of movement and benefits from involvement in the local community. This comprehensive concept of mobility is needed to allow valid empirical measurement of mobility.

Since this research focuses on the mobility of older adults, the definition of mobility that will be used is a definition that takes the own experience of older adults into account and that provides a valid measurement to qualitatively research the role of mobility in the quality of life of older adults. Therefore, the five dimensions of Alsnih & Hensher (2003) and Metz (2000) are used (table 2).

Dimensions of mobility	Explanation
Travel to achieve access to desired people and places	Derived demand for which the aim is to minimise the associated costs of the travel
Psychological benefits of movement – "getting out and about"	More general benefits of going out
Exercise benefits	Muscle and bone exercises that are part of the everyday life
Involvement in the local community	Yielding benefits from informal local support networks and social activities
Potential travel	Knowing that you could make a trip even if it is actually not undertaken

Table 2 | The five key dimensions of mobility (Alsnih & Hensher, 2003; Metz, 2000)

2.1.3 Quality of life concept

Different fields in the academic world researched the quality of life of people. Economics, human geography, psychology, health and gerontology studies have shown interest in this topic (Ziegler & Schwanen, 2011). Because quality of life is studied in this wide range of academic disciplines the definition of quality of life has become diverse and sometimes contradictory in the existing literature. This is partly due to the complexity of the concept and can make it difficult to grasp what researchers are talking about and if they are talking about the same concept (Norbakke & Schwanen, 2014). Although many studies focused on the quality of life, studies about the quality of life of older people and what this means for them was less common (Borglin et al., 2005; Bowling & Gabriel, 2007). Yet, there may be a shift in the importance of different domains of quality of life when people become older. Whereas younger people considered relationships, work, finance, and happiness to be more important, older people seemed to emphasise health more (Borglin et al., 2005). According to Browne et al. (1994) the importance of different domains of quality of life can even change over time in the older age group.

The interest in the quality of life of older adults has increased, due to the rising number of older adults and their expectations of living a good life (Gilroy, 2008). Several studies (Borglin et al., 2005; Bowling & Gabriel, 2007; Browne et al., 1994; Elo, 2011; Gilroy, 2008; Vanleerberghe, 2017) showed the quality of life criteria that were identified by older people. For these studies, large surveys were carried out among older adults with the question to list criteria for quality of life and qualitative approaches were used to investigate older adults' views on what contributes to prosperity in later life. Although there is no clear definition, understanding or consensus, there is agreement on some aspects. Quality of life is often seen as multidimensional, dynamic, differing between and within individuals, and consisting of both objective and subjective aspects (Vanleerberghe et al., 2017). Significant consistencies were found in the results of these studies (Borglin et al., 2005; Bowling & Gabriel, 2007; Browne et

al., 1994; Elo, 2011; Gilroy, 2008; Vanleerberghe, 2017). Borglin et al. (2005) divided the quality of life of older adults into four domains that seemed important for older adults. First, anchorage of life was seen as an important aspect, which means a positive prospect of life and knowing that you could cope with the changes that ageing brings. Second, a satisfied body and mind, which means that meaningful activities of the everyday life could still be undertaken. Third, access to significant relations, which means maintaining unique and reciprocal relations with others. Fourth, the conditions of governing one's life seemed important, which means the combination of material values and more values as the meaning of home and their environment. These domains overlap to a large extent with the findings of Elo (2011). In this study the social, symbolic, and physical environments were indicated as the most important environments that influence the quality of life. In the social environment, maintaining contact with family members and friends and a pleasant living community seemed important. In the symbolic environment, a sense of freedom in their homes and surroundings was indicated as important. In the physical environment, safe activity and opportunities for activities were important. This corresponds accordingly with the third, fourth and second domain of Borglin et al. (2005). In the study of Browne et al. (1994) older adults nominated family, social and leisure activities, health, living conditions, religion, independence, finances, and relationships as relevant to their quality of life. Except for religion these domains are also all indicated in the studies of Borglin et al. (2005) and Elo (2011). Summarizing the important factors from these studies (Borglin et al., 2005; Bowling & Gabriel, 2007; Browne et al., 1994; Elo, 2011; Gilroy, 2008; Vanleerberghe, 2017) that contribute to the quality of life of older adults are a secure home, a supportive neighbourhood, the ability to get out and about, a strong social network, health and income that allow participation in social life, the capacity to make a contribution to the life of the community, the ability to access information and activities, and positive prospect and independence. Qualities of the local surrounding environment seemed most important (Gilroy, 2008).

The theory of Schalock et al. (2016) takes into account the multidimensional and dynamic nature of quality of life. It combines concepts from different studies and comes to an integrated and comprehensive concept for quality of life. Quality of life is conceptualised as consisting of eight core domains derived from an extensive literature review of the quality of life literature. The domains are emotional wellbeing, interpersonal relation, material wellbeing, personal development, physical wellbeing, self-determination, social inclusion, and rights. These domains need to be considered when studying the quality of life (Schalock, 2004). Explanations of the different domains are shown in table 3. These domains with different indicators extensively grasp which aspects are important for quality of life according to the people themselves. The domains emotional wellbeing, interpersonal relation, material wellbeing, physical wellbeing, self-determination, and social inclusion are also present in and related to the different dimensions of mobility from Alsnih & Hensher (2003) and Metz (2000). Therefore, these domains will be used to assess the role of the life space mobility in the quality of life of the older adults in this study.

Quality of life domain	Indicators
Emotional wellbeing	- Contentment - Self-concept - Lack of stress
Interpersonal relation	- Interactions - Relationships - Supports

Material wellbeing	- Financial status - Employment - Housing
Personal development	- Education - Personal competence - Performance
Physical wellbeing	- Health - Activities of daily living - Leisure
Self-determination	- Autonomy/personal control - Goals and personal values - Choices
Social inclusion	- Community integration and participation - Community roles - Social supports
Rights	- Human - Legal

Table 3 | Quality of life domains (Schalock, 2004)

2.2 Literature review

2.2.1 Life space mobility and quality of life of older adults

An extensive amount of literature exists about the mobility of older adults (Alsnih & Hensher, 2003; Baker et al., 2003; Davis et al., 2015; Forte et al., 2015; Gilroy, 2008; Haustein & Siren, 2015; Kestens et al., 2016; Lo et al., 2016; Metz, 2000; Meyer et al., 2013; Musich et al., 2017; Nordbakke & Schwanen, 2014; Owlsey, 2002; Peel, 2005; Spinney, 2009; Stalvey, 1999; Webber et al., 2010; Ziegler & Schwanen, 2011). These studies agree on the fact that when people become older, prevalence of disability increases, which accordingly leads to mobility limitations. According to these studies an ageing population also means more people that become less mobile. Literature about the mobility of older adults is embedded in the gerontology, transport and health research. Therefore, a lot of these studies researched mobility in relation to the quality of life or wellbeing of older adults (Davis et al., 2015; Forte et al., 2015; Gilroy, 2008; Metz, 2000; Musich et al, 2017; Nordbakke & Schwanen, 2014; Owlsey, 2002; Spinney, 2009; Ziegler & Schwanen, 2011).

Wellbeing and quality of life are often used interchangeably, because they both show interest in living a good life and many of the facets of quality of life and wellbeing are the same (Nordbakke & Schwanen, 2014). These studies about mobility and the quality of life of older adults all showed a positive relationship. But they did not all study the same aspects of mobility and quality of life. According to Davis et al. (2015) mobility is seen as the capability of an individual to accomplish valued functioning. Being mobile allows you to do the things you want to do, which makes you feel valued and contributes to the quality of life in this way. This corresponds with the relationship that Forte et al. (2015) found. In this study functional mobility is seen as meaningful and contributing to life if an individual can efficiently fulfil their daily tasks. These two studies (Davis et al., 2015; Forte et al., 2015) have looked at the domains which correspond with the physical wellbeing and self-determination domains of Schalock

(2004). Having good mobility seemed to positively influence these domains. Gilroy (2008) concluded that a loss in mobility leads to an increase in muscle wastage, social isolation, and cognitive decline, and is a major factor in decreasing quality of life. This corresponds with the findings of Spinney et al. (2002), who found that exercise, psychological, and community-helping aspects of mobility benefits to the quality of life. These social needs were also found in the study of Ziegler & Schwanen (2011). Limitations in the mobility reduced contact with relatives, friends and neighbours which may result in depression, loneliness and isolation (Gilroy, 2008; Musich et al., 2017; Spinney et al., 2002; Ziegler & Schwanen, 2011). Musich et al. (2017) found that severe mobility limitations led to more financial stress and more depression. Poorer psychological health was discovered for people with reduced mobility. These studies (Gilroy, 2008; Musich et al., 2017; Spinney et al., 2002; Ziegler & Schwanen, 2011) thus found influences of reduced mobility on emotional wellbeing, interpersonal relation, material wellbeing, physical wellbeing, and social inclusion domains of Schalock (2004). More general conclusions are drawn in the study of Metz (2000) and Nordbakke & Schwanen (2014) about the role of mobility in quality of life. Loss of mobility was related to a diminishing quality of life for older adults. Potential and actual movement contributes to the quality of life in later life.

Some studies (Clarke & Gallagher, 2013; Cress et al., 2010; Elo, 2011; Finlay et al., 2014; Gilroy, 2008; Rosso et al., 2011) considered the role of the environment in the mobility and quality of life of older adults. Most of these studies belong to the ageing in place research.

The quality of life of older adults can be supported by the physical, social, and symbolic environment (Elo, 2011; Gilroy, 2008). The following aspects of these environments contributed to the quality of life of older adults. In the social environment it seemed important to maintain contact with family members and friends, and a pleasant living community also seemed important. In the symbolic environment, a sense of freedom in their home and surroundings was indicated as important. In the physical environment, safe activity and opportunities for activities were important (Elo, 2011). Gilroy (2008) argues that the home, neighbourhood and mobility are the most important factors that influence the quality of life of older adults. Therefore, places have to be created that support human flourishing. The most important aspects of the neighbourhood environment that contributed to the quality of life of older adults were social contacts, basic facilities, green space and parks, accessible transport, and the maintenance of a good streetscape.

Clarke & Gallagher (2013), Cress et al. (2010) and Rosso et al. (2011) all looked at environmental factors in urban environments that influence the mobility of older adults. They found risks in the environment that can create barriers to the mobility of older adults in their own environments. Clarke & Gallagher (2013) concluded from their research that older adults that live in a neighbourhood with accessible sidewalks, public transport stops and more accessible entryways of their homes are more likely to be mobile than people that live in neighbourhoods without these aspects. Rosso et al. (2011) also found empirical evidence for the relationship between the urban built environment and mobility of older adults. Although it is unclear whether this relationship represents a direct influence on limitations in mobility, there is evidence that a large amount of intersections, bad street and traffic conditions, and long distances to desired places and green spaces represent a negative relationship with mobility. Other studies (Gilroy, 2008; Kestens et al., 2016; Lo et al., 2016; Peel et al., 2005; Stalvey et al., 1999; Webber et al., 2010) also considered the role of the environment on the mobility of older adults. Besides that Gilroy (2008) investigated the role of the environment in the quality of life of older adults, the study also looked at the role of the environment in the mobility of older adults. Antagonistic environments create problems in the mobility of older adults. The most important aspect is the maintenance of the streetscape, for example pavement quality, street lights and seats, which contributed to mobility. Lo et al. (2016), Stalvey et al. (1999) and

Webber et al. (2011) especially assessed the role of the environment as different life spaces in the mobility of older adults. Lo et al. (2015) found that different neighbourhoods contribute to a different risk in accidental falls among older adults, and thus differently influence mobility. The neighbourhoods with a higher risk of accidental falls had worse pedestrian infrastructure and lower quality parks and open spaces. Stalvey et al. (1999) found that environmental factors that played the most important role in the mobility of older adults were crime rates, climate, adequacy of public transportation and other resources of the environment. Webber et al. (2011) showed how limitations in mobility can lead to limitation in assessing different life spaces. The key determinants of mobility that they acknowledge are cognitive, psychosocial, physical, environmental, and financial, and all the six life spaces are composed of these mobility determinants. In this way mobility of older adults is embedded in their life space.

Research about life space mobility was sparse. Studies that came close to the topic of life space primarily wrote on the environment and mobility in this environment. In recent years, however, more research on this topic has emerged. These studies consider the life space mobility of older adults that live in community-dwellings (Portegijs et al., 2015; Rantakokko et al., 2013; Rantakokko et al., 2015; Snih et al., 2012; Viljanen et al., 2016). Rantakokko et al. (2015) and Viljanen (2016) investigated the relationship between environmental factors and life space mobility of older adults and the relationship between the mode of transportation and life space mobility of older adults. If older adults perceive barriers in their environment (e.g. snow, ice, dangerous crossroads, traffics) the life spaces where they were mobile in were more restricted. If they perceived facilitators in their environment (e.g. safe street crossings) more life spaces were accessible. In this research the precise level in which the older adults perceived barriers in life spaces and in which they perceived facilitators was not found (Rantakokko et al., 2015). Regarding the relationship between mode of transportation and life space mobility it seemed that the life spaces where older adults are mobile in was larger for people that drive their own car, especially for persons with walking difficulties. Therefore, it seems necessary to improve the different transportation options that older adults have in order to meet their needs, which will ensure that older adults with disabilities can also still be actively and independently involved in society (Viljanen et al., 2016). The factors that are associated with life space mobility are also studied for older Mexican Americans. In this research, 80% of the participants were limited to their home or neighbourhood. Factors that decreased their life space mobility were older age, female, stroke, high depressive symptoms, high BMI and disabilities in the activities of daily living. Education and high physical movement increased their life space mobility. Other studies in the field of life space mobility looked specifically at the relation between life space mobility and the quality of life of older adults, or partially at quality of life. Portegijs et al. (2015) investigated if the physical activity of older adults was greater when moving through greater life spaces. This research found that older people were more active when they go out the home and their physical activity increased further while moving through the neighbourhood or the town. This research focused on the relationship between life spaces and physical activity of older adults, which also is part of the quality of life domains of Schalock (2004). Rantakokko et al. (2013) assessed the life space mobility and quality of life of older people. In this research quality of life was divided in four domains: physical, psychological, social, and environmental. They found that life space mobility is associated with all four quality of life domains and also with the overall quality of life. The relationship between life space mobility and social quality of life was very weak. The possibility for older adults to know where they want to go and also can go increases their quality of life.

2.3 Conceptual model

A conceptual model has been developed which is deductively derived from the theories and the existing literature. Life space, mobility and quality of life are the most important concepts of the model. In this research the role of life space and mobility in the quality of life of older adults will be investigated. Different life spaces derived from Peel (2005), mobility aspects derived from Alsnih & Hensher (2003) and Metz (2000) and quality of life domains derived from Schalock (2004) are used.

This research focuses on the life spaces that may be used daily by the older adults and that still belong to the rural context. Therefore, outside the house, the neighbourhood and the town are featured. According to the literature, different dimensions of mobility take place in different life spaces. Therefore, all five dimensions from Alsnih & Hensher (2003) and Metz (2000) are used in this research. Characteristics of this life space mobility can also directly influence the quality of life of older adults, for example face-to-face contact with family and friends, a pleasant community, a sense of freedom in their surroundings and opportunities for activity can contribute to the quality of life (Elo, 2011). Therefore, six domains of quality of life from Schalock (2004) are added to the model.
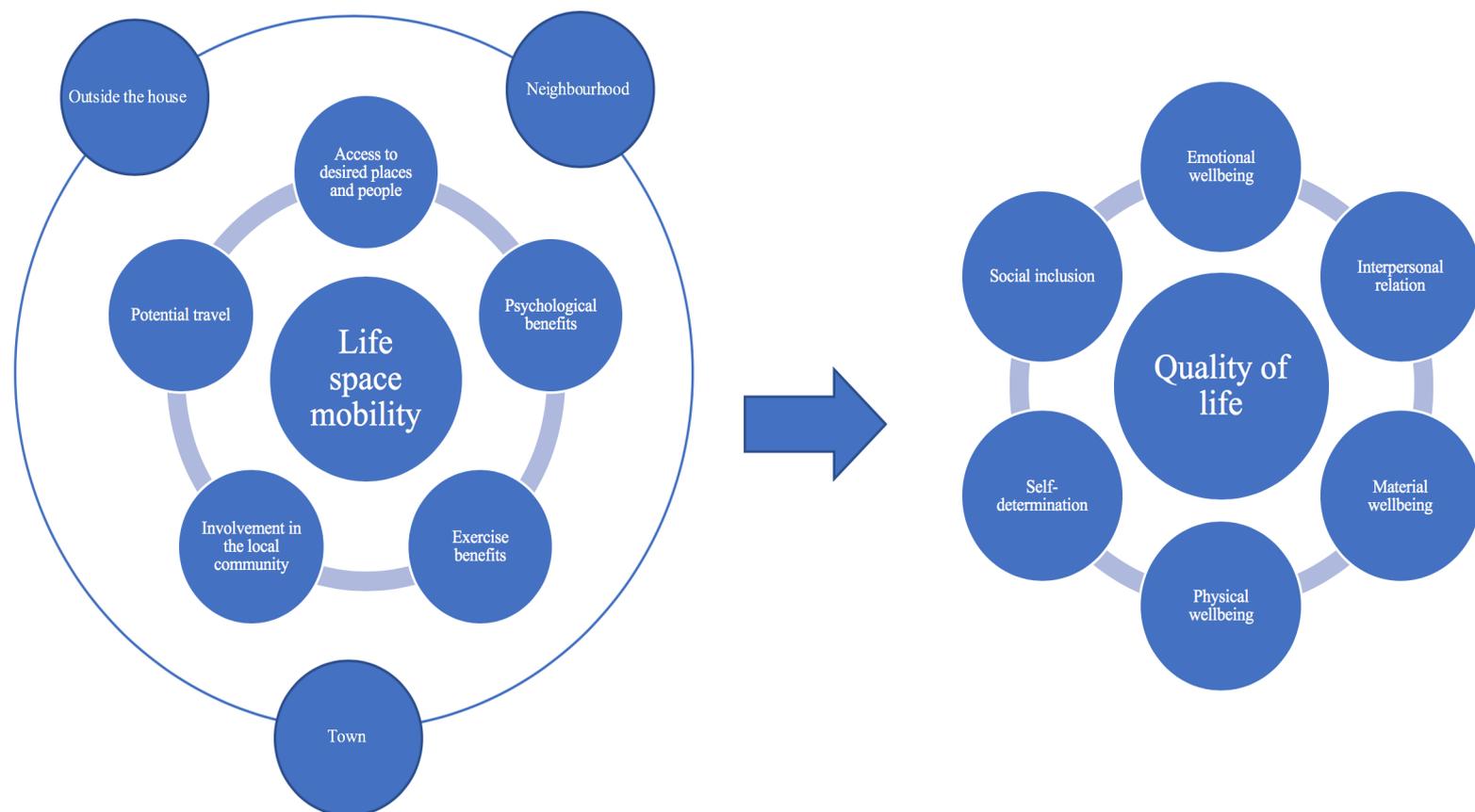

Figure 5 | Conceptual model

3. Research design

This research fits in the qualitative research paradigm, which enables to explore experiences and perceptions of participants from their own perspectives, understanding their meanings, interpretations and experiences. It studies the participants in their natural environments which helps identifying how their experiences and behaviours are shaped by the contexts of their lives (Hennink et al., 2011). In this research two types of methods in a natural environment of the participants are used. First, an in-depth interview is conducted in the participants' homes. Second, a walking interview is conducted in the neighbourhood.

3.1 Research location

The research location is the village of Vlagtwedde, which is a rural village in the southeast of the province of Groningen in the Netherlands. In 2017 around 3,400 people were living there. Since 1 January 2018 Vlagtwedde belongs to the municipality of Westerwolde. This municipality consists of the former municipalities Bellingwedde and Vlagtwedde. In the former municipality Vlagtwedde 20.63% of the total population was aged 65 years or older in 2017 (CBS, 2017d; Provincie Groningen, 2018). The 'address density' (i.e. number of addresses per square metre) of the municipality of Vlagtwedde in 2017 was 353/km^2, which means that it is considered a rural area in the Netherlands (CBS, 2018; SER, 2009). According to 'Dorpsbelangen Vlagtwedde' (n.d.) the village is: "… *a cozy village which is located in the middle of peace, space and nature. The area is characterized by the wooded area, farmland and many canals and small rivers with beautiful walking- and cycling routes*" (Dorpsbelangen Vlagtwedde, n.d.). The village has many amenities and it fulfils a centre function for the surrounding villages. The village contains two supermarkets, a bakery, a jeweller, a drugstore, a clothing shop and several restaurants and bars. It also contains two primary schools, a library, two general practitioners, a physiotherapist and several sport facilities such as a swimming pool, a golf course and a sports hall. In addition, there are associations aiming to maintain the liveability of the region and associations for the interests of older adults. These associations organise activities and provide help for people in need. There are several bus stops in Vlagtwedde, with the main bus station located in the middle of the village centre. These bus services connect Vlagtwedde to Bourtange, Stadskanaal and Winschoten. The busses go every hour from 06:22 in the morning, until 00:00 in the evening. Stadskanaal and Winschoten are both about 15 kilometres from Vlagtwedde and in these places a hospital is located and more shops and amenities are available. Most amenities in Vlagtwedde are located in the Schoolstraat and the Wilhelminastraat, the most important amenities are shown in figure 6.

Figure 6 | Map of Vlagtwedde with main amenities | Map made with ArcGIS

3.2 Data collection

3.2.1 In-depth interviews

The first part of the data collection consisted of conducting semi-structured in-depth interviews. In-depth interviews can be delineated as a conversation between the interviewer and the participant, in which the interviewer determines a general direction for the conversation and carries on specific topics that are raised by the participant (Babbie, 2013). Semi-structured interviews allow for open questions and give the participant the possibility to answer with open response in their own words. Since the interview is not totally structured it offers the participants to come up with issues that they consider to be important (Hennink et al., 2011). To ensure the semi-structure of the interview an interview guide was made (see appendix A). An interview guide is used as a checklist and gives structure to the interview and assures that the same issues are discussed with all the different participants. The questions may be asked in a different sequence, since the researcher follows the order in which the participant raise the different topics (Hennink et al., 2011). The interview guide is also provided with neutral probes to encourage the participants to elaborate on their stories (Babbie, 2013). This interview guide helped to make sure that all the important issues were asked to the participants and allows the discussion to offer the participant the chance to come up with issues that they feel are important (Longhurst, 2013). The questions in the interview guide are all open questions. Open questions enable the participant to describe how they feel about a certain topic and give more personal detailed information. The open questions are phrased in a way that they do not direct the participant in a certain direction to answer (Hennink et al., 2011).

Leading main themes in this research are life space mobility and quality of life. These themes were therefore the basis for the interview guide. These concepts are operationalized to be used in the interviews, in a way that makes it clear for every participant what is meant with

the concepts (Babbie, 2013). Regarding the life space there are questions about what the participant perceives as important characteristics and places outside their house, in the neighbourhood and in the town. Regarding life space mobility there are questions about their daily activities, where they are going, how far they can go, if they face mobility issues in these activities and if there are things they cannot do anymore or places they cannot visit anymore. Concerning quality of life there are questions on what the older adults experience as important in their lives and why, if they face problems in the things they think are important, and if this is connected to ageing and their mobility. The operationalisation of these concepts is further elaborated in the interview guide (see appendix A). The interview guide is in Dutch, because the interviews have also been conducted and transcribed in Dutch. The quotes that are used in this research are therefore translated from Dutch to English by the author.

According to Longhurst (2013) the interview should be conducted in a neutral, informal and easily accessible place. Since the surrounding environment of the participants plays an important role in this research, the interviews are, if the participants agreed, conducted at the homes of the participants. The interviews at the homes of the participants took place in a relaxed, quiet and private atmosphere. During the interviews no other people were present in the room, except for the interviews that were conducted with a couple.

First a pilot interview was conducted and transcribed to check whether any relevant questions were missing. After the pilot interview it seemed that no adjustments were needed and therefore this first interview is also included in the research. After that eleven more interviews were conducted.

3.2.2 Walking interviews

After the in-depth interviews, the participants were asked if they also wanted to participate in a walking interview. The walking interviews are conducted to gain deeper and more detailed understandings about how the experiences of the participants are related to their local environment. These interviews provide an entrance to the researcher to the experiences and practices of the participants in real time and space (Kusenback, 2003). Five participants agreed to participate in the walking interview as well. Less mobile people or people that did not walk a lot were less eager to participate in the walking interviews. The reasons for not participating in the walking interviews varied from not being able to or feeling uncomfortable walking, to not having enough time for a walk, and to simply not feel like it or did not like walking.

The participants were asked to just walk a route that they often walk. Three of the participants of the walking interviews wanted to do the walking interview immediately after the in-depth interview, which was more convenient for them, not having to make a new separate appointment. In addition, they could relate it to the in-depth interview more easily. The other two participants made a separate appointment for the walking interview. These participants often walked long distances and therefore needed more time for the walking interview.

The walking interviews were also semi-structured and a separate interview guide was developed (see appendix A). During the walk, questions were asked about the route we were walking, why they walked this route in particular, whether they also walk other routes, if they experience problems during the walk, and if there are routes that they do not like to walk.

3.3 Participant recruitment

In this research the study population is older adults of 65 years and older living in the village of Vlagtwedde. The goal is to recruit participants that are both mobile and less mobile, to identify whether they experience the role of life space and mobility in their quality of life differently. The study population is the group of people we want to know about and draw

conclusions on (Babbie, 2013). A sample of this study population is selected with the following inclusion criteria: people that are 65 years or older, mobile or less mobile, living in the village of Vlagtwedde and still living independently. Sampling methods that were used are snowball sampling, formal networks and advertisements. Using different methods for recruiting participants is beneficial since no recruitment strategy may be completely ideal (Babbie, 2013; Hennink et al., 2011).

First formal networks were used, such as recreation networks, social networks or housing networks. It considered at which particular services are used by older adults and what type of events and associations they visit. After this, advertisements were sent by mail to different community centres, churches, recreation associations, elderly interest organisations and apartment blocks for older adults (see appendix C). Then, snowball sampling was applied to recruit additional participants. The number of participants to recruit for the interviews is reached when data saturation occurs. This is the point where no new information is extracted from the interview and the collected information begins to repeat itself (Hennink et al., 2011). After eleven in-depth interviews data saturation was reached. Since the appointment for the twelfth interview was already made, twelve interviews were conducted in the end.

3.4 Analysis

The interviews were recorded and transcribed ad verbatim. The transcripts of the interviews were imported in the software program ATLAS.ti. In this program the transcripts were coded by open coding. An advantage of developing codes by open coding is the opportunity to identify patterns and categories and different connections between the information from different participants (Hennink et al., 2011). The code scheme (appendix D) has been developed inductively. Important issues that were raised by the participants, which were not present in the theoretical framework could be added immediately. After this, deductive codes were added based on the concepts from theory. Similarities between the deductive codes and the answers of the participants are investigated. The advantage of inductive coding is gaining direct information from the participants without imposing preconceived categories or theoretical perspectives. The challenge when only using inductive codes is that it is difficult to develop a complete understanding of the context and to identify key categories. Therefore, it is useful to also develop deductive codes with the advantage that the existing literature can be supported and extended. This will result in a more complete understanding of the research topic (Hsieh & Shannon, 2005).

A bottom up approach is used for interpreting the data. This means that first a lot of codes with low frequencies are developed. After this, different codes are more conceptualized and merged together. These codes are constituted into super codes, which belonged to a defined category. The codebook (appendix E) present insight in all codes and interpretations, whether deductively, inductively or in vivo.

3.5 Ethical considerations

The National Commission for the Protection of Human Subjects of Biomedical and Behavioural Research determined the fundamental ethical principles that should guide research on human subjects in the Belmont report (National Commission for the Protection of Human Subjects of Biomedical and Behavioural Research, 1979). Three relevant principles were stated: respect of persons, benefice and justice. Respect of persons means that the welfare of the participant is always the most important in the research. Benefice means that the potential risks to the participants are minimized and the researcher should strive to maximize the benefits for the

society and the participants. Justice refers to research procedures which should be fair, non-exploitative and well-considered administered (National Commission for the Protection of Human Subjects of Biomedical and Behavioural Research, 1979). These principles were taken into account when conducting the interviews. According to Hennink et al. (2011), important considerations have to be taken into account when applying these principles, such as informed consent, self-determination, minimization of harm, anonymity and confidentiality.

First, the participants received an informed consent after they subscribed for participating in the research (appendix B). This informed consent provides the participants with sufficient and comprehensible information about the research. In this informed consent it is stated that participants participate voluntarily and that they have the possibility to stop participating, before the research is finished, even if they already started. This will ensure the self-determination of the participants. If the participant agrees the interviews will also be audio-taped. This is told to the participants before the interview and permission is asked.

Second, the participants should not risk any harm due to the research. Therefore, the questions that are asked are thoughtfully formulated and sensitive questions will be explained with care. During the interview it was possible for the participants to ask questions or to ask for more explanation if necessary. It is important to make sure that the participant feels comfortable.

Third, to ensure the anonymity and confidentiality of the participants, their names are not linked to what they said in the interviews. The transcripts of the interviews are anonymized and personal information is left out when presenting quotes. All data records will be kept confidential and only used for this research.

4. Findings

In this chapter the results of the data analysis are described. On the basis of the results obtained from the interviews an attempt is made to get an answer to the central research question: '*How do older adults in the village of Vlagtwedde experience the role of life space mobility in their quality of life?'* and the sub-questions:

1. How do older adults perceive their life space mobility?
2. How do older adults experience their quality of life?
3. How do older adults perceive their life space as contributing to their mobility and quality of life?

Various themes came forward from the analysis that revealed how older adults in Vlagtwedde experienced their life space mobility and their quality of life. In the first paragraph the different experiences that older adults had regarding their life space mobility will be discussed. The second paragraph discusses how the participants experienced their quality of life. In the third paragraph the perception of the participants on how their life space contributes to their mobility and quality of life is discussed. Finally, in the fourth paragraph additional inductive themes that were raised by the participants are discussed.

In total twelve in-depth interviews were conducted with fifteen older adults. A walking interview was conducted with five people. In table 4 the participants and their characteristics are shown.

Pseudonuym	Age	Marital status	Years in Vlagtwedde	Mobility devices	Walking interview
Mr. Schaap	70	Married	8	-	Yes
Mr. and Mrs. Edelman	79 and 80	Married	55	Walking stick and walker	No
Mrs. Oudsma	76	Married	16	-	No
Mrs. Bakker	81	Widowed	14 days	Walking stick and walker	No
Mr. Schultinga	78	Married	12	-	Yes
Mrs. de Kort	82	Married	19	Electric bike	Yes
Mrs. Lammersma	84	Widowed	16	-	Yes
Mrs. Kuipers	65	Married	38	Electric bike	No
Mrs. Leenstra	79	Widowed	41	-	Yes

Mr. and Mrs. Molenaar	71 and 71	Married	20	Electric bike	No
Mrs. Visser	86	Widowed	12	Electric bike	No
Mrs. and Mr. Boer	77 and 79	Married	25	-	No

Table 4 | Characteristics of the participants

All the participants still lived independently. Most of the participants lived in a detached two-story house. Only Mrs. Bakker and Mrs. Visser lived in an apartment, Mrs. Lammersma and Mrs. Kuipers lived semi-detached to a house of a family member and Mrs. Leenstra lived in a terraced corner house.

4.1 Life space mobility

4.1.1 Access to desired places and people

An important aspect of mobility of older adults in their life spaces seemed that they had access to desired places and people. Different places and people they like to visit or that are important to them were mentioned. All the participants indicated that amenities are important for them. Different participants mentioned different amenities that they consider important. In the village all kind of shops are present. Therefore, it is possible to buy daily necessities nearby. Just the ease and convenience of not having to travel far is meaningful to the participants. For some participants it is necessary that the shops are close by, because they cannot or do not dare to drive a car and/or bike anymore. It was important to them that it was still possible to get something themselves if they needed something. If it is possible to get everything within walking distance then they are not dependent on others to get their daily necessities. But this was also important for participants who are still able to drive a car, one participant mentioned: *"that all the shops are nearby makes a big difference, this means that it is possible to be in this place also when you become older and perhaps less mobile" (Mrs. Oudsma)*. This was also the case for Mr. Schaap, he and his wife moved to the village to live close to all the amenities. In this way they hope to be able to live there for the rest of their lives. Besides the shops, also the care- and sports amenities seemed important. The two general practitioners and the physiotherapist in the village ensured the older adults that if there is something about their health they can be helped quickly and do not have to travel far. This also applied to the hospitals that are not too far away in Stadskanaal and Winschoten. The sport amenities were also easily accessible and mostly used to stay fit and to maintain social contacts.

Nine of the participants mentioned the natural environment as a desired place to visit. Most of the participants loved to bicycle or walk along the agricultural fields and through the forest. The well maintained and beautiful paths are experienced as positive. The environment was mainly described as amazing, peaceful and unspoiled. The natural environment seemed important for participants to unwind, relax and stay fit: *"The natural environment is amazing. Enjoying the nature and staying fit. And also if you do not know how to solve a problem, it works best to go into the nature. When you come back home you are completely bright and fresh again" (Mr. Edelman)*. It gave participants a pleasant feeling to quietly look at nature, to process the peaceful surroundings, feeling free, and totally unwind. Some of the participants cross the border with Germany sometimes to enjoy nature, because they feel that they are treated

as guests over there. This gives the feeling that they are really going out for a day. Besides the aspects of relaxation, unwinding, and staying fit, the participants also like to visit the natural environment because it is always changing. Every day you have the opportunity to discover something new that you have not seen before. That is the reason why they do not feel they have to go far to experience the natural environment: *"It is beautiful that you can see deer, hares, rabbits and porcupines just when cycling in the neighbourhood. Every time it [nature] is different and special, even if you make the same trip. It is not possible to always sit at home, you have to go out and keep moving"* (Mrs. de Kort).

At last, places that were important to the participants are familiar places, places where they have good memories or where the association life takes place. Places that were mentioned are the birth place, places where they used to live, and places where family lives. The church and buildings of associations where they are a member of seemed important too. These places are desired to visit because the participants know people there and have their contacts in these places. Having a chat and getting in touch with other people is mentioned as important and giving a cozy feeling. Other places that were mentioned as important are places where they have good memories of. One participant tells: *"These places are important because they feel like your own and are recognizable. These are also places where you have met other people. These are places with good memories, where you can totally feel at home"* (Mr.Schaap). Another participant also added that *"these places are important because they give you a feeling of solidarity and a sense of belonging, you are part of these places"* (Mrs. Lammersma).

There are also places that were less desired by the participants. These are especially busy and unfamiliar places and places with bad memories. Cities are busy and unfamiliar places that were less happily visited by a lot of the participants. A part of the participants did not like to visit cities because the traffic around and in the cities is too busy. They did not dare to drive to these places themselves. Another part just did not like the feeling that they get in busy places. Most of the participants are used to the quiet and free life on the countryside: *"Cities, I really do not like them. I cannot enjoy cities. Maybe it is too busy for me, because we always lived quiet and free. Yes, I think it is too busy for me"* (Mrs. de Kort). Festivals are also labelled as too busy places, which most of the participants cannot enjoy. Three of the participants liked to visit festivals, but these were all festivals nearby in the countryside. Besides busy and unfamiliar places, places that evoke bad memories are also less desired. Places that evoke bad memories are places that remind the participants of the war and/or cemeteries where family or friends are buried: *"Places that remind me of the war, no I will not go there. Houses and streets that are shot, it reminds me of a terrible and sad period"* (Mr. Schultinga).

A final important theme was the accessibility of places and people. This led some of the participants to the decision to move to Vlagtwedde, because then they live close to most of the desired places. It is important that all these amenities stay in the countryside. Otherwise some of the participants will not be able to visit them by themselves. According to the participants some facilities are missing in the village. The village does not have a butcher, a fishmonger and a shoe store. Most of the participants did not feel that this is a problem, because the butcher- and fish departments in the supermarkets also have a lot to offer. New shoes are only bought at most once a year, so they did not feel that it is needed to live close to a shoe store. Furthermore, these shops can be found in the neighbouring village Onstwedde, which is around five kilometres from Vlagtwedde. Most of the participants are able to visit Onstwedde by themselves. The people that are not able to cover this distance were able to reach them with the help of their partner or other family members that lived nearby. At the time of the interviews, the bank office was leaving Vlagtwedde. The biggest disadvantage that the participants mentioned about the departure of the bank is that it changes the social feeling: *"If you have difficulties or problems concerning your bank account it is important that you can have personal contact with a bank employee. Now you have to travel further, this changes the social*

feeling in the village. First people that did not know how for example their debit card work, could ask in the office for help. For older adults that is important, because they did not grow up with it and face difficulties in using it. Now they have to do it themselves, that undermines the social feeling" (Mr. Schaap). Lastly, some participants are not able to visit certain places anymore. They mentioned that it is not possible to visit family that lives further away in the western part of the Netherlands anymore. Groningen and other big cities are mentioned too. This mainly had to do with the busy traffic, where they do not dare to drive there anymore, or they consider the place itself too busy.

4.1.2 Psychological benefits

Being mobile gives people certain psychological benefits. These are more general benefits of going out, which you cannot profit from when you are not mobile anymore. Relaxation, getting out, and positive feelings were the most important psychological benefits that are mentioned in the interviews. Being mobile gives you the opportunity to visit your close and far surroundings. This allows the participants to go to quiet places where they can unwind. Unwinding and relaxing was very important for the participants, being mobile gives them the possibility to escape the more busy and crowded places. Participants also indicate that just the action of moving makes them feel relaxed and peaceful: *"If you have been busy for the whole day, it is wonderful to go cycling or for a walk, then you can completely relax" (Mrs. Edelman).* For some people it was also important that they could visit this peaceful setting, because then they finally felt like they had time for themselves: *"Sometimes it is important to look for places that are quiet. I am a busy person and I also like company. But sometimes I do not look for that, then I just want some time for myself. Preferably to a place where I do not…, where I do not meet anyone, that I just do not have to talk to anyone" (Mrs. Oudsma).* Just looking at, walking or bicycling through these places was relaxing for them.

Besides the relaxation people felt it is important to just getting out and about. Being mobile gives the opportunity to just go out for a walk or a bike whenever you want to. Some of the participants just go out to be among other people. They felt that it is not good to sit at home all day, as this makes you feel lonely. To just have a chat with others gives a sense of belonging: *"Yes, it is very important to go out and it is also cozy. When you greet people, you are getting in touch with people" (Mrs. Bakker).* Furthermore, the participants enjoy being outside, they feel pleasant being outside.

Another important psychological benefit that the participants mentioned is that being mobile evokes positive feelings. The ability to go out whenever you want and to wherever you want gives them a pleasant and fortunate feeling. They experience a positive feeling that they are able to be among other people, but also have the possibility to be alone: *"It gives a positive feeling and ensures that you can still have a positive life" (Mrs. Kuipers).*

4.1.3 Exercise benefits

Being mobile also gives several benefits that are related to doing exercises. Exercise results in trained muscle and bones so that they keep strong. The participants mentioned that being mobile gives them the possibility to be active and to stay healthy. It was mentioned that being active ensures that the participants can still be busy in both a physical and social way. It also ensures that the participants are still in the physical state in which they are now, for most of the participants this means that they are still feeling good physically.

Besides being active, training also gave them benefits. Through training it is possible to stay fit and not feel sick: *"It is also important for your health to move a lot. You feel better when you are moving. Nobody wants to be sick, therefore we continue to train" (Mrs. de Kort).*

Training by walking, cycling, swimming, and other sports helps them to stay healthy. This was especially important for participants with diseases such as hernia, torn knee straps or broken hips: *"Before I had a hip replacement I was able to walk for an hour, but that is no longer possible. But the doctor says that I have to keep moving. Therefore, I now do other sports [swimming] in this way I keep feeling fit" (Mrs. Oudsma)*. With a view on diseases also other participants mentioned that continuing to train is important.

4.1.4 Involvement in the local community

For older adults that are mobile in one way or the other it was possible to be involved in the local community. In the interviews it was mentioned that social participation and social integration in the local community is important. Social participation was mainly expressed through volunteering and helping each other. Social integration was mainly expressed through established networks in the village, the activities of different associations, and the feeling of solidarity.

A part of the participants did volunteer work for the church or for an association that is concerned with the interests of older adults. Being an active member makes them feel at home in a community and gives them a sense of belonging. They also thought that it ensures that the village stays liveable and that it results in a good atmosphere throughout the whole village. In this way people enjoyed themselves volunteering and it gives them a satisfied feeling. Helping less mobile people through voluntary work is also considered important: *"Volunteering is important because I think people should be helped. It is also important to help people to get out of their isolation. I always wanted to do that as much as possible" (Mrs. Boer)*. A few of the participants mentioned that they hoped that the younger generation will take over the volunteer work. Since they had done so much for the community and they get older, they felt it was time for a new generation to stand up. Besides doing volunteer work it seemed important to help neighbours, friends and family and also receive help from them. If the participants see that something is wrong, they are glad to offer help when possible. That could contribute to other people's lives. Another point that is often mentioned is that they help, because they think they will receive it back when they need it: *"Helping other people is important. You can always say no to everything, but when it is necessary you also would like to receive help from them" (Mrs. Lammersma)*. Another participant added to this that *"when you help other people and you give attention to them, you will get this help back at a certain point in time" (Mrs. Oudsma)* and that *"when the times come that I need help, I hope that there are also people for me" (Mrs. Visser)*. Another aspect of volunteering and helping other people is that it keeps the participants busy and gives them interaction with other people. This enables them to stay active, which gives them a good feeling. The participants felt grateful that they were still able to do this for the community.

The social integration was often called positive and easy in the village. Participants thought that integration in a community is easier when you live in a village as compared to a city. This was also mentioned by two participants that first lived in big cities in the western part of the Netherlands: *"It is easier to make contact in a small village. Sometimes I have long conversations with someone that I have never seen before. Where I come from that is not possible. I really like that about this place" (Mrs. Oudsma)*. The integration in the village and the association ensures that most of the participants know a lot of people and have a lot of social contacts in the village. Through these networks they are always able to get help when they need it. This solidarity and sympathy in the community is emphasized as very important. The associations were also important because they organise activities: *"It is important that when there is an activity that you take part in it, that is very important. It gives you a sense of belonging" (Mrs. Bakker)*. In this way the participants are seeking unity with each other. The

networks that the participants created with the neighbours were considered very important too. The participants knew that there is always someone in their close surroundings who they can turn to. The contacts that you gain from a good integrated village has positive outcomes: *"Through the networks and social contacts that you gain you are automatically more willing to help each other. The neighbours look after our house when we are away. It is nice that you are surrounded by people that are willing to help"* (Mrs. Molenaar).

4.1.5 Potential travel

A final important theme in the life space mobility of older adults is that they have the potential to make a certain trip. This was mainly expressed in the different transportation modes they are able to use and this ensures them that that they know they are able to make a trip even if they will not make it. The participants that are still mobile are able to use a lot of different transportation modes and this give them the feeling that they have the opportunity to make every possible trip. The participants that are less mobile are not able to use every transportation mode. This stops them from being able to travel anywhere and whenever they want. But these participants did not feel that this is a problem for them, because they had the potential to make all the trips they still want to make.

The main modes of transportation for the older adults are walking, bicycling and driving a car. Seven of the participants are still able to independently walk, ride a bike, and drive a car. This enables them to go everywhere and to make trips they may not even consider to make. Six of the participants experienced serious difficulties in walking. But these participants are still able to either drive a car or ride a bike: *"Walking is not going so well anymore and standing is even a bigger problem [...] but fortunately, I can ride a bike and if the weather is bad I can take the car, then you are still able to get somewhere"* (Mr. Edelman). The other two participants are only able to walk if they have to go somewhere. One of these participants never goes far out of the village, so she could go walking everywhere she wants to go independently. If it was necessary for her to go farther, she could always ask her daughter to drive her. The other participant did go farther out of the village, but then she just walks a great distance or she goes with her husband, who is still able to drive: *"I am a walker, from my childhood I always walked. Cycling that is not for me, I am afraid of it. And if I really have to go far, my husband is able to drive a car"* (Mrs. Boer). Three of the participants made use of mobility devices. They used a walking stick and/or a walker. These devices give them extra certainty and stability and makes them able to walk greater distances than without them. Besides these devices, six of the participants used an electric bike. Most of the participants use an electric bike out of convenience and it makes them able to travel greater distances. It was mentioned that they use it because then they are able to keep up to the pace of their partners or (grand)children. Making use of devices was not always easy for the participants, but they notice that they do not have another option: *"I now have a walker, and my husband uses a walking stick when he walks. That does not really matter [...] you only have to cross this threshold and that is sometimes disappointing"* (Mrs. Edelman).

There are differences in which transportation mode they like to use the most. Some of the participants prefer to walk, even if they have the possibility to ride a bike or drive a car. This is mostly because they are able to see more when they are walking. They only take the bike or car if they have to travel really far or when they are in a hurry. Other participants prefer cycling over walking. This is mostly because they experience difficulties in walking or that they want to go farther out of the village. None of the participants prefer to take the car. They only use the car when it is necessary. They mentioned that the car is there for bad weather conditions, to get heavy groceries and to travel really long distances. The number of times that the public transport is used by the participants is very limited. Only one of the participants says that she

uses public transport regularly, because she was used to it when she lived in a bigger city. Because she does not drive a car or ride a bike, it is sometimes convenient for her to take public transport, otherwise she depends on others [husband and neighbours] to ride with. The other participants barely use public transport. They mention that they do not have the need to use it and that they do not know how it works. But most of the participants say that they like to use it once, just for pleasure: *"The times we [he and his wife] have gone with public transport is possible to count on one hand. We do not need it, but we would like to take the train from Winschoten to Germany once, just for fun"* (Mr. Schultinga).

Besides the different transportation modes they are able to use, it was important for the participants that they know they could make a trip if they want to. Some participants experience barriers when making a trip. These barriers were mostly that they are not able to drive in busy places anymore or in the night when it is too dark, as is also mentioned in paragraph 4.1.1. This disables them from visiting all the possible places and therefore they know that they are not able to make all the potential travels. None of the participants mention that this is a problem, because they are still able to visit all the places they want to visit. The participants that were able to use all different transportation modes and that do not experience barriers get a pleasant feeling of this potential to travel. Most important was the freedom to go wherever you want: *"I am mobile capable to go to all these places. For example, when I want to go to Schiphol [Amsterdam airport], then we can drive there by car, but if we have to we could also get on the train. [...] The freedom to go wherever you want to go and actually can go, yes that makes me very happy"* (Mr. Schaap).

4.2 Quality of life

4.2.1 Emotional wellbeing

Emotional wellbeing is one of the themes in quality of life that is experienced as important by the participants. Although not often immediately mentioned by the participants themselves, most of them feel like this was important in their quality of life. When asked about emotional wellbeing most of the time contentment was mentioned, which was expressed in gratitude, lack of stress, and happiness. Some of the participants mentioned discontentment, which was expressed in fear, disappointment, sadness, and stress. Two other feelings that were often mentioned, which do not fall under these main categories, were solace and loneliness.

The participants mentioned that it was very important that they do not experience stress. They feel gratitude for not experiencing stress and that they are still as good as they are now. This lack of stress makes them feel content and happy, which has a positive influence on their quality of life: *"We are not easily discontent, we are very content people both, we do not have stress, but that is also mainly because we have it good and we are still good"* (Mrs. de Kort). Another participant added that *"I am a very content person, and that is what makes me very happy"* (Mrs. Leenstra).

On the other side of emotional wellbeing there was one participant that mentioned having stress and feeling sad. This stress and sadness were closely related with the disease of her husband and the care she needs to provide now: *"Emotional wellbeing is very important. Because some things now [since her husband got ill]…, I have to be alert all the time, it all has to come from me. And that your husband is not allowed to come home, that has an impact on your life. That makes me very sad and stressed. [...] Now he can come home every weekend, but that means an extra burden for me, I am sometimes very stressed about that"* (Mrs. Bakker). Sadness was also related to the losses you face when you grow older. More people disappear around you when you become older, which makes them feel sad. Another point mentioned was disappointment. Some participants experienced being disappointed by other people in the past.

This has caused that they are more cautious now in relations with other people, because they are afraid that they will get disappointed again.

Two other points that were mentioned relating to emotional wellbeing are solace and loneliness. The participants mentioned that it is very important that you do not get lonely. A lot of the participants undertake a lot of activities and seek for social contacts, because they are afraid of getting lonely otherwise: *"You have to keep doing things and going to activities. You first have to go yourself to the people and activities, and then they will also come to you. That is important, otherwise you will get very lonely" (Mrs. Lammersma).* If they are not able to do this anymore they mentioned that they have to seek solace somewhere or in something else.

4.2.2 Interpersonal relation

Interpersonal relations were often mentioned by the participants as important in their quality of life. The main points that were experienced as important were the kind of relationship and the things they get from and give in these relationships.

The most important interactions and relations the participants have are with family and friends. The other relationships that also play a role are relations with acquaintances, neighbours, and fellow villagers. The main things that they get from the relationships and give to them are sympathy, support, trust and help. Good relations both in the family and outside the family are seen as important, because then you are able to help each other when needed and you can offer each other solace and share concerns. It was mentioned that in this way you seek unity with each other. This did not mean that you have to be surrounded by others all the time, but it means that you know you can go there or people can come to you when you want it: *"Just helping each other out, especially family. But other relations, when you have good relations in your surroundings, you are automatically supporting each other" (Mrs. Molenaar).* Mrs. Boer mentioned: *"We have good neighbours, we trust them. Friends and acquaintances are also really important in helping each other. But some days I do not have to see anyone, and that is also okay then".* These relations prevent the participants from becoming lonely simply by sometimes drinking a coffee or visiting one another. Besides these deeper relations and interactions also the more superficial ones, just a talk on the street, in the apartment building or in the supermarket, were considered important: *"When you greet people in the street, you get in touch with people, that gives a positive feeling with each other. Yes, that is what I experience then: positive feelings" (Mr. Schaap).* There were also people that did not think that these relations play a role in their quality of life: *"I am not really a people person, in the past I used to be alone too. For my wife it is different, relations with other means quality of life for her. But not for me, I prefer to be alone" (Mr. Edelman).*

Finally, some people missed some relations, because these people moved. Friends or family that moved abroad were especially a difficult matter. These people were mentioned as very good relationships and now there is a lack in ability to easily contact these people. The participants that experienced this feel very unfortunate with this loss of relations.

4.2.3 Material wellbeing

Material wellbeing was, like emotional wellbeing, not often mentioned by the participants themselves as important in their lives. After asking to the importance of material wellbeing in their lives it seemed that the participants do not feel that this is very important for them. When asking further it became clear that it was important that they have a certain material basis, which enables them to make ends meet and to have a roof over their heads.

Therefore, the two main points that were mentioned concerning material wellbeing are financial, which is expressed by income, savings, and debts. The second is housing, which is expressed by ageing in place, close to amenities, and adaptions.

Financially it is important for the participants to have a solid income, which enables them to make ends meet every month. Since all the participants do not work anymore, this income consists of the social security contribution for elderly people, their pensions and/or money from their own businesses. Even though some participants said that this is not always much, they do not have financial worries. In the past some people experienced financial worries, because they also wanted to support their children until they finished studying and it was mentioned that running an own business also comes with financial worries sometimes. Nevertheless, the participants say that they did not lose any sleep over it. All the participants were very abstemious about the financial theme. If something is financially not possible then they just do not do or buy it. It was often mentioned as something unimportant: *"We never talk about money in this house. If it is not there, it is not there. It is too unimportant to always talk about it" (Mr. Boer).* Besides this it was important for them that they do not have to make any debts. They think that it is too easy nowadays to make debts. They also want to protect their children and grandchildren from this. That is why they think it is important to first save money, before spending it.

The participants were all satisfied about their housing situation. They mentioned that it was not important to have a big home, but just that you have a roof over your head. Most of the participants want to stay in their homes until this is not independently possible anymore. To ensure that this is possible many of the participants chose to live close to the amenities. Therefore, they are able to visit the amenities themselves even if they will not be as mobile anymore in the future. Another point about the possibility to age in their home was that it was possible to make adaptions or the possibility to live on the ground floor. This ensures that they could still live there even if they are not that mobile or healthy anymore.

So, for the participants it is not important to be materially rich and this was mentioned a lot: *"It is not important for us to be materially rich, because when you are healthy you are already rich enough" (Mr. Molenaar).*

4.2.4. Physical wellbeing

Physical wellbeing is one of the two themes that is mentioned most by the participants as being important in their lives. The participants themselves often connected physical wellbeing directly to their quality of life. Physical wellbeing was seen as health, which according to the participants consists of absence of diseases, diseases, being able to do everything you want to do, and being active. The other main theme in health raised by the participants were limitations, which consists of decreasing mobility, safety, not being able to do everything you want to, take a rest, and loneliness.

For the participants it is important to be healthy. Most of the participants defined quality of life as being healthy. Therefore, the participants mentioned that they are really working on and thinking about their health: *"Quality of life is that you are healthy, and we do a lot for that. We stay healthy by cycling and eating healthy foods" (Mr. Edelman).* Being healthy makes them feel happy and grateful, because this makes them able to do the things they love to do. This also makes them able to participate in all kinds of activities. Therefore, health is seen as the greatest treasure you can have. Besides their own health, the participants are concerned with the health of their children and grandchildren. When they are doing well, the participants self are also having a good feeling. The participants say that it is obvious that health is one of the most important things in their life, because nobody wants to be ill or unhealthy. Despite the fact

that most of the participants experienced serious illnesses, hospital admissions and surgeries, they still feel all very healthy. Because they came strong out of these periods of less health.

In addition to health, limitations were mentioned regarding physical wellbeing. It was mentioned that not all the things you do are going as easily as in the past. Most of the things that they were not able to do anymore had to do with their decreasing mobility. Standing on a ladder or climbing stairs and practicing some sports is often not possible or without dangers anymore. Most of the dangers that are faced by the participants are falling: *"I have to start watching out about what I can do and what I cannot do. For example, I would like to skate, but if something happens, if you fall, then the costs are very high. You have to accept that" (Mrs. Oudsma)*. Therefore, the participants pay attention to their own safety, they accept that sometimes it is not possible to do everything they used to do. Besides the decreasing mobility, a lot of the participants mentioned that they get tired sooner than in the past and that this causes that they are not able to do things in the same time as they were used to. Since they get older they need longer to do the same work as in the past, because nowadays it costs extra energy. Some of the participants therefore have help for doing work in the house or the garden. For example, some of the participants used to clean the whole house in one day, whereas nowadays they have to divide this over two days or they hire someone to help them or they get help from relatives: *"We cannot go that fast anymore, we are doing everything a bit slower. It now takes me two days to clean this living room, I used to do it at once. I do also not dare to stand on a ladder anymore, when I fall... You think about that kind of things now, you automatically see more bears on the road when you become older" (Mrs. Molenaar)*. Finally, the participants mentioned that they hope that these limitations will not expand, they are afraid that if they become too limited they are less able to leave the home and that this will result in loneliness. Therefore, physical wellbeing was seen as most important in their lives: *"Being healthy is quality of life. Your health that is your freedom, that is a great value" (Mrs. Boer)*.

4.2.5 Self-determination

The fifth theme of quality of life that was discussed was self-determination. Most participants mentioned this in between the other themes and mostly related it to health and mobility. The first point of self-determination is autonomy, which the participants saw as either being independent or being dependent. The second point is about the personal goals, values, and choices of the participants, which were expressed in being able to do everything you want to do, being able to go anywhere you want to go, and living independently in this place. Since the themes under the second point also fitted under previous categories and are already discussed in previous paragraphs, they will not be further elaborated here.

All the participants feel they are independent in most of the tasks and activities they do and in the travels that they make. Due to different periods of illnesses or surgeries the participants have experienced times when they were more dependent upon other people. This gave them the feeling that they were at the mercy of others. Relying on other people was experienced as an unpleasant feeling and difficult to accept. They found it difficult to delegate tasks to other people, because they were used to do it themselves. Since most of these periods of dependence were temporary it was easier to accept, because they knew they were able to do it themselves again in the future. In addition, it was mentioned that if they are dependent sometimes, then they will not go to activities, unless as it is the case that they will never be independent anymore. Therefore, it was seen as important to be independent in as much as possible, that you can handle yourself and do not need help of others: *"I am very happy that we [she and her husband] can do everything ourselves. We are never dependent. You do everything yourself, that is something really important. If that is no longer possible... I would not like that" (Mrs. de Kort)*. The people that are married and living together say that it is easier for them to

be independent together, because they have each other. If someone is not able to do something, most of the time the partner can do it. They think this will become more difficult when you are on your own. Some of the participants mentioned that for some tasks they are dependent on help from family or others. Most of the times this has to do with work in the house and in the garden. In the beginning the participants had to get used to that, because they would love to do it themselves, but after a while they accept it and are happy that other people are willing to help them. One of the participants mentioned that she is sometimes dependent on their children and that this was first difficult to accept: *"If I have to go out of the village, I have to ask my children to drive me. There is no other way, and then I have to adjust. First, I had to console myself, it is terrible to be a burden to another" (Mrs. Leenstra).* Finally, a lot of the participants mentioned that being independent constitutes out of being mobile for a great part.

4.2.6 Social inclusion

The themes that the participants discussed that belonged to social inclusion overlap mainly with the themes that are discussed in paragraph 4.1.4 about involvement in the community. For social inclusion it was also mentioned that social participation and social integration were the most important parts, expressed through volunteering, being socially moved, a sense of community, association life, and helping each other. Therefore, these findings will not be elaborated here again. In the theme of social inclusion one additional point came forward that was not mentioned by the participants when talking about involvement in the community. This is that it is important for the participants to either be a point of contact or having a point of contact. They are feeling glad that they know they can go to someone in the community who will offer them support or solace. The other way around, participants that function as a point of contact feel glad that they can perform this role in the community and in this way provide support and comfort to people who need it.

4.2.7 Religion

Together with physical wellbeing, religion was the most important in the lives of the older adults, according to the participants themselves. The main point that participants came up with was faith, which was expressed in eternal life, grip, forgiveness, trust, and solidarity. The participants try to live as good as possible following their religion. All of the participants visit the church once a week. Some of the participants have an executive role in the church which varied from serving coffee voluntarily to being in the board, being sexton or leading church services.

Eternal life was mentioned often as being given by religion. This gives them the idea of a future that you may have, but that you also grant to another. This also gives them the idea that you get a new life on a new earth after you die. These ideas give the participants trust. Through the trust that the participants find in the faith, they were also able to not look up against some things: *"Having a faith is very important and that you trust in it. I never looked up against surgeries, because I have trust that it will be okay" (Mrs. Bakker).* So, having a faith ensures that the participants are more combative. Besides trust, grip is mentioned as an important part of faith. Faith gives the participants grip and the feeling that they can rely on it: *"First our faith is very important, it really gives you guidance. If there is something, you can always rely on it. I think that is really important" (Mrs. de Kort).* For the participants, attending church services is a way to seek solidarity with one another. Coming together at these services make them feel like one unity. Finally, living as good as possible according to your religion is something what the participants try to achieve during their lives: *"Faith comes first for us [she and her husband]. And we try to live as well as possible, sometimes we stumble, but we try to do it as*

well as possible… what is in the Bible. That is what it is all about in our lives, the faith" (Mrs. Boer). Following this Mr. Schaap mentioned: *"Asking for forgiveness, that is the good way to live, and that makes you happy".*

4.3 Walking interviews

As already seen in the previous results, mobility was very important for the participants. This ensured that they are able to access desired places and people, they experience psychological and exercise benefits from it, it gives them the possibility to be involved in the local community, and ensures that they could make a potential travel. How the life space of the participant could contribute to their mobility and their quality of life was investigated further in the walking interviews. This will give a better understanding of the experiences of the older adults during their daily walks in their near surroundings. Out of the five people that participated in the walking interviews none use mobility devices.

First, two very mobile participants, walked a long route during the interview. The third participant is also mobile, but just wanted to do a small daily round. The fourth and fifth participant are not that mobile anymore and mainly walk short distances, therefore they chose a short route to walk during the interview. Figure 7 shows the routes of the walking interviews. For privacy reasons is one of the walking interviews not displayed on the map.

Most striking during the walking interviews was that there was a lot of contact with other people during the walk. That this contact with other people on the street is important for the participants also became clear in the in-depth interviews. The participants mainly walk these routes because they have to be at places along the route, to enjoy nature, or to stay fit.

The first participant often walks through the centre of the village. He has to visit the places along the route a lot, because there he attends meetings of the church and visits people that he has to help or to speak with. Therefore, these places are familiar to him and important for him. This participant walked a lot, because he thinks it is not good for you to stay inside the whole day. During the walk he mentioned the great view on the fields, therefore he also walks this route when he does not have to be at that places, just to enjoy the views. Further, during the walk, he mentioned all the facilities where we came across. This was really important, because this ensures that he never has to go far if he needs something. This participant does not experience barriers or obstacles during the walk and also does not have routes that he does not like to walk.

The second participant mostly walks in nature that is adjacent to the village. He mentioned the importance of the proper walking- and biking paths that are on this route. He says that it is important that these paths are well maintained, because sometimes there are pits in the paths and he thinks that is a bit dangerous. These pits make it more difficult to easily walk this route. The most beautiful thing about the route according to the participant is the openness of nature. The long paths along the water and the road are less popular by this participant, but he says that it is purely a personal preference. He enjoys just being out of the centre for an hour and then returning home.

The third participant is able to walk great distances, but most of the time she does not walk that far. If she travels further, and in order to stay fit, she takes the bike. Most of the time she walks in her own neighbourhood or adjacent neighbourhoods to go to friends or acquaintances. She also walks through the centre to visit the different amenities. In the evening she mostly walks to relax and to get some fresh air. This participant did not experience any obstacles or barriers when walking. And she thus mainly walks to reach places and to relax.

The fourth participant is less mobile and only walks very short distances. She only walks on the concrete path, because she experiences inconveniences in walking when she leaves this path. The busy road she has to cross to reach the path is an obstacle too. She mentioned that she

has to be very careful when she crosses the road. She tries to walk every day mainly to stay fit, and she also likes the view on the agricultural fields. She mentioned that a few years ago she walked farther beyond the bend of the road, but that is not possible anymore because she is not able to walk that long distances anymore. Therefore, she always walks the same route nowadays. She also experienced barriers in safety during the walk. In the past she used to walk along the canal, but she does not feel safe there anymore. In the evening she does not feel safe walking this route on the concrete path, because there are no street lights present along the path. She also mentioned that in the winter with bad weather she is not able to walk, because the path becomes very slippery. Then she prefers to stay inside or take the car.

The last participant is also less mobile and walks short distances. In the afternoon she sometimes walks a little bit farther into the nature area. In the evening she mostly walks around in the neighbourhood. She mentioned that she is still able to walk this distance. She walks mainly to stay fit. She only walks on the paved paths, and then she does not experience any obstacles or barriers when walking. The view over the agricultural fields is what she loves most about this route in the neighbourhood. She is happy that she is still able to walk, because she is not able to ride a bike or drive a car anymore.
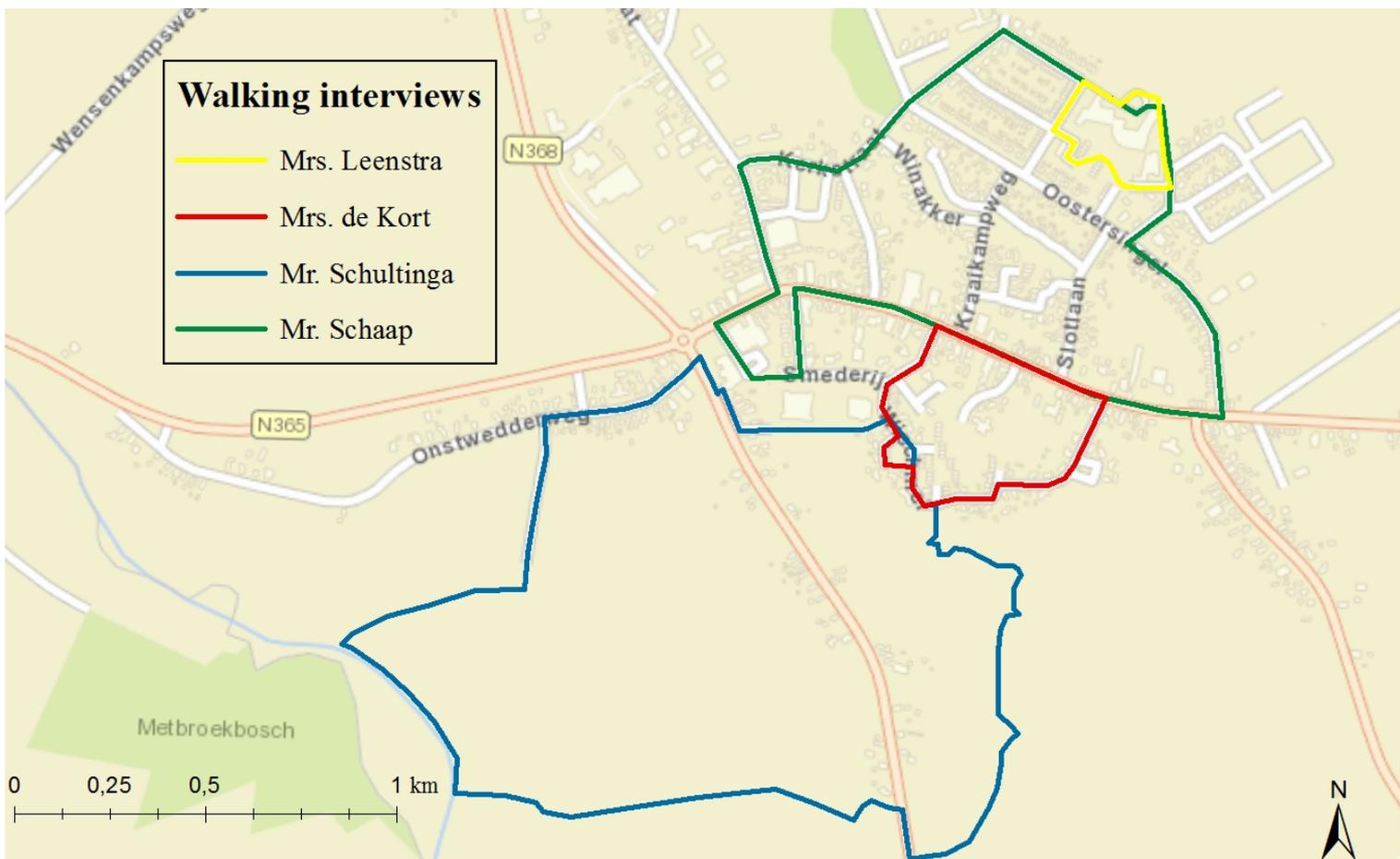
Figure 7 | Routes of the walking interviews | Map made with ArcGIS

4.4 Additional themes

During the interviews the participants mentioned themes that do not fit directly under the life space mobility or quality of life time theme. The themes mentioned were: activities, important ideals and dealing with changes. Since these themes seemed really important in the lives of the older adults, they are further elaborated below.

4.4.1 Activities

The participants mentioned that the activities they can still undertake are important for them. They divided these activities in activities of daily living and hobbies. Sometimes their activities of daily living overlap with their hobbies, but they will be explained separately in this paragraph.

Since the participants are still very active they have extensive and varied activities in their daily lives. The participants said that their lives are not lacking in activities. All the participants mentioned (grocery)shopping and domestic work as activities that belong to their daily lives. All the participants do their (grocery)shopping themselves. Some of the participants have help from relatives or a paid worker with their domestic work. In addition to these necessary activities the participants mentioned that they visit people or have visitors, follow the news, do some gardening and/or go for a walk or a bike ride. A few participants mentioned that they also look after their grandchildren a few times a week. The participants mentioned that the necessary tasks like (grocery)shopping, domestic work and looking after the grandchildren are mostly on weekdays. In the weekend most of the participants are visit family or they go out for a day on Saturday. Sunday is often mentioned as a day of rest, while in the morning visiting the church service: *"In the morning I do some domestic work and after that I help in the garden. And we love to watch plants and flowers at local shops. We look after our granddaughter on Wednesdays. In the weekend, on Saturdays, we are going out visiting villages around here and on Sundays we go to church, that is our day of rest, and then we walk a bit in the afternoon. The days fly by"* (Mr. Boer). Another participant tells about her daily live: *"We are often working in the vegetable garden, hoeing has almost become a hobby. In the morning we listen to the radio for the daily news and we read the newspaper. After that we do some domestic work or grocery shopping. Sometimes in the afternoon we are going to cycle. And in the weekends, we visit family or friends and go to church"* (Mrs. de Kort). All these activities are important to the participants, because it gives them the feeling that they are still able to really participate in the community.

Besides the activities of daily living the participants like to practice a variety of hobbies during the week. The hobbies mentioned by the participants are playing games, solving puzzles, playing sports, visiting the theatre, doing needlework, going out, reading, watching television, and singing. The fact that the participants have these hobbies and that they are still able to perform them ensures the participants that they do not get bored. Some of the participants mentioned that because of the hobbies they have, they will not get lonely quickly in the future: *"I have so many hobbies. And if I have nothing to do anymore in the future, then I will write a book or something. Sometimes you see that people become lonely, but I do not think that will happen to me so quickly, I still have so much to do"* (Mr. Edelman). Another participant mentioned: *"I never get bored. I have a hobby room here in my apartment. I knit and sew a lot, I go out with friends and I sing in a choir, so I will never get bored"* (Mrs. Bakker).

4.4.2 Important ideals

Despite the fact that many important ideals of the participants have already emerged in the previous paragraphs, there were still a few important ideals that did not fit under the previous themes. Ideals that were mentioned are honesty, privacy, freedom, safety, and living together harmoniously. Most mentioned by the participants were freedom and living together harmoniously. The participants say that living in harmony is important both in the family and outside the family with your surroundings. And that if the harmony is disturbed, for example by an argument or a quarrel, then you should try to engage in a dialogue as soon as possible to regain the harmony. This allows the participants to live together with all the other people around

them in a pleasant way. For freedom it is mentioned that it is important that you can do whatever you want to do and that you can go wherever you want to go. That is of great value for the participants: *"Everybody wants the freedom, to be able to do the things you want to do"* (Mr. Schultinga) and: *"Your freedom is a great value, then you do not have to wait, but you are just able to go"* (Mrs. Boer). In addition to living together harmoniously and freedom, privacy is mentioned as belonging to these two ideals. The participants felt that living as well as possible with your environment and having the freedom to do everything you want also contains the privacy to do this in your own way and to have the possibility to be on your own sometimes. At last, honesty and safety are mentioned as being important ideals in the participants' lives. For honesty it is mostly mentioned that it is important to be honest with each other and to not speak behind each other's back. For safety it is mentioned that they are concerned with their own safety and therefore do not do some things anymore, but that they are also concerned with the safety of others and that they do not want to be a danger for others, for example in traffic: *"The approval of the driving license for older people is very important to me. If I am not able to drive properly anymore, then I do not want to drive anymore. Not only for my own safety, but also for the other people on the street"* (Mrs. de Kort).

4.4.3 Dealing with changes

Finally, it was mentioned how the participants deal with changes in their lives. These concerned both changes in their quality of life and changes in their mobility.

Changes in the quality of life of the older adults mostly have to do with their physical wellbeing. Acceptance, slowing things down, and pursuing other interests were mentioned here as most important by the participants. As already mentioned in paragraph 4.2.4 most of the changes that the older adults face has to do with the ability to do the same amount of work in the same amount of time as in the past. This will not be further elaborated on again. In short, the participants say that because of the changes in physical wellbeing they have to slow things down, take more rest, sometimes ask for some help and in the end accept the changes. For some of the participants the changes in their physical wellbeing or the physical wellbeing of their partner caused that their emotional wellbeing has also changed. This was expressed in more stress and sadness. The same applies to the aspect of self-determination which for some participants changed a bit, because they are not able to do all their tasks independently anymore. Although the older adults mentioned changes in the different aspects of quality of life, all the participants mentioned that their overall quality of life is still the same: *"I cannot say that my quality of life has changed, it has not gotten worse either. It is difficult that you are not able to do all the work by yourself anymore, but you have to accept that"* (Mrs. Leenstra). Most of the participants mention that all the things that they have experienced over their life course have made them stronger and that therefore their quality of life has not changed. Finally, they mentioned that although the overall quality of life has not changed, the aspects of quality of life that are important for the older adults have changed over their life course. In the past, material wellbeing and taking care of the children and worrying about the children was more important. Since they do not work anymore and all the children have left their homes and started their own families, these aspects have become less important. Physical wellbeing and self-determination have become more important, because these aspects occur and influence their lives more when they are becoming older. In the past these aspects were taken more for granted by the participants.

Most of the participants experienced small changes in their mobility. They mention that the most important aspects of this changing mobility are that they have to cope with reduced mobility and that some of them have to make use of other modes of transportation. Five of the participants mentioned that they did not experience changes in their mobility at all and that they

are still as mobile as they have always been. These participants say that for them it is quite normal that they are still that mobile, because it has never been different, but that they are very happy with it. The other ten participants all mentioned some kind of change in their mobility. These changes mostly have to do with that they are not able to walk or bike that well anymore or that they face difficulties in climbing stairs. Participants that have new hips, knees or have undergone other surgeries were mostly not able to walk or not able to walk long distances anymore. Most of the participants did not really face problems with this, because they are able to ride a bike or drive a car. This enables them to still visit all the life spaces. The participants that are not able to ride a bike anymore are all able to walk or drive a car. One of the participants is unable to ride a bike and to drive a car. This participant had to solve these inconveniences by asking other people for help when she has to go out of the village. Participants that have difficulties in climbing the stairs have made sure that they can live on the ground floor or they lived in an apartment that only has one floor. Coping with the changes in mobility therefore consist mainly of using other modes of transportation, asking other people for help, and adapting the housing situation: *"When you become older it is obvious that your mobility reduces. But you must not let yourself be discouraged by it. You just have to go on and pursue. You will find ways to cope with it and sometimes you just have to ask for help"* (Mrs. Bakker).

5. Discussion and reflection

In this chapter the findings will be discussed, including reflections.

5.1 Discussion

This research focused on life space mobility and quality of life of older adults living in a rural village, specifically on the role of life space mobility in this quality of life.

Besides the three life spaces that were included in the research also the other three life spaces that are elaborated in the life space framework from Peel (2005) seemed important. These spaces are the bedroom, the home and the unlimited. These different life spaces influence how often and with how much independence the older adults can travel to each life space. For example, some of the participants needed to make adaptions in their bedroom or home, because they were not able to climb the stairs anymore, but these people did not face difficulties with independently traveling to and in the life spaces farther away. And the other way around some of the participants were not able to independently travel outside the town, to the unlimited, but these participants did not face any problems in the other life spaces closer by.

All the five dimensions of mobility from Alsnih & Hensher (2003) and Metz (2000) were found in the data. Therefore, these five key dimensions should be taken into account, allowing for a valid empirical measurement of mobility.

The quality of life domains from Schalock (2004) did not all prove to be important in the data. Especially material wellbeing was not that important. Since it was important to have a kind of base material wellbeing (e.g. ability to make ends meet and having a roof over your head), this domain is still included in the model. The other five domains from the model can all be found in the data. Religion is a seventh additional domain, besides the domains from Schalock (2004), that is found in the data as most important and playing a role in quality of life. Therefore, religion should be added to the model.

Three other themes that play an important role in either or both life space mobility and quality of life were found as well. These themes are activities, important ideals, and dealing with changes, which should also be added to the model to assess life space mobility and the quality of life of older adults.

When comparing the findings of this research to the existing literature about the connections between life spaces, mobility and the quality of life of older adults some noteworthy similarities and differences come forward. The majority of the participants did, although not severe, experience changes or limitations in their mobility. This is in line with several studies about the mobility of older adults (Alsnih & Hensher, 2003; Baker et al., 2003; Davis et al., 2015; Forte et al., 2015; Gilroy, 2008; Haustein & Siren, 2015; Kestens et al., 2016; Lo et al., 2016; Metz, 2000; Meyer et al., 2013; Musich et al., 2017; Nordbakke & Schwanen, 2014; Owlsey, 2002; Peel, 2005; Spinney, 2009; Stalvey, 1999; Webber et al., 2010; Ziegler & Schwanen, 2011). These studies state that the prevalence of mobility limitations increases when people become older.

This research has shown that different dimensions of mobility play a role in different domains of quality of life, but that it does not so much play a role in the overall quality of life of the participants. Mobility plays a role in emotional wellbeing, interpersonal relations, physical wellbeing, self-determination, and social inclusion. This contradicts with the studies of Metz (2000) and Nordbakke & Schwanen (2014), which drew more general conclusions about the role of mobility in quality of life. Those studies stated that a loss of mobility was related to a diminishing overall quality of life. Other studies (Gilroy, 2008; Musich et al., 2017; Spinney et al., 2002; Ziegler & Schwanen, 2011) corresponded to the findings. They found that

reduced mobility played a role in four of these quality of life domains. They did not find the role of mobility in self-determination, but they did find a role in material wellbeing.

It was remarkable that this research showed that all the life spaces of Peel (2005) are important in the mobility and quality of life. In the literature, however, little was found about the role that life spaces play in the mobility and quality of life. Gilroy (2008) stated that the home and the neighbourhood and the mobility in these spaces are the most important in the quality of life of older adults. This partly corresponds with the findings of this research, but it seems that more extended life spaces are also important. This corresponds with Elo (2011), who showed that through creating a pleasant social, symbolic, and physical environment life spaces play a role in both the mobility and the quality of life.

In this research it became clear from the walking interviews that the physical environment is important in the mobility of the older adults. Especially well-maintained walking paths and the busyness of intersections were mentioned. This corresponds with the studies of Clarke and Gallagher (2013) and Rosso et al. (2011). These two studies also mentioned that public transport, the amount of intersections, and accessible entryways to their home were important in the mobility of older adults. These last findings were not found in this research. Gilroy (2008) mentioned that the most important aspects of the environment are the maintenance of the streetscape, which was also found during this research and was expressed in the quality of the paths and proper street lights.

The results of this research contradicted other studies when the distance of travelling related to the transportation modes was concerned. In this research it became clear that a lot of the participants that were able to drive a car, were not able to drive to bigger cities and busy places, and therefore sometimes did not get farther than participants that did not drive a car, but were able to bike great distances. Literature that was entirely focused on life space mobility, especially stated that the life spaces that people are mobile in are larger for people that are still able to drive a car (Viljanen et al., 2016). This does not completely correspond with the findings from this research. Furthermore, Rantakokko et al. (2013) found that life space mobility is associated with the physical, psychological, and environmental quality of life. In this research it also became clear that the life space mobility of the participants plays a role in the physical and psychological quality of life, which are called emotional wellbeing and physical wellbeing in this research. Yet, in this research, it also became clear that it plays a role in other domains, such as the interpersonal relations, self-determination, and social inclusion.

The findings of this research show that it is difficult to define mobility and quality of life. These concepts mean different things to different people and these meanings also depend on the status of the mobility and the quality of life of the older adults. Moreover, the concepts mean different things to the same person over their life course. This shows the complexity and dynamics of the concepts. This corresponds with the findings of Nordbakke & Schwanen, (2014), Webber et al. (2010) and Ziegler & Schwanen (2011). As was stated by Vanleerberghe (2017) that quality of life is seen as multidimensional, dynamic and differing between and within individuals. This also applies to mobility. Therefore, it is theoretically important to separately focus on older adults in research, because important dimensions and domains change over the life course of people.

In the above discussion of the existing literature and the findings of this research it became clear that life space mobility plays a role in the quality of life of older adults, but that it is a complex role, since it varies over the different dimensions of mobility and the different domains of quality of life. Striking is that all the existing literature is just focused on the role of life space mobility in the quality of life, but does not consider the role of quality of life in the life space mobility of older adults as much. In this research it became clear that it also works the other way around and that especially physical wellbeing, self-determination, interpersonal relations, and social inclusion play an important role in life space mobility, which should be

investigated further. Moreover, in this research the participants also mentioned three other themes that are important in their life space mobility and/or their quality of life: activities, important ideals, and dealing with changes.

The developed model in this thesis was based on the life space aspects of Peel (2005), the mobility aspects of Alsnih & Hensher (2003) and Metz (2000), and the quality of life aspects of Schalock (2004). Peel (2005) indicated different life spaces to evaluate the mobility of people. This thesis focused on the following life spaces: outside the house, the neighbourhood, and the town. Alsnih & Hensher (2003) and Metz (2000) indicated different dimensions that are important when looking at mobility in later life. All these five dimensions of mobility are used for this thesis: access to desired places and people, psychological benefits, exercise benefits, involvement in the local community, and potential travel. Schalock (2004) indicated eight core domains of the quality of life of people. This thesis focused on the following domains of quality of life: emotional wellbeing, interpersonal relation, material wellbeing, physical wellbeing, self-determination, and social inclusion. Now that the findings are elaborated and discussed it is possible to discuss the applicability of the developed model that was used in this research to the role of life space mobility in the quality of life of older adults. Having used the developed model and assessed its outcome it can be stated that the mobility of older adults plays a role in some domains of their quality of life, but not in their overall quality of life. This also worked vice versa that some domains of quality of life play a role in some dimensions of mobility. Religion is an additional seventh domain in quality of life. Also, three other themes mentioned by the participants play an important role in either or both their life space mobility and quality of life. This is encountered in all six life spaces mentioned by Peel (2005). Therefore, an adjusted model has been developed. The adjustments are shown in a white font (figure 8). This model better displays what life space mobility and quality of life consists of according to the older adults and what role mobility plays in the quality of life of older adults in different life spaces and vice versa.
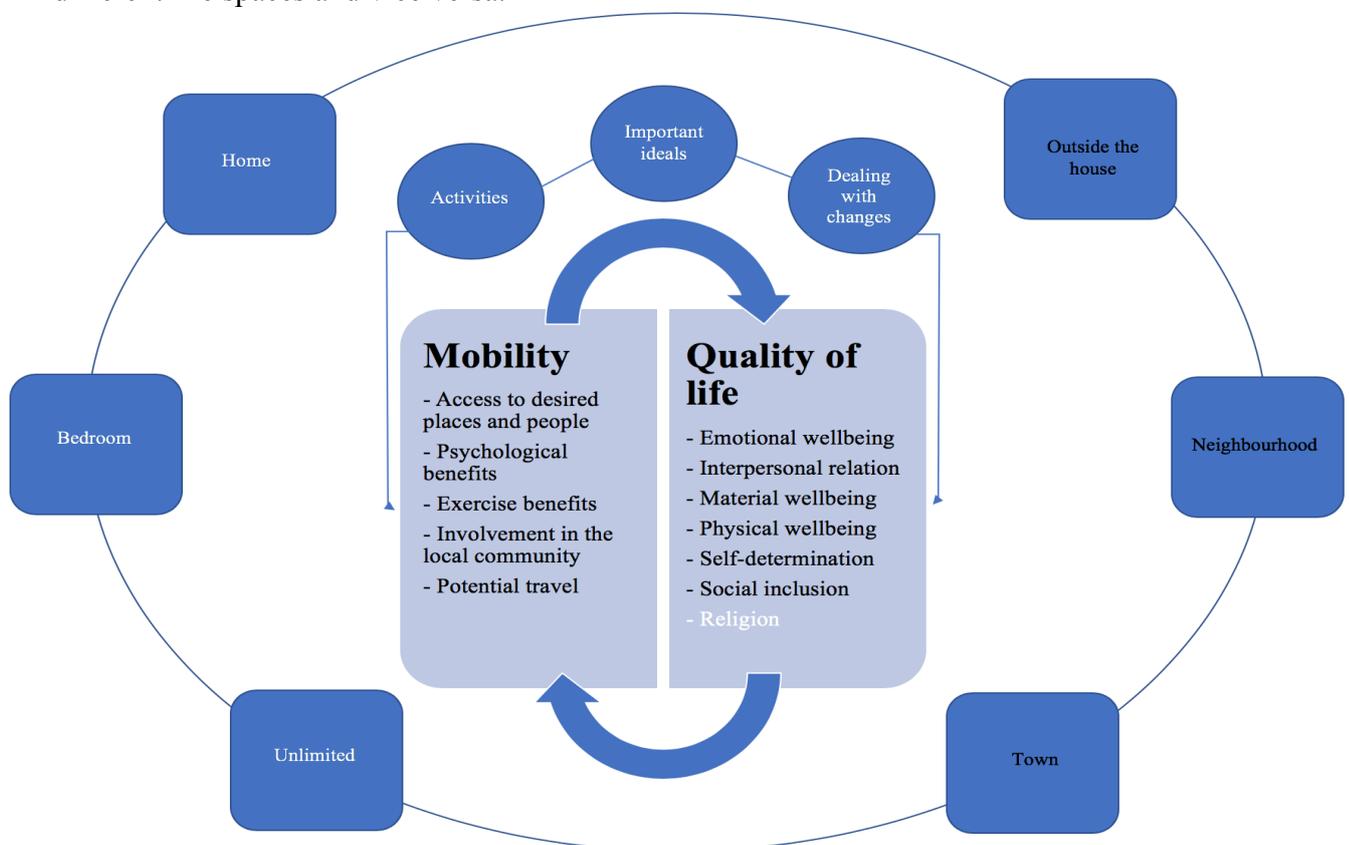

Figure 8 | Adjusted model

5.2 Reflection

The method used for gathering the data is useful to gain insight in the own experiences and perceptions of the participants. The open questions in the interview enabled the participants to describe how they feel and they could give more personal detailed answers about certain topics. Most of the participants enjoyed talking and sometimes it was difficult to intervene which led to very long interviews. This led to very time-consuming interviews, both at the moment of the interview and afterwards during transcribing and analysing the interviews. Since all the useful information is gathered from the interviews, this will not harm the results. However, it is important to bear in mind that it will often take more time than was expected in advance. Furthermore, in three interviews the interview was conducted with a couple. This could influence the answers that the persons give, if they do not feel comfortable to speak openly in the presence of the other person. This did not appear to be the case in these three interviews. In these interviews both partners were very open and it did not seem that they experienced troubles in answering the questions. In some cases, it seemed useful that the partner was present, because they could complement each other's answers. During the other interviews no other people were present in the room.

Concerning the recruitment of the participants, it proved difficult to recruit less mobile people. People that are still very mobile are more active, which made it easier to find them. Therefore, the first interviews that were conducted involved people that were mobile. After this, the recruitment was focused more on less mobile people, since it was important for this research to also get the view of less mobile people. Via an association aimed at the interests of older adults it eventually succeeded to also find some less mobile people. That most of the participants were relatively mobile can also be attributed to the fact that this research is focused on older adults that still live independently. Most of the older adults that are less mobile do not live independently anymore. It was also noticeable that less mobile people or people that did not walk a lot were less eager to participate in the walking interviews. The reasons for not participating for this group of people was that they did not feel comfortable walking or that they did not like walking. Therefore, in the walking interviews especially the view of the more mobile people is represented.

Afterwards, some of the participants asked if it had been possible to receive the questions of the interview beforehand. I chose not to send the questions in advance, because it was not the aim of the interview to get pre-defined, maybe socially accepted, answers. It was the intention that the participants spontaneously described how they feel about and experience certain topics.

After each interview, transcribing of the interview and coding the data was immediately done. This made it possible to discover certain things raised by the participants which may have been important to include in the following interviews. It also made it possible to immediately discover when data saturation was reached. Using this approach, it is important to take into account that you do not drive yourself in a certain direction raised by the participants in the interviews. Therefore, it is important to keep in mind the interview guide and topics that were established beforehand, because these are important in order to answer the research questions.

Lastly, this research was focused on a rural context and conducted in a village in East-Groningen, because the rural context is under-investigated in this field and consequences of ageing population will vary across space (Stockdale, 2011). Since this context is under-investigated it may be that some of the findings of this research are specific to this region or village. Therefore, there are still a lot of opportunities ahead for ageing research in a rural context.

6. Conclusion and recommendations

6.1 Conclusion

In conclusion of the life space mobility of older adults, their mobility is perceived as still good, even if they were not able to go everywhere they could go in the past and to do everything they could do in the past. Access to desired places and people, psychological benefits, exercise benefits, involvement in the local community, and potential travel all seemed important in the mobility of older adults. These dimensions of mobility are important in all six life spaces: the bedroom, the home, outside the house, the neighbourhood, the town, and the unlimited. This was different from the expectation that only three life spaces would be important.

Concluding on the quality of life of older adults, their quality of life is experienced as a high quality of life, even though not all the separate domains of quality of life are experienced as positive. Moreover, not all six domains of quality of life were evenly important. Although not evenly important all the six domains seem to play a role in the quality of life: emotional wellbeing, interpersonal relations, material wellbeing, physical wellbeing, social inclusion, and self-determination. In addition to these six domains, religion was also considered very important in quality of life. As for mobility, quality of life is set in all six life spaces.

The life space could also contribute to the mobility and quality of life of older adults through providing accessible amenities, proper walking- and biking paths and maintaining the safety on the street. Three inductive themes that are important in both the mobility and quality of life of older adults are activities, important ideals and dealing with changes.

Finally, it is important to take into account that mobility does not play a role in the overall quality of life. Different dimensions of mobility play a role in different domains of quality of life. It is noteworthy that this is not a one-way relation, but that there is a mutual relation between these concepts. Therefore, different domains of quality of life play a role in different dimensions of mobility as well.

This research shows that life space plays a role in both mobility and quality of life of older adults, and that different dimensions of mobility play a role in different domains of quality of life. It also shows that there is a mutual relation between these concepts: different domains of quality of life play a role in different dimensions of mobility. Finally, there are other themes that were identified in the different life spaces and that play a role in both mobility and quality of life of older adults.

6.2 Recommendations

From this research different recommendations for policymaking and future research come up.

As far as policymaking concerned, first, it is important that all the amenities stay close to older adults. Especially in the countryside, where older adults otherwise have to travel much farther to these basic amenities. Therefore, in order to create friendly environments for older adults, policymakers should bear in mind that proximity to amenities is very important when taking into consideration the mobility and quality of life of older adults in their own environment.

Second, policymaking should focus on building houses for older adults that are suitable to make adaptions or houses where it is possible to live on one floor. In this way more older adults have the possibility to live independently longer and grow old in the place where they live.

Third, places need to be maintained and created that make it possible for older adults to volunteer and participate in activities. Involvement in the community creates a sense of

community and ensures that villages stay liveable. This will make the villages a comfortable place to be for older adults.

Fourth, it is important to provide and maintain both walking- and cycling paths, create safe crossings on (busy) roads and provide proper street lights. This will increase the safety of the older adults and may encourage them to walk or bike more. It should also be considered to create concrete paths in the more natural areas, since the paths often contain pits, which is dangerous looking at the risk of falling. This would make it possible to walk through the nature with mobility devices too.

Lastly, policymakers in areas concerned with an ageing population need to consider that most of the older adults are not used to use public transportation services. Therefore, trainings should be provided to teach older adults how to use this mode of transportation, which could be very beneficial when people become less mobile. It may expand the potential to travel. Accomplishing these recommendations leads to more age-friendly environments in the countryside.

Besides recommendations for policymaking, recommendations for future research will also be provided. This research focused on a village in East-Groningen. It may be that the outcomes of this research are specific to this village or this region. Future research should focus on different villages or different regions to provide an answer on the question if these outcomes are context specific. It would be interesting to investigate this subject in villages with less amenities, because almost all amenities older adults need are available in Vlagtwedde. It could also be interesting to compare this to studies about mobility and quality of life of older adults that are already conducted in more urban contexts. If there is a broader picture of the different contexts, then municipalities or local authorities could focus on how they can deal with an ageing population in their specific context.

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Interview guide

How do older adults in Vlagtwedde experience the role of life space mobility in their quality of life?

1. How do older adults perceive their life space mobility?
2. How do older adults experience their quality of life?
3. How do older adults perceive their life space as contributing to their mobility and quality of life?

Introductie

Allereerst hartelijk bedankt voor het deelnemen aan dit onderzoek. Het onderzoek gaat over mobiliteit en de kwaliteit van leven van ouderen in Vlagtwedde. Dit onderzoek is voor mijn afstudeerscriptie van de master Population Studies aan de Rijksuniversiteit Groningen. Daarvoor ga ik verschillende ouderen in Vlagtwedde interviewen. Ik zal kort nog even uitleggen wat er gebeurt met de informatie die u geeft. Deelname aan dit onderzoek is vrijwillig. Indien u een vraag niet wil beantwoorden is dit mogelijk. Deelname kan gestopt worden totdat mijn scriptie afgerond is. De informatie uit dit interview zal alleen gebruikt worden voor dit afstudeeronderzoek en er zal vertrouwelijk mee omgegaan worden. Naast dat ik toegang heb tot de informatie, kan ik ook mijn scriptiebegeleider toegang geven. De informatie uit het interview wordt anoniem verwerkt, dus niemand kan achterhalen wat u gezegd heeft aangezien uw naam onbekend blijft. U kunt op elk moment stoppen met de deelname of een pauze nemen tijdens het interview.

Het interview wordt ook opgenomen, zodat ik het later eventueel nog een keer terug kan luisteren om de informatie zo zorgvuldig mogelijk te analyseren. Met het ondertekenen van het toestemmingsformulier stemt u in met bovenstaande voorwaarden en met het opnemen van het interview. Is alles duidelijk, of heeft u nog vragen?

Introducerende vragen
- Kan u kort iets over uzelf vertellen?
  Probe: leeftijd, huishoudenssamenstelling, kinderen, woonsituatie
- Hoe lang woont u hier al?
- Kunt u een typische doordeweekse dag beschrijven?
  En een typische dag in het weekend?
  Probe: hobby's, sociale contacten, (vrijwilligers)werk

Quality of life vragen
- Wat betekent voor u kwaliteit van leven?
- Wat vindt u het meest belangrijk in uw leven? En waarom?
  Probe: emotioneel welzijn, persoonlijke relaties, materieel welzijn, fysiek welzijn, zelfbeschikking, sociale integratie
- Zijn er hiernaast nog andere dingen die u belangrijk vindt?
- Zijn deze aspecten altijd belangrijk geweest of is dat over de tijd veranderd?
  Zo ja: Wat heeft gezorgd voor die verandering?

Zo ja: Hoe is het veranderd, wat was vroeger belangrijker en waarom?
- Is uw kwaliteit van leven veranderd?
  Zo ja: Wat heeft er gezorgd voor deze veranderingen? Wat is er veranderd?
- Heeft u het idee dat uw mobiliteit invloed heeft op de dingen die u belangrijk vindt/kwaliteit van leven? Waarom?

- Indien niet benoemd hoe belangrijk is:
  - Emotioneel welzijn (tevredenheid, zelfbeeld, gebrek aan stress)
  - Persoonlijke relaties (interacties, relaties, ondersteuning/support)
  - Materieel welzijn (werk, huisvesting, financieel)
  - Fysiek welzijn (gezondheid, activiteiten in het dagelijks leven, vrije tijd)
  - Zelfbeschikking (autonomie/persoonlijke controle, doelen en persoonlijke waarden, keuzes)
  - Sociale integratie (integratie in de gemeenschap en participatie, rol in de gemeenschap, sociale ondersteuning)

Life space mobility vragen
Rondom het huis, in de wijk en in het dorp
- Welke plekken zijn belangrijk voor u rondom uw huis, in de wijk en in het dorp?
  Probe: natuur, voorzieningen, buurthuis
- Waarom zijn deze plekken belangrijk?
- Hoe bereikt u deze plekken?
  Probe: auto fiets, openbaar vervoer, te voet
- Gebruikt u hierbij wel eens hulpmiddelen?
  Probe: elektrische fiets, scootmobiel, rollator, wandelstok
- Welke andere plaatsen bezoekt u graag? Waarom?
  Wat maakt deze plekken bijzonder voor u?
  Roepen deze plekken bepaalde gevoelens op?
- Zijn er ook plekken buiten het dorp die u bezoekt?
  Hoe bereikt u deze plekken?
  Wat maakt deze plekken bijzonder voor u?
  Roepen deze plekken bepaalde gevoelens op?
- Hoe ervaart u het bezoeken van deze plaatsen die u heeft genoemd?
  Probe: fit voelen, over het algemeen een fijn gevoel van het bezoeken, sociale activiteiten en contact
- Zijn er plekken die u minder graag bezoekt? Waarom?
- Zijn er plaatsen die u zou willen bezoeken, maar niet meer kan door uw mobiliteit?
- In hoeverre bent u afhankelijk van anderen mensen om ergens heen te gaan?
  Hoe voelt u zich daarbij?
- In hoeverre bent u afhankelijk van openbare vervoersmiddelen om ergens heen te gaan?
  Hoe voelt u zich daarbij?
- Voelt u zich wel eens belemmerd in uw mobiliteit? Hoe gaat u hiermee om?
- Wat betekent mobiel zijn voor u?
- Hoe mobiel vindt u zichzelf? Op een schaal van 1 tot 10?
  Zo ja mobiel: Wat vindt u het belangrijkste aan nog mobiel zijn?
  Probe: contacten, zelfstandig zijn, fysieke oefening
  Zo niet mobiel: Wat betekent het voor u dat u minder mobiel bent?

- Indien niet benoemt hoe belangrijk is:
  - ➢ Mobiliteit om toegang te krijgen tot gewenste plaatsen of mensen
  - ➢ Psychologische voordelen van mobiliteit (algemenere voordelen)
  - ➢ Fysieke voordelen (oefening, beweging, lichamelijk)
  - ➢ Betrokkenheid bij de gemeenschap (informele lokale supportnetwerken en sociale activiteiten)
  - ➢ Potentieel om te reizen/mobiel te zijn (weten dat je in staat bent om iets te doen)

Aflsuitende vragen
- Wat vond u van het interview en de vragen?
- Heeft u nog iets aan te vullen op het interview, wat nog niet besproken is?

Aflsuiting
Dit waren de laatste vragen van het interview. Heeft u nog opmerkingen of vragen? Ik wil u graag nog een keer bedanken voor uw tijd en het interview.

Walking interview
- Kunt u iets vertellen over de route die we nu lopen? Waar zijn we, waar gaan we heen?
- Hoe vaak loopt u deze route?
- Waarom loopt u deze route?
  Positieve en minder positieve dingen aan de route?
- Loopt u ook wel eens andere routes? Waarom?
  Probe: weersomstandigheden, andere verkeerssituatie, obstakels
- Ervaart u obstakels/problemen bij het lopen van deze routes?
  Probe: fysieke hindernissen, drukte/andere mensen, verkeer
- Zijn er ook routes die u minder graag loopt? Waarom?

Toestemmingsformulier

Ondergetekende verklaart hierbij dat hij/zij deelneemt aan het volgende onderzoek: mobiliteit en de kwaliteit van leven van ouderen in Vlagtwedde.

Hier een korte uitleg over wat er met uw informatie en dit onderzoek gedaan wordt:

Deelname aan dit onderzoek is vrijwillig. Indien u een vraag niet wil beantwoorden is dit mogelijk. Deelname kan gestopt worden totdat mijn scriptie afgerond is. De informatie uit dit interview zal alleen gebruikt worden voor dit afstudeeronderzoek en er zal vertrouwelijk mee omgegaan worden. Naast dat ik toegang heb tot de informatie, kan ik ook mijn scriptiebegeleider toegang geven. De informatie uit het interview wordt anoniem verwerkt, dus niemand kan achterhalen wat u gezegd heeft aangezien uw naam onbekend blijft. U kunt op elk moment stoppen met het interview of een pauze nemen tijdens het interview. Het interview wordt ook opgenomen, zodat ik het later eventueel nog een keer terug kan luisteren om de informatie zo zorgvuldig mogelijk te analyseren.

Met het ondertekenen van het toestemmingsformulier stemt u in met bovenstaande voorwaarden en met het opnemen van het interview.

Datum:

Naam deelnemer: Handtekening:

Geboortedatum:

Naam onderzoeker: Daniëlle Ruikes   Handtekening:

Plaats:

Informatie over het onderzoek de rol van mobiliteit in de kwaliteit van leven van ouderen in Vlagtwedde

Het doel van dit onderzoek
Mijn naam is Daniëlle Ruikes en ik ben momenteel bezig met mijn master scriptie voor de master Population Studies aan de Rijksuniversiteit Groningen. Het doel van deze scriptie is om te onderzoeken welke rol mobiliteit speelt in de kwaliteit van leven voor ouderen in Vlagtwedde.

Deelname aan het onderzoek
Voor dit onderzoek nodig ik u uit om met mij in gesprek te gaan over uw ervaringen door middel van een diepte-interview en eventueel een wandeling waarin u meer kunt vertellen over uw mobiliteit in de omgeving. In het interview zullen er vragen gesteld worden over uw mobiliteit in uw omgeving en thema's die u belangrijk vindt in uw leven. Het interview zal ongeveer een uur duren. Als u ook mee wilt doen aan de wandeling, zal dit ook ongeveer maximaal een uur duren. Als u ermee instemt, zal het gesprek bij u thuis plaatsvinden.

Naar wie ben ik op zoek?
Voor dit onderzoek ben ik op zoek naar ouderen van 65 jaar of ouder die zelfstandig woonachtig in Vlagtwedde zijn. Zowel personen die nog heel erg mobiel zijn, als mensen die minder mobiel zijn kunnen deelnemen aan het onderzoek.

Wat gebeurt er met de verzamelde informatie?
De gegevens die ik via het interview verzamel zullen vertrouwelijk behandeld worden. Naast mijzelf heeft alleen mijn begeleider vanuit de Rijksuniversiteit Groningen toegang tot de gegevens, verder hebben anderen geen toegang. De informatie wordt anoniem bewaard, verwerkt en geanalyseerd. Uiteindelijk zal ik met de informatie mijn scriptie schrijven en kan de informatie uit mijn scriptie gebruikt worden voor ander onderzoek.

Wilt u deelnemen?
Als u zou willen deelnemen aan het onderzoek vraag ik u uw naam en telefoonnummer door te geven via onderstaande gegevens. Ik neem dan contact met u op. Mocht u toch niet meer willen deelnemen, dan kunt u op elk moment stoppen met de deelname.

Heeft u nog vragen?
Als u meer vragen heeft over het onderzoek dan kunt u altijd contact met mij opnemen via onderstaande gegevens.
Naam: Daniëlle Ruikes. E-mail: d.c.ruikes@student.rug.nl. Telefoonnummer: 06-30759657.

Met vriendelijke groet,

Daniëlle Ruikes

Life space mobility	A: Access to desired places and people	A1: Desired places and people	A1.1: Natural environment
			A1.2: Familiar places
			A1.3: Good memories
			A1.4: Amenities
			A1.5: Associations
		A2: Not desired places	A2.1: Busy places
			A2.2: Bad memories
		A3: Accessibility	A3.1: Not being able to visit
			A3.2: Places nearby
			A3.3: Missing amenities
	B: Psychological benefits	B1: Relaxation	B1.1: Unwind
			B1.2: Time for yourself
		B2: Getting out	B2.1: Among the people
			B2.2: Enjoyment
		B3: Positive feelings	
	C: Exercise benefits	C1: Being active	C1.1: Being busy
			C1.2: still feeling good
		C2: Training	C2.1: Stay fit
			C2.2: Not feeling sick
	D: Involvement in the local community	D1: Social participation	D1.1: Volunteering
			D1.2: Helping each other
		D2: Social integration	D2.1: Networks
			D2.2: Association life
			D2.3: Solidarity
	E: Potential travel	E1: Transportation	E1.1: Walking
			E1.2: Bicycle
			E1.3: Driving a car
			E1.4: Public transport
			E1.5: Use of devices
		E2: Being able to make a trip	E2.1: Can get somewhere
			E2.2: Not being able to visit
			E2.3: Barriers
Quality of life	F: Emotional wellbeing	F1: Contentment	F1.1: Gratitude
			F1.2: Lack of stress
			F1.3: Happiness
		F2: Discontentment	F2.1: Fear
			F2.2: Disappointment
			F2.3: Sadness
			F2.4: Stress
		F3: Other	F3.1: Solace
			F3.2: Loneliness
	G: Interpersonal relation	G1: Interactions / relationships	G1.1: Family
			G1.2: Friends
			G1.3: Acquaintances
			G1.4: Neighbours
			G1.5: Fellow villagers

		G2: Other	G2.1: Sympathy
			G2.2: Support
			G2.3: Trust
			G2.4: Helping each other
	H: Material wellbeing	**H1: Financial**	**H1.1: Income**
			H1.2: Savings
			H1.3: Debts
		H2: Housing	**H2.1: Ageing in place**
			H2.2: Close to amenities
			H2.3: (Possible) adaptions
	I: Physical wellbeing	**I1: Health**	**I1.1: Absence of diseases**
			I1.2: Diseases
			I1.3: Being able to do everything you want to do
			I1.4: Being active
		I2: Limitations	**I2.1: Decreasing mobility**
			I2.2: Safety
			I2.3: Not being able to do
			I2.4: Take a rest
			I2.5: Loneliness
	J: Self-determination	**J1: Autonomy**	**J1.1: Independence**
			J1.2: Dependence
		J2: Personal goals, values and choices	**J2.1: Being able to do everything you want to do**
			J2.1: Being able to go anywhere you want to go
			J2.3: Living independent in this place
	K: Social inclusion	**K1: Social participation**	**K1.1: Volunteering**
			K1.2: Socially moved
		K2: Social integration	**K2.1: Sense of community**
			K2.2: Association life
		K3: Social supports	**K3.1: Point of contact**
			K3.2: Helping each other
	L: Religion	**L1: Faith**	**L1.1: Eternal life**
			L1.2: Grip
			L1.3: Forgiveness
			L1.4: Trust
			L1.5: Solidarity
Other	**M: Activities**	**M1: Activities of daily living**	**M1.1: Shopping**
			M1.2: Domestic work
			M1.3: Visiting people / get people to visit
			M1.4: Following the news
			M1.5: Look after the grandchildren
			M1.6: Gardening
			M1.7: Walking / bicycle
		M2: Hobbies	**M2.1: Playing games**
			M2.2: Puzzle

			M2.3: Sports
			M2.4: Theatre visit
			M2.5: Needlework
			M2.6: Going out
			M2.7: Reading
			M2.8: Watching television
			M2.8: Singing
	N: Important ideals	N1: Honesty	
		N2: Privacy	
		N3: Freedom	
		N4: Safety	
		N5: Living harmoniously together	
	O: Dealing with changes	O1: Change in quality of life	O1.1: Acceptance
			O1.2: Slow things down
			O1.3: Other interests / way of thinking
		O2: Change in mobility	O2.1: Coping with reduced mobility
			O2.2: Use of other transport or devices

E. Code book

Code Book		
Code	Type	Definition
Life space mobility		
Access to desired places / people		Derived demand for which the aim is to minimise the associated costs of the travel.
Desired places and people	Deductive	Places and people that are liked to be visited a lot.
Not desired places	Deductive	Places and people that not liked to be visited.
Accessibility	Deductive	The entries and possibilities people have to visit desired places and people.
Psychological benefits		More general benefits of going out.
Relaxation	Inductive	The feeling that you totally unwind and have time for yourself.
Getting out	Deductive	The enjoyment of just being outside among other people.
Positive feelings	Inductive	Positive feeling that are evoked by going out.
Exercise benefits		Muscle and bone exercises that are part of the everyday life.
Being active	Deductive	Activities that are part of the everyday mobility, that keeps you busy.
Training	Deductive	Activities to train your muscles and bones to stay fit and not feeling sick.
Involvement in the local community		Yielding benefits from informal local support networks and social activities.
Social participation	Deductive	Participation in the community through volunteering or helping each other.
Social integration	Deductive	Integration in the community through gained networks, associations and solidarity in a community.
Potential travel		Knowing that you could make a trip even if it is actually not undertaken.
Transportation	Deductive	Different modes of transportation that can be used to visit places or people.
Being able to make a trip	Deductive	The knowing that you can make a trip without any barriers, even if you are not going to actually make that trip.
Quality of life		
Emotional wellbeing		Emotions that are evoked in different situations and influence you wellbeing.
Contentment	Deductive	Positive feelings of gratitude, a lack of stress and happiness.
Discontentment	Inductive	

		Negative feelings of fear, disappointment, sadness and stress.
Other	Inductive	Other more neutral feelings of solace and loneliness.
Interpersonal relation	The different interactions and relationships you have with other people and the things you give to and get from these relationships.	
Interactions/relationships	Deductive	Social networks and social contacts and the relationships with other persons
Other	Inductive	Things you give to and get from the interactions and relationships, such as sympathy, support, trust and help.
Material wellbeing	The possessions that you have and what you can do with it.	
Financial	Deductive	Income, benefits, savings and debts.
Housing	Deductive	Type of residence, ageing in place, close to amenities and (possible) adaptions that can be made.
Physical wellbeing	The functioning of the body.	
Health	Deductive	The absence of diseases, having diseases, being able to do everything you want to do and still being active.
Limitations	Inductive	Limitations that cause less physical wellbeing such as decreasing mobility, safety, not being able to do things, needing rest and loneliness.
Self-determination	The autonomy to do things without needing help from others.	
Autonomy	Deductive	Being able to do everything independent.
Personal goals, values and choices	Deductive	The desires, expectations, opportunities, options and preferences people have.
Social inclusion		
Social participation	Deductive	Participation in the community through volunteering or helping each other.
Social integration	Deductive	Integration in the community through gained networks, associations and solidarity in a community.
Social supports	Deductive	Supports that are gained from the inclusion in the community such as having a point of contact and helping each other.
Religion	Cultural system followed by people.	
Faith	Inductive	The values people get from a religion.
Other		
Activities	Activities and hobbies that are performed daily.	
Activities of daily living	Inductive	Activities that people undertake during the day.
Hobbies	Inductive	Hobbies that people love to do during the day.
Important ideals	Ideals that are important in the lives of people.	
Honesty	In vivo	To be honest with other.
Privacy	In vivo	The ability to be on your own and do things in your own way.
Freedom	In vivo	Having the freedom to do whatever you want.
Safety	In vivo	Feeling safe in your own surroundings.
Living harmoniously together	In vivo	Living pleasant together with the people around you.

Dealing with changes	Changes people have to deal with when they become older.	
Change in quality of life	Inductive	Accepting, slowing things down and other interests that are important when you become older.
Change in mobility	Inductive	Coping with reduced mobility and using other transport modes when becoming older.