The Impact of Living Arrangements on Quality of Life among Older Adults:

Aging in Place versus Retirement Homes

Colophon

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Abstract

The aging population in the Netherlands poses significant challenges for living arrangements and their impact on the quality of life among older adults. This thesis investigates how different living arrangements, specifically aging in place versus residing in retirement homes, influence the quality of life of older adults using a quantitative analysis of the WoON 2021 survey data. The study employs Coarsened Exact Matching (CEM) to control for the compositional effect, ensuring comparability between the two groups.

The findings reveal no significant difference in life satisfaction between older adults aging in place and those residing in retirement homes after matching to control for compositional effects. This suggests that living arrangements alone may not be the primary determinant of life satisfaction. Instead, other factors such as health status, social quality, and activity hindrance play more substantial roles. Health emerged as a pivotal factor, with better health significantly associated with higher life satisfaction, underscoring the importance of health promotion and maintenance programs tailored to older adults. The extent and quality of social interactions were also crucial, with higher social quality linked to greater life satisfaction. Physical limitations negatively impacted life satisfaction, emphasizing the importance of interventions aimed at reducing activity hindrance and promoting physical independence. Living in a multi-person household had a small but significant positive effect on life satisfaction, suggesting that social support within the household can enhance well-being. Higher household income was associated with increased life satisfaction, although the effect size was relatively small, indicating that financial stability is an important aspect of overall well-being.

The study's findings have several policy implications. Firstly, there is a need for policies aimed at improving the health of older adults through preventive measures and access to healthcare services. Secondly, fostering social interactions and community engagement can significantly enhance the quality of life. Thirdly, interventions to reduce physical limitations and promote independence are essential. Financial support programs to ensure adequate income for older adults can also contribute to their well-being. Finally, spatial planning should create age-friendly environments that cater to the needs of older adults in both urban and rural settings.

In conclusion, while living arrangements themselves do not significantly impact the quality of life among older adults in the Netherlands, health status, social quality, and activity hindrance are critical factors. Policymakers should focus on these areas to improve the well-being of the older population. By addressing health, social interaction, physical independence, and financial stability, it is possible to enhance the overall quality of life for older adults, whether they age in place or reside in retirement homes. The insights gained from this study underscore the multifaceted nature of quality of life and highlight the importance of a holistic approach to supporting the aging population.

Keywords: aging in place, quality of life, retirement homes, older adults, well-being, health status, coarsened exact matching

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List of Abbreviations

CBS	Centraal bureau voor de statistiek
CEM	Coarsened exact matching
GLM	Generalized Linear Model
LM	Linear Model
QoL	Quality of life
RIVM	Rijksinstituut voor Volksgezondheid en Milieu (National Institute for Public Health and the Environment)
WHO	World Health Organization

1. Introduction

1.1 Background

The population of the Netherlands is aging. At the start of 2023 just over 3.6 million people aged over 65 lived in the Netherlands which corresponds to 20.2 percent of the total population. In 1990 only 12.8 percent of the Dutch population was aged over 65 (CBS, n.d.a). This percentage has been increasing and is expected to increase further in the future (van Dam et al., 2013; CBS, n.d.a; Vanleerberghe et al., 2017). Additionally, the proportion of very old people is expected to grow even faster. For instance in Europe, the segment of people aged over 80 will double by 2080 compared to 2014 (Vanleerberghe et al., 2017; Eurostat, 2015). Furthermore the proportion of older adults is higher in rural areas compared to more urban areas. It is expected that the share of older adults in rural areas will be around 30 percent (van Dam et al., 2013).

The increasing share of older adults comes with significant spatial challenges and requires new policy approaches (van Dam et al., 2013). The aging process is often accompanied by a declining degree of self-reliance. For instance, the distance older adults are able to walk and are therefore more dependent on services in their immediate surroundings of their home (Lager et al., 2016). Therefore, the physical environment has a significant impact on the lives of older adults as they rely on their locality for support and assistance (Buffel & Phillipson, 2012). As older adults are dependent on their surroundings in their daily activities and assistance,their direct surroundings are an important contributor to their quality of life (Guida & Carpentieri, 2021; Douma et al., 2021).

The Netherlands and many other Western governments have chosen to stimulate and promote aging in place through policies to cope with the challenges arising from an aging population (van Bilsen et al., 2008; Ministerie van VWS, 2018). In recent decades, the Netherlands has undergone policy shifts regarding elderly care. Similar to in other western societies this transition is driven by the need to reduce the costs associated with elderly care (Sixsmith & Sixsmith, 2008). In the Netherlands this is accompanied by a shortage in health care personnel. Specifically nursing homes have been criticised for not providing a home for their residents (Klaassens & Meijering, 2015). Additionally, governments argue aging in place is better for older adults in most situations. Governments often refer to global research that points out the positive relationship between aging in place and social interaction, social activities, physical and mental health and longevity (Anme & McCall, 2011). Furthermore, research points out that older adults prefer aging in place as opposed to moving to a retirement home. Older adults in western countries prefer to live in their own familiar environment as long as possible (De Witte et al., 2012; Teti et al., 2014; Gonyea & Burnes, 2013). Historically, retirement homes have played a crucial role in providing care for the older adults in the Netherlands but this is no longer the norm (Heins, 2005). Intramural living is deemed less attractive. Older adults feel that they maintain their independence, autonomy and social connections when they stay in their familiar environment (Wiles et al., 2011). In 2018 the Dutch Ministry of Health, Wellbeing and Sports introduced the program ‘Langer Thuis’ (Aging in place). It aims to enable older adults to live in their current residence, independently, for longer, also called aging in place (Ministerie van VWS, 2018). In alignment with governmental policies, there has been a decline in traditional retirement homes, with a corresponding rise of aging in place (ABF Research, 2021). This shift is not merely a reflection of budgetary constraints but also resonates with the broader societal trend of promoting independence and quality of life for older adults. This raises the question: how do we maintain and improve quality of life among older adults?

This thesis addresses a research gap in spatial planning research by examining the impact of policy shifts towards aging in place on the quality of life, and its interrelated factors, among older adults in the Netherlands. Douma et al. (2021) research the subjective wellbeing in later life in relation to geographical life space with qualitative methods. They found that the extent to which an older person their life space is restricted puts older adults more at risk of having low subjective well being. Older adults in community dwellings have on average a less restricted life space. However, qualitative methods are often more guiding. In qualitative methods it is difficult to control for other factors that could influence whether an older adult is either aging in place or living in a retirement home. By using a quantitative method using the WoON dataset and the matching procedure we aim to control for the compositional effect that qualitative research is often lacking. Therefore, a quantitative approach can give a deeper understanding into the perceived quality of life among older adults. The scientific relevance of this thesis is that it can provide insights into the causal relationship between aging in place and quality of life and which related factors are important in this causal relationship.

The societal relevance of this thesis lies in its exploration of the intersection between social policy, and spatial planning. As populations in many developed countries are aging (ABF Research, 2021; World Health Organization, n.d.), understanding the implications of housing policy changes on older adults becomes increasingly important. Causation related to policy change will be difficult to prove, but this research does give an understanding of the difference in quality of life among older adults in retirement homes versus those aging in place. The research contributes to a deeper understanding of how policy decisions affect the quality of life among older adults in the Netherlands. By evaluating the quality of life of older adults in different living arrangements, this study offers insights into the broader consequences of aging in place policies. These insights are vital for developing evidence-based policies and practices that effectively support the aging population, particularly in the context of a housing crisis as in the Netherlands. Additionally, this thesis builds upon existing research as that from Douma et al. (2021), connecting it with current societal challenges. The findings are expected to inform policymakers, spatial planners, and healthcare professionals, offering insights on the needs and challenges faced by older adults in rapidly changing urban environments.

Assessment is crucial to a policy pursuing a good quality of life, literature reveals that this is seldom performed (Vanleerberghe et al., 2017). The comparative analysis of these environments in the Dutch context holds pivotal implications for policy-making and the future design of eldercare models to improve quality of life.
At the same time, the Netherlands faces a significant housing crisis, characterized by a shortage of affordable housing. In this context, the transformation of the retirement home sector and the promotion of aging in place have implications not only for elderly care but also for the broader housing context. The revitalization of retirement homes may open up regular housing units.

1.2 Research Problem

This thesis seeks to investigate the impact of living arrangements on the quality of life of older adults in the Netherlands. The primary objective is to evaluate how quality of life among the older adults differs for older adults living in retirement homes versus older adults aging in place.

This thesis addresses the following research question:

"How do living arrangements, specifically aging in place versus residing in retirement homes, influence quality of life for older adults in the Netherlands?"

Consequently, the following sub-questions are addressed:

- To what extent is the difference in quality of life among older adults residing in a retirement home versus aging in place a result of a composition effect?
- To what extent do key determinants of subjective well-being influence quality of life among older adults?

This thesis can provide a basis for future policy development for housing and care for older adults. It can also contribute to the housing debate which is arguably the largest crisis in the Netherlands in this decade. Additionally it gives insight into factors influencing quality of life among older adults in the Netherlands.

1.3 Structure of the Thesis

Firstly, current academic literature on aging in place and quality of life will be discussed in chapter 2, the theoretical framework. The theoretical framework will address factors that can predict whether older adults age in place or reside in retirement homes. Second, a conceptual model is presented that visualizes how quality of life and housing typology relate to each other and how they are influenced by other factors. Third, in chapter 3, the methods and data used to assess how living arrangements influence quality of life among older adults will be explained and justified. Thereafter, the results will be presented in chapter 4, followed by a discussion in chapter 5 and a conclusion in chapter 6.

2. Theoretical Framework

2.1 An Aging Population

The Netherlands is experiencing a significant demographic shift, characterized by an aging population. Aging is defined as the process where the proportion of older individuals increases relative to the overall population (Volksgezondsheidenzorg, 2023). Grey pressure, the ratio between the number of people aged 65 and over and the number of people of working age from 20 to 64, has increased from 22.2% to 34.4%. This corresponds with a growth of the number of people aged 65 and over from 2.2 million to 3.6 million. During the same period, the total population growth was comparatively modest at 10%. Figures 1 and 2 illustrate these demographic changes through population pyramids.

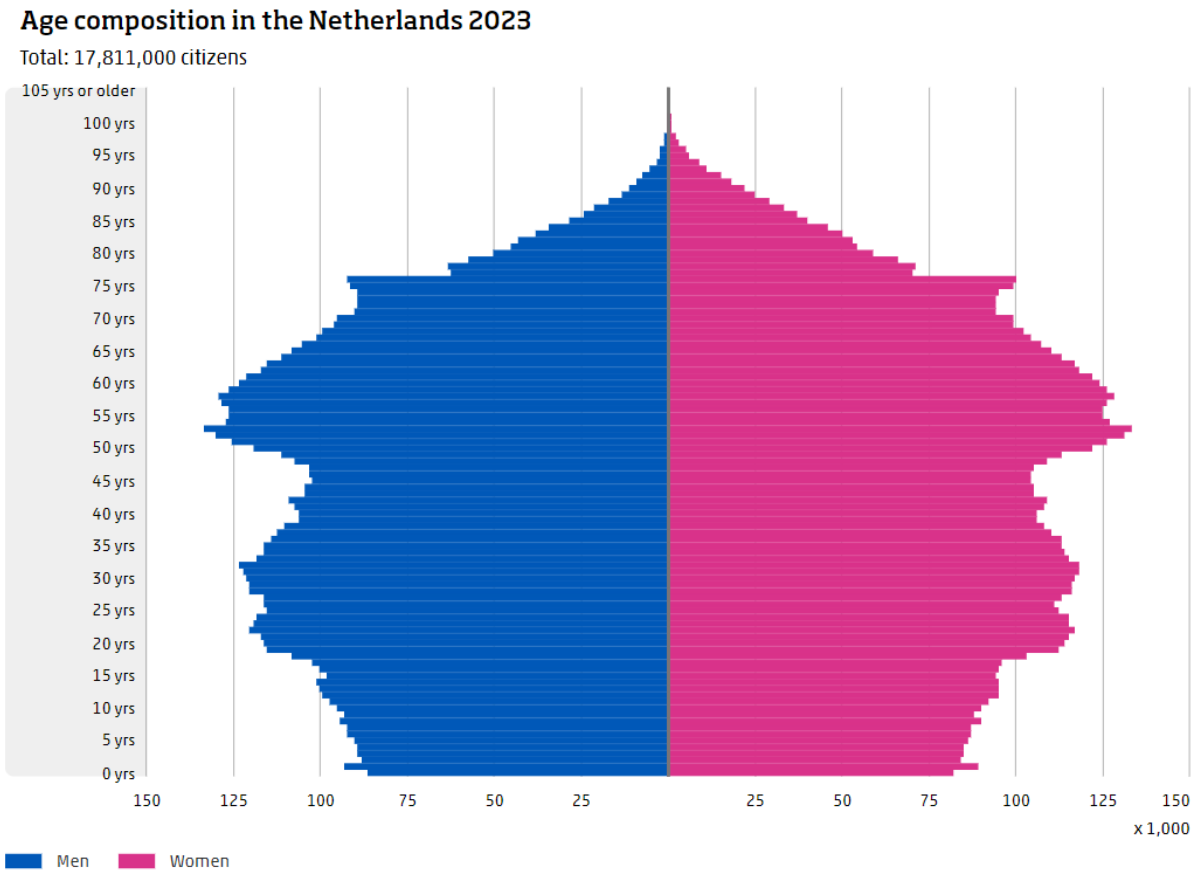

Figure 1: Age composition in the Netherlands 2023 (CBS, n.d.)

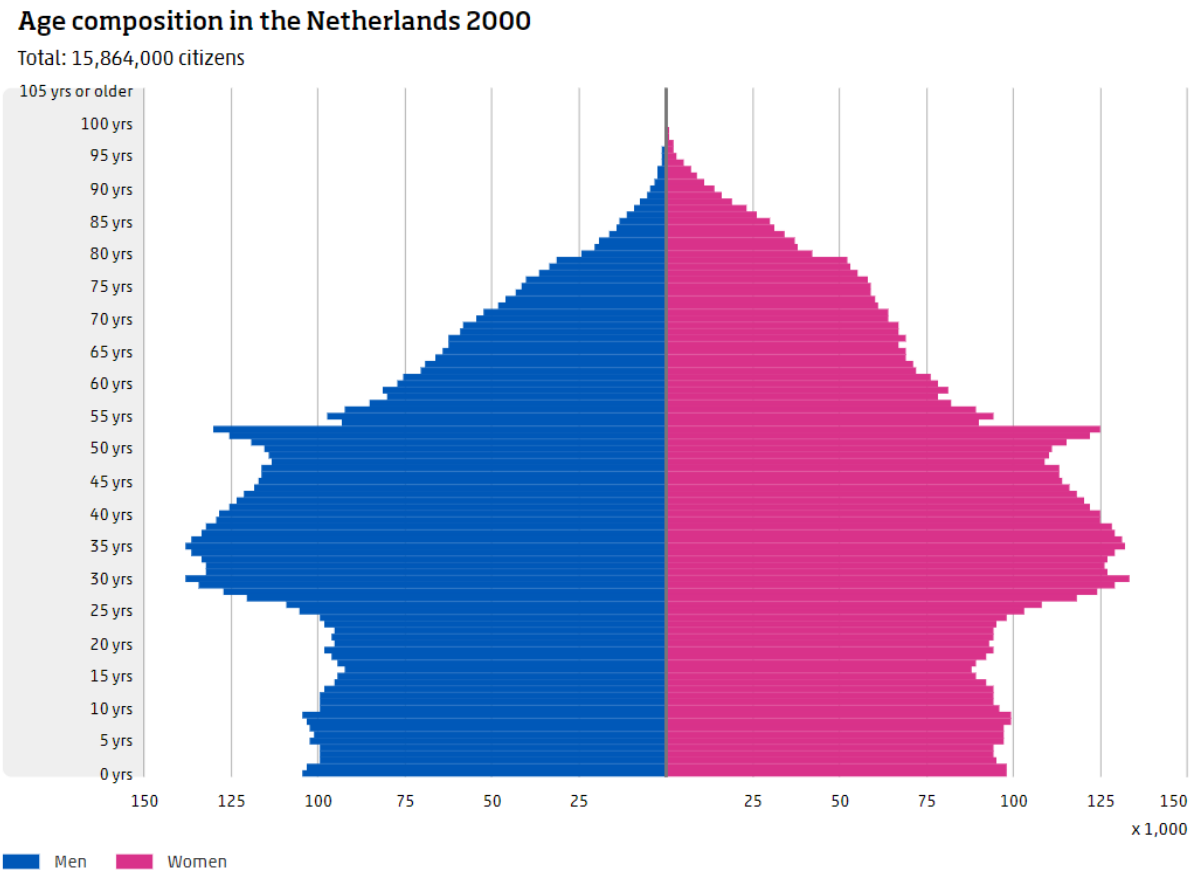

Figure 2: Age composition in the Netherlands 2000 (CBS, n.d.)

Alongside the aging population, other demographic changes are occurring. There have been shifts in household composition and living arrangements. Over recent decades, the number of one person households have increased in the Netherlands, most strongly among older adults (Lange & Witter, 2014; CBS, 2023b). The number of one person households older than 75 has increased by 400 percent between 1971 and 2021. This increase of one person households among older adults is almost exclusively a consequence of the aging population. Due to higher mortality rates among men, older single women households are significantly more common. However, the faster rising life expectancy of men (Stoeldraijer et al., 2021) is leading to a gradually less skewed gender ratio in the oldest age groups. Around the year 2000, there were only 23 men for every 100 women among single individuals over 75. By 2030, this number is expected to double. The disparity will continue to decrease, reaching 52 men per 100 women by 2045 and 56 men per 100 women by 2070 (CBS, 2023b). According to CBS (2023b) this increase will continue for the coming decades, they predict until at least 2070. Despite the decreasing disparity between men and women a decreasing proportion of older individuals are expected to be able to rely on partners or children for support because of the overall increase in older adults (van Dam et al., 2013). Another trend is that in recent decades, 65-year-olds have been experiencing an increase in the number of years they live without moderate to severe physical limitations. This trend is a favourable outcome for policy efforts, enabling older adults to live independently for longer (van Dam et al., 2013). While individuals between the ages of 65 and 75 remain active, often venturing outside their homes and maintaining mobility, there is a notable decline in mobility starting at age 75. The frequency and distance of trips decrease significantly, particularly affecting out-of-home leisure activities. Consequently, the daily mobility range of older adults narrows as they age, emphasizing the importance of the immediate living environment's quality (van Dam et al., 2013).

To conclude, the share of older adults in the population is increasing. Despite the vitality observed in those aged 65 to 75, physical limitations become increasingly common beyond this age bracket, further reducing their range of mobility. Simultaneously, changes in household compositions mean that more older individuals are living alone, reducing their ability to rely on close family for informal care and assistance (van Dam et al., 2013). This shift increases their dependency on external care providers. Both developments underscore the importance of the environments where the older population resides.

2.2 Policy development in the Netherlands

There has been a shift in expectations concerning the quality of housing, services, and care, which are now held to higher standards. These developments have presented significant challenges, raising concerns about the rising costs associated with providing adequate care and support to an aging population (Sixsmith & Sixsmith, 2008) and the consequent impact on the demand for specific types of services (Brink, 1990; van Dam et al., 2013). These demographic and economic changes have led to a transformation in policies related to care and housing for older adults over the past decades.

The narrative of these policy shifts begins in the 1960's. This period is characterized by substantial growth in elderly care facilities. Initially, these facilities catered not only to the physically and mentally impaired older adults but also to healthy seniors who chose to move into elderly homes post-retirement. In this period elderly homes operated as large, self-sufficient institutions where services were provided economically on a large scale, although, with minimal interaction with the broader community (Naafs, 1997). This policy caused many older people to move to elderly homes or other alternative housing facilities early in life while not having actual mental or physical health concerns. Care homes did not have strict (if any) health related admission requirements and focus was not on care but on living (Naafs, 1997). In the 1970s, the upcoming demographic shifts towards

an aging population and the economic limitations of the welfare state started to come on the agenda of the Dutch national government (Naafs, 1997). This awareness led to a series of governmental measures. The government started to reduce care expenses to stabilize the expansion and development of elderly care (Singelenberg et al., 2012). Policies no longer exclusively aimed at individuals aged over 55 but included all ages to include caregivers to motivate and provide support to informal forms of caregiving(Naafs, 1997). At the same time the Dutch government acknowledged the varied needs, wishes, and capabilities of older adults, thus advocating for a more personalized approach to care (Naafs, 1997). In the 1980's the evolution with the implementation of the Outreach activities for older people policy continued (Nota flankerend bejaardenbeleid, 1983). It emphasized a shift from a formal care system to an integrated, informal care framework where formal care complemented rather than substituted informal care. This period also marked a move from a welfare-dependent society to one where older individuals had greater say in their care, particularly concerning elderly homes.

The Social Support Act of 2007 was a significant milestone, reflecting a paradigm shift in the relationship between the government and its citizens. It championed increased autonomy at local levels and greater individual responsibility, restructuring financial streams and shifting tasks and responsibilities from the central government to insurers and municipalities. A central goal was to control and potentially reduce the growth of care-related expenditures (Jager-Vreugdenhil, 2012; Pijpers et al., 2016). This act set the stage for the 2015 Social Support Act, which further decentralized non-residential care to municipalities, emphasizing the need for services that support older adults in living independently in familiar environments. This was part of a broader government strategy to transition from residential care to non-residential care, aiming to provide care in settings that residents prefer and where they feel most comfortable (Maarse & Jeurissen, 2016).

In 2018, the introduction of the Longer at Home program specifically targeted the increasingly large number of older adults living independently. This program aims to improve the care and living situations of older adults by facilitating collaboration among the national government, municipalities, and social parties to enhance the support and care available to older adults in their local communities (Ministerie van VWS, 2018).

These policy developments over the past decades illustrate a significant transformation in elderly care and housing in the Netherlands, from a primarily institutional-based approach to a more community-centered framework that values autonomy, participation, and integration into the community.

2.3 Quality of Life

An increasing number of older adults age in place and consequently live independently for a longer time (ABF Research, 2021; Lager et al., 2013). These older adults are confronted with an increase in challenges and limitations as a consequence of decreased physical abilities from the age of 75 onwards (Abeles et al., 1994). This means that for the majority of older adults, it is not only important that they can live longer independently but also how their living environment can contribute to maintaining and improving their quality of life. Both the meaning and experience of home change over the life course (Klaassens & Meijering, 2015). The home becomes ever more significant in the everyday lives of many older adults, especially those with constrained mobility or chronic illness (Sixsmith et al., 2014). Furthermore, quality of life should be an important endpoint in the evaluation of public policy (Bowling & Gabriel, 2007). It is therefore important for one to understand the construct of quality of life.

Quality of life has been a focal point of research across multiple academic fields, including economics, human geography, psychology, health studies, and gerontology (Ziegler & Schwanen, 2011). The definition of quality of life, however, varies widely among these disciplines, often leading to diverse and sometimes contradictory interpretations in the literature. This diversity largely stems from the concept's inherent complexity, making it challenging to determine whether researchers are discussing the same aspects of quality of life (Norbakke & Schwanen, 2014). In addition, subjective well being is a similar term that is used a lot in academic literature. Camfield and Skevington (2008) discuss how both terms are used in academic literature and found that terms should be used synonymously. Therefore, this thesis will include literature on subjective well being and quality of life. The term used in this thesis is quality of life. Historically, less attention has been given to the specific quality of life concerns of older adults and what these concerns mean for this demographic (Borglin et al., 2005; Bowling & Gabriel, 2007). It has been observed that as people age, they tend to place greater importance on different aspects of life. While younger individuals may prioritize relationships, work, finance, and happiness, older adults often emphasize health (Borglin et al., 2005). Browne et al. (1994) suggested that the priority given to these domains may shift even within the older age group over time.

Recent studies have responded to an increasing interest in the life quality of older adults, driven by their growing numbers and aspirations for a fulfilling life (Gilroy, 2008). Comprehensive surveys and qualitative research have identified several key criteria that older adults associate with quality of life. These studies highlight the multidimensional and dynamic nature of quality of life, which varies not only between individuals but also within an individual over time, encompassing both objective and subjective elements (Vanleerberghe et al., 2017). Borglin et al. (2005) categorized the quality of life for older adults into four main themes: "anchorage to life," which included the sub-themes living in the present, living at the end of life, accepting and adjusting, and reminiscing. "Satisfied body and mind" included participating in life, enjoying life, giving meaning to the day, being independent as opposed to being dependent, being aware of the inevitable, keeping control as opposed to losing control over body and/or mind. "Access to significant relations" included staying together as opposed to losing a part of oneself, being involved as opposed to being left out. "Conditions governing one's life" included having freedom as opposed to limitations and having home as an integrated part of oneself. These environments support maintaining social contacts, enjoying freedom at home and surroundings, and ensuring safety and opportunities for activities. Browne et al. (1994) also identified several relevant aspects to older adults' quality of life, including family, social and leisure activities, health, living conditions, independence, finances, and relationships with religion being the only domain not observed in other mentioned studies.

More recent literature identifies similar factors for quality of life among older people (Vanleerberghe et al., 2017; Klaassens & Meijering, 2015; Douma et al., 2017; Douma et al., 2021). Vanleerberghe et al. (2017) focus specifically on the definition of the concept of quality of life of older people aging in place and how this is used in empirical articles. Only a few publications they reviewed contained a clear definition of quality of life and the definitions used were different, indicating that there is little consensus (Vanleerberghe et al., 2017; Mandzuk and McMillan, 2005; Moons et al., 2006). The findings are consistent with other studies that emphasize the importance of social and health-related quality of life domains (Vanleerberghe et al., 2017). Other domains are also increasingly becoming both relevant and important as people living in place emphasize the desire for autonomy, interpersonal relations, rights, and emotional, physical, and material well-being (Bowling & Gabriel, 2007; Farquhar, 1995; Wilhelmson et al., 2005; Henchoz et al., 2015). When asking older people about the aspects that gave quality to their lives, they reported the following domains: social relationships, social roles and activities, health, psychological well-being, home and neighborhood,

financial circumstances, and independence (Bowling et al., 2003). Vanleerberghe et al. (2017) stress the importance of including aspects of neighborhood or environment and autonomy in any quality of life instrument, specifically for older people. A holistic and integrated approach to quality of life is important (Vanleerberghe et al., 2017). Schalock et al. (2004; 2016) take such a person-centered approach in their theoretical model of quality of life. This model consists of the domains of emotional well-being, interpersonal well-being, material well-being, personal development, physical well-being, self-determination, social inclusion and rights. Earlier research in different groups has proven that these domains are universally and cross-culturally valid. Or in other words, that they are important for any individual, independent of cultural influences (Jenaro et al., 2005).

The ambiguity and lack of consensus on definitions and domains of quality of life might be a result of the different settings in which the studies were done. Several authors have argued that conceptions of SWB of older adults living in assisted-living homes are likely to differ from community-living older adults living independently at home (Bergland & Kirkevold, 2006; Gabriel & Bowling, 2004). Douma et al. (2017) looked into the conceptions of subjective well being for different groups of older people. They found 15 domains of subjective well being that were based on their participants' conceptions. Among the different groups of older adults, the multidimensional domains of social life, activities, health and space and place were most important (Douma et al., 2017). Domains of religion, health care and support, and personal development were found to be least important to older adults' subjective well-being (Douma et al., 2017). Since older adults are in the later stages of life it is expected that personal development is not important. However, health care and support is also not deemed important but older adults are among the group that need it the most. The lack of importance that is allocated to this domain might be a result that this is closely linked to health which is one of the most important domains.

In summary, the essential factors contributing to older adults' quality of life, as identified across various studies, include a secure home, a supportive neighborhood, mobility, a strong social network, health, sufficient income for social participation, community engagement, access to information and activities, and a positive outlook and independence. These factors highlight the significance of the local environment for older adults (Gilroy, 2008). Schalock et al. (2016) integrate these perspectives into a comprehensive theory, defining quality of life of the individual in general through eight core domains: emotional well-being, interpersonal relations, material well-being, personal development, physical well-being, self-determination, social inclusion, and rights.

2.4 Aging in Place

Housing is crucial for older people as it not only serves as a retirement setting but also acts as a financial asset, especially in the Netherlands. Despite the comprehensive nature of intramural living, which combines housing, care, and social interactions, many older individuals prefer to maintain their independence by living in their own homes or neighborhoods as they age. Relocation is often unappealing to them (Ball et al., 2004; Gilleard et al., 2007).

Aging in place extends beyond the confines of home and work to include public spaces and facilities within a neighborhood. The characteristics of a residential location significantly influence the residents' range of activities and behavioral options (Hägerstraand, 1970). Thus, the residential environment can either restrict or enable the spatial behavior of individuals. Making neighborhoods more age-friendly is critical, particularly because the environment plays a vital role for all age groups, but is especially crucial for those dependent on local resources for support and assistance (Buffel & Phillipson, 2012). With aging often come physical changes that can affect energy levels, impacting, for example, how far older individuals can walk within their neighborhood (Lager et al.,

2016). Developing age-friendly neighborhoods involves acknowledging the needs of different generations and considering the potential of neighborhoods to cater to people of all ages (Buffel & Phillipson, 2012). Western societies have thus been promoting policies that support aging in place, aiming to help older adults maintain their well-being amidst increasing frailty and decreasing mobility (Evans, 2009; Ahrentzen, 2010; Van Dijk, 2015). These policies assume that living in a familiar environment enhances older adults' quality of life, preserving their independence, autonomy, and social connections (Wiles et al., 2012). Moreover, some research suggests that aging in place may be a cost-effective solution to the challenges posed by an expanding population of very old individuals (Davies & James, 2011; Lager et al., 2013). However, recent studies challenge this view. For instance, Van Eijkel et al. (2019) found that healthcare costs have not decreased but have actually increased with ageing in place. This rise is partly due to the establishment of local care teams, intended to support ageing in place by organizing care closer to clients. Contrary to expectations, these teams have led to an increase in referrals to professional care, thereby raising healthcare costs. The assumption that aging in place reduces healthcare costs remains unverified. Despite these challenges, intramural living is increasingly reserved for those requiring more intensive care (Sociaal Economische Raad, 2008). Consequently, it is essential to explore innovative solutions that support aging in place, enabling older adults to maintain a high quality of life while living independently.

Existing literature identified several factors that can be predictors for whether someone is likely to age in place or not. This necessitates the addition of a number of variables on which should be matched on. Andel et al. (2007) discuss that older age, white race, and poor health, including activities of daily living limitations are associated with a lower chance of aging in place. This is consistent with findings from other studies, Bananszak-Holl et al. (2004) also found that older age, white race and poor health are associated with a lower chance of aging in place. Additionally, several authors add more characteristics to this list. Living alone (Banaszak-Holl et al., 2004; Bharucha et al., 2004), limited social resources (Banaszak-Holl et al., 2004; Bharucha et al., 2004; Gaugler et al., 2007), low socioeconomic status (Banaszak-Holl et al., 2004; Bharucha et al., 2004; Gaugler et al., 2007), and female gender (Banaszak-Holl et al., 2004; Bharucha et al., 2004) are all factors associated with a lower chance of aging in place. It is important to note that this is research in an American context and this might be different to the Dutch and European context.

There has been an acknowledgment in practice and scholarship that financial resources play a role in residential patterns of older adults (Lehning et al., 2013). Research on late-life migration offers valuable insights into the relationship between financial resources and the decisions and abilities to age in place. This relationship, however, is complex and subject to change over time. Early studies, such as those by Meyer and Speare (1985), highlighted that higher income levels increase the likelihood of older adults relocating for amenity reasons while decreasing the likelihood of moving for assistance reasons. This indicates that financial resources provide older adults with the flexibility to seek environments that enhance their quality of life, rather than moving out of necessity. Conversely, Walters (2002) found that many older adults with lower incomes also tend to be amenity movers until they encounter negative life events, such as impaired health or the death of a spouse. These events often compel them to transition into assistance movers. This finding suggests that lower-income elders share similar motivations with their higher-income counterparts regarding residential preferences. However, financial constraints and adverse circumstances can hinder their ability to act on these motivations, resulting in a shift towards moves driven by necessity rather than choice. Bradley et al. (2008), reported a counterintuitive finding: wealthier older adults who had been considering an amenity move were less likely to follow through with that move at follow-up. This challenges the assumption that higher financial resources always translate into increased

mobility for amenity purposes. The study suggests that even financially secure older adults might opt to stay put, possibly due to a growing preference for aging in place. The literature on late-life migration often assumes that relocation for amenity reasons is inherently desirable and beneficial. However, there is an increasing focus on aging in place both in academic research and practical initiatives. Vasunilashorn et al. (2012) documented a rising interest among researchers in aging in place, while organizations are also developing more aging-in-place initiatives (Greenfield, 2012). This growing attention might reflect a shift in preferences among older adults, regardless of their financial resources, towards remaining in their own homes rather than relocating for amenities.

While empirical support for this trend is still emerging, the potential exists for both lower and higher-resourced older adults to decide against amenity moves in favor of aging in place. This shift could be influenced by the increasing availability of home-based services and modifications, which make aging in place more feasible and attractive. The relationship between financial resources and the expectation to age in place is intricate and evolving. Higher income levels traditionally correlate with a greater likelihood of amenity moves, while lower-income individuals are often forced into assistance moves due to adverse life events. However, emerging trends suggest a growing interest in aging in place across different income levels, potentially driven by enhanced support systems and changing attitudes toward residential stability in later life.

2.5 Place Characteristics

Previous studies have researched the relationship between the living environment and quality of life. The living environment significantly influences the quality of life for older adults, with distinct differences between those aging in place and those residing in retirement homes. Understanding these place characteristics is crucial for developing policies and interventions that support healthy and fulfilling aging experiences.

2.5.1 Aging in Place: Place Characteristics

Older adults who age in place remain in their familiar environments, which contributes to psychological stability and satisfaction. Familiar surroundings and established routines enhance their sense of comfort and well-being (Lewis & Buffel, 2020). The emotional attachment to their home and community often plays a crucial role in their overall happiness and mental health (Wiles et al., 2012). Aging in place allows older adults to maintain a higher degree of independence and control over their daily lives. They can engage in their preferred activities and manage their personal space without the constraints typically found in institutional settings (Sabia, 2008). This autonomy is linked to better mental health and a greater sense of identity (Wiles et al., 2012). Living in a known community helps older adults sustain their social networks and participate in social activities, which are vital for mental and physical health and also have a strong link to quality of life. Strong social connections are often maintained more easily in familiar environments, where individuals have long-standing relationships with neighbors and local community members (Ewen et al., 2014). However, shared living alternatives also provide opportunities for increased social interaction (Ewen et al., 2014). The interaction between an individual's abilities and their environment is crucial in aging in place. As residents become increasingly frail, they need more support from their surroundings. Home modifications, such as installing ramps, grab bars, and other accessibility features, are often necessary to ensure safety and accessibility as physical and cognitive abilities change (Campbell, 2015). These modifications help older adults continue living independently and safely in their own homes.

2.5.2 Retirement Homes: Place Characteristics

Retirement homes offer a structured environment with access to healthcare, regular meals, and assistance with daily activities (Panday & Kumar, 2017). This structured setting can alleviate the stress and burden of managing a household, providing residents with peace of mind and consistent support. They can provide daily support, care and security and a new home for people in need (Fonad et al., 2006). On the other hand people associate retirement homes with rules, dependency, reduced privacy, or awareness of transience (Seifert & Schelling, 2013). Therefore, entry in an institutional setting can also be stressful for older people (Ewen & Chahal, 2013). Many older adults have a negative attitude towards retirement homes. This might be a result of the increased amount of confrontation with being old and in need when entering a retirement home (Miche et al., 2015).

Retirement homes provide ample opportunities for social engagement and community activities, which can reduce feelings of loneliness and isolation. Regularly scheduled social events, group activities, and communal dining encourage interaction among residents, fostering a sense of community and belonging (Evans, 2009). These facilities are designed to ensure the safety and security of residents, with features such as emergency call systems, security staff, and accessible facilities. The built environment in retirement homes is tailored to meet the needs of older adults, minimizing the risk of falls and injuries (Marek & Rantz, 2000). Retirement homes are specifically designed to accommodate the physical and cognitive limitations of older adults. Features such as wheelchair-accessible pathways, elevators, and ergonomically designed living spaces enhance the comfort and safety of residents. This level of accessibility is often more comprehensive than what is available in individual homes.

2.5.3 Comparing Place Characteristics

The differences in place characteristics between aging in place and retirement homes influence various quality of life indicators. For example, the independence and familiarity of aging in place support better mental health, while the structured support in retirement homes ensures physical health and safety (Choi, 2022). Both settings have unique benefits and challenges that affect the overall well-being of older adults. While aging in place supports autonomy and preserves social networks, it often requires significant modifications to ensure safety. On the other hand, retirement homes provide a safe and supportive environment but may limit personal freedom and disrupt established social connections (Pynoos et al., 2008). Balancing these trade-offs is essential for optimizing the quality of life for older adults in both settings.

Understanding the place characteristics of aging in place versus retirement homes is essential for developing effective policies and interventions. By recognizing the unique needs and preferences of older adults, policymakers and practitioners can create environments that enhance the quality of life for this growing demographic. Further research and tailored approaches are needed to address the diverse experiences and challenges faced by older adults in different living arrangements.

2.6 Urban versus Rural

The distinction between urban and rural living environments has significant implications for the quality of life among older adults. Urban areas are often characterized by greater access to healthcare services, social activities, and public transportation, which can enhance life satisfaction and social participation among older adults (Nummela et al., 2008). However, urban environments can also present challenges such as noise, pollution, and a faster pace of life, which may negatively impact well-being. On the other hand, rural areas typically offer a quieter and more peaceful living environment, with closer-knit communities and a slower pace of life, which can foster a sense of

belonging and reduce stress. However, the limited availability of healthcare services, social activities, and public transportation in rural areas can pose challenges for older adults, particularly those with mobility issues or chronic health conditions. These environments may lead to increased dependency on family and local social networks for support, which can be both a strength and a potential vulnerability. The study by Nummela et al. (2008) highlights that social participation and trust are critical for self-rated health among aging individuals, with notable differences observed between urban, semi-urban, and rural settings. The findings suggest that while urban areas offer more opportunities for social engagement, rural areas may provide stronger community ties and support networks.

Additionally, Van Leeuwen and Venhorst (2021) examined the preferences of Dutch households to move up or down the urban hierarchy during economic crises. They found that economic conditions significantly influence mobility decisions, with households often moving to areas that offer better economic opportunities or more affordable living conditions. This suggests that older adults' preferences for urban or rural living may be influenced not only by personal health and social factors but also by broader economic conditions.

In the context of aging in place versus residing in retirement homes, the urban-rural dichotomy plays a crucial role. Aging in place in rural areas might offer a more supportive community environment but can be challenging due to limited access to services. In contrast, aging in place in urban areas can provide better access to services but may lack the close community ties found in rural areas. Retirement homes in both settings aim to mitigate these issues by providing structured support, though the quality and nature of support can vary significantly between urban and rural facilities. Understanding these dynamics is essential for policymakers and practitioners aiming to improve the quality of life for older adults, as it underscores the need for tailored approaches that consider the unique advantages and challenges of both urban and rural living environments.

2.7 Conceptual Model

The conceptual model presented in Figure 1 illustrates the hypothesized relationships between living arrangements (aging in place versus residing in retirement homes) and quality of life among older adults in the Netherlands. The model incorporates various factors that are theorized to influence the quality of life, including health status, social quality, activity hindrance, household income, household size, age, rurality, and country of birth.

In this framework, living arrangements are directly linked to quality of life, with the hypothesis that aging in place or residing in a retirement home may have different impacts on an older adult's overall well-being. The primary dependent variable is 'Quality of Life,' while the key independent variable is 'Aging in Place.' Several related variables, including income, activity hindrance, health, social quality, age, country of birth, household size, and rurality, are also considered. These interrelated factors, listed below, may influence both the likelihood of an older adult aging in place and their quality of life.

- Health Status, physical health is a critical determinant of quality of life, influencing an individual's ability to perform daily activities and maintain independence (Vanleerberghe et al., 2017).
- Social Quality: The extent and quality of social interactions and networks play a significant role in life satisfaction, with stronger social ties and community engagement contributing positively to well-being (Nummela et al., 2008; Vanleerberghe et al., 2017).

- Activity Hindrance: Physical limitations and difficulties in performing daily activities can reduce life satisfaction by limiting independence and participation in desired activities (Lager et al., 2016).
- Household Income: Financial security, as indicated by household income, provides access to resources and reduces stress related to financial instability, thus enhancing quality of life (Emmons & Noeth, 2014).
- Household Size: The presence of other household members can offer emotional and practical support, which can enhance life satisfaction (Browne et al., 1994).
- Rurality: The model also considers the influence of the living environment (urban versus rural) on quality of life. The quality of the living environment can still play a role in shaping the experiences of older adults (Buffel & Phillipson, 2012).

Furthermore, the model controls for age and country of birth since they might affect older people's likelihood of residing in a retirement home.

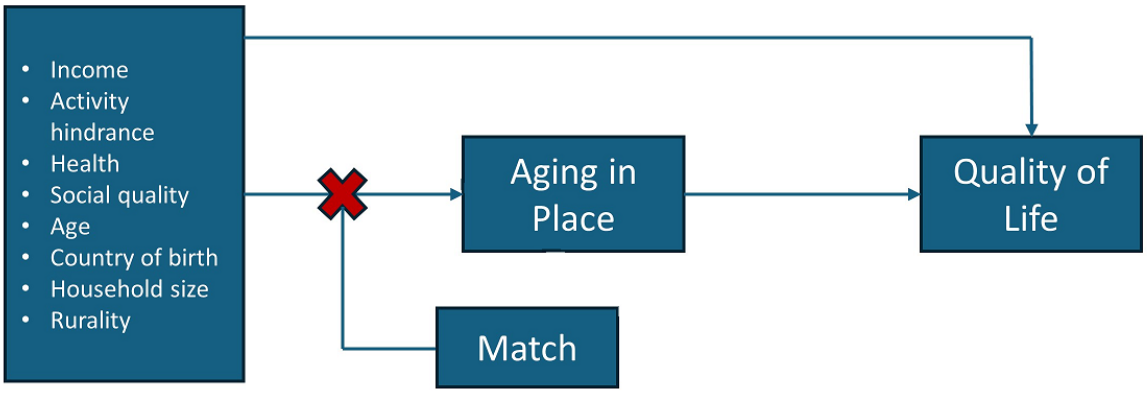

Figure 3. Conceptual model of the links between aging in place, health, social quality, activity hindrance, household income, household size, age, rurality, country of birth, and quality of life

To control for compositional effects, we employ a matching process. By matching individuals based on the related variables, we create comparable groups of older adults who are aging in place and those residing in retirement homes. This is illustrated by the red cross through the line connecting the variables to 'Aging in Place,' indicating that the compositional effect is controlled for through matching. The arrows in the model show the hypothesized relationships, with the primary focus on understanding how aging in place directly affects quality of life. This approach ensures that any observed differences in quality of life are attributable to the living arrangements rather than the compositional effect.

2.8 Hypotheses

Based on the literature review and the theoretical framework, the following hypotheses have been formulated to guide the analysis of how living arrangements influence the quality of life among older adults in the Netherlands:

Previous studies suggest that older adults prefer to stay in their familiar environment, which is associated with greater autonomy, independence, and social connections, all of which are positively

correlated with life satisfaction (Wiles et al., 2011; De Witte et al., 2012). Therefore the following hypothesis is formulated:

Hypothesis 1 (H1): Aging in place is associated with life satisfaction.

Health is a critical determinant of quality of life. Older adults with better health are likely to experience fewer physical limitations and greater participation in social and recreational activities, contributing to higher life satisfaction (Vanleerberghe et al., 2017). Therefore the following hypothesis is formulated:

Hypothesis 2 (H2): Health status significantly influences quality of life among older adults.

Social support and interaction within a household can enhance life satisfaction by providing emotional support, companionship, and practical assistance. Family is also an important predictor for quality of life (Browne et al.,1994). Therefore the following hypothesis is formulated:

Hypothesis 3 (H3): Household size impacts the quality of life, with older adults living in multi-person households reporting different life satisfaction than those in single-person households.

Social quality, which includes the extent and quality of social interactions and networks, is positively related to life satisfaction. Strong social ties and community engagement are essential components of quality of life (Vanleerberghe et al., 2017). Therefore the following hypothesis is formulated:

Hypothesis 4 (H4): Social quality influences life satisfaction among older adults.

Physical limitations and difficulties in performing daily activities can reduce life satisfaction by limiting independence and participation in desired activities (Lager et al., 2016). Therefore the following hypothesis is formulated:

Hypothesis 5 (H5): Activity hindrance affects quality of life among older adults.

The living environment, including factors such as access to services, social networks, and environmental quality, can influence life satisfaction. Rural and urban settings may offer different advantages and challenges affecting quality of life (Buffel & Phillipson, 2012). Therefore the following hypothesis is formulated:

Hypothesis 6 (H6): Older adults living in rural areas have different levels of life satisfaction compared to those living in urban areas, with the effect varying by the degree of rurality.

These hypotheses will be tested using the WoON 2021 dataset through regression models that account for confounding variables and the matching process to ensure comparability between different living arrangements. The results will provide insights into the relative importance of these factors in shaping the quality of life among older adults in the Netherlands.

All hypotheses are formulated as the H1 for legibility. The hypotheses tested were null hypotheses, with the expectation of no difference between older adults aging in place versus those residing in retirement homes.

3. Data and Methodology

To answer the research question: "*How do living arrangements, specifically aging in place versus residing in retirement homes, influence quality of life for older adults in the Netherlands?*" a quantitative analysis of secondary survey data has been conducted. Secondary data was used as

opposed to collecting primary data. The WoON survey contains data on quality of life and its domains, type of dwelling and household characteristics. The dataset contains a large sample size on a national scale. Therefore, using secondary data is the most appropriate, for this thesis its purpose, with the resources available.

3.1 Defining Older People

First to assess quality of life among older adults in the Netherlands it is necessary to define older adults in terms of age. In academic literature 'older adults' is defined differently, mostly depending on location and subject. The Joint Center for Housing Studies (2019) focuses on households with a head aged over 50. In other articles 'older adults' is defined as people aged 65 and over (e.g. Dobner et al., 2016; Douma et al., 2017; Douma et al., 2021). Most academic literature in relation to aging in place and other forms of elderly housing focus on people aged over 65. Therefore, this thesis will focus on people aged 65 and older. There will be differentiation between age 65-74 and aged 75 and over. This allows us to better assess whether there is a relation between quality of life and living arrangements.

3.2 Defining Quality of Life

Quality of life (QoL) is a multifaceted concept that encompasses various dimensions of an individual's well-being, including physical health, psychological state, level of independence, social relationships, personal beliefs, and their relationship to salient features of their environment. In the context of this study, quality of life is particularly focused on the subjective well-being of older adults, which is a critical aspect as it reflects individuals' overall perception of their position in life.

For this thesis, the primary measure of quality of life is derived from the WoON survey data, specifically the variable "leven," which captures respondents' life satisfaction on a scale from 1 to 10, with 1 indicating very low life satisfaction and 10 indicating very high life satisfaction. This measure aligns with the approach taken by Douma et al. (2021), who emphasized the importance of considering the subjective evaluations of older adults to capture the heterogeneity in their experiences and perceptions. The selection of life satisfaction as a proxy for quality of life is supported by its widespread use in gerontological research (Ferrans & Powers, 1992; Yildirim et al., 2013). Life satisfaction is a comprehensive indicator that encompasses various domains of life, such as emotional well-being, fulfillment, and happiness, making it a robust measure for assessing overall quality of life among older adults (Henrich & Herschenbach, 2000). Additionally, this measure allows for the differentiation between individuals based on their living arrangements, providing insights into how aging in place versus residing in retirement homes impacts their subjective well-being.

It is important to note that there are two perspectives on well-being: the hedonic view and the eudaimonic view. In the hedonic view, well-being is defined as attaining pleasure, avoiding pain, and satisfaction with one's life (Kashdan et al., 2008). The hedonic view focuses on people's emotional responses, and research employing this perspective on well-being typically asks people how they felt in the past (Kim, 2015). According to the eudaimonic view, well-being is related to self-assessments of whether life is meaningful and if the individual has engaged in the process of self-realization (Waterman, 1993). Research assessing the eudaimonic view of well-being would ask the respondent to indicate if they enjoy making plans for the future and working to make them a reality (Kim, 2015). For older adults, life satisfaction tends to be significantly influenced by their cumulative life experiences rather than their present or future circumstances. To capture how older adults are satisfied with the current situation this thesis includes measures of satisfaction with living environment and satisfaction with dwelling.

By focusing on life satisfaction, this study aims to provide a nuanced understanding of how different living arrangements affect the overall quality of life among older adults in the Netherlands. This approach is intended to inform policymakers, spatial planners, and healthcare professionals about the key factors that contribute to the well-being of older adults, thereby facilitating the development of targeted interventions and support systems to enhance their quality of life.

3.3 Data

The datasets that is used in the analysis: WoON 2021 (BZK/CBS, WoON 2021). WoON is an abbreviation of 'WoonOnderzoek Nederland', Housing survey Netherlands, and is conducted every three years by the CBS, Central Bureau for statistics, in cooperation with the Ministry of the Interior and Kingdom Relations. The aim of the housing survey is to gather statistical information about the housing situation of the Dutch population and its wishes and needs in terms of housing. Attention is paid to the composition of households, the home and living environment, housing costs, housing requirements and relocations (CBS, n.d. b). The target population of the WoON dataset is people aged 18 and over in private households in the Netherlands. It uses the statistical units: persons, households, potential households, and inhabited dwellings.

The data collected through surveys are supplemented with data from registers. The survey data is collected through personal interviews, telephone interviews, and since 2009 also via the internet. The external sources used to supplement the survey data are: Personal records database (BRP), tax authorities, energy companies, and the energy module which is used to estimate maintenance costs for homeowners.

3.4 Sample Selection

The analytic sample includes respondents aged over 65. The variable "srtbejwon" was used to divide the sample into two groups, people aging in place and people living in a retirement home. This reduced the sample size to 12021 from the original 46658 for 2021. Cases with negative yearly disposable incomes were excluded as these are almost exclusively self-employed respondents who made a loss. This represents a case in which one seems to have a low income while in reality it most likely concerns a wealthy respondent. This results in an analytic sample of 12008. Within the analytic sample there are 231 respondents who are residing in a retirement home and 11777 aging in place.

3.5 Variables

1. Quality of life

As a measure of quality of life the variable "life satisfaction" was used. This variable contains a value between 1 and 10 on the respondent's life satisfaction. 1 being low and 10 being high.

2. Living arrangements

The WoON dataset distinguishes between 4 types of living arrangements. A new variable was computed with data on type of dwelling and whether respondents were residing in a nursing home. Respondents residing in a nursing home were excluded from the study as this thesis aims to focus on traditional retirement homes. The new variable consists of two types of living arrangements: Aging in place and residing in retirement homes.

3. Disposable income (VROM definition)

Income remaining after deduction of taxes and social security charges, available to be spent or saved as one wishes. Excluding expenditures and tax-effects related to housing.

4. Household size

A new variable was computed using “hht”: household size in two categories: single-person household and multi-person households.

5. Activity hindrance

Measure of hindrance one experiences with daily activities.

6. Country of birth

Country of birth in three categories: Netherlands, western, and not-western. Ethnicity is a strong predictor for income (Emmons & Noeth, 2014). In addition, ethnicity is also associated with living arrangements (Killewald & Bryan, 2018). By including country of birth in our models we can account for this relationship, as the proportions within the sample are not equal.

7. Health

Measure of health in 5 categories, poor, moderately poor, okay, good, very good. Health is a strong predictor for quality of life among older adults (Vanleerberghe et al., 2017). By including this in our models we can match on this variable and try to account for this relationship.

8. Social quality

Measure of social quality based on several questions in the WoON questionnaire. It contains values between 1 to 10, 1 being low social quality and 10 being high social quality. Social factors have a strong influence on quality of life (Vanleerberghe et al., 2017).

9. Age

Age in two categories, 65-74 years old and 75 and older.

10. Rurality

Measure of rurality in 5 categories, being least rural and 5 being most rural.

3.6 Statistical Analysis

To determine how living arrangements influence quality of life among older adults, a comprehensive statistical analysis was conducted using the WoON 2021 dataset. The analysis involved several key steps, as outlined below:

3.6.1 Matching

Older adults with poorer health, advanced age, greater activity hindrance, white race, living alone, low social quality, and low socio-economic status are more likely to live in retirement homes. These factors also influence quality of life. Therefore the difference in quality of life observed could be a result of compositional effects.

To control for these compositional effects, Coarsened Exact Matching (CEM) was employed. This method helps create balanced groups of individuals aging in place and those residing in retirement homes, ensuring comparability between the two groups. The variables used for matching included health status, age, activity hindrance, household size, country of birth, household income, social quality, and rurality. Figure 4 contains a plot visualizing the absolute standardized mean difference. The plot helps to visualize the balance improvement by comparing the open circles (before

matching) with the filled circles (after matching). Ideally, the filled circles should be closer to the zero line than the open circles, indicating better balance.

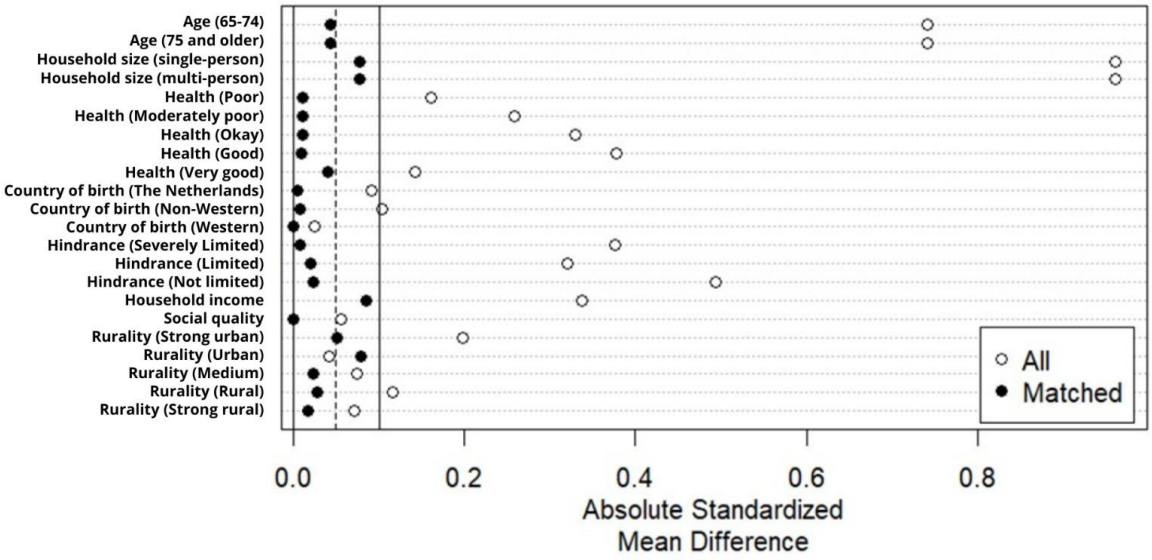

Figure 4. Plot absolute standardized mean difference CEM model

The filled circles (matched) are generally closer to the zero line compared to the open circles, indicating that matching has improved the balance for most variables. Balance for age and household size has improved significantly in the matched sample. Some imbalance still exists, especially in household size but it also had the greatest imbalance in the unmatched sample. There also still remains some imbalance in household income and rurality. The imbalance in one category in rurality has increased in the matched sample. However, imbalance in the other categories reduced. Some imbalances remain but overall the matching was successful.

3.6.2 Regression Models

Following the matching process, general linear models (GLMs) were used to estimate the impact of living arrangements on quality of life. To gain a deeper understanding in how living arrangements influence quality of life among older adults two separate regression models were specified: one for satisfaction with dwelling (measured on a scale from 1 to 5) and another for satisfaction with the living environment (measured on a scale from 1 to 5). The independent variable of interest in both models was the living arrangement (aging in place vs. residing in a retirement home). Control variables included health status, age, household size, country of birth, activity hindrance, household income, social quality, and rurality.

3.6.3 Statistical Software

All analyses were conducted using R software. The R package MatchIt (Ho et al., 2011) was used for matching procedures, while the LM and GLM functions were used to fit the linear regression models.

3.7 Ethical Considerations

This thesis uses secondary, anonymized data. Permission to use the data for purposes of this thesis was granted by the data manager. The research has taken note of the "Wet Bescherming Persoonsgegevens" as required by the additional terms of use. Data is stored in a password protected drive, and will only be used for the purposes of this study.

4. Results

4.1 Descriptive Statistics

Table 1 reports means for key variables and the weighted sample characteristics presented separately for the groups 'retirement home' and 'aging in place'. Both sample sizes, retirement home (n=231) and 2021 (n=11777) are sufficiently large to conduct statistical analysis. Taken at face value, mean life satisfaction in the sample is 7.649 in retirement homes, and 7.894 for aging in place (Difference = -0.244, $p < 0.001$). This is the difference that is likely to be observed in qualitative research. However, the composition of the characteristics of older adults is different in retirement homes compared to aging in place. In retirement homes the share of older adults with poor health, and older age is significantly higher in retirement homes compared to the group aging in place, see the descriptive statistics table on the older population in the appendix. Additionally, the composition of other characteristics are also different in both groups. By matching on these characteristics we aim to control for these composition effects to determine if this observed difference is due to composition effects.

Table 1. Descriptive statistics table

WoON	Retirement home		Aging in place		Difference
Respondents in analytic sample (*n* = 12008)	(*n* = 231)		(*n* = 11777)		t tests
	Mean	SE	Mean	SE	Difference
Life Satisfaction	7,649	0,079	7,894	0,009	-0,244***
Disposable household income (€/year)	22.306	531	35.924	398	-13.619***
Social quality	6,813	0,104	6,899	0,015	-0,086
					prtest
Health	Prop.	SE	Prop.	SE	Difference
Poor	0,069	0,017	0,037	0,004	0,033**
Moderately poor	0,165	0,024	0,092	0,003	0,073***
Okay	0,325	0,031	0,200	0,004	0,125***
Good	0,364	0,032	0,534	0,005	-0,170***
Very good	0,078	0,018	0,138	0,003	-0,060**
Household type					
Single-person household	0,814	0,026	0,421	0,005	0,392***
Multi-person household	0,186	0,026	0,576	0,005	-0,390***
Age					
65-74	0,251	0,029	0,592	0,005	-0,341***
75 and older	0,749	0,029	0,408	0,005	0,341***
Activity hindrance					
Severely limited	0,156	0,024	0,062	0,002	0,094***
Limited	0,502	0,033	0,360	0,004	0,142***
Not limited	0,342	0,031	0,579	0,005	-0,237***
Country of birth					
Dutch	0,909	0,019	0,931	0,002	-0,022
Not-western	0,035	0,012	0,025	0,001	0,009
Western	0,056	0,015	0,044	0,002	0,012
Rurality					
Strong urban	0,264	0,029	0,212	0,004	0,052*
Urban	0,338	0,031	0,290	0,004	0,047
Medium	0,147	0,023	0,177	0,004	0,123
Rural	0,190	0,026	0,240	0,004	-0,049*
Strong rural	0,061	0,016	0,081	0,003	-0,020

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

4.2 Life Satisfaction

Table 2 presents the result of the analysis that compares the impact of living arrangements on life satisfaction, controlling for age, household size, health, country of birth, activity hindrance, disposable household income, social quality, and rurality. An unmatched model and a matched model with coarsened exact matching (CEM) is used to control for compositional effects due to imbalances in the composition of the characteristics such as health status, age, and activity limitations, which are more prevalent among older adults living in retirement homes. By creating comparable groups based on these observed characteristics, matching reduces selection bias, improves comparability, and enhances the robustness of the results. This allows for a more accurate and credible estimation of the impact of living arrangements on the quality of life among older adults. The dependent variable quality of life is measured on a scale from 1 to 10.

Table 2. Estimated coefficients from the linear models measuring the relation between life satisfaction and living arrangements, age, household size, health, country of birth, activity hindrance, disposable household income, social quality, and rurality

	Unmatched Model		Matched (CEM) Model	
DV: Quality of life (1-10)	Coef.	SE	Coef.	SE
Living arrangements, ref. retirement home				
Aging in place	0,0111	0,0598	0,0656	0,0591
Age, ref. 65-74				
Aged 75 and older	-0,0024	0,0168	0,0455	0,0458
Household size, ref. one-person household				
Multi-person household	0,1482	0,0178	0,0078***	0,0513
Health, ref. poor				
Moderately poor	0,2643**	0,0499	0,5364***	0,2011
Okay	0,4758***	0,0481	0,6648***	0,1939
Good	0,8119***	0,0489	1,0167***	0,1982
Very good	1,1311***	0,0535	1,3840***	0,2129
Country of birth, ref. Netherlands				
Non-Western	0,1142**	0,0391	0,6268**	0,2076
Western	0,0280	0,0381	0,4736	0,2419
Activity hindrance, ref. severely limited				
Limited	0,3666*	0,0380	0,3569***	0,1454
Not limited	0,4422**	0,0412	0,4975***	0,1553
Household income	7,78E-07	1,86E-07	2,07E-06***	1,70E-06
Social quality	0,1149***	0,0048	0,1329***	0,0173
Rurality, ref. strong urban				
Urban	0,0110	0,0230	0,0973	0,0548
Medium	-0,0426	0,0268	-0,0416	0,0698
Rural	-0,0339	0,0244	-0,0020	0,0576
Strong rural	0,0015	0,0326	0,2473	0,1227
Observations	12008		12008	
R-squared	0,2081		0,1841	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

In the unmatched model, aging in place compared to living in a retirement home has a small positive effect on quality of life (Coef. = 0.0111, SE = 0.0598), though this effect is not statistically significant. In the matched model, the effect remains positive and increases slightly (Coef. = 0.0656, SE = 0.0591), but still does not reach statistical significance. This suggests that after controlling for the compositional effect through matching, aging in place does not have a significant direct impact on life satisfaction compared to living in a retirement home. Older age (75 and older), compared to the reference category aged 65-74, shows a negligible negative effect on quality of life in the unmatched model (Coef. = -0.0024, SE = 0.0168) and a small positive effect in the matched model (Coef. = 0.0455, SE = 0.0458), with neither effect being statistically significant. This indicates that age alone, when considering these two age groups, does not significantly influence life satisfaction. Living in a multi-person household compared to a single-person household insignificantly improves quality of life in the unmatched model (Coef. = 0.1482, SE = 0.0178). However, in the matched model, the effect size decreases dramatically but is statistically significant (Coef. = 0.0078, SE = 0.0513, $p < 0.001$). This suggests that while living with others generally improves life satisfaction, the effect is reduced when accounting for other factors. Being of non-Western origin, compared to the reference category Netherlands, shows a significant positive effect on quality of life in both the unmatched (Coef. = 0.1142, SE = 0.0391, $p < 0.01$) and matched models (Coef. = 0.6268, SE = 0.2076, $p < 0.01$). Western origin is not a significant factor in either model compared to the reference category. This indicates that non-Western older adults report higher life satisfaction compared to their Dutch counterparts, possibly due to cultural differences in perceiving life satisfaction. Household income has a small positive effect on quality of life, significant in the matched model (Coef. = 2.07e-06, SE = 1.70e-06, $p < 0.001$). This suggests that higher household income, although marginally, contributes to better life satisfaction.

Health status has a strong and statistically significant impact on quality of life in both models. For example, having very good health compared to bad health has a large positive effect on quality of life in the unmatched model (Coef. = 1.1311, SE = 0.0535, $p < 0.001$) and in the matched model (Coef. = 1.3840, SE = 0.2129, $p < 0.001$). This and the other coefficients within the health category highlight the critical role of health in determining life satisfaction among older adults. Having no activity hindrance compared to being severely limited shows a positive and statistically significant effect on quality of life in both the unmatched (Coef. = 0.4422, SE = 0.0412, $p < 0.01$) and matched models (Coef. = 0.4975, SE = 0.1553, $p < 0.001$). This underscores the importance of physical independence in enhancing life satisfaction among older adults. Social quality significantly enhances quality of life in both the unmatched (Coef. = 0.1149, SE = 0.0048, $p < 0.001$) and matched models (Coef. = 0.1329, SE = 0.0173, $p < 0.001$). This highlights the vital role of social interactions and community engagement in improving well-being. Living in rural areas compared to strong urban areas shows no significant effect in either model, although there is a positive effect in the matched model for strong rural areas (Coef. = 0.2473, SE = 0.1227), which is not statistically significant. This suggests that rurality, in general, does not significantly impact life satisfaction among older adults

The reason some variables remain significant after matching is that the matching process provides a more precise estimate of their effects on life satisfaction by reducing the influence of the compositional effect. By matching, we ensure that the comparison between aging in place and residing in a retirement home is more accurate, isolating the effect of living arrangements on life satisfaction. However, the intrinsic relationships between these variables and life satisfaction can still be significant, reflecting their genuine impact on the well-being of older adults.

Both models have 12,008 observations. The R-squared value, which indicates the proportion of variance explained by the model, is slightly higher in the unmatched model (R^2 = 0.2081) compared to the matched model (R^2 = 0.1841).

In **figure 5** the mean values of life satisfaction and the predicted mean values of life satisfaction from the matched sample are presented. In the matched sample the mean values are a bit closer to each other, mean life satisfaction is lower for aging in place and higher for retirement homes. This means that part of the difference observed in the sample can be explained through the compositional effects. Additionally, the error bars in the matched sample overlap while they do not for the sample means. This visualization reveals that there is a difference in quality of life in the analytical sample. However, since the error bars overlap in the matched model we can not assume that there is a significant difference in life satisfaction in the population between older people residing in retirement homes and those aging in place.

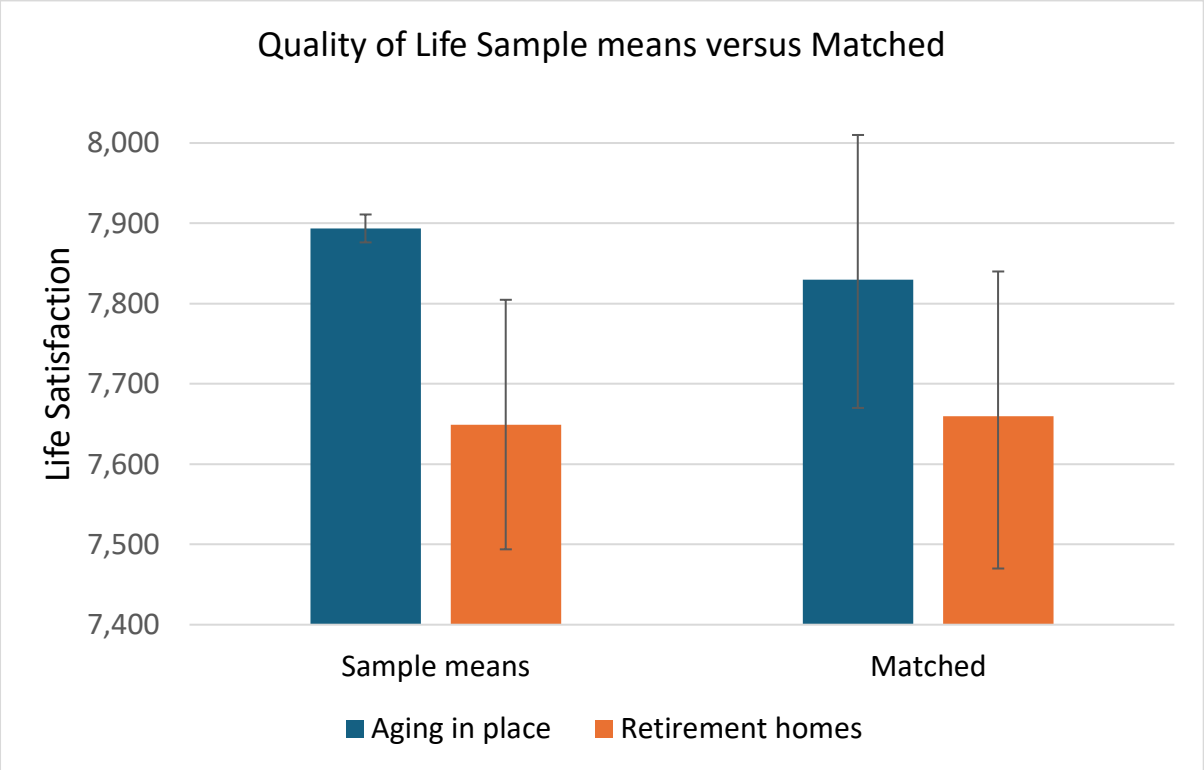

Figure 5. Quality of life sample means versus matched

The analysis reveals that while living arrangements (aging in place vs. retirement home) do not have a significant direct impact on quality of life, other factors such as health status, household size, activity hindrance, social quality, and household income play substantial roles. The matching process controls for the composition effects, providing a clearer picture of the true effects of these factors on the quality of life among older adults.

4.3 Satisfaction with Dwelling and Living Environment

The analysis compares the impact of living arrangements and various other factors on two aspects of quality of life among older adults: satisfaction with their dwelling and satisfaction with their living environment. The matched model using Coarsened Exact Matching (CEM) is applied to both dependent variables.

Table 3. Estimated coefficients from the linear models measuring the relation between satisfaction dwelling and living environment and living arrangements, age, household size, health, country of birth, activity hindrance, disposable household income, social quality, and rurality

	Matched (CEM) Model		Matched (CEM) Model	
DV:	Satisfaction dwelling (1-5)		Satisfaction living env. (1-5)	
	Coef.	SE	Coef.	SE
Living arrangements, ref. retirement home				
Aging in place	0,0844	0,0448	0,0725	0,0460
Age, ref. 65-74				
Aged 75 and older	0,0751*	0,0347	0,0205	0,0356
Household size, ref. one-person household				
Multi-person household	-0,0855*	0,0389	-0,0269	0,0399
Health, ref. poor				
Moderately poor	0,1560	0,1523	0,1180	0,1563
Okay	0,1540	0,1468	0,2190	0,1508
Good	0,3636*	0,1501	0,3068	0,1541*
Very good	0,5612***	0,1612	0,4098	0,1655*
Country of birth, ref. Netherlands				
Non-Western	-0,8679***	0,1571	-0,0691	0,1614
Western	-0,2473	0,1832	0,0113	0,1881
Activity hindrance, ref. severely limited				
Limited	0,0980	0,1101	-0,0566	0,1130
Not limited	0,0315	0,1176	-0,1036	0,1207
Household income	4,28E-06***	1,29E-06	5,85E-06	1,32E-06***
Social quality	0,1248***	0,0132	0,2191	0,0135***
Rurality, ref. strong urban				
Urban	-0,0505	0,0415	-0,0679	0,0426
Medium	-0,0921	0,0529	0,0017	0,0543
Rural	-0,0140	0,0436	-0,0021	0,0448
Strong rural	-0,1505	0,0936	0,0142	0,0954
Observations	12008		12008	
R-squared	0,1141		0,1640	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

For satisfaction with dwelling, aging in place compared to living in a retirement home has a small positive effect on satisfaction (Coef. = 0.0844, SE = 0.0448), though this effect is not statistically significant. Similarly, for satisfaction with the living environment, the effect remains positive and is not statistically significant (Coef. = 0.0725, SE = 0.0460). This indicates that living arrangements do not have a significant direct impact on satisfaction with either the dwelling or living environment. Older age (75 and older), compared to age 65-74, has a higher estimated satisfaction with dwelling (Coef. = 0.0751, SE = 0.0347, $p < 0.05$) and a higher estimated satisfaction with the living environment (Coef. = 0.0205, SE = 0.0356), with the latter not being statistically significant. This suggests that older age slightly improves satisfaction with the dwelling but not significantly affects the satisfaction with the living environment. Living in a multi-person household, compared to the reference category single-person household, has a small negative effect on satisfaction with dwelling (Coef. = -0.0855, SE = 0.0389, $p < 0.05$) and a smaller, non-significant negative effect on satisfaction with the living environment (Coef. = -0.0269, SE = 0.0399). This implies that living in a multi-person household might slightly reduce satisfaction with one's dwelling, possibly due to shared space or conflicts.

Health status has a significant impact on satisfaction with dwelling. For example, having good health compared to bad health shows a positive effect on satisfaction with dwelling (Coef. = 0.3636, SE = 0.1501, $p < 0.05$) and a similar effect on satisfaction with the living environment (Coef. = 0.3068, SE = 0.1541, $p < 0.05$). Very good health compared to bad health shows a strong positive effect on satisfaction with dwelling (Coef. = 0.5612, SE = 0.1612, $p < 0.001$) and a significant positive effect on satisfaction with the living environment (Coef. = 0.4098, SE = 0.1655, $p < 0.05$). These findings underscore the importance of good health in enhancing both dwelling and environmental satisfaction. Social quality significantly enhances satisfaction with dwelling (Coef. = 0.1248, SE = 0.0132, $p < 0.001$) and has a similar significant positive effect on satisfaction with the living environment (Coef. = 0.2191, SE = 0.0135, $p < 0.001$). This highlights the critical role of social interactions and community engagement in improving satisfaction levels.

Being of non-Western origin is significantly associated with lower satisfaction with dwelling, compared to the Netherlands (Coef. = -0.8679, SE = 0.1571, $p < 0.001$), but the effect is smaller and not significant for satisfaction with the living environment (Coef. = -0.0691, SE = 0.1614). Western origin, compared to the reference category the Netherlands, is not a significant factor in either model. This suggests that non-Western older adults might face challenges in dwelling satisfaction. Activity hindrance does not show significant effects in either model. Household income has a very small positive effect on satisfaction with dwelling (Coef. = 4.28e-06, SE = 1.29e-06, $p < 0.001$) and on satisfaction with the living environment (Coef. = 5.85e-06, SE = 1.32e-06, $p < 0.001$). Rurality, compared to strong urban areas, shows no significant effect on either satisfaction with dwelling or living environment, with coefficients close to zero.

Both models have 12,008 observations. The R-squared value, indicating the proportion of variance explained by the model, is 0.1141 for satisfaction with dwelling and 0.1640 for satisfaction with the living environment. The analysis reveals that while living arrangements do not have a significant direct impact on satisfaction with either dwelling or living environment, other factors such as household size, health status, country of birth, household income, and social quality play substantial roles. The matching process helps to control for compositional effects, providing a clearer picture of the true effects of these factors on the quality of life among older adults.

5. Discussion

5.1 Interpretation of Results

The results of this study provide a nuanced understanding of how living arrangements impact the quality of life among older adults in the Netherlands. Contrary to the initial expectation, the analysis reveals no significant difference in life satisfaction between older adults aging in place and those residing in retirement homes after matching. This finding suggests that factors other than living arrangements might play a more critical role in determining life satisfaction among older adults. However, it is important to note that a difference in quality of life between those aging in place and those residing in a retirement home is observed in the models. However, the difference does not reach the levels of statistical significance. The fact that this difference is not significant might be due to the relatively small amount of cases in the retirement homes group.

One of the most significant predictors of life satisfaction in both unmatched and matched models is health status. Older adults with better health report significantly higher life satisfaction. This aligns with existing literature that highlights the critical role of physical health in enhancing quality of life (Vanleerberghe et al., 2017). The positive association between good health and life satisfaction underscores the importance of health maintenance and promotion programs for older adults. The results indicate that activity hindrance negatively affects life satisfaction. Older adults with fewer physical limitations report higher life satisfaction, highlighting the impact of physical independence on overall well-being (Lager et al., 2016). Activity hindrance is an important factor for quality of life. The descriptive statistics reveal that people who have more severe activity hindrance are more likely to be living in a retirement home as opposed to aging in place. Social quality, measured by the extent and quality of social interactions and networks, shows a strong positive effect on life satisfaction. This finding is consistent with previous studies that emphasize the importance of social ties and community engagement in promoting well-being among older adults (Vanleerberghe et al., 2017). This relationship is not as strong as health and activity hindrance but a good social quality seems to be, together with health and activity hindrance, the most important contributor to a good quality of life.

The analysis indicates that living in a multi-person household has a small but statistically significant positive effect on life satisfaction in the matched model. This finding supports the hypothesis that social support and interaction within a household enhance life satisfaction by providing emotional and practical support (Browne et al., 1994). Additionally the analysis revealed that older adults living in retirement homes are more likely to live in a one-person household. The positive effect is very small and only significant in the matched model. Therefore, it is assumed that this is not an important predictor of quality of life among older adults. The effect of rurality on life satisfaction is not statistically significant in the matched model. This finding suggests that the quality of the living environment in urban versus rural areas does not have a differential impact on the life satisfaction of older adults once other factors are controlled for (Buffel & Phillipson, 2012). Furthermore, higher household income is associated with higher life satisfaction, although the effect size is relatively small. This suggests that financial security contributes to well-being by providing access to resources and reducing stress related to financial instability (Emmons & Noeth, 2014).

To get a better understanding of the relationship between living arrangements and quality of life this thesis includes two models analysing how living arrangements and the confounding factors influence satisfaction with dwelling and satisfaction with living environment. A change in living arrangements might not affect life satisfaction but will influence satisfaction with dwelling and satisfaction with

living environment. The eudaimonic view is better represented by satisfaction with dwelling and living environment and the hedonic view of well-being by life satisfaction. Therefore, improving the depth of the analysis, giving better insight in overall well-being.

Since there is no significant difference found in life satisfaction between living arrangements, the exploration of satisfaction with dwelling and satisfaction with living environment can give a deeper insight into the differences in quality of life between the two living arrangements. The analysis reveals that for both satisfaction with dwelling and satisfaction with living arrangements there is no significant difference between older adults aging in place and those residing in retirement homes. This finding is consistent with the life satisfaction model, indicating that living arrangements alone do not significantly impact these aspects of quality of life but that this is due to compositional effects. Similar to the analysis of life satisfaction, health and social quality seem to be important predictors of high satisfaction with dwelling and living environment. This underscores the importance of health, social interactions and community engagement across all aspects of quality of life. Household income is associated with higher levels of satisfaction with dwelling and living environment which is consistent with our findings in the life satisfaction model.

Contrary to the life satisfaction model, there is no significant relationship found between activity hindrance and satisfaction with dwelling and living arrangements, indicating that physical limitations might not directly influence how older adults perceive their living conditions. Furthermore, the model reveals that having a non-western background is associated with having a lower satisfaction with dwelling. This is contrary to the life satisfaction model where having a non-western background is associated with higher life satisfaction. This might be a result of older adults with a non-western background valuing different aspects in life satisfaction, the hedonic view of well-being, compared to Dutch older adults. Living in a multi-person household, compared to a single-person household, is associated with higher life satisfaction. Conversely, living in a multi-person household has a small negative effect on satisfaction with dwelling. This suggests that while household composition influences overall life satisfaction positively, it may have a different impact on satisfaction with specific living conditions. Rurality does not significantly impact life satisfaction. Similarly, rurality shows no significant effect on satisfaction with dwelling or living environment, with coefficients close to zero, indicating that the degree of urbanization does not substantially impact these aspects of quality of life.

5.2 Policy Implications

The findings of this study have several important policy implications. Given the significant impact of health status on life satisfaction, policies aimed at improving the health of older adults are crucial. This includes preventive health measures, access to healthcare services, and programs promoting physical activity and healthy lifestyles, which are supported by evidence from existing literature (Vanleerberghe et al., 2017). For example, the Netherlands has a National Prevention Agreement which emphasizes the importance of preventive measures in reducing lifestyle-related diseases (Ministerie van Volksgezondheid, Welzijn en Sport, 2019). The RIVM (National Institute for Public Health and the Environment) conducted a study on the effectiveness of this policy and found it to be lacking on several aspects: prevention of smoking only has a marginal effect, percentage of people who are overweight will remain high, and the percentage of problem drinkers will be barely reduced (Ministerie van Volksgezondheid, Welzijn en Sport, 2024). The WHO's Global Strategy and Action Plan on Ageing and Health 2016–2020 emphasizes optimizing functional ability to ensure well-being in older age. This involves promoting healthy lifestyles, providing age-friendly environments, and ensuring access to healthcare services (World Health Organization, 2020). These strategies align with the positive health coefficients found in our study, underscoring the importance of robust health

policies. The WHO found that to promote healthy aging a life course approach is needed to address the determinants of health-related behavior and the presence or absence of disease (World Health Organization, 2020). Additionally, all older adults, irrespective of the level of intrinsic capacity, should have opportunities to optimize functional ability in order to enjoy what they value most (World Health Organization, 2020).

The strong association between social quality and life satisfaction highlights the need for community-based programs that foster social interaction and community engagement among older adults. This could involve creating more opportunities for social participation, volunteer programs, and community centers specifically designed for older adults. Studies show that social participation and trust significantly improve self-rated health among older adults in urban, semi-urban, and rural settings (Nummela et al., 2008). This supports the findings of this study with social quality positively influencing life satisfaction (Coef. = 0,1248**). Policies should aim to develop age-friendly communities, as proposed by Buffel & Phillipson (2012), to support social engagement and enhance the quality of life. This suggestion is also supported by the World Health Organization (2020).

Policies and interventions aimed at reducing physical limitations among older adults are essential. This might include providing assistive devices, home modifications, physical therapy, and accessible public spaces that encourage mobility and physical activity. The WHO's Integrated Care for Older People (ICOPE) program provides guidelines for managing declines in intrinsic capacity, supporting older adults to maintain independence and functional ability (World Health Organization, 2017). Environments that people inhabit and their interaction with them are also major determinants of what older adults with a given level of intrinsic capacity can do. These environments provide a range of resources or barriers that will ultimately decide whether older people can engage or participate in activities that matter to them (World Health Organization, 2020). Therefore, planners should also aim to design places to fit with the needs and abilities of older adults so that they can engage in activities and experience less discomfort as a consequence of their disabilities. The model its coefficients indicate that better health (Coef. = 0,8119 for Good health, compared to reference category Poor health and Coef. = 1,1311 for Very good health, compared to reference category Poor health) and reduced activity hindrance are significantly associated with higher life satisfaction, underscoring the need for these policies.

The link between household income and life satisfaction underscores the importance of financial support programs for older adults. Ensuring adequate pensions, financial assistance, and affordable housing can contribute to the overall well-being of the older population. Economic conditions significantly influence the quality of life among older adults, with financial security providing access to resources and reducing stress related to financial instability (Emmons & Noeth, 2014) . Policies such as the Dutch General Old Age Pensions Act (AOW) provide a model for ensuring financial security for older adults. The fact that there is a policy for financial security for older adults might be the reason that the coefficient for household income is so small in both models. Therefore this study suggests no significant changes in this domain.

Although rurality did not significantly impact life satisfaction, spatial planning and development should still consider the needs of older adults. Creating age-friendly environments in both urban and rural areas can support aging in place by ensuring access to services, transportation, and safe public spaces. Research suggests that age-friendly urban planning can significantly enhance the quality of life for older adults (Buffel & Phillipson, 2012) . Policies should focus on integrating services, enhancing public transportation, and developing accessible public spaces to accommodate the aging population.

To conclude the Netherlands already has preventive policies in place but the effectiveness has been lacking. It is important to improve and evaluate policies related to health and social quality in the Netherlands. Furthermore, an effective financial security framework for older adults is in place in the Netherlands. By implementing the above mentioned recommendations, policymakers and planners can create a supportive environment that enables older adults to lead fulfilling and satisfying lives, which improves quality of life.

5.3 Limitations and Future Research

This study has several limitations that should be addressed in future research. Firstly, the cross-sectional nature of the WoON dataset limits the ability to draw causal inferences. Longitudinal studies are needed to explore how changes in living arrangements over time impact quality of life. Secondly, while the matching process helps control for the compositional effect, there may still be unobserved factors influencing the results. For example, previous research has found a gender gap in healthy aging (World Health Organization, 2020). The WoON data does not include a gender variable. Therefore, it was not included in this thesis's statistical analysis and it is a limitation that should be noted. Another limitation is that, despite the matching process, the study cannot fully account for the self-selection bias inherent in living arrangement choices. Older adults choose their living arrangements based on personal preferences and circumstances, which are not randomly assigned. This limitation is difficult if not impossible to resolve but essential to acknowledge as it impacts the generalizability of the findings. Furthermore, this study would benefit from a larger sample size, especially the number of older adults residing in retirement homes is marginal in the sample. Additionally, for the country of birth variable it is important to note that the retirement homes sample only includes 8 cases not-western and 13 cases western. Therefore these results need to be carefully interpreted.

Future research should consider a quasi-experimental design. For example where an entire community transitions to a new living arrangement, to better isolate the effects of living arrangements on quality of life. However, the feasibility of such a study is questionable. Additionally, employing longitudinal studies can provide insights into how changes in living arrangements impact quality of life over time. In terms of qualitative research, future studies should delve deeper into how older adults maintain their social lives and mobility in general and when transitioning between different living arrangements. Understanding these aspects can provide a more comprehensive view of the factors influencing quality of life.

6. Conclusion

This study aimed to investigate how different living arrangements, specifically aging in place versus residing in retirement homes, influence the quality of life among older adults in the Netherlands. Using data from the WoON 2021 survey, the study employed a quantitative analysis incorporating Coarsened Exact Matching (CEM) to control for compositional effects and ensure comparability between the two groups.

The findings reveal that, after matching, there is no significant difference in life satisfaction between older adults aging in place and those residing in retirement homes. This suggests that living arrangements alone may not be a critical determinant of life satisfaction. Instead, other factors such as health status, social quality, and activity hindrance play more substantial roles in influencing the quality of life among older adults.

Health emerged as a pivotal factor, with better health significantly associated with higher life satisfaction. This underscores the importance of health promotion and maintenance programs tailored to older adults. Furthermore, this is also in line with academic literature (Vanleerberghe et al., 2017) The extent and quality of social interactions were also crucial, with higher social quality linked to greater life satisfaction. This highlights the need for community-based programs that foster social engagement among older adults. Physical limitations negatively impacted life satisfaction, emphasizing the importance of interventions aimed at reducing activity hindrance and promoting physical independence (Lager et al., 2016). Living in a multi-person household had a small but significant positive effect on life satisfaction, suggesting that social support within the household can enhance well-being. Higher household income was associated with increased life satisfaction, although the effect size was relatively small. Financial stability is thus an important aspect of overall well-being (Emmons & Noeth, 2014). The study found no significant difference in life satisfaction between urban and rural dwellers once other factors were controlled for, suggesting that the quality of the living environment in terms of rurality is not a primary driver of life satisfaction among older adults.

The study's findings have several policy implications. Firstly, there is a need for policies aimed at improving the health of older adults through preventive measures and access to healthcare services. Secondly, fostering social interactions and community engagement can significantly enhance the quality of life. Thirdly, interventions to reduce physical limitations and promote independence are essential. Financial support programs to ensure adequate income for older adults can also contribute to their well-being. Finally, spatial planning should create age-friendly environments that cater to the needs of older adults in both urban and rural settings.

In conclusion, while living arrangements themselves do not significantly impact the quality of life among older adults in the Netherlands, health status, social quality, and activity hindrance are critical factors. Policymakers should focus on these areas to improve the well-being of the older population. By addressing health, social interaction, physical independence, and financial stability, it is possible to enhance the overall quality of life for older adults, whether they age in place or reside in retirement homes. The insights gained from this study underscore the multifaceted nature of quality of life and highlight the importance of a holistic approach to supporting the aging population.

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