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Faculty of Social Sciences

School of Economic, Social and Political Sciences

"Enriching the Golden Time" - A Study about Time and Goals, and their Effects on Depression in Later Life

by

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Abstract

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Goals play an important part in human development and are interrelated with future time perspective. What is less clear is whether a short future time perspective leads to poor mental wellbeing. This mixed methods study addressed the question of the relationship between goals, future time perspective and depression in later life.

The first study strand (Study One) deployed an online- and paper questionnaire with a total of 76 older adults aged 65 and above from the United Kingdom. The survey contained questions about sociodemographic variables, Instrumental Activities of Daily Living (IADL), Geriatric Depression Scale (GDS) and the Motivational-Induction-Method (MIM) to measure and classify future time perspective and goals. Crosstabulations and Mann-Whitney U Tests were conducted to analyse the sample. The results show that depression in this sample does not increase in later life and that older adults with extended future time perspective (>1 year) have more goals than older adults with limited future time perspective. However, the hypothesis that having both limited future time perspective and fewer goals in later life led to subthreshold depression was not confirmed.

The second study strand (Study Two) used a qualitative research design to explore how perceived future time perspective impacts older people's views about their own goals. Using Thematic Analysis, four themes were created from the interviews with 18 older adults. The first two themes explored the impact health, ageing, and retirement have on goals and future time perspective, while the last two themes describe the adaptation strategies participants used to navigate the impacts they experienced.

This study offers insights into how health, ageing, and retirement shape older adults' perceptions of their goals and future time perspective, while examining their adaptation to the changing circumstances of later life. Despite a limited future time perspective, participants showed a diverse range of goals. The findings reveal how older adults adjust their goals in response to health changes and retirement, employing different strategies to focus on meaningful goals. Although the hypothesis linking a limited future time perspective and fewer goals to subthreshold depression was not supported, the research underscores that experiences of losses are not necessarily associated with depressive symptoms. These findings highlight the importance of present-focused strategies in enabling older adults to navigate later life effectively, contributing to a better understanding of adaptation in later life.

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Research Thesis: Declaration of Authorship

Print name: Christoph Heuser

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I declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

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• Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
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• Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
• None of this work has been published before submission.

Signature: Date: 19/03/2025

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This thesis is dedicated to the memory of my beloved grandma, who, although no longer here to witness my achievement, remains a constant source of inspiration in my life. I know she would be proud.

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1 Introduction

In recent years, a growing number of researchers have embarked on a journey to understand the concept of future time perspective (Lang, Staudinger and Carstensen, 1998; Carstensen, Isaacowitz and Charles, 1999; Isaacowitz, Smith and Carstensen, 2003; Rupprecht *et al.*, 2022) and its consequences for depression and anxiety (Kooij *et al.*, 2018), well-being (Demiray and Bluck, 2014; Sakakibara and Ishii, 2020) and subjective and objective health (Korff and Biemann, 2020). A few have also tried to connect the concepts of goal development with the notion of future time perspective (Lapierre, Bouffard and Bastin, 1992; Brandtstädter and Rothermund, 2003).

There is a broad consensus that goals are an important part of life, not only at young ages but also in later life. Brim (1992) argues that all human beings have goals and ambitions, which continue to exist into later life. Empirical data supports this idea (e.g., Lapierre, Bouffard and Bastin, 1992; Rapkin and Fischer, 1992; Burton *et al.*, 2024) but the intensity and direction of goals may change over the life course (Brandtstädter and Rothermund, 2003). The reason for this is unclear. Some authors argue that a limited future time perspective, which describes the time an individual believes to have left in life, leads to individuals in later life focusing on more important goals, for example, spending time with important members of their social network (e.g., Lang, Staudinger and Carstensen, 1998; Carstensen, Isaacowitz and Charles, 1999) however, the findings are inconsistent. Kessler and Staudinger (2009) and Sakakibara and Ishii (2020) found that older adults with an extended future time perspective reported better well-being. Lapierre, Bouffard and Bastin (1992) reported that an extended future time perspective leads to a focus on personal goals (Lapierre, Bouffard and Bastin, 1992) while adults with a negative perception about their own future time perspective tend to report a focus on health-related goals (Lapierre, Bouffard and Bastin, 1992), but also report negative subjective and objective health (Korff and Biemann, 2020).

Grühn *et al.* (2016) have found that individuals with a limited future time perspective have more depressive symptoms compared with individuals with an extended future time perspective. Therefore, investigating what happens to individuals who perceive their own future as limited or who no longer have goals is of particular research interest. Furthermore, whether the results that can be repeated that demonstrate an increase in depressive

symptoms among individuals with limited future time perspective can be repeated is of interest.

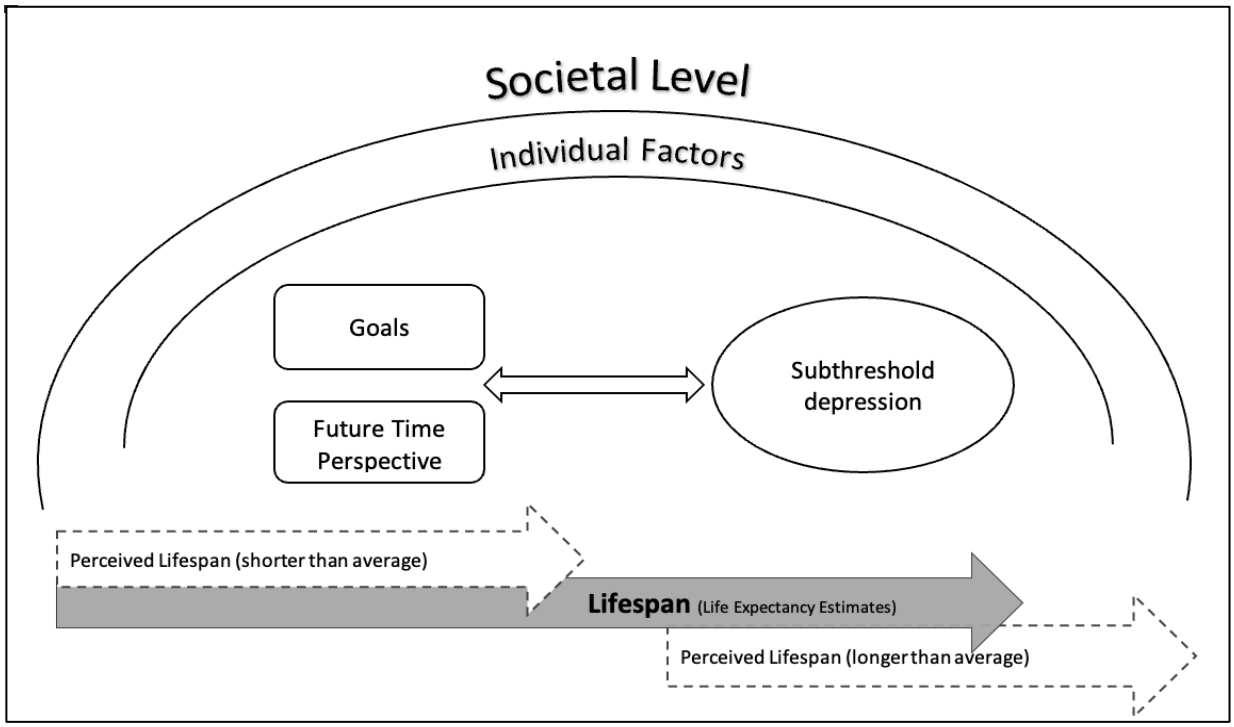
Depression is an important topic of research interest. Depression not only negatively affects someone's well-being in later life (Chachamovich *et al.*, 2008), but it can also lead to higher mortality and morbidity (WHO, 2021a). However, despite extensive research, some questions remain unanswered. For example, it is still unclear how many older people currently live with depression. Reasons for this gap include authors using different screening instruments, while there is also no clear distinction between depressive *symptoms* and clinical *diagnosis* of depression. Furthermore, the concept of late life depression is still ambiguous, as there is no consensus about the age at which late onset depression begins. Some researchers have suggested that depression in late life can have a completely different cluster of symptoms and aetiology in comparison to early onset depression (Prince *et al.*, 1999a). The understanding of depression among academics and clinicians has changed. Instead of seeing depression as either present or absent, depression is located on a continuum (Judd *et al.*, 1998 cit. in Baldwin, 2008). Subthreshold depression, defined as a form of depression below the threshold of major depression, is garnering increasing interest among researchers. This is because the likelihood of experiencing subthreshold depression is higher in later life, especially among adults aged 80 and above (Oh *et al.*, 2020), and can also predict mortality (Ludvigsson *et al.*, 2019). A better understanding of subthreshold depression could lead to earlier detection of individuals at risk and to earlier interventions to mitigate the effects of depression.

1.1 Conceptual Framework

Figure 1 provides a conceptual framework that will guide this doctoral thesis. The core of this framework is subthreshold depression, where it is assumed that fewer goals in later life and a limited future time perspective play a role in explaining subthreshold depression. The relationship between goals, future time perspective, and subthreshold depression, however, is not completely understood. It is unclear whether fewer goals and a limited future time perspective leads to subthreshold depression or vice versa. The arrow indicates this undetermined relationship. A further assumption is that subthreshold depression increases later in life, as indicated by the lifespan arrow. Finally, the environmental context may also

play a role in the development of subthreshold depression as well. As shown in Chapter 3, different factors can increase the chances of subthreshold depression in later life (for example, disability, income, marital status, or education).

Figure 1: Conceptual Framework



Source: Author's own work

1.2 Research Objective

The present research aims to narrow the empirical gap between goal development and subthreshold depression in later life in the context of future time perspective. In particular, this doctoral thesis intends to answer the overarching question: 'What is the relationship between goals, future time perspective and depression in later life?'. To address this, the following four research sub-questions are posed:

1. Is a limited future time perspective associated with a lower goal pursuit in later life?
2. What is the relationship between the number of depressive symptoms and age?
3. If older adults with limited future time perspective pursue fewer goals in later life, will they have more depressive symptoms compared to their counterparts (who might experience an extended future time perspective and more goals)?

4. How does perceived future time perspective impact older people's view about their own goals?

The nature of sub-questions 1 to 3 requires a quantitative research approach, and sub-question 4 will be answered using a qualitative approach.

In order to answer sub-questions 1 to 3; first, an online and paper survey based on the suggested research methods from Nuttin (1985) was created. Other authors have used Nuttin's methods to understand the concept of goals and the relation of goals to well-being in later life (see Lapierre, Bouffard and Bastin, 1992; Bouffard, Bastin and Lapierre, 1996; Lapierre, Bouffard and Bastin, 1997). The content of the questionnaire comprised the Geriatric Depression Scale (GDS) (Yesavage *et al.*, 1982) to capture symptoms of depression and the Motivational Induction Method (MIM) (Nuttin, 1985) to capture future time perspective and goals. Online and paper surveys were disseminated among adults aged 65 years and older with help from charities, ageing-related societies and social media across the United Kingdom and a total of 76 participants were included in the study. A subset of 18 participants from the quantitative survey was recruited for an in-depth interview to discuss their goals and future time perspective in more detail.

1.3 Thesis Structure

Chapters Two and Three outline the theoretical framework and the variables measured and used in this thesis. Specifically, Chapter Two provides an overview of the theoretical framework and explains how this research uses the umbrella term of lifespan development. It discusses the concept of gains and losses within the lifespan development framework, specifically focusing on the concepts of selection, optimisation, and compensation, as well as the model of assimilation and accommodation. Furthermore, Chapter Two explores the concept of future time perspective and goals and reviews the evidence regarding their roles as a predictor variable for various health outcomes (e.g., mortality).

Chapter Three examines current academic knowledge about depression, with a particular focus on subthreshold depression in later life. This chapter also provides essential insight into the definition of depression and its measurement in current academic literature.

Chapter Four outlines the philosophical framework guiding this thesis. It begins with a description of the study design, recruitment strategies, and ethical considerations, followed by an explanation and justification of the research methods used for each study strand. Each study strand is described separately, including a detailed account of the analysis of the gathered data.

In Chapter Five, the findings from the quantitative strand of the study (Study One) are presented. The chapter first outlines the sample characteristics and the bivariate comparison of each variable, followed by testing the hypotheses introduced in Chapter One.

Chapter Six presents the findings from the qualitative strand of the study (Study Two) and the themes created out of the interview data. This chapter also includes a preliminary discussion of the qualitative research findings, as is common practice in Reflexive Thematic Analysis.

Chapter Seven discusses the findings from both the quantitative and qualitative studies within the context of current theoretical and empirical knowledge. The research findings are embedded within the research framework, offering new insights into the field of Gerontology. The chapter is divided into three subchapters: the first two discuss the findings from each study strand separately, while the third discusses the findings in combination.

Finally, Chapter Eight highlights the original contributions of this doctoral thesis. It presents the limitations of both study strands, discusses the implications of the results for research, theory, and policymakers, and concludes the thesis.

2 Lifespan Development in Later Life

Robert J. Havighurst was one of the first authors who described the lifespan as a continuously developmental process.

> "LIVING IS LEARNING, and growing is learning. One learns to walk, talk, and throw a ball; to read, bake a cake, and get along with agemates of the opposite sex; to hold down a job, to raise children; to retire gracefully when too old to work effectively, and to get along without a husband or wife who has been at one's side for forty years. These are all learning tasks. To understand human development, one must understand learning. The human individual learns his way through life" (Havighurst, 1953, p. 1).

However, not all aspects of his introduction would be relevant today. His understanding of development was purely in the direction of growth until middle age, followed by a decline in later adulthood when the individual has to learn to live with losses: loss of one's spouse, the decline in health and loss of employability (Havighurst, 1953). Since the late 80s, development is seen as a multidirectional and multidimensional process, including losses and gains (Baltes and Baltes, 1990). Nevertheless, Havighurst (1953) recognised the importance of growth and the human need for mastering life tasks for someone's own development. Managing one's own life is also a common theme in Brim's (1992) understanding of ambition and how individuals manage success and failure over the life course. Brim (1992) assumed that humans have a "basic drive for growth and mastery" (ibid, p. 3), and this drive is universal and valid for all human beings. The goals that humans try to pursue are manifold and can encompass "health, creativity, money, intimacy, helping others [or] doing good" (ibid, p. 3).

Similar notions exist in Ryff and Keyes (1995) model of psychological well-being. The authors are describing six dimensions which can contribute to a higher well-being. Two dimensions are quite similar to Brim's understanding of motivation over the life course, that is 'personal growth' which is understood as "a sense of continued growth and development as a person" and 'environmental mastery' which means the "capacity to manage effectively one's life and surrounding world" (Ryff and Keyes, 1995, p. 720).

However, according to Havighurst (1953), humans have to accomplish specific developmental tasks rather than individual goals in their life course. He described that successfully managing these life tasks will lead to higher life satisfaction. Therefore, development is a process that is

important for individuals as a personal factor of growing and a societal determinant, whereby society will decide if the individual is successful or not. Furthermore, Havighurst described three aspects that can govern the developmental process: “physical maturation”, “cultural pressure”, and “personal values and aspirations” (Havighurst, 1953, p. 4), which will each be defined in turn.

“Physical maturation” is the natural growth that can be seen as increasing in height from childhood to adolescence or adjusting to physical changes later in life, and Havighurst provides as an example: “adjusting to the menopause” (ibid, p. 4). However, he does not specify whether psychological adjustment to changes in later life are a part of physical maturation or a part of cultural pressure or personal values. “Cultural pressure” is described as being responsible for becoming a valuable member of society through learning in school and joining the workforce. “Personal values” are a combination of “personality, or self, emerge[d] from the interaction of organic and environmental forces” (ibid, p. 4).

In later life, an individual has an increased chance of experiencing losses, such as a reduction in one’s finances, downsizing, becoming widowed, poor health, which all requires an adaption to the new situation (ibid).

However, Havighurst did not consider that old age can be a source of growth as well. He assumed that only in spiritual domains would growth be possible. Instead, Havighurst saw old age as an episode in life when the individual has to develop a more “defensive strategy” (ibid, p. 277). Similar to the contemporary lifespan notion, Havighurst mentioned that older adults should increase efforts to maintain physical, mental and economic goods, rather than try to increase them, and which can be seen as optimisation strategies. This idea of *optimisation* will be discussed in a later section (see Chapter 2.1.1).

Another author who had an impact on the early study of lifespan development is Erik Erikson. In his chapter *Eight Ages of Man,* Erikson described different crises an individual undergoes when growing older (Erikson, 1963, p. 247). In Gerontology, the last two stages, or “critical periods of development” (ibid, p. 246) as Erikson called it, are essential to consider when discussing lifespan development. In adulthood, the conflict in development is between “generativity vs. stagnation” (ibid, p. 266). “Generativity” refers to the task to convey one’s values to the next generation. Failure can lead to “stagnation”, which Erikson described as “begin[ning] to indulge themselves as if they were their own – or one another’s – one and only child” (Erikson, 1963, p. 267).

In the last critical period of development, the individual has to face “ego integrity vs. despair” (Erikson, 1963, p. 268). Individuals must accept their own success and failure, accumulated over the life course, to reach this ego integrity. However, conversely, failure in this integration can lead to despair. “Despair express the feeling that the time is now short, too short for the attempt to start another life and to try out alternate roads of integrity” (Erikson, 1963, p. 269).

Similarly to Havighurst’s (1953) idea, for Erikson late-life is a period when the individual has to accept the decisions they have made and paths that they followed in their past. However, this kind of passivity of accepting one’s life is contrary to contemporary notions of development in late life, as the process of ageing does not only entail decline and losses. On the contrary, development always contains losses and gains, as discussed in the following section.

2.1 Gains and Losses Over the Lifespan

For early developmentalists, the young age was a time of gains, whilst old age was considered a time of losses (Uttal and Perlmutter, 1989). However, for Marsiske *et al*. (1995, p. 37) the “process of development [is] not a simple movement toward higher levels of efficacy, such as incremental growth. There is no pure developmental gain”.

Instead, Baltes (1997) and other authors (e.g. Salthouse, 1984; Heckhausen, Roger and Baltes, 1989) have proven that gains and losses are possible and perceived in every life stage. Uttal and Perlmutter (1989) extend this position and argue that lifespan development can only be understood if one considers gains and losses in all life stages. Gains are thus defined as “the acquisition of new structures or functions, improvements in the effectiveness or efficiency of old structures or functions, or the new application of existing structure or function to novel tasks or domains” (ibid, p. 102). While losses are defined as the opposite of the previous definition in the sense of “removal or disappearance” (p. 102). Compared to other developmentalists, Uttal and Perlmutter (1989) do not assume a simple accumulation of gains in early years and losses in later life, because this assumption would entail that “gains and losses are causally related, and that the direction of causality is determined by age” (Uttal and Perlmutter, 1989, p. 102). However, the authors do not deny that physical gains are more visible in early childhood and physical losses are more prominent in late life, although this does not imply a lower quality of life, and psychological aspects should be considered as well.

As discussed previously, gains and losses can co-occur. Baltes and Baltes (1990) used the term plasticity (p. 7) to describe development in later life. Development is not unidirectional. Instead, development appears in a wide variability between individuals, and even within an individual, a great potential for plasticity is possible. Baltes (1987 cit. in Uttal and Perlmutter, 1989) spoke sometimes about multidirectionality and multidimensionality to describe this process (see also Marsiske *et al.*, 1995). Multidimensionality is understood as those gains and losses which are possible in different dimensions (physical, psychological, and social), and multidirectionality implies that development can emerge in different directions simultaneously. It might be possible to lose physical abilities, and at the same time, for the individual to experience growth in wisdom. Steinberg and Silverman (1986, cit. in Uttal and Perlmutter, 1989) gave another example, a young adolescent gains freedom from the control of their parents, but at the same time, the peer group will determine more of the adolescent's behaviour. If an individual chooses a particular career path which is successful, this can reduce energy and time for other alternative pathways (Marsiske *et al.*, 1995).

Heckhausen *et al*. (1989) conducted a study to analyse the ratio of gains and losses over the life course. In particular, the authors wanted to shed light on the belief systems of adults to assess perceived gains and losses. For this purpose, the authors used a list of 358 adjectives, and the participants had to assess in two sessions which characteristics were desirable, and which were undesirable, and what were the onset and the closing age of acquiring certain characteristics. The characteristics encompassed personal, social, and intellectual attributes. The raters allocated the 358 adjectives in the three dimensions: desirable, undesirable, and neutral, and the participants had to choose at which age the characteristic should start to increase (onset) and when the closing age would be (in which age stage the characteristic will stop increasing). For example, the increase in "experienced in knowledge of human nature" was rated highly desirable (M = 7.65, SD = 1.56) and the onset for obtaining experiences about human knowledge was at the age of 40.6 (SD = 10.9), and the closing age was 80.9 (SD = 10.7), while becoming "suspicious" was rated as undesirable (M = 2.83, SD = 1.25) and the belief about the onset of becoming suspicious was at 49.1 (SD = 18.6) and the closing age at 83.3 (SD = 18.6) (Heckhausen, Roger and Baltes, 1989, p. 112).

With advanced age, more undesirable characteristics were expected. However, even in old age, gains are perceived as possible.

For the authors, the findings were a clear indication against a “unidirectional model of aging” (Heckhausen, Roger and Baltes, 1989, p. 119), as they have shown that even in old age, gains were expected by participants, and therefore ageing can be seen as multidirectional (Heckhausen, Roger and Baltes, 1989).

It can be concluded that gains and losses are a part of human development, and in later life individuals experience and perceive both - gains and losses. However, if losses are more obvious for the individual in later life can this perception increase the vulnerability for an increasing experience of depressive symptoms? The next section will discuss why this might be not the case.

2.1.1 Selection, Optimisation and Compensation and the Role of Successful Ageing

The term ‘successful ageing’ is strongly interwoven with the notion of life span development. For this purpose, success, in general, is defined by Marsiske *et al*. (1995 p. 41) as a “goal attainment” and can be seen as an “avoidance of undesired outcomes” and a “realization of desired outcomes” (p. 41).

However, it exists more than one idea of successful ageing. In the last decades, different authors tried to define what successful ageing means. One of the most influential models of successful ageing based on Rowe and Kahn’s (1987) understanding of losses in later life. The authors reiterate that losses and functional decline in later are often seen as ageing related. They are challenging this view by suggesting that “many age-associated declines can be explained by in terms of life style, habits, diet, and an array of psychosocial factors extrinsic to the aging process” (ibid, 1987, p. 143). Rowe and Kahn define successful ageing as “low probability of disease and disease-related disability, high cognitive and physical functional capacity, and active engagement with life” (Rowe and Kahn, 1997, p. 433). However, Rowe and Kahn’s model of successful ageing is not without critique. The authors by themselves are addressing some of the critical aspects of their idea about successful ageing in an editorial article published in 2015. The main critique points comprise that the model needs a clearer consideration of subjective aspects of individual ageing, addressing the issue of stigmatisation regarding older adults who are not ageing without diseases and disabilities, and that the term successful ageing needs to be changed as it implies that ageing can also be ‘unsuccessful’ (Rowe and Kahn, 2015). Furthermore, they acknowledge that in their earlier formulation, they

did not emphasis macro societal structures and determinates (e.g., gender and financial inequality) which can influence individual ageing (ibid).

Another model of successful ageing was created by Baltes and Baltes (1990). Both developed a framework of successful ageing which aimed to develop objective measures of successful ageing. The rationale for objective measurements of success are based on findings that humans, even in the face of adversity, can see positive aspects in their circumstances, and therefore, the use of subjective criteria of success and well-being alone cannot explain the true nature of successful ageing (Baltes and Baltes, 1990).

Therefore, interindividual variability and intraindividual plasticity are essential concepts to understand development in later life and successful ageing, as objective criteria.

The authors noted that "subjective and objective indicators need to be considered within a given cultural context with its particular contents and ecological demands" (Baltes and Baltes, 1990, p. 7). To define and understand successful ageing, the authors provided seven propositions that should be considered to understand successful ageing (see Table 1).

Table 1: A Framework of Propositions

Proposition 1	There are major differences between normal, optimal, and sick (pathological) aging
Proposition 2	There is much heterogeneity (variability) in aging
Proposition 3	There is much latent reserve
Proposition 4	There is an aging loss near limits of reserve
Proposition 5	Knowledge-based pragmatics and technology can offset age-related decline in cognitive mechanics
Proposition 6	With aging the balance between gains and losses becomes less positive
Proposition 7	The self remains resilient in old age

Source: Baltes and Baltes, 1990, pp. 7 – 18

In the first proposition, ageing should be seen under three aspects. Most people age *normally*, and some people develop health conditions when they are getting older, and *optimal* ageing

is understood as a perfect condition (environmental and societal) where people can grow older. However, the line between *normal* and *pathological* ageing is unclear and is not further discussed by Baltes and Baltes (1990).

In the second proposition, heterogeneity is an important aspect of later life. Heterogeneity refers to interindividual variability (Baltes and Baltes, 1990). Old age is not characterised by uniformity. If one compares two older adults, there would be differences in abilities, physical stamina and psychological and cognitive abilities.

The third proposition refers to the (intraindividual) plasticity, which is possible in old age. Baltes (1997) understood that plasticity is the "potential" or the "modifiability" (p. 367) that characterises human development, and Rowe and Kahn (1997) translate plasticity as "the capacity for positive change" in old age (p. 437).

Here, the difference between Havighurst's (1953) idea about the decline in old age and current research is visible. Kliegl *et al*. (1989) and Salthouse (1984, 1996) showed that even in old age, the individual can learn new skills and compensate for lost skills. These studies refer to the cognitive plasticity which can be seen in later life.

Nevertheless, reserve capacity is not unlimited in later life (Kliegl, Smith and Baltes, 1989). These findings lead to the fourth proposition, and as already mentioned, there is a limit to capacity in old age. In Kliegl *et al.'s* study (1989), the authors tested the ability to remember words in later life, compared to younger participants. Although the older participants were able to learn new skills and improve their skills in recalling the words, the younger participants still performed better after receiving the same training in memory skills. These findings can be seen as a limitation of cognitive enhancement in later life (Baltes and Baltes, 1990).

The fifth proposition discussed the impact of culture and technology on physical constraints in old age. Cattell (1971) and Horn (1970, both cit. in Baltes and Baltes, 1990) developed a model of fluid and crystallised intelligence. Baltes and Baltes (1990) developed this model further and coined the words 'mechanic' (based on fluid intelligence) and 'pragmatic' (based on crystallised intelligence). The authors assume that a decline in mechanic intelligence can be compensated with a higher usage of pragmatic intelligence. More so, technology, what Baltes (1997) calls *culture,* can be helpful to compensate for cognitive losses.

The penultimate proposition is based on the assumption that gains always include losses. Pure development with regards to goals is not possible; while an individual will experience gain and growth towards one direction, the individual will be prevented from going down another

avenue (Baltes and Baltes, 1990). The authors formulated this as “any given developmental process that entails a positive change in some kind of adaptive capacity also contains the loss of other developmental capacities and future options” (Baltes and Baltes, 1990, p .17). For example, the authors explain that it is impossible to specialise in one area regarding ones’ career without neglecting another domain. If an individual has chosen a specific career path, then it is not possible to pursue another career path concurrently with the same intensity. It does not necessarily mean that they cannot change their career later, but they will not have the same amount of time to follow one track. Time, therefore, governs one’s development opportunities.

The last proposition concerns the ageing self. Research has shown that older adults are quite resilient against the adverse effects of old age regarding their “personal control” and “self-efficacy” (Baltes and Baltes, 1990, p. 18).

Baltes and Baltes (1990) argue that three possible factors play a role in maintaining the self in later life. The first factor assumes that all individuals have “multiple selves” (Filipp & Klauer, 1986; Markus & Nurius, 1986; Neisser, 1988 cit. in Baltes and Baltes, 1990). Thus, these ‘selves’ are adjusted depending on the situations which the individual has to face. The second factor is that individuals strive to find the perfect balance for their ambition and goals. These ambitions and goals are adapted to the current situation, based on previous experiences (Brandtstädter, 1989; Brandtstädter and Baltes-Götz, 1990; Brim, 1992). The third factor assumes that individuals change their reference group for social comparison (Baltes and Baltes, 1990). Similarly, Heckhausen (2003) argues in her lifespan theory of control that if specific goals in later life are not reachable anymore due to illness or physical limitations, the individual uses various strategies to handle the situation. One of these strategies is “downward social comparisons, which deflect the potential negative effects of failure experiences on important motivational resources of affective balance and self-esteem” (Heckhausen, 2003, p. 387).

For Baltes (1997), biology and culture are the two main pillars of his lifespan theory. Human biology determines development during one’s lifespan, and at the same time, humans are shaped in their development by cultural progress and environmental circumstances. Both aspects, biology and culture, are influenced by evolutionary and ontogenetic aspects of life. Whereby Baltes argued, “that ontogenesis is inherently a system of adaptive change involving

as foundational elements the orchestration of three subprocesses: selection, optimization, and compensation" (Baltes, 1997, p. 366).

Furthermore, he argues that human development is "incomplete" and "more like an ill-designed building in which inherent vulnerability, as old age is reached, become more and more manifest" (ibid, pp. 366-367). Human development is governed by biological and cultural progress, but biological progress is underdeveloped in later stages in life. As humans get older, they face an increased susceptibility to illness and vulnerability. However, at the same time, cultural development can compensate for the adverse effects of ageing (Baltes, 1997). Therefore, Baltes (1997) describes three principles that regulate human development. First of all, evolution: Human lifespan has increased over the past century, and the selection processes of evolution could not improve the late-life phase of earlier cohorts, as most individuals do not reach an advanced age (Baltes, 1997).

In his view, some diseases occur in old age more often as the evolution has had not enough time to cope with the new circumstances of a prolonged life, and the human body cannot "generate or maintain high levels of functioning" (Baltes, 1997, p. 368). However, as mentioned before, culture can compensate for evolutionary disadvantages. Culture comprises the "entirety of psychological, social, material, and symbolic (knowledge-based) resources that humans have generated over the millenia [sic]" (Baltes, 1997, p. 368).

Culture is not only crucial at a young age in its development of skills and abilities to orientate oneself and act within society. In advanced age, the need for culture is increased due to the incompleteness which has been described above. Society is the reason why human lifespan increased and not the evolution of human genes as the time span of a century is not long enough to create such solid evolutionary progress (Baltes, 1997). Based on the three principles, researchers in lifespan development assume a change of priorities across the lifespan. Whilst at a young age, the individual focuses on growth, and a shift will happen during the mid-life to maintain the resources which an individual has obtained, and finally, a shift to prevent losses in later life (Baltes, 1997). Other lifespan researchers and their theories support this perspective (Brandtstädter and Baltes-Götz, 1990; Carstensen, Isaacowitz and Charles, 1999). Therefore, selection, optimisation with compensation (SOC) serves as a "metatheory" to describe lifespan development and is based on the theoretical framework which has been delineated in the section above (Baltes, 1997, p. 370).

SOC is inherent in individuals' development. Baltes (1997) argues that human "development always has a specific set of targets (goals) of functioning […] and proceeds within condition of a limited capacity, including constraints in time and resources" (Baltes, 1997, p. 371). Individuals select specific pathways, and not all selections are made deliberately or by choice. Baltes (1997) gives an example from child development and the acquisition of language. A newborn child cannot choose their language, and their parents and environment determine their language development. The (involuntary) selection contains the gain to mastering the language as a native language, but at the same time, it will restrict the child in learning another language in the same intensity as the first language.

Baltes (1997, p. 372) distinguished between "elective selection", which contains specifications of goals, goal systems, the contextualisation of goals and goal commitment, and on the other side "loss-based selection" with focusing on the most important goals, the search for new goals, reconstruction of goal hierarchy and adaption of standards. Optimisation refers to striving towards goals. However, optimisation in the context of SOC includes a successful achievement of higher goals and mastering specific domains. Furthermore, optimisation implies maintenance and augments achieved goals in the best possible way (Marsiske *et al.*, 1995). Optimisation is described as "attentional focus, effort/ energy, time allocation, the practice of skills, acquiring new skills/ resources, modelling successful others and motivation for self-development" (Baltes, 1997, p. 372). The final aspect of development is compensation. For Marsiske *et al*. (1995) there exists two fundamental principles of compensation. The first principle is related to the general assumptions that humans cannot have optimal functionality in all given contexts. Individuals use different compensatory strategies to bridge the gap between someone's ability and the given circumstances in daily life. The authors give an example of a tourist who visits France but cannot speak French. The tourist will compensate for his inability to speak the foreign language whilst using more non-verbal communication techniques or a dictionary with common phrases (Marsiske *et al.*, 1995). The other principle is based on losses which are more common in later life. When goal achievement is no longer possible, because of various (physical or mental) restrictions, the individual will use compensatory strategies to adapt to the losses (Marsiske *et al.*, 1995). Compensation can be nudged by restrictions of time or by waning abilities in mental or physical capabilities. However, compensation is not visible only in later life; adverse life

circumstances (after an accident or disease) can force individuals even in earlier life stages to use compensatory strategies (Baltes, 1997).

Finally, compensation can manifest in different ways like "increased attentional focus, increased effort/ energy, increased time allocation, activation of unused skills/ resources, acquiring new skills/ resources, modelling successful others who compensate, use of external aids/ help of others and therapeutic intervention" (Baltes, 1997, p. 372).

The SOC model provides a meta-perspective about successful ageing. While it describes what individuals do over the life course to manage gains and losses, it is not clear how the procedure takes place within an individual. Baltes (1997) acknowledges that humans select certain pathways, and will therefore, make different decisions to achieve selected goals. The SOC model does not provide the underlying mechanism of how the individual makes adaptions to achieve goals nor does it explain what happens if certain goals are not achievable anymore due to restricted time left in life or a given alignment which might prevent pursuing a chosen goal.

Another theory that explains the mechanism of how older adults' goals are managed in later life is the dual-process model by Brandtstädter & Renner (1990). The following section will discuss the goal development in more detail as it provides some interesting ideas how individuals manage goals when time is scarce.

2.1.2 Dual-Process Model

The dual-process model created by Brandtstädter and Renner (1990) describes how goal adjustment is executed. In their model, the authors distinguish between two modes of coping – the assimilative and the accommodative mode.

The assimilation mode creates strategies that help to overcome disparities in desired developmental goals. If the individual has to face life difficulties, the assimilative mode will be activated to increase endeavours to adapt to the new circumstances (ibid). These difficulties can encompass all of the different goals an individual would like to achieve in life, for example, educational goals, family-orientated goals, or practical achievements. For instance, a person wants to strive towards an academic career. For this goal they will focus on this goal. This can include to spend more time on student assignments compared to other

students, or sacrificing leisure time to achieve better marks, and eventually they might pursue to find a job in academia after graduation.

The assimilative mode of coping follows a sequence of different steps. In a potentially aversive situation where important goals are at risk, the individual reconsiders these goals. If the endangered goal is considered important, the individual increases their endeavour by modifying their behaviour. Additionally, the individual considers if they have enough resources to cope with the potentially aversive situation. If resources are not available to control the situation, the individual tries to find the information to regain control over the situation. If a change in behaviour and information acquisition does not lead to the desired success, additional external help is sought (Brandtstädter and Renner, 1990). This help could be from friends, family members or professional support to overcome the discrepancies in goal achievement. In the example above, the person who would like to pursue an academic career might face challenging situations, e.g., financial uncertainties, they will then reconsider if the goal is worth it to achieve and whether resources are available to cope with the arisen challenges. Therefore, the assimilative mode can be seen as an extended endeavour to overcome life difficulties or a correction of someone's life course, given the adverse conditions which might endanger personal values and goals. However, striving towards goals that are not achievable can bear the risk of serious complications for someone's self-concept. Therefore, the authors argue that a second mode, which eliminates the risk for the self-concept, will be activated - the accommodative mode (Brandtstädter and Renner, 1990).

The accommodative mode can also be activated when resources are limited and more often in old age when the individual has to mitigate limitations of capabilities and opportunities (Brandtstädter and Rothermund, 2003). When the goals as seen as unachievable or former endeavours to overcome obstacles are insufficient, the individual might feel "hopelessness, resignation, and depression" (Brandtstädter and Renner, 1990, p. 59). These feelings will be observable as long as new goals cannot be seen, and the length of the feelings depend on the valence of the goals. Brandtstädter and Renner called the period "disorganization, identity crisis, disorientation" (1990, p. 60) and emphasised the necessity to experience the feeling to achieve an re-evaluation of former important goals.

The next step is the reappraisal of goals and converting former goals to new perspectives and easier goals that are more realistic to attain for the individual, followed by a phase of "restabilization of new developmental perspectives" (Brandtstädter and Renner, 1990, p. 60).

The following section discusses findings regarding the assimilative and accommodative modes in the context of time. Brandtstädter and Rothermund (2003) collected a study sample based on the ARS study, which included 896 participants (age range 54 – 78 years) and was conducted between 1991 and 1999. The authors aimed to answer the following questions: 1) when does the shift from assimilative to accommodative mode occur; 2) what is the meaning of time in the context of gains and losses; 3) how does the meaning of life change given a restricted lifetime; and 4) are their limitations of adaptive resources in the last stage of life (Brandtstädter and Rothermund, 2003).

In the study, the authors followed Baltes' (1997) assumption that the individual has to face gains and losses and finding the optimal balance point seems to be the pivotal task in human development. Whilst in Baltes (1997) model of selection, optimisation, and compensation, it is crucial to deal with losses, the dual-process model emphasises the function of adjustment of goals. When the individual encounters goal adjustment, then a standard order of processes is activated. It is important to note that compensatory mechanisms are the last step within the assimilative mode.

Given the limited time perspective in old age, pursuing future goals can be inefficient and "a situation where losses cannot be prevented, or goals no longer be achieved should be conducive to alienation and depression" (Brandtstädter and Rothermund, 2003, p. 111). However, from a theoretical perspective, the accommodation mode helps shift the individual´s attention towards more worthwhile goals.

In the ARS study, a reversed curvilinear relationship in a U-shape was hypothesised for the assimilative mode. This can be seen as a decline in assimilative strategies in the older age groups followed by an increase in accommodative strategies at the same time. The ARS data confirmed the relationship between compensatory strategies and ageing. There was an increase in compensatory strategies in the age group 58-74, followed by a decrease in these compensatory strategies beyond the age of 74, with the lowest point being in the age group of 82-86 (Brandtstädter and Rothermund, 2003). The theoretical explanation posits that the effort to maintain former goals is not desirable in later life, because compensatory strategies are not as effective as in younger years given the limited time left in life. Downgrading former goals and focusing on alternative goals can buffer the "emotional impact of perceived functional loss" (Brandtstädter and Rothermund, 2003, p. 112).

Time is an essential factor in thinking about one´s life direction and the decisions involved. Time, therefore, can have different outcomes on an individual's life. One could argue that the limited expectation of time left in life would buffer the emotional vulnerability, as there is not enough time left to be affected by the disappointments and triumphs of life. However, as mentioned above, time is necessary to accept and overcome losses in life (Brandtstädter and Rothermund, 2003). Brandtstädter and Rothermund (2003) frame two hypotheses from the argument before. Either old age and the restricted time serves as a cushion which eases the emotions, or the opposite would be true, and in late life, there is not enough time left to cope with expectations on life, and therefore, the limitation of time would have a negative effect on an individual's well-being.

The authors measured depression using the Geriatric depression scale (GDS) and assessed life satisfaction. Furthermore, they measured residual life expectancy, which was assessed by asking the participants how much longer they believed they might live. The ratio between the participants' actual age and their expected life expectancy was the residual life expectancy. In the authors´ first analysis, the data in the longitudinal study appeared to support that, with a decrease in goal expectations, well-being is less affected. However, the authors analysed the effects of residual life expectancy (RLE) as a possible moderator on well-being. Here, it can be seen that if life expectancy is assumed as short, the effect on emotional well-being is worse compared to the participants who expected to live longer. The authors emphasise that "residual life time appears to function as a resource in coping with losses" (Brandtstädter and Rothermund, 2003, p. 114). If individuals perceive losses in old age, and time seems to run out, they are more affected by negative emotions. However, if losses are not perceived as losses per se, time plays a less crucial role for well-being.

In line with the theory from Brandtstädter and Rothermund (2003), it is assumed that individuals who experience losses could not adopt the accommodation mode, as accommodation would act as a compensation strategy for perceived losses. Another conducted analysis could support the assumption that participants with high Flexible Goal Adjustment (FGA) scores are less affected by a shortage of residual lifetime.

The data in the ARS sample support the trend of an increase in depressive symptoms in the oldest age cohort. The effect is still significant after controlling different covariates (health, personal control, and social support). Only changes in residual life expectancy and feeling of

obsolescence ("I feel that I cannot keep pace with the modern way of living") did dimmish the rates of depression in the oldest age cohort (Brandtstädter and Rothermund, 2003).

Similarly to the socioemotional selectivity theory (described in Chapter 2.3), Brandtstädter and Rothermund believe that if the individual faces losses of friends, health, and limitations regarding physiological capabilities, then selective processes are embarked on to focus on important goals. While Carstensen *et al*. (1999) highlighted the importance of emotional networks, Brandtstädter and Rothermund (2002) take a broader view and refer to important goals for the aged individual. However, older adults can be resistant to stressors that occur in later life. Former expectations that losses, for example, loss of social networks, bereavement, physical depletion, accompanies a decrease in the notion of control, leading to depression, could not be confirmed (Brandtstädter and Rothermund, 2002).

In view of the dual-process model, the accommodative mode is important when the individual confronts negative situations. In a potentially aversive situation, switching from the assimilative to the accommodative mode can even create a sense of control. Re-evaluating and adapting new goals, and devaluating unattainable goals, can lead to a higher perception of self-efficacy and control over the given situation (Brandtstädter and Rothermund, 2002). Rothermund and Brandtstädter (2003) developed a study to test changes in depressive patterns with a cross-sequential and longitudinal design. Furthermore, they were looking for factors that either mediate or are responsible for depression in late life.

The authors tested their hypotheses using "health variables, socioeconomic variables, coping styles, control beliefs, and residual lifetime" (Rothermund and Brandtstädter, 2003, p. 82). Depression was measured with the GDS. For health status and impairment, the Seriousness of Illness Rating Scale was used. Participants were asked how many close friends they had, perceived support and the monthly income for economic evaluation to assess their social and economic resources. The coping styles and control beliefs were assessed with the Internality, Powerful Others, Chance Control (IPC scale) and the scale for assessing Tenacious Goal Pursuit and Flexible Goal Adjustment. Lastly, the Time Perspective Questionnaire was used for the time perception, which comprised "concreteness, controllability, and openness of future time perspective; orientation toward the past; and feelings of obsolescence" (Rothermund and Brandtstädter, 2003, p. 83).

The results show an increase of depression within the older age groups (Baseline age 62–65; 66-69; 70-73, and 74-77), with a higher increase amongst women in the time period of 8-years. The opposite was the case within the younger age groups (Baseline age 54-57 and 58-61). Here, no increase in depression was observed. The cross-sequential pattern showed a decline in depression rate amongst men, measured with the GDS, from 54 to 69. After this age, an increase in depression can be seen. For women, the GDS score appeared relatively stable until the age range 62-65, after which, an increase in the depression rate was observed. The regression analysis revealed weak but significant effects of economic status, Flexible Goal Adjustment and Time Perspective (Openness) on depression. All three predictors had a cushioning effect on the GDS scores. The authors highlighted the importance of time regarding the ageing process, as "fading of residual lifetime thus tends to erode sources of meaning that are connected to future-related goals and prospects" (Rothermund and Brandtstädter, 2003, p. 87).

It can be summarised that development is a process that occurs over the whole life course and not only in younger years, and that development is inherent across all life stages (Havighurst, 1953; Erikson, 1963). Various theories have been developed over the last decades to explain the developmental process, and in particular, how successful ageing might be possible (Baltes and Baltes, 1990; Rowe and Kahn, 1997). The SOC model from Baltes and Baltes (1990) focuses on the different strategies for successful development over the life course and provides some ideas how an older individual manages perceived losses in later life. This is different to Brandtstädter and Renner's (1990) model of assimilation and accommodation, which provides a framework to understand how goals are chosen in later life and it explains the consequences if the individual cannot detach themselves from certain, unattainable goals and the role of time in this context.

Time, as described in the dual-process model, plays an important role in goal development and on the occurrence of depression in later life. Especially in the oldest age group losses are more visible and the restricted time left in life seems to be more salient. But what kind of goals do older adults pursue? The next chapter will provide an overview of recent empirical finings regarding goals and goal development in later life.

2.2 Goals in Later Life

The previous section focused on goals and goal development in later life, how older adults choose goals and alternative goals when original goals are not reachable anymore. The following section provides the empirical foundation of goal valence among older adults. Which goals are prominent in later life, and how do goals change over the life course? In particular, the next sections will outline the empirical evidence of which goals are chosen by older adults and what the relationship is between goals and time.

Rapkin and Fisher (1992) wanted to understand the kinds of goals valued by older adults. The authors argue that understanding goals may help to understand how older adults adjust to later life.

Goals in late life can be categorised as "achievement, maintenance, disengagement and coping goals", and many studies have been conducted that focus on each type of goal (Rapkin and Fischer, 1992, p. 127). In their study, Rapkin and Fisher (1992) examined the goals of 179 older adults. For this purpose, the researchers created a 112-item inventory with goals organised into 16 domains. The aim was for participants to evaluate all goals, and to decide whether the goals were "*important*, *irrelevant*, or *antagonistic* to a satisfying life" (Rapkin and Fischer, 1992, p. 129).

The participants were drawn from the Retired Senior Volunteer Program (RSVP), which included 486 people aged over 60 years. The average age of the sample was 73.3 years (SD = 6.7). To assess the goals of the older adults, the authors used the Life Goals Inventory with twelve domains. The twelve domains included "personal achievements, health, ability to get around, financial situation, living situation, neighbourhood condition, marital status, family situation, friends, leisure opportunities, volunteer opportunities, religious activities, the health care system, services for older adults, the political process, and the role in the community" (Rapkin and Fischer, 1992, p. 130). The participants assessed each goal on a 5-point Likert scale as *essential*, *important*, *desirable*, *irrelevant*, or *rejected*.

Furthermore, each goal domain included goals that could either be seen as an achievement, maintenance, disengagement ("avoidance or acceptance of losses" (p. 130)) or as problem-solving goals.

The results showed that goals related to safety and security were most often mentioned as essential (31.6%), followed closely by goals related to stability (30.2%). Of the 112 provided

goals, 23.63% of goals were rated as ‘essential’, 29.10% were ‘important’ for the participants, 29.21% as desirable, 10.37% as ‘not relevant’, and 7.64% of the goals were as ‘rejected’ (Rapkin and Fischer, 1992). Furthermore, the data analysis revealed that a lower socioeconomic status was associated with more goal disengagement and goals related to safety and security, and a better education led to more goals related to independence (Rapkin and Fischer, 1992).

Another approach to measuring goals was developed by Nuttin (1985). Instead of using a predefined tick-box questionnaire, Nuttin introduced the Motivational-Induction-Method (MIM). The MIM employs a set of 40 positive and 20 negative inducers to prompt participants to complete a given sentence. For example, a positive inducer might be *"I am striving (to, or for) …"*, while a negative inducer could be *"It would displease me very much if …"*. Participants were then instructed to complete these sentences in their own words.

The MIM serves two primary purposes. Firstly, it allowed Nuttin to gain insight into participants' goals and ambitions. Secondly, it provided information about their time perspective, as certain goals are inherently linked to specific timeframes. The precise procedure of the MIM will be further discussed in Chapter 4 (Section 4.5.1).

A study that utilised the MIM was conducted by Lapierre, Bouffard and Bastin (1992). They investigated the relationship between different goals and well-being in later life. The authors relied on 708 participants to answer their questions. While 50.1% reported no physical impairments, the other 49.9% reported having some difficulties in performing activities of daily living. The measurement comprised sociodemographic variables, the Motivational-Induction-Method and measurements of well-being was assessed with nine questions based on the research of Ryff and Essex (1991, cit. in Lapierre, 1997).

As in a previous study (see Lapierre, 1992), the results show that older participants were primarily concerned with goals that referred to the ‘self’, largely maintaining health and followed by aspirations of keeping up relationships with other people. *Self* was divided into five subcategories: *general*, *personality*, *self-preservation*, *health-preservation,* and *autonomy*. The results indicated that health preservation was mentioned the most (14.27%), followed by personality (7.11%) and goals related to autonomy (4.78%). However, a total of 37.74% of the answers encompassed motivations and goals around the *self*. The category *contact* represented 15.51% of the answers. The most answers, with 7.89%, were linked to contacts who are characterised as *altruistic* (7.89%), followed by contact in *general* (6.40%)

and *intimate* contacts (1.16%). Another important theme was *self-realisation*, (8.76%) and represented by answers such as "to improve myself, to live my life to the fullest" and by goals referring to realisation in general (9.27%), with examples such as: "to repair my car, to do some voluntary work" (Lapierre, Bouffard and Bastin, 1997, p. 294).

In the next step, the authors compared personal goals with well-being. Well-being was divided in the study into nine subcategories: self-rated physical health, environmental mastery, competence, self-determination, meaning of life, occupational satisfaction, current life satisfaction, satisfaction since retirement and expectations for the future. The cross-tabulations showed that lower self-rated physical health and low environmental mastery correlated with a higher pursuit to maintain the current health status. Higher self-realisations were more often mentioned by participants with a higher perception of competence and life satisfaction, satisfaction with their occupational situation, and having a positive outlook towards their future (Lapierre, Bouffard and Bastin, 1997).

It seems that participants with low health status, difficulties performing tasks of daily living, dissatisfaction with their leisure time and present life, and negative perception of their future would more often mention desires referring to maintain their health status, having social contacts, and more often expressed the wish to die a good death. In contrast, participants with meaning in their lives, high competence and skills to master ones' environment and positive expectations of the future were more often goals related to self-realisation and contacts, described as altruistic (Lapierre, Bouffard and Bastin, 1997). This study shows how important goals can be and the goals the individual will pursuit is depended on their own perception of the future. It can be argued that goals and time are inevitably connected. Dissatisfaction with leisure time and present life was mentioned in Lapierre *et al.'s* study (1997) and can give a possible hint towards depressive symptoms in later life. According to the Diagnostic and Statistical Manual of Mental Disorders Version 5 (DSM-5) experience a diminished interested or pleasure in activities, recurrent thought of death, and feeling empty and sad can be signs of depression (APA, 2013) (Depression will be disused in detail in Chapter 3).

More recent studies focus on goals and their relationship with physical mobility and life resources (Saajanaho *et al.*, 2014; Saajanaho *et al.*, 2016). In one study (Saajanaho *et al.*, 2014), the authors focused on older women and their changes in mobility, which the authors assumed would affect their personal goal setting when they experienced a decline in mobility.

To test this hypothesis, the authors used an 8-year follow up study and focused on their assumptions in previous studies and theories.

They assumed that goals that can be achieved with higher mobility would more likely be abandoned and that the women in their study would focus more on goals related to maintaining relationships. Furthermore, they expected that the older women would focus more on health and living independently related goals, as found in previous research (Lapierre, Bouffard and Bastin, 1992).

The longitudinal study was based on the Finnish Twin Study on Aging (FITSA), and the authors used the second wave as a baseline in 2003-2004. The reason for this was the Personal Project Analysis inventory (PPA), was only incorporated into the study protocol from the second wave. At the baseline, personal interviews were conducted with the participants, whilst the follow-up comprised only a questionnaire. Exclusion criteria was mobility limitations. This was ensured by only including women participating in the study when they could travel to the study centre. Beyond that, the researchers assessed the mobility limitations additionally in their interviews (baseline) and questionnaires (follow-up), respectively. Participants were asked if they could walk a distance of two kilometres, use public transportation and climb stairs with or without difficulties. At baseline, 308 women were included, but only data from 205 women were available at the end of the follow-up, with an attrition rate of 66.5% due to death (8.1%) and unavailability (25.3%) (Saajanaho *et al.*, 2014).

The Personal Project Analysis (PPA) was invented by Little (1983 cit. in Saajanaho *et al.*, 2014) and differed fundamentally from Nuttin's (1985) MIM method. Instead of using motivational inducers, the PPA asked participants to create a list with as many personal projects and goals as possible. However, the study protocol of the FITSA asked for only four personal projects or goals. Similarly to the MIM, the goals were categorised into different domains by two researchers (Saajanaho *et al.*, 2014). However, the raters from the baseline were different at the follow-up, which arguably might have led to different results. The domains were predefined and contained 19 possible categories. Further questions included depressive symptoms assessed with the CES-D, marital status, economic situation, and health status.

The authors reported 11.1% at baseline and 14.1% at the follow-up had scores on the CES-D, but without indicating how high those scores were. Furthermore, it is unclear which CES-D scale was used, as the CES-D are available with 20-items and a short form with 8-items.

The results regarding the goals of the participants showed that health and functioning was the most often named goal at the baseline (74%) and also at the follow-up (62%), followed by exercise (38%) and goals relating to close relationships (36%) at the baseline. These goals were changed in the follow-up. The second most often reported goal was independent living (42%) and close relationships (28%). For the analysis, the authors only used the five most named goals. It can be confirmed that 38% abandoned the goal of health and functioning in the follow-up, and this was significant (p = 0.011), and 60% of the participants mentioned health and functioning related goals as important in the follow-up but did not report this at the baseline. Exercise-related goals were significantly less reported in the follow-up (p = <0.001). Interestingly, the close relationship decreased from 36% at the baseline, to 28% at the follow-up, but this result was not significant (p = 0.086). The results for independent living revealed a different result. Whilst 49% mentioned this goal at the baseline, this changed significantly (p = < 0.001) at the follow-up to 86%. Further analysis found that the odds of engaging with cultural activities declined with higher age (OR: 0.74, 95% CI: 0.62 – 0.87). The opposite is true for independent living. The older the participants were in the study, the lower the chances of not engaging with independent living goals (OR: 0.81, 95% CI: 0.66 – 0.99). Mobility appeared to be important to predict changes in goals related to exercise and cultural activities. If participants reported mobility difficulties, the odds to engage in exercise goals were 0.05 (95% CI: 0.01 – 0.39) and OR: 7.68 (95% CI: 1.26 – 46.74) to not engage in new activities related to culture. However, the interpretation of the odds ratio for disengaging from cultural activities should be interpreted with care, given the wide range of the confidence intervals. Climbing stairs was associated with a lower engagement in goals regarding health and functioning (OR: 2.46, 95% CI: 1.10 – 5.51), and the odds to strive towards more close relationships were associated with issues using public transportation (OR: 2.79, 95% CI: 1.18 – 6.58) (Saajanaho *et al.*, 2014).

The authors discuss the findings with various theoretical assumptions. For example, the authors assume that the goal changes align with the dual-process model from Brandtstädter and Renner (1990) and Heckhausen's theory (1999) without testing concrete assumptions from these theories. However, the findings showed that limitation in mobility reduces the likelihood of older women engaging in new goals related to exercise and cultural activities (Saajanaho *et al.*, 2014). It can be assumed that due to the limitation in mobility, older women focused on goals that were in their proximal environment. The authors believed that their

findings aligned with Cummings and Henry's disengagement theory (1961) and that disengaging from society is an adaptation process that is "inevitable" for older adults (Saajanaho *et al.*, 2014, p. 6). However, they do not discuss the original assumptions of the disengagement theory, which presents disengagement as a mutual process involving both society and the individual, withdrawing mutually and actively (Cumming and Henry, 1961).

The finding that difficulties in using public transportation led to more goals related to closeness to others was discussed by the authors, in line with Carstensen's socio-emotional selectivity theory (1999), whereby older adults focus on close relationships when future time perspective is seen as limited. Although the authors did not include any measure of future time perspective in their study, the result of focusing on close relationships can also be a result of lacking opportunities to engage with other activities, as the authors mentioned at the beginning of their study, where the majority of older women in their study did not possess a driving license (Saajanaho *et al.*, 2014).

In 2016, Saajanaho *et al.* embarked on another research project to examine life resources and goals in later life. For this purpose, the authors used the social-ecological model of human flourishing as a conceptual framework (Little 2007, 2014 cit. in Saajanaho *et al.*, 2016). In particular, the authors were interested in personal goals in later life and how they were affected by age, sex, social and financial circumstances, and health resources like mobility, cognition, and self-rated health.

The general assumption in the study was that participants with fewer resources were more likely to engage in goals that were health-related and more focused on goals that were important for daily living, while it was assumed that participants with more resources were more likely to engage in activity goals (Saajanaho *et al.*, 2016).

The 824 older participants (age 75-90, Mean age 80.1, SD = 4.2) were selected from the Life-Space Mobility in Old Age Study (LISPE) and participated in a structured interview at their home. To assess the variables, the authors used the Personal Project Analysis to evaluate the most current goals. Compared to the study by Saajanaho *et al*. (2014), the authors did not report in the current study how many goals the participants should name, but they reported that the participants mentioned between zero to seven goals (Saajanaho *et al.*, 2016).

The goals were allocated to 25 previously created domains by two independent raters. The categories were further divided into different subcategories. The main categories comprised personal goals, health maintenance, recovery, social goals, leisure-time goals, physical

activity, daily life, ideological goals, others and no goals. The results showed that, on average, 2.4 (SD = 1.5) goals were indicated, and only 6% (n = 51) reported no goals. The participants with no *personal goals* (maintaining health or function, healthy lifestyle, or mental health) were more often female (57%, but the difference was not significant, p = 0.412). However, the multivariate analysis showed that women were more likely to have a least one goal in general compared to men (OR: 2.19, 95% CI: 1.12. – 4.30). This effect was significant only in the multivariate analysis and not in the bivariate analysis. Furthermore, participants who were living alone also had fewer *personal goals* (68%, p = 0.027). The most often mentioned *personal goal* related to maintaining health (32%) and maintaining functioning (20%), followed by *social goals* related to family (14%) and meeting other people (13%). Travel-related goals were reported by 15%, and 14% reported goals regarding hobbies at home. Being active in daily life was reported by 16%, and 15% mentioned goals related to independent living. If participants reported higher education, a good financial situation, and good health, the odds were lower than *health maintenance-related* goals. Fewer difficulties in walking increased the odds of reporting more *social related goals*. The odds were higher for female in the bivariate (OR: 1.60, 95% CI: 1.18 – 2.18) and in the multivariate model (OR: 2.36, 95% CI: 1.65 – 3.39), likewise, with better socio-economic resources (bivariate model OR: 1.05, 95% CI: 1.02 – 1.09 and multivariate model OR: 1.06, 95% CI: 1.02 – 1.11). The odds were higher to engage in *social-related goals*. However, if participants reported that they met regularly with relatives, the odds were significantly lower to report social goals (OR: 0.70, 95% CI: 0.51 – 0.97), but not significant for meeting with friends (Saajanaho *et al.*, 2016). Similar results were found for *leisure-time related goals* and *physical activity-related goals*. Participants with higher education, higher cognitive scores on the MMSE and better health status had higher odds to report *leisure-time goals* and *physical activity-related goals*. *Daily life goals* were more likely to be mentioned in the group with participants who also reported poor health status. In comparison, ideological goals were reported within the group with older participants and more contact with friends than younger participants (Saajanaho *et al.*, 2016). As in the previous study (Saajanaho *et al.*, 2014), the authors discussed the results post-hoc in light of three different lifespan development theories (model of selection, optimisation and compensation, dual-process model and the motivational lifespan theory) without testing the particular assumptions derived from the theories a priori.

While previous research often assessed older adults' goals via predefined questionnaires (Rapkin and Fischer, 1992; Saajanaho *et al.*, 2016). In this study, the authors used a large online survey with a qualitative approach to explore older people's goals and deployed the study in six English-speaking countries. A total of 1,551 respondents participated, and the authors created six themes from the survey. The themes concerned "health and well-being; social connections and engagement; activities and experiences; finances and employment; home and lifestyle; and attitudes toward life" (Burton *et al.*, 2024, p. 1).

Unlike previous studies, the survey asked participants if they had goals and in a subsequent question, if the previous question was answered with yes, they were motivated to share their goals. Although the survey design is more suitable for asking for goals than having predetermined questionnaires with "researcher driven […] predetermined goals" (ibid, p. 2), the problem remains that not all participants might think that they have goals. This can be seen in that only 63% of the 1,551 participants reported goals.

However, the 946 goals mentioned were thematically analysed and clustered in the above-mentioned themes. Interestingly, participants from the United Kingdom and Ireland reported significantly fewer goals than participants from Australia and New Zealand or the United States and Canada. For men over 65, 'activities and experiences' were the most often reported goals, followed by 'social connections and engagements' and then 'health and wellbeing'. Women reported mostly goals related to 'activities and experiences' followed by 'health and wellbeing' and finally 'social connections and engagements' (Burton *et al.*, 2024, p. 5). In general, goals regarding health and well-being were most often named in the whole dataset.

It can be summarised and assumed that older adults are still pursuing goals (Saajanaho *et al.*, 2016), and that older participants in studies mentioned as most important goals, goals related to maintaining their health (Lapierre, Bouffard and Bastin, 1997; Saajanaho *et al.*, 2014; Saajanaho *et al.*, 2016; Burton *et al.*, 2024). Further important goals are to stay connected with other people, doing exercise and being autonomous (Lapierre, Bouffard and Bastin, 1997; Saajanaho *et al.*, 2014), and living independently becomes more important the older the participants become (Saajanaho *et al.*, 2014). However, independency seems to be more important when the participants have a better education (Rapkin and Fischer, 1992). While higher education leads to higher chances to report more goals related to leisure-time and

related to physical activity, the opposite can be seen for a lower socioeconomic status. Here, lower socio-economic status leads to more goal disengagement, and goals will be more related to safety and security pursuits (Rapkin and Fischer, 1992).

Not only the socio-economic status seems to play an important role for goals pursuit, also the self-rated health seems to determine the planned goals. So showed Lapierre, Bouffard and Bastin (1997) that lower self-rated physical health and low environmental mastery correlated with a higher wish to maintain the current health status, and goals related to daily life were also more likely to be mentioned in the group with participants who also reported poor health status (Saajanaho *et al.*, 2016).

Finally, self-realisation seems to be more important for older adults with a high perception of competence, higher life satisfaction and who have a positive outlook towards their own future (Lapierre, Bouffard and Bastin, 1997). Therefore, to understand personal goals in later life, it appears reasonable to consider time as an essential factor for what older adults may and can do. Therefore, the next section discusses the relationship between goals and time.

2.2.1 Relationship between Goals and Time

In human development, time is closely interwoven with one's ontogenetic development, not only as points on a time axis to describe where humans are in their life cycle also as a motivator for actions and deeds. For Brandtstädter and Rothermund is time "the joint product of causality *and* intentionality" (Brandtstädter and Rothermund, 2003, p. 105). Intentionality is described as humans planning their life and striving towards goals depending on the stage in their life cycle. An individual may have different goals, but it is not possible to achieve all goals simultaneously. Baltes (1997) argued that the selection of goals could be one option to solve the predicament. However, it might also be possible to arrange the goals in a particular order in time to achieve one goal before the other. This strategy could be a way out of the dilemma, but only if enough perceived time is left. Time can also serve as a compensation strategy; "we need time to cope with loss, and even slow runners (or learners) may reach the goal when they are granted enough time" (Brandtstädter and Rothermund, 2003, p. 106).

Humans choose actions to create the desired outcome regarding their developmental trajectory, and the goals which the individual chooses can be modified at the same time as the developmental trajectory. However, this process is only successful if enough lifetime is

available. The authors add that these processes must be considered if one tries to understand depression in late life.

Three options might be conceivable to understand the presence (or absences) of depressive symptoms in later life. Firstly, someone perceive their own future as limited and therefore becoming aware that goals are not achievable anymore and this leads to depressive feelings, sadness, and rumination, secondly, the individual perceives their future as limited, and focus only on important (mostly emotional and social) goals as described in the Socio-emotional Selectivity Theory (see Chapter 2.3) or the individual perceives their future not as limited regardless of age, and goals are present until the very end.

In later life, the future is more restricted, regardless of someone's self-perception, and desired goals may no longer be within reach (Brandtstädter and Rothermund, 2003). The authors describe a "continuity-flexibility dilemma" (Brandtstädter and Rothermund, 2003, p. 107) during humans' ontogenetic development. Personal goal aspiration therefore must be amended during one's lifetime. In the beginning, individuals strive to reach an optimal level of satisfaction, but at the same time, the individual adapts their goals in response to certain circumstances which can occur during the life course.

Conversely, the individual strives towards continuity, but also needs to be flexible enough to change goals when they face challenges that can be established in societal contexts or personal circumstances. For example, a career goal can be interrupted by a global pandemic or by the birth of a child. Each situation requires a switch in one's personal goals (Brandtstädter and Rothermund, 2003).

Some studies explored the future time perspective as an abstract idea, and the participants should define how much longer they believe they have to live. Although, the concept of future time perspective will be discussed in more detail at a later point, it is important to discuss it shortly in context of goal development. Both concepts; goal development and choices and someone's own time perspective seems to be interwoven.

Lapierre *et al*. (1992) see future time perspective (FTP) as a "cognitive-motivational variable" (Lapierre, Bouffard and Bastin, 1992, p. 280), it appears essential for them to use a methodology to assess FTP with the help of an open-questionnaire. Thus, the authors focused in this research on the motivational content of FTP. Primarily, they were interested in the relationship between individual goals and sociodemographic variables among 708 older adults with an average age of 74.7 (70.8% female), living either in institutional care (49.6%)

or in their own home (50.1%). For this purpose, the following six hypotheses were devised: The participants in the higher age groups focus more on health preservation and transcendental goals. Those living in institutional care are more concerned with their health than their non-institutionalised counterparts. Furthermore, they assumed that women more often strive towards independence and self-assertion. Participants with a higher socio-economic status have more goals regarding their self-realisation, and participants with lower socio-economic status are more interested in goals that encompass possessions. The same is assumed for participants with higher education, while participants with lower education are less often concerned with goals that include self-realisations than the higher educated participants. Lastly, participants with fewer family and friends more often mention goals related to staying in contact with other people (Lapierre, Bouffard and Bastin, 1992). To investigate these hypotheses, the authors used the Motivational-Induction-Method (MIM). Nuttin (1985) created a list containing ten motivational goals, which are frequently used to analyse and categorise the finding from studies based on the MIM. The motivational goals comprised *self*, *self-realisation*, *realisation*, *contact*, *contact from others*, *wishes for others*, *exploration*, *possession*, *leisure and transcendental* (Nuttin, 1985).

After the authors categorised the 15,020 expressions, they found that 37.74% contained goals relating to the category *self*. Self contains goals such as general (4.25%), personality (7.11), self-preservation (4.88), autonomy (4.78%) and health preservation (14.27%). Therefore, health preservation was the dominating aspiration in the study group, followed by the category *contact* (total: 15.51%) (general 6.40%, intimate 1.16%, altruistic, 7.89%). The lowest ranks were for *intimate contact* (1.16%), *contact from others* (1.98%) and *possession* (0.71%). When compared younger with older adults, it can be seen that young, old adults mentioned goals related to health and contact other people more often, in contrast to the older adults group (Lapierre, Bouffard and Bastin, 1992). However, a clear distinction between the differences in the age groups was missing and would have provided an important insight into the structure of the demographics concerning the individual goals. For participants with the lowest health status, health preservation was the most important goal, followed by the wish to have a *good death*. A better health status is aligned with striving towards self-realisation, altruistic contacts, and exploration. Men, however, mentioned more often goals relevant to *possessions* and *intimate contacts*.

Further differences were seen in socio-economic status and marital status. In contrast, participants with a higher socio-economic status mentioned more often goals related to *self-realisation*, while participants with a lower socioeconomic status often mentioned goals that comprised *health preservation*. Not surprisingly, participants without close friends and family wished to have social *contact with others* more often than other participants (Lapierre, Bouffard and Bastin, 1992).

In the same notion, Bouffard *et al*. (1996) examined how goals and future time perspective change in women during adulthood. Goals are strongly interwoven with someone's future time perspective. Bouffard *et al*. defined this as "the person's aspirations, by what one wants to do, wants to achieve or wants to become; the extension indicates the temporal distance of the goals" (Bouffard, Bastin and Lapierre, 1996, p. 254). The general assumption of the study was that FTP is determined by the social role or by the social environment. The authors decided to examine three different kinds of social roles for the current study: homemakers, career women and students, and their association with FTP. However, it has to be acknowledged that these role classifications are rather simplistic categorisations of women that do not reflect modern gender roles and do not reflect the diversity and heterogeneity of women in modern day.

Nevertheless, the authors were interested in the role of age and FTP (Bouffard, Bastin and Lapierre, 1996). The study sample comprised 622 women aged between 20 and 64 years, divided into the last-mentioned three groups and in four age groups. The first group encompassed women between 20 – 29 years (26%), the second group was between 30 – 39 years (28.2%), the third group aged 40 – 49 years (25.8%) and the fourth group aged 50 – 64 years (20.0%). The age of the homemaker group was relatively homogeneous, with a slight majority in the older age group (28.9%). The group containing students were mainly in the youngest age group (36.7%) and lowest in the oldest age group (9.4%). The career women were between aged 40 and 49 years (32.7%) and lowest in the youngest and oldest group (19.8% both). The authors also used the Motivational Induction Method (MIM) to assess the goals for all women, by evaluating and judging the goals regarding their temporal dimension. The goals could be either long-term, short-term or open present. Open present was allocated when a goal could not be placed in one of the other categories. If a goal was achievable within one year, the authors categorised the goal as a short-term goal, while long-term goals would be used if it was likely to take longer than one year to achieve it (Bouffard, Bastin and Lapierre,

1996). In general, the results indicated that aspirations for *health* and *self-preservations* increased with age.

Based on the results, the authors created profiles for each social role. The homemakers mainly were occupied with goals that referred to the *self* and *activities,* with aspirations around the *self* increasing with age, and *activities* decreasing with age. *Activities* and *self-development* were essential themes for students, while *contact with others* was less mentioned. One interesting finding was the role of careerwomen: At the beginning of their career, the aspirations for *activities* were high but changed in their forties to an orientation more towards *self*. Therefore, the profile of careerwomen was closer to the profile of the students at a younger age but becoming aligned to homemakers in later life. As a possible explanation, the authors argued that the results are influenced by the environment and the social roles someone has to fulfil. The future time perspective is not the cause for the goals that the participants have chosen. It is more likely that the FTP is "modulated" by social roles (Bouffard, Bastin and Lapierre, 1996, p. 279).

2.2.2 Summary

The literature suggests that most older adults still have goals in late life, and only a minority of older adults reported having no goals (Saajanaho *et al.*, 2016). But what happens if someone has no goals anymore? Might this be a source of depressive symptoms? As discussed briefly before, the perception of running out of time might have different consequences. The awareness of not having enough time left in life to pursue important goals might lead to depressive symptoms or it leads to concentrate on certain goals which are important for the individual as a form of selection and compensation described by Baltes (1997). Furthermore, it could be argued that if the process of selecting the 'right' goals are failed, namely focusing on goals which are not achievable anymore, that the consequences are developing depressive symptoms.

It is interesting that the most important goals are related to health, which is more prominent in later life than in younger years. For some authors, the health-related goals are interwoven explicitly with the self (Lapierre, Bouffard and Bastin, 1992; Bouffard, Bastin and Lapierre, 1996; Lapierre, Bouffard and Bastin, 1997). The *self* is based on the categorisation developed by Nuttin (1985) and contains the self in general, personality, self-preservation, health-preservation, and autonomy. Health-preservation is an important goal and has been included

in cross-sectional and longitudinal studies (Lapierre, Bouffard and Bastin, 1992; Saajanaho *et al.*, 2014). This goal was prevalent amongst older adults with lower self-rated health and those who felt unable to master their environment (Lapierre, Bouffard and Bastin, 1992). Furthermore, lower socio-economic status led to more goals related to safety and security and health preservation (Rapkin and Fischer, 1992; Lapierre, Bouffard and Bastin, 1997), and lower cognitive ability and lower education lowers the odds to engage in physical activity-related goals and goals related to leisure-time (Saajanaho *et al.*, 2016).

The goals mentioned in different studies seem to focus on compensation of losses as mentioned in the SOC model, but they do not provide any clues whether the participants in the studies are satisfied or unsatisfied with their chosen goals nor if there are an association between focusing on loss-compensating goals and depressive symptoms.

The second most important goal, which was mentioned amongst older participants, was related to social contacts. These findings have been confirmed in numerous studies (Lapierre, Bouffard and Bastin, 1992;1997; Saajanaho *et al.*, 2016).

Rapkin and Fischer (1992) showed that higher education led to more goals related to independence, and Lapierre, Bouffard and Bastin (1992) found that higher life satisfaction and a positive outlook towards the future was more likely to lead to goals in the direction of higher self-realisation.

The following section focuses on contacts and social relationships goals in later life and starts with an introduction to the Socioemotional Selectivity Theory.

2.3 Socioemotional Selectivity Theory and Future Time Perspective

The frequency of social interactions declines in old age (Carstensen, 1992). The reason for this pattern remains unclear (Fredrickson and Carstensen, 1990). Some researchers follow the arguments derived from disengagement theory, whereby withdrawal from society is desired by individuals and society (Cumming and Henry, 1961). Others assume that activity theory gives an insight into why this decline might be happening. The latter implies that reducing contacts is based on a lack of social opportunities within society (Carstensen, 1987) rather than a self-initiated process, as described within disengagement theory (Cumming and Henry, 1961). However, both theories are empirically weak (Carstensen, 1992). Carstensen (1987) argues that using cross-sectional studies to determine whether older people are more

satisfied if they are more active or involved in different activity levels than their younger selves does not help to understand the ageing self (Carstensen, 1987). The frequency of social contacts alone has no explanatory character. Significant, “is the meaning of the interaction” (Carstensen, 1987, p. 224). Therefore, it is irrelevant if the ageing person is more or less active than in their earlier years. The intra-individual sense of connectedness is the crucial part. Neither disengagement nor activity theory can help to understand changes in later life (Carstensen, 1987).

However, the reduced social interaction could also be a type of compensation for the ageing individual to remain at an optimal well-being level, described by Baltes (1997). Therefore, it could be an essential part of ageing (Carstensen, 1987).

During their lifetime, people become increasingly selective about the choice of social partners. These selections start at a very young age, and Carstensen argues that infants cannot choose their social partners as, generally, their parents determine them. The older the child becomes, the more choices they have to connect with other people. However, during one’s lifetime, our contact choices gradually reduce (Carstensen, 1987;1992).

Socioemotional selectivity theory (SST) tries to explain the reason behind reducing one’s network size over the life course. The key assumption in this theory is that the reduction in older adults´ network size occurs throughout the entire lifespan and the reduction of the network size peaks in one’s late life. The reduction in the size of someone’s network in later life serves to enhance a positive socioemotional state and unconsciously, it might be interwoven with someone’s own perception of their remaining lifetime (Carstensen, Isaacowitz and Charles, 1999).

By selecting social partners during the life course, the individual might be able to create a network of close social partners, which can mitigating social risks and helps in achieving maximum social and emotional benefits (Carstensen, 1992; Antonucci, Akiyama and Sherman, 2007). Social interactions can have different functions in modern societies. They can be described as opportunities for individuals to learn about other people and understand social contexts, which might be helpful to find one’s own place in society, but also a way to obtain help in times of hardship – physically and mentally (Carstensen, 1992). The younger a person is, the more they seek knowledge and follow “educational ambitions” (Lang, Staudinger and Carstensen, 1998, p. 21). Therefore, an individual invests more time in choosing various social partners to meet these demands. However, it is important to keep in

mind that pursuing those described goals are shaped by society, and that they are not necessarily inherent in human nature.

Whilst a person is younger, the search for information is usually more salient than in later life. This can be seen in younger adults who compare themselves with other people or try to understand cultural contexts. Having conversations with other younger adults can be one source to enhance the comparison within peer groups and help to understand cultural norms. However, the older the adult becomes, the less they seek information or knowledge about cultural norms and become less likely to seek new peers (Carstensen, 1995). Carstensen (1992) argues that social interactions with others can host hazards, for example, negative feelings and rejection. Some social interactions can be quite exhausting and the source of negative emotions. The same arguments follow Antonucci *et al*. (2007). Originally, the idea that social interactions are helpful for an individual in potentially stressful situations based on the concept of the social convoy and was described by Kahn and Antonucci (1980). The authors propose that social support buffers against perceived stress over the life course and that individuals build up a personal network, called a 'convoy', over the lifetime, that supports the individual. Over the life course, some people join the convoy or personal network, and other people vanish. Some stay almost the entire life; others only remain in the convoy for a short time. However, Antonucci *et al*. (2007) recognise that not every social convoy in life is optimal.

The individual therefore strives to maintain an emotionally satisfying level. This is more likely to be found in existing relationships, especially in relationships with people who share one's past and history (Carstensen, 1995). Fredrickson and Carstensen (1990) doubt that an older person would strive to find a new strong friendship in later life as they generally face a limited lifespan. Arguably, this limited lifespan makes it more challenging to maintain strong friendships. The consequences of a limited perceived lifetime leads to a gradual change from focusing on more rewarding relationships and less aversive relationships, which can be described as an adaptive process during a lifetime to preserve energy in late life and maintain a positive emotional state (Carstensen, 1987). When a person sees their lifetime as limited, which is often more salient in older age, a focus on the future is generally less rewarding and a change of focus towards short-term goals, based on "emotional gratifications" (Lang, Staudinger and Carstensen, 1998, p. 21), will be preferred, as emotional gratification is easier

to control and to achieve. The goal is to maintain an emotional state when the time perspective appears limited (Lang, Staudinger and Carstensen, 1998). Whilst this is sensible for older adults with a positive emotional state, the question remains, what happens if this process is not successful – will it lead to depression?

Future time perspective is an integral part of SST. The socio-emotional selectivity theory argues that if an individual perceives they have a limited future, then emotional gratification becomes more important. In contrast, if the future is perceived as open-ended, knowledge-based goals become more salient (Carstensen, Isaacowitz and Charles, 1999). Therefore, in the next section will discuss the concept of future time perspective in more detail.

2.3.1 Future Time Perspective

Future time perspective is defined "as a malleable, cognitive-motivational construct that focuses on an individual's tendency to anticipate and structure one's future, and differentiate FTP from personality, affective, and agentic traits that capture how an individual tends to experience situations and respond to them affectively and behaviorally" (Kooij *et al.*, 2018, p. 868).

Time has, therefore, various ramifications on different psychological levels – on emotion, cognition, and motivation. If time is perceived as limited, people are more aware of the present, as the future will be unlikely to host a place for the individual with a restricted time perspective (Carstensen, Isaacowitz and Charles, 1999).

The tenets of the socioemotional selectivity theory were not only observable in old age, but even in younger age. Researchers were able to frame a short lifespan for younger people, and where younger people were diagnosed with a terminal condition, it was found that they focused on more emotional aspects of life (Carstensen, Fung and Charles, 2003).

Therefore, time is an essential aspect of human nature. Especially in old age, a person receives a reminder of their limitation of time. Chronic diseases, which occur more often in later life, can be such a reminder, and positive life events like the marriage of someone's child can remind the individual of the passing of time (Carstensen, Fung and Charles, 2003).

Empirical studies show that older adults are relatively adept at assessing how close they are to their death. For example, Kotter-Grühn *et al*. (2010) used the Berlin Aging Study (BASE) sample to assess how accurately older adults predicted their death.

The authors showed that the closer the participants felt to death, the higher the mortality risk was within 16-years (Kotter-Grühn, Grühn and Smith, 2010). To assess their proximity to death, the authors used a single item that asked if the participants felt that their time was running out, which was rated on a 5-point Likert scale which might not be optimal. However, running-out-of-time could also be related to the participants self-perception of ageing and might cause a self-fulfilling prophecy which could have led to an increase in observed mortality (Sargent-Cox, Anstey and Luszcz, 2013).

When the time horizon is perceived as limited, investing energy in long-term goals, which is related to gaining knowledge, becomes progressively less important. It seems more effective for the person with a limited time perspective to focus on the present and thus maintain the energy on more important goals for emotional satisfaction (Lang, Staudinger and Carstensen, 1998).

For example, young couples were more likely to spend time working on their relationships as they perceived their time as extended, to prevent issues developing in the future. In comparison, older couples accepted each other as they were and endeavoured to avoid conflicts, knowing that their time is finite and trying to change each other could potentially lead to more disputes (Carstensen, Isaacowitz and Charles, 1999). However, it has to be mentioned that to the authors' knowledge, nobody has done so far, qualitative research to examine the understanding and perspective of older adults towards their own future time perspective. Such research would provide important insight in understanding older people's behaviour regarding their future and could validate or refute ideas like that older couples accept each other because of the limited time together or just because of pure pragmatism.

For Carstensen *et al*. (1999), the focus on the present is an essential aspect of the SST. In addition, the authors cited Holman and Cohen-Silver (1998) as important research where it was assumed that focusing on the past was more associated with depression.

However, it is important to be aware that Holman and Cohen-Silver (1998) examined the effect of participants who had experienced trauma in their past. The participants focused on moments in life before the traumatic event occurred, leading to higher distress in their series of studies (Holman and Silver, 1998). Therefore, it would be too simplistic to assume that all older adults have traumatic experiences, and thus that focusing on the past always leads to depressive symptoms. Conversely, other authors have found that dwelling on the past can

give the older person self-identity, and therefore it cannot be an indicator for depression in late life (Brandtstädter and Rothermund, 2003).

Despite the amount of evidence that supports the underlying assumptions of the SST (Fredrickson and Carstensen, 1990; Carstensen, 1992; Lang, Staudinger and Carstensen, 1998; Isaacowitz, Smith and Carstensen, 2003), some research has revealed contradictory findings. In their meta-analysis, Kooij *et al*. (2018) hypothesised that a limited FTP is negatively correlated with anxiety and depression without specifying for which age group it might be relevant and valid (Kooij *et al.*, 2018). The results showed no associations between happiness and perceived FTP but found a significant relationship between hope, conscientiousness, life satisfaction and extended FTP. Furthermore, the authors found that participants who are scoring higher on anxiety and depression are also more likely to report a limited FTP (Kooij *et al.*, 2018). However, the direction of the effect was unclear. One explanation could be that anxiety and depression lead to a shortened perceived future time perspective, but a limited perceived future time perspective could also cause anxiety and depression.

2.3.2 Measuring Future Time Perspective

The future time perspective is widely measured as a unidimensional construct based on the FTP scale by Lang and Carstensen (1996). However, Cate and John (2007) argue that a single construct that contains an extended future time perspective on one side and a limited future time perspective on the other side does not grasp the whole variety of this construct. Previous research found an extended future time perspective among younger adults and decreased perceived future time left in later life (Lang and Carstensen, 2002). However, Cate and John (2007) suggest that a two-dimensional construct of FTP might capture the phenomenon more comprehensively. In contrast to previous notion where young people see the future in general as extended and older adults see their future as limited, the authors argued that a middle-aged adult could perceive their own time as limited, but at the same time, they could envisage future possibilities, and not as expected by Lang and Carstensen (1996), a gradual decline in the perceived FTP (Cate and John, 2007). Furthermore, time could be seen as more limited in middle age, but at the same time, it might be possible to envisage future opportunities. Based on this argument, the authors "suggest that at least two views of future time may coexist:

future as a time of opportunities and future as a time of limitations" (Cate and John, 2007, p. 187).

In four studies, the authors used the FTP scale developed by Carstensen and Lang (1996) and tested the scale as a two-dimensional construct. As a result, the authors proved that the FTP scale could be seen as a two-dimensional construct. In addition, their study found an increasing decline in perceiving opportunities from a young age to middle adulthood, supporting the idea that perceived opportunities tend to decline with progressing age. However, in the age group between 40 and 50, the authors could not find any differences regarding a decrease in perceived opportunities. These findings were supported by the longitudinal study within the same research project. "Women at age 61 retained the same level of focus on opportunities as they had shown age 43" (Cate and John, 2007, p. 197f.). In contrast, women in their 20s and 40s are not different in focusing on limitations, but women in the age of 50 were focusing significantly more on limitations than younger women did (Cate and John, 2007).

Strough *et al*. (2016) provide further support for the two-dimensional construct of the FTP scale. The authors used the national life-span study with 3,933 adults between 18-93 years to examine the usability of a two-dimensional FTP scale. The researchers suggested that measuring "limited time" and "future opportunities" (p. 566) were more suitable to interpret the data from the national life-span study. The findings proved that older participants experienced limited time left in life and future opportunities. In particular, it became visible that from the age of 60, participants perceived a decreased future time horizon and fewer opportunities compared to the younger age groups (Strough *et al.*, 2016).

More recent research suggests a three-dimensional construct of the future time-perspective scale. Rohr *et al*. (2017) argued that there were three constructs: Perceived Future Opportunities, which is understood as opportunities and chances in one's life, which are important to achieve personal goals—perceived Future Time Constraint, as the realisation that life is not infinite and obstacles can shorten the perceived lifetime, and finally, Perceived Future Time Extension. The Perceived Future Time Extension is the notion about how much time a person believes he/she has left in life (Rohr *et al.*, 2017). The study used Exploratory Structural Equation Modelling (ESEM) to test the factor loading for the three constructs on the FTP scale. Seven study samples from three different countries (Germany, U.S and China)

with 2,170 participants were included to test the assumptions. Table 2 presents the standardised factors loading from the study.

Table 2 Factor Loading for Future Time Perspective Scale

FTPS items	FTO	FTE	FTC
1. Many opportunities await me in the future	**.914**	-.012	-.005
2. I expect that I will set many new goals in the future	**.928**	-.053	-.001
3. My future is filled with possibilities	**.805**	.109	.040
4. Most of my life lies ahead of me	.243	**.613**	.014
5. My future seems infinite to me	-.078	**.803**	-.006
6. I could do anything I want in the future	.272	**.402**	-.181
7. There is plenty of time left in my life to make new plans	**.492**	.228	-.190
8. I have the sense that time is running out	-.018	.075	**.741**
9. There are only limited possibilities in my life	-.259	-.118	**.454**
10. As I get older, I begin to experience time as limited	.074	-.035	**.779**

Source: Rohr et al., 2017, p. 600

Table 2 shows that items 1, 2, 3 and 7 were loaded highly on Future Time Opportunity, items 4, 5 and 6 were loaded on Future Time Extension and items 8, 9 and 10 were loaded highly on Future Time Constraint. The constructs were interrelated. A correlations analysis showed that Future Time Opportunity correlated positively with Future Time Extension ($r = .69$, $p<.001$), which indicated that the participants also saw more opportunities with an extended future time perspective. The Future Time Constraint correlated negatively with Future Time Extension ($r = -.40$, $p. < 00.1$) and negatively with Future Time Opportunity ($r = -.33$, $p. <. 001$), meaning that a limited future time perspective accompanies a decrease in the perception of opportunities in the future and that the longer the perception of a lifetime is, the lower the perception of constraints. Therefore, the results support the assumption that the FTP scale measures three subconstructs of future time perspective, but at the same time, all constructs were intercorrelated which suggests a possible relationship between all three constructs (Rohr *et al.*, 2017).

Further evidence comes from Zhang *et al.* (2024), who tested the three-factor future time perspective in three different samples (U.S. and Switzerland). The found that the three-factor structure fitted better in two samples (from U.S.), but in one sample, a two-factor future time perspective provided a better fit. The authors consider this partial support for the three-factor

model. However, it remains unclear why, in one sample (drawn from Switzerland), the two-factor model fitted better (see Section 3.2.3 for further discussion).

Another line of research questions the basic assumptions of the SST. Is a limited future time perspective really associated with higher well-being?

2.3.3 Future Time Perspective and its Relation to Well-being

Sakakibara and Yu (2019) examined a possible mediation effect between FTP, Time Left in Life (TLL) and well-being. The researchers also used the Future Time Perspective scale to assess FTP but treated it as a two-dimensional construct, as their factor analysis supported a two-factor model (Sakakibara and Ishii, 2020). The findings concurred with research conducted by Cate and John (2007).

Sakakibara and Yu (2019) argued that FTP and TLL were different constructs. However, in contrast to previous studies, where authors argued that the FTP scale could be seen as one scale with different subcomponents (Cate and John, 2007; Rohr *et al.*, 2017), this study questioned if 'time left in life' is a component within FTP? While FTP asked positive questions about the future, TLL asked more neutrally how much time the participant believed they had left to live (Brandtstädter and Rothermund, 2003). Therefore, the study tested if FTP and TLL were different constructs and if one of these two constructs was correlated with higher well-being in late life (Sakakibara and Ishii, 2020).

The study used two different hypotheses. The first hypothesis supposed that FTP and TLL were different constructs, and therefore, they would weakly correlate. The second hypothesis aimed to test mediation of cognitive-emotional regulation on FTP/ TLL and well-being. Regarding cognitive-emotion regulation, SST proposed that individuals with limited FTP use strategies to decrease negative emotions and enhance positive emotions to regulate their well-being. While some research shows that the previous described cognitive-emotion regulation is observable (Lang and Carstensen, 2002), other studies failed to find a positive correlation between limited FTP and emotional upregulation of positive emotions (see Kessler & Staudinger, 2009).

Therefore, Sakakibara and Ishii (2020) were interested in what extent cognitive-emotion regulation could be used to explain the relationship between well-being and Future Time Perspective as a mediator.

The authors tested their hypotheses in a sample of 1,400 participants aged between 20 – 89 years (M = 54.24, SD = 19.04). The Japanese version of the 10-time FTP scale was used to measure Future Time Perspective and Time Left in Life with the question: “How much time do you think you have left in your life? It doesn’t matter if it is an intuitive estimation, please state the number of years” (YEARS) and “Do you feel the years stated above are short or long?” (FEELING) (Sakakibara and Ishii, 2020, p. 23).

As predicted, the results showed that expanded FTP and higher well-being was mediated by cognitive-emotional regulation, as assumed. Further, the first hypothesis was confirmed, that is, FTP and TLL show a weak correlation. The results also showed that an expanded FTP led to higher well-being, and a limited FTP was associated with lower well-being.

The mediation analysis revealed that if the future is perceived as extended, the participants reported a higher feeling of well-being. This relationship was mediated by emotion regulation. Therefore, according to Sakakibara and Ishii (2020), the second hypothesis was also confirmed, which contradicts SST. In SST, well-being should be higher with limited time perception. The authors argued that the positive factors inherent in FTP were connected with adaptive strategies and not with maladaptive strategies. Furthermore, they proposed that the longer the expected lifetime, the higher well-being is because of the participants' positive adaptive strategies (Sakakibara and Ishii, 2020).

Grühn and colleagues (2016) follow the same argument. The authors combined nine studies to investigate the relationship between FTP and well-being. In general, the findings agreed with the SST, as they showed that older participants reported higher emotional satisfaction in old age, compared to younger adults. In accordance with the tenets of the SST, old age was associated with a limited FTP. However, similarly to Sakakibara and Ishii (2020), the authors found that participants with a limited FTP reported a lower sense of well-being and increased unhealthy behaviour (Grühn, Sharifian and Chu, 2016). This raised the important question of whether a limited FTP serves as a trigger for well-being. The authors argued that it might be true that older adults focus on emotionally significant relationships if they perceived their life horizon as limited.

Nevertheless, it is arguable whether this finding automatically leads to higher satisfaction and higher well-being, as the study could not prove this relationship. Instead, the authors believed that if an individual becomes older and experiences losses which were health or psychologically related, this could lead to the motivation to regulate one self’s emotion.

However, motivation does not necessarily lead to action and change in an individual's behaviour (Grühn, Sharifian and Chu, 2016).

In another study, Demiray and Bluck (2014) explored how the sense of one's future time perspective affects people's well-being. By comparing young and middle-aged adults, they try to understand how chronological age and time left in life (used synonymously with future time perspective) impact different age groups regarding their well-being. They further assume that a more open future time perspective leads to a higher feeling of well-being regardless of age. The study included 309 young (mean = 21.13, SD = 1.18) and 148 middle-aged adults (mean = 55.67, SD = 5.99), predominately white Caucasians (N = 151) from North America. By using a mediator analysis to see the effect of the Future Orientation Scale (Carstensen and Lang, 1996) and the chronological age, measured with the Rappaport Time Line (Rappaport, Enrich and Wilson, 1985) on the six dimensions of well-being suggested by Ryff and Keyes (1995), the authors found that adults in mid-life reported a lower open future time perspective and that the shift from an open to a more narrowed time perspective can already be observed in middle-adulthood. This is similar to previous large-scale studies that found that in later life, adults perceived their future as limited (Coudin and Lima, 2011).

Furthermore, they found that mid-life is associated with high levels of well-being in all six dimensions, especially high levels of environmental mastery and autonomy compared to younger adults. Having an open future-time perspective is related to higher levels of well-being regardless of age. The authors consider that this differs from SST, which assumes that in later life, the future-time perspective decreases and, therefore, negatively impacts the socio-emotional process, which causes a shift towards emotionally related goals (Carstensen, Isaacowitz and Charles, 1999). However, one could argue that reaching middle age is a time when an individual has not experienced an accumulation of losses that will cause the shift in goal valence as described in the SST.

In the final step of their analysis, the authors explored whether time left in life (measured by the Future Orientation Scale) or chronological age (measured by the Rappaport Time Line, where participants indicate their position on a timeline between birth and death) influences well-being and thereby acts as "opposing forces" (p. 1210). The results indicate that participants who maintain an open future time perspective, even with a perception of limited time left in life, continue to experience high levels of well-being.

More recent studies on FTP support the effect of limited FTP on negative well-being. Korff and Biemann (2020) hypothesised that a limited future time perspective is negatively associated with someone's objective and subjective health. Furthermore, the authors hypothesised that loneliness measured as a decline in social contacts will accompany a limited FTP and that a limited FTP is associated with lower life satisfaction. It is important to mention that the authors used different aspects from the SST without questioning it. The SST posits that with reduced FTP, the individual focuses more on important relationships, leading to higher emotional well-being, which is known as 'positivity effect' (Carstensen, Isaacowitz and Charles, 1999; Reed, Chan and Mikels, 2014). However, Korff and Biemann (2020) expected that a limited FTP would lead to a lower satisfaction level, contrary to the tenets of the SST.

A higher sense of subjective health and life satisfaction and reduced feelings of loneliness were associated with an open-ended FTP. The authors tested their hypotheses on different age groups. Noticeably, in the age group 70 and older, the FTP was less affected by subjective health, objective health or loneliness (Korff and Biemann, 2020).

Interestingly, Korff and Biemann (2020) focus on age groups with a mean age of 53.5 (SD = 18.3) in regards to depression, as previous work has shown, it appeared that there was a curvilinear relationship with higher rates of depression within the octogenarians (Brandtstädter and Rothermund, 2003). Furthermore, it is debatable whether individuals aged in their 50s or 60s had already experienced a wide variety of losses, affecting their well-being. It is undeniable that losses are more common in late mid-life or at the beginning of pension age, for example, the death of someone's parents or retirement from work. However, the accumulated effect of losses are less likely to be so clearly visible in the early stages of becoming an older adult as other researchers could show that perceived losses become more prominent at the age of 70 and above, in a state of life where the older adult is likely to face multiple losses at the same time (Heckhausen, Roger and Baltes, 1989).

Whilst the explanation for a reduced network size appears reasonable to help to understand changes in late life, it is hard to refute the findings regarding positivity effect. Reed *et al.* (2014) have shown, with their meta-analysis, that positivity effect is observable in later life. The underlying rationale for this phenomenon is not as unequivocal as it seems. So far, SST is the only theory that explains the positivity effect. Alternative connections e.g., that the

positivity effect could be a piece of evidence that Erickson's Theory is valid, and the positivity effect is a sign of a successful achievement of a developmental stage has not been done.

The last two studies presented here were conducted during the COVID-19 pandemic. The pandemic was particularly disruptive for many people. Two studies that explored how people's future time perspectives changed during the pandemic are particularly relevant to this research.

One study was conducted in Finland and the authors used thematic analysis to identify how perceived time changed during the pandemic for older adults (Leinonen and Era, 2024). In total, 77 letters were analysed, in which older Finish Adults reflected in a letter how they perceived the pandemic and its restrictions. The letters were subsequently analysed regarding their clues towards participants' experiences of temporality. Three themes were created out of the data: (1) 'forced to live in the present', 'the present interpreted through the past' and 'uncharted future' (p. 7). The first theme reflects on the situation during the pandemic, when everyday events that usually mark social time were halted, such as meeting other people. Public holidays or weekends became boundless without a clear delineation between week and weekend, consequently forcing the participants to stay in the present rather than look forward to events that might otherwise have happened in the near future.
The second theme in this study concerned the meaning of the present through the lens of the past. Older adults used to reflect on their individual past to make sense of the present. They especially reflected on events from the previous wartime in Finland and that a time of prosperity followed after the restrictions in the past were lifted. At the same time, reliving the past was also a time to live through past traumata again. The last theme explored the worries and uncertainty of the future that the pandemic imposed on them. Participants reflected on the "stolen future" (p. 12) and noted that at the time of the pandemic, it was unforeseen how long the pandemic and its restrictions would last. In their mind, their third age would eventually lead to the fourth age, and the future they imagined having to enjoy would be a future where they might be physically and mentally limited. Therefore, they are restricted to living in the present.

The study provides an interesting insight into the experience of the temporality of older adults during the pandemic and how the restrictions forced some of them to live and focus on the present rather than on the future.

Similar findings about the effect of the pandemic on older adults' future time perspective come from Rupprecht *et al.* (2022). The authors examined the effect of COVID-19 and the perceived finitude in a German context. The data from 1,042 participants between 18 – 95 years was collected at the beginning of the pandemic and recollected during the second peak of the pandemic. The authors found that the future time perspective decreased from the beginning of the pandemic to the second measurement at the second peak of the pandemic. Using the three-dimensional construct of the future time perspective as suggested by Rohr *et al.* (2017), they found that perceived Future Opportunities decreased among older adults and that perceived Future Time Constraints and perceived Future Time Extension decreased among the whole sample on average (Rupprecht *et al.*, 2022).

2.4 Summary

It can be concluded that the effect of an extended or limited future time perspective on someone's well-being is divided, and only one study touched upon the association between FTP and depression (Grühn, Sharifian and Chu, 2016). It might be possible that the experiences of losses in later life makes people aware of their limited FTP. A limited FTP, in turn, leads to focus on important goals to regulate someone's own well-being. But what if the process fails and the individual is not able to focus on new goals or the goals are not achievable because of the limited FTP? Those questions remain still unanswered.

Interesting and unrecognised in the last two decades is the approach to measuring future time perspective as described by Nuttin (1985). Research conducted by Bouffard et al. (1996) and Lapierre et al. (1992, 1997) has shown a remarkable and innovative approach, to assess the FTP of individuals over the life course. Using the MIM to assess FTP is discussed further in Chapter 4. The next chapter provides and overview over depression in general, and the implications of studying depression in later life.

3 Introduction to Depression in Later Life

´Depression is a part of ageing, and it increases as people get older'. Such and similar stereotypes about older adults can be found in everyday conversations about late life. But what evidence underpins those clichés?

A recent study, conducted across 27 European countries, comprising 258,888 participants estimated that 6.38% of the study sample live with depressive symptoms. Women were more often affected (7.74%) than men (4.89%). Interestingly, the highest prevalence was among the group aged 75 and older (11.59%) (Arias-de la Torre *et al.*, 2021).

As the above-mentioned study suggests, depression might become more prevalent in later life. However, research also suggests that depression in old age is different from depression at different age stages (Fiske and Jones, 2005); additionally, there is a clear distinction between late-onset depression and early-onset depression (Gatz, 2001). However, before the causes and assumptions about late-onset depression are further discussed and results are presented, it is important to clarify what depression is, and how it is classified.

3.1 Classification of Depressive Symptoms

In the following section, the classification and diagnostic criteria for depressive symptoms are discussed to provide an overview about the disorder, to understand the differences between depressive symptoms (measured using questionnaires in gerontological research) and diagnosed major depression (as a clinical label of a cluster of symptoms). Both are necessary to understand differences in the aetiology of depression in early life and depression which occurs for the first time in later life.

Currently, two systems are used to classify depressive mood disorder: the International Classification of Diseases Version 11 (ICD-11) developed and published by the WHO (2022) and the Diagnostic and Statistical Manual of Mental Disorder 5th Edition (DSM-5) published by the American Psychiatric Association (APA, 2013).

Although the ICD-11 is the newest version of the International Classification system of Diseases, ICD-10 will be used in the following section to delineate depression as most studies currently based on the definition outlined in the ICD-10 (see WHO, 1992).

The ICD-10 classified mood disorders into different subcategories, as shown in Table 3.

Table 3: Classification of mood disorders using the International Classification of Diseases (Version 10)

Mild depressive episode	F32.0
Moderate depressive episode	F32.1
Severe depressive episode without psychotic symptoms	F32.2
Severe depressive episode with psychotic symptoms	F32.3
Recurrent depressive disorder	F33
Organic depressive disorder	F06.32
Bipolar affective disorder: current episode mild, moderate or severe depression with or without psychotic symptoms	F31.2 – F31.5
Dysthymia	F34.1
Mixed anxiety and depressive disorder	F41.2
Adjustment disorder with depressive reaction	F43.20, F43.21
Minor depressive disorder	-

Source: Baldwin, 2008, p. 529

The ICD-10 is used to diagnose mild depressive symptoms of depression using three categories (Category A, B and C). Category A contains symptoms which must be present for more than two weeks. The second Category (B) comprises a depressed mood (1) which is present at most of the time of the day, loss of interest or pleasure (2) in activities the individual enjoyed previously, or decreased energy or increased fatigability (3).

Two out of the three symptoms must be present, and additionally at least four symptoms from the third Category (C):

- "Loss of confidence or self-esteem
- Unreasonable feelings or excessive guilt
- Recurrent thoughts of death or suicide
- Reduced ability to think or concentrate
- Psychomotor activities are reduced or increased
- Sleep disturbances
- Changes in appetite" (Baldwin, 2008, p. 530)

In the description of the next, more intensified classification of depression, the quantity of symptoms is increased to diagnose a more severe depressive episode. For example, moderate depression requires the presence of Category A (the symptoms must be observable for more than 2 weeks) and two symptoms from Category B. In total (combined Categories A to C) at least six symptoms must be prevalent, that means another four symptoms from Category C are required to diagnose a moderate depression.
For severe depressive episodes, all Category B symptoms and at least five symptoms from Category C must be observed (Baldwin, 2008).

A similar classification system is used by the Diagnostic and Statistical Manual of Mental Disorders Version 5 (DSM-5). The DSM-5 distinguishes between the following depressive disorders:

- "Major depressive disorder
- Persistent depressive disorder (dysthymia)
- Disruptive mood dysregulation disorder
- Premenstrual dysphoric disorder
- Substance/ medication-induced depressive disorder
- Depressive disorder due to another medical condition
- Other specified disorder
- Unspecified depressive disorder" (APA, 2013, p. 155)

As this thesis focuses on late-life depression, only major depressive disorder is examined in depth.
The feeling of emptiness, irritable mood and sadness can be found in almost all forms of depression (APA, 2013). All three symptoms (feeling of emptiness, irritable mood and sadness) co-occur often with physical and cognitive changes which affect ability to function and handle daily activities. The only difference between different kinds of depression is the duration of the episodes, the timing of occurrence and the aetiology.

According to the DSM-5, major depression is classified as the presence of five or more of the following symptoms during the same two-week period, including Category A symptoms plus at least one symptom of: 1) depressive mood or 2) loss of interest or pleasure:

1. “Depressed mood most of the day (nearly every day) (feeling empty, sad, or hopeless)
2. Diminished interest or pleasure in all, or almost all, activities
3. Significant weight loss when not dieting, weight gain or decrease or increase in appetite nearly every day
4. Insomnia, hypersomnia nearly every day
5. Psychomotor agitation or retardation (feeling restless or being slowed down)
6. Fatigue or loss of energy
7. Feeling worthless or excessive or inappropriate guilt
8. Diminished ability to think or concentrate, or indecisiveness
9. Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, suicide attempt or a specific plan for committing suicide” (APA, 2013, pp. 160 - 161)

Additionally, Category B and C must be present to be able to diagnose major depression. Category B includes symptoms which “cause clinically significant distress or impairment in social, occupational, or other important areas of functioning”, and Category C requires that the episode “is not attributable to the physiological effects of a substance (e.g., drugs or medication) or another medical condition” (APA, 2013, p. 161).

However, the DSM-5 emphasises that sadness, rumination, insomnia, poor appetite and/or weight loss can also be attributed to significant loss. Loss does not only include experiences of bereavement, but also loss of someone’s home or autonomy, which can cause feelings of loss (APA, 2013).

The last two criteria are related a psychotic history and a history of manic episodes. Major depressive episodes should only be diagnosed if they cannot be better explained by diseases related to schizophrenia (Criteria D), and the individual should not have experienced a manic or hypomanic episode in the past (Criteria E).

Similar to the ICD-10, major depressive episodes can be classified into:

- Mild
- Moderate
- Severe
- With psychotic feature

- In partial remission
- In full remission
- Unspecified (WHO, 1992)

According to DSM-5, late-onset depression is not uncommon (see Chapter 3.2 for more details on late-onset depression). However, the DSM does not present any specific prevalence rates. The only section in which the DSM (see DSM-5 - Development and Course) distinguished between depressive symptoms in earlier life compared to symptoms in later life is by observing that extreme tiredness and insatiable hunger are more often observable among younger people and melancholia and agitation are more often among older adults.

Baldwin (2008) argues that the ICD-10 and DSM-5 do not completely reflect depressive episodes in late-life when the criteria of the manuals are used too strictly for the diagnostic process. For example, an individual with cognitive impairment (e.g., dementia or a delirium) will not be included, and ultimately excluded from the diagnostic approach within the ICD-10, as the category A in the ICD-10 states that depressive symptoms should not be caused by an organic disease or psychoactive substance misuse. Consequently, depressive episodes in late-life are either overestimated or underestimated (Baldwin, 2008).

3.1.1 Affective and Motivational Factors of Depression

A deeper investigation into increasing prevalence of depression in late life was conducted by Prince *et al.* (1999a). The authors found two different causal factors of depression, the first being affective suffering, which is constant over the life course, and the second, motivational factor is especially visible in late life.

Affective suffering is marked by depression, tearfulness and the wish to die. In contrast, the motivational factor includes loss of interest, poor concentration and lack of enjoyment (Prince *et al.*, 1999a).

Furthermore, the authors pointed out that depression and physical illness might be strongly intertwined but crucially, that the direction is not clear (Prince *et al.*, 1998). The authors were looking for factors that might be responsible for the emerging depressive symptoms in late life. They assumed that living with a physical disability would be a strong predictor for late-onset depression, drawing on evidence from previous studies and the higher rate of disability in late life. Due to the lack of cohort studies, Prince *et al.* (1998) conducted a one-year

prospective cohort study to examine the onset and maintenance of "pervasive depression" (ibid, p. 338). The results showed, besides the high dropout rate among participants with depression due to death, an onset of depression of 12% within one year and a continuation rate of 63.2% amongst participants who lived with depression before the study was observed. Furthermore, they could not find any particular disease that caused the depressive episode, but the difficulties which resulted out of a disease was connected with the occurrences of depression. For example, a stroke leads to a physical impairment which cause difficulties in participation in social activities (Prince *et al.*, 1998).

To investigate which factors can prevent depression, the authors analysed data from the group without depression for protective factors. Social support and social participation were the strongest factor to prevent late-onset depression. Further analysis of the group which remained living with depression after the one-year period revealed that the likelihood of living with depression was higher when the participant either had a lack of social support or an "impoverished social *milieu*" (Prince *et al.*, 1998, p. 348).

Another study conducted by Prince *et al.* (1999b) examined different depressive symptoms measured with the EURO-D scale. The scale contains 12-items: “depression, pessimism, wishing death, guilt, sleep, interest, irritability, appetite, fatigue, concentration, enjoyment and tearfulness” (Prince *et al.*, 1999b, p. 331).

A factor analysis revealed two different factors - the authors called it the “depressed affect”- which includes depression, tearfulness and the wish to die (ibid, p. 333); and the “motivation factor” which includes loss of interest, lack of concentration and lack of enjoyment (ibid, p. 334). While loss of interest is assessed with the question: “What is your interest in things? (Less interested than usual)”, “lack of concentration is measured with the question: How is your concentration? (Difficulty in concentrating on entertainment or reading)”, and “lack of enjoyment with: What have you enjoyed doing recently? (Almost nothing)” (Prince *et al.*, 1999b, p. 332)

In a subsequent analysis, the authors tested the EURO-D scale among 21,724 older participants in 11 European countries. Participants were classified into six different age groups (65-69; 70-74; 75-79; 80-84; and 85 and above). The results indicated a linear association between age and scores in EURO-D, with an increase in scores the older the participants were, and with more women than men reporting higher scores of depression on

the EURO-D (Prince *et al.*, 1999a). In contrast with previous epidemiological studies, the current study shows a slight increase in depression rates with advanced age. Furthermore, the authors have seen an increase in scores which comprised the motivational factors and less of the depressed affect (Prince *et al.*, 1999a; Prince *et al.*, 1999b). They concluded that the motivational factor is more prominent in old age, as this factor increases with age, while the depressed affect remains stable over the lifetime. Furthermore, the authors reported an increase in the motivational factor accompanied by a cognitive decline, speculating that the motivational factor might be salient in old age either because of cognitive decline or a "world-weariness" (Prince *et al.*, 1999a, p. 343). This was because the question posed directly to the oldest participants was "whether they look forward to the future, or whether they have as much interest or enjoyment in life as they used to" (ibid, 1999a). This prompt the question whether the motivational factor is also visible when participants perceive a limited future time perspective? However, not looking forward to the future can mean that participants are unsure if there is a future ahead for them but could also be a sign of pessimism.

Another potential cause for depression in late life is an ischemic change in the brain. Medical textbooks refer to white-matter hypersensitivities (WMH) (Thomas, 2021), or sometimes to vascular depression (Baldwin, 2008), and can be caused by smoking or high blood pressure (Thomas, 2021). A change of the white matter can interrupt the flow of neurotransmitters and can cause depressive symptoms (Koenig and Blazer, 1992). WMH can often be found among older adults with major depression and those vascular changes can often be confirmed after autopsy (Thomas, 2021).

Regarding the motivational factor of depression, it should be mentioned that Baldwin (2008) interprets Prince *et al.*'s (1999a) description of the motivational factor of depression as a profile of a vascular depression. This thesis, however, tries to establish an alternative explanation of the increased prevalence of depression in later life, based on the assumption that a limited future time perspective leads to a lower goal pursuit and eventually might cause depressive symptoms.

But what is meant by late-onset depression and when does late-onset start? The next section will address this question in further detail.

3.1.2 Late-Onset Depression

Late-onset depression describes an onset of depressive symptoms beyond a specified age. Aziz and Steffens (2013) posit that late-onset depression is a form of depression which starts at some point after the age of 60 – 65. However, they do not clarify their reasoning underpinning their choice of age range, which appears arbitrary (Thomas, 2021). Although there is currently no clearly delineated point of chronological age when early-onset and late-onset depression starts, it is widely accepted that late-onset depression manifests at or after 60-years of age (Van den Berg *et al.*, 2001). One explanation could be that some life events might cause a depressive symptom or that from a certain age, the possibility of developing particular neurological disorders, such as cerebrovascular diseases increase. Cerebrovascular diseases are also prevalent in patients with vascular depression (Baldwin, 2008). One explanation for the occurrence of vascular depression is that vascular risk factors can lead to a change of the prefrontal cortex and cause depressive symptoms, mainly psychomotor retardation and impaired self-reflection. Medical comorbidity assumes that depressive symptoms are caused by underlying medical conditions, for instance, myocardial diseases, strokes or Parkinson's disease (Aziz and Steffens, 2013). However, the question remains whether the disease is always biologically responsible for these depressive symptoms, whether the depressive symptoms are a reaction to the disease or purely coincidental.

Aziz and Steffens (2013) summarise personality attributes, behaviour, cognition, psychodynamic theory and social support as causes for depression in later life. In addition, certain personality attributes, for example, neuroticism or self-efficacy, may relate to later life depression. Behaviours such as learned helplessness and the accumulation of stressful life events may also relate to late-life depression.

A prior history of depression appears to be a strong predictor for late-life depression. In a longitudinal study by Kraaij *et al*. (2002), the authors investigated the relation between cognitive coping strategies and depressive symptoms in late life and whether stressful life events and a history of depression were solid predictors for late life depression. Using a sample of 99 participants aged 67 and one follow-up point two and a half years after the initial interview, the authors found that certain cognitive traits are related to depressive symptoms. For example, participants who reported frequent rumination, catastrophising and acceptance

of circumstances were more often associated with depressive symptoms (Kraaij, Pruymboom and Garnefski, 2002). However, this association was based on the depression scores from the follow-up, therefore a deeper understanding of the cause of the depressive symptoms is not possible. It is not clear, for example, whether rumination leads to depressive symptoms or rumination is a symptom which occurs with depressive symptoms. Furthermore, the authors found that past and current stressful life events and a history of depression are also related to the display of depressive symptoms. Interestingly, the authors found that the more negative life events are experienced in the past the higher were the depressive symptoms in the present (Kraaij, Pruymboom and Garnefski, 2002); this could reflect an accumulation of adverse life events over the life course. The findings that the accumulation of stressful life events is associated with depressive symptoms have been supported by a meta-analysis (Kraaij, Arensman and Spinhoven, 2002). Surprisingly, the study found that sudden unexpected negative life events were not associated with depressive symptoms in late life (ibid, 2002).

Van den Berg and colleagues were interested in the relationship between psychobiological factors in early-onset and late-onset depression. Their hypotheses were that early-onset depression is more common amongst adults with a history of parental depression and with higher scores in neuroticism, while late-onset depression is not associated with these factors, but with more severe life stress in the past and an increased risk for vascular diseases. Furthermore, the authors assume that these psychobiological factors are the same for minor and major depression (Van den Berg *et al.*, 2001).

Those assumptions do not fit completely with general frameworks for depression in later life. For example, Gatz (2001) proposed in her framework of depression that older adults are exposed to three risk factors for depression in late life: biological, psychological, and social risk factors. These risk factors have different roles and weight in the explanation of depression in late life. While the authors believe that history of depression is more common in depression in earlier life stages (Baldwin & Thomson, 1995 cited in Gatz, 2001), which aligns with the assumption by Van den Berg *et al.* (2001). However, the assumption of risk factors differs regarding the role of psychological risk factors. Van den Berg and colleagues (2001) assume an increasing role of life stress which can cause late life depression, and these are similar to

the findings by Kraaij, Arensman and Spinhoven (2002), while Gatz (2001) assumed that psychological factors play a lower role in later life, as the individual can have learnt how to adapt to certain stressors (Fiske and Jones, 2005).

To test their hypotheses, Van den Berg *et al.* (2001) chose 132 participants from the Groningen Longitudinal Ageing Study (GLAS) and from six mental health outpatient clinics. The results showed that in the group which experienced late-onset depression, participants with no life stress events in the past had significantly higher risk factors for vascular disease compared to participants who experienced life stress previous to their first occurrence of the depressive symptoms. The authors summarise that their hypotheses are supported by the data, and they proposed that late-onset depression might have two different pathways. One pathway is described as experiences of life stress which can lead to late-onset depression; and the second pathway is described as vascular risk factor, whereby the pathway for early-onset depression is founded on a lifelong vulnerability due to personality disposition and parental history of depression (Van den Berg *et al.*, 2001).

To better understand age and cohort effects, Yang and D'Arcy (2023) used the Canadian National Population Health Survey (NPHS) and the Canadian Community Health Survey (CCHS) to explore depression among 362,154 adults aged 65 and over, using data available from 1994 to 2018. Depression was measured using the World Health Organization Composite Diagnostic Inventory Short Form for major depressive episodes (CIDI-SFMD) in the NPHS and the PHQ-9 in the CCHS. The authors aimed to understand cohort and period effects among participants born between 1910 and 1954.

The hierarchical linear models showed that an increase in late-life depression can be explained by birth cohort rather than just chronological age. They discovered that individuals born later in the 20th century experienced higher levels of depression. In contrast, those born before 1935 had lower rates, but depression became more common in subsequent birth cohorts.

They argue that newer birth cohorts are more likely to experience disability, and studies have shown a link between depression and disability (Prince *et al.*, 1997). The authors also discussed historical events, particularly for adults born during and shortly after the Second World War, suggesting that these events may have contributed to their experiences of late-

life depression. However, moderation analysis showed that higher education levels among younger birth cohorts led to a lower likelihood of experiencing depression (Yang and D'Arcy, 2023).

3.2 Subthreshold Depression in Later Life

Another form of depression is subsyndromal depression or subthreshold depression, the term subthreshold depression is not used coherently in the literature (Baldwin, 2008), and the term subsyndromal and subthreshold depression will be used interchangeably. It can be said that subthreshold depression is used to describe depressive symptoms which are below a certain threshold, and that subthreshold depression can be a predictor for major depression (Lyness *et al.*, 2006; Lyness *et al.*, 2009). In the following chapter, subthreshold depression will be examined in detail.

3.2.1 Criteria of Subthreshold Depression

Evidence about subthreshold depression in later life is presented by Oh *et al.* (2020). The authors explored the epidemiological aspects of subthreshold depression in late life. To identify risk factors, prevalence and incidence, the Korean Longitudinal Study on Cognitive Aging and Dementia was used, which is a prospective cohort study comprising 6,818 participants aged 60 and over. The study comprised two follow-up periods within a 2-year interval.

A neuropsychiatric assessment was used to identify participants with major or minor depression based on the DSM-4. Subthreshold depression was defined according to the authors own criteria and based on the diagnosis criteria of the DSM-4. For example, subthreshold depressive syndromes were present when participants exhibited fewer symptoms compared to those with minor or major depression, but at least two symptoms out of category A and including depressed mood or anhedonia (Oh *et al.*, 2020).

Among the 6,640 participants, 9.16% reported subthreshold depressive symptoms, and the majority of participants with subthreshold depression were female (68%). In comparison to other groups, participants with subthreshold depression more often had low socioeconomic status, reported less social support and did less exercise than other participants. However, this was only the case when the researchers compared the participants with subthreshold

depression with participants without depressive symptoms. When the group with subthreshold depression was compared with participants with minor or major depression, they showed that participants with subthreshold depression were physically fitter, had a higher socioeconomic status and that reported fewer episodes of major depressive episodes in the past (Oh *et al.*, 2020).

However, with increases in age, the chance of experiencing subthreshold depression increased, being 13.4% among participants above 80 years. Seven-point five percent out the 3,955 participants who participated in the follow-up developed subthreshold depression, while 0.83% developed minor depression and 0.68 major depression. The researchers calculated the odds ratio to determine which factors might be responsible for an increased risk of developing a subthreshold depression. The analysis revealed that old age and less exercise do not increase the risk of developing a subthreshold depression, but being female, having a low socioeconomic status, reduced social support and a reduced sleep quality were identified as risk factors. Based on the results, the authors argue that the subthreshold depression "may be more attributable to age-associated socio-environmental factors such as the economic state or social support than to aging itself" (Oh *et al.*, 2020, p. 155).

One interesting finding in this study was that alcohol consumption reduced the risk of developing subthreshold depression, and the authors followed the argumentation from other epidemiological studies that alcohol consumption is beneficial, as it shows that regular alcohol consumption can be a sign of good physical health and can reduce feelings of loneliness (Oh *et al.*, 2020). However, the authors do not reflect upon these arguments critically and do also not consider in which context the participants mentioned drinking alcohol. Thus, the effect of alcohol in itself may not mitigate the impact of subthreshold depression, rather it is the environment where the alcohol is consumed, e.g., participants who drink in a pub or meet friends and therefore have potentially more social contact than other participants.

Additionally, Ludvigsson *et al.* (2019) investigated the morbidity and mortality among participants aged 80 and older, referred to as "very old individuals" (ibid, p. 1569). The emphasis on 'very old' is made because the authors argue that the group of the 80+ are different compared to the younger old age groups regarding their 'degree of multimorbidity, frailty and, and social dependence' (ibid, p. 1570). The study aim was to test whether the 'very

old' adults with subthreshold depression are more likely to experience more morbidity and a higher mortality, compared to participants without depression.

It is not clear why Ludvigsson *et al*. (2019) chose to compare 'very old' adults with subthreshold depression with younger adults without depression. It would have been interesting to see potential differences between the very old participants and young-old participants with subthreshold depression to note any differences regarding their ages.

The participants were selected from the *Elderly in Linköping Screening Assessment* (ELSA 85) study, which is a population-based longitudinal study with three follow-up waves and nine years in total length involving 496 participants (born in 1920) living in the south of Sweden (Ludvigsson *et al.*, 2019).

In contrast to the study from Oh *et al.* (2020), in which the authors used a self-created diagnostic criterion for subthreshold depression, Ludvigsson *et al.* (2019) used the 15-point version of the Geriatric Depression Scale as a source to define subthreshold depression: participants scoring 3 to 5 points on the GDS-15 were defined as having subthreshold depression.

The study experienced a high attrition rate between the baseline and the last time point of the follow-up, and the authors attribute this attrition to various factors, e.g., higher scores of depressive symptoms. The participants with subthreshold depression had reported lower self-perceived health and more challenges with Activities of Daily Living compared to participants without depressive symptoms. Regarding mortality, the authors showed that living with subthreshold depression at baseline presents a 1.6 times higher risk of death within the study period (Ludvigsson *et al.*, 2019). But what are the causes for subthreshold depression?

3.2.2 Causes for Subthreshold Depression

One explanation is proposed by Adams (2001). The author aimed to link different theories and phenomena together in her research. On the one hand, Adams chose one subtype of depression, called 'depletion', which is marked by withdrawal, apathy, and lack of vigour (WAV) (measured in the Geriatric Depression Scale and similar to the affective and motivational factors measured with the EURO-D). On the other hand, Adams applied ageing theories which aim to explain a reduced network size in later life, namely disengagement

theory (Cumming and Henry, 1961), socio-emotional selectivity theory (Carstensen, Isaacowitz and Charles, 1999) and gerotranscendence (Tornstam, 1989). Adams (2001) argued that when older adults are falsely diagnosed with depression this leads to a variety of problems, including the use of unnecessary antidepressants and health services. Ageing-related somatic complaints can, according to Adams (2001), lead to a situation in which older adults are falsely diagnosed with depression and therefore, cause higher reported prevalence of depression in later life.

Some symptoms which can be seen in late-life depression may be attributed to a normal process in later life and not to a separate disorder. As example, Adams posits socio-emotional selectivity theory (Adams, 2001), described in the previous chapter (Chapter 2.3). This theory suggests that older adults reduce their social network size as their future time perspective is narrowing. This reduction can be interpreted, through the lens of depression, as a lack of social interest. Indeed, the GDS-15 asks: "Have you dropped many of your activities or interests?" or "Do you prefer to stay at home, rather than going out and doing new things?" (Adams, 2001).

It is quite convincing that both these questions might reflect a developmental change in later life, however, it is not correct to conclude that a lack of interest or the preference to stay at home is normal in later life. This reflects more the inadequacy of using short screening assessments to assess depression in later life, rather than clinical assessments.

A term which is often used in context of late-life depression is 'depletion'. The term was originally introduced by Newmann *et al.* (1996). The authors distinguished between 'depressive syndrome' and 'depletion syndrome'. Depletion syndrome is more marked by feeling loneliness, lack of interest and reduced appetite and can be seen in the Geriatric Depression Scale (GDS) as withdrawal and apathy, and lack of vigour (WAV) (Adams, 2001). Adams (2001) administered a questionnaire which comprised the 30-item version of the Geriatric Depression Scale (GDS-30), questions about the Instrumental Activities of Daily (IADL) Living, a question about self-control ("Thinking about life in general, some people generally feel out of control and helpless, while others feel in control and able to cope. How do you generally feel?" rating on a Likert scale from 0 – 10) (Adams, 2001, p. 771) and a scale to explore the social network structure of the participants.

A total of 327 respondents (M = 73.1, SD = 6.2) participated in the study. The descriptive results showed that most participants reported no difficulties in performing IADLs. Regarding

the questions about *control*, the majority (89%) rated that they are in control over their lives (Median 8 out of 10). Only 272 participants completed the GDS and therefore, were included in the analysis. Of these, 12.9% reached the threshold of depression on the GDS (Adams, 2001). The subsequent analysis showed that if the WAV-items were removed from the analysis, only 8.1% would have been classified as depressed, compared to 12.9% if the whole scale were considered. Adams proposed that more research should be conducted to understand the WAV-items in relation to ageing theories to avoid overdiagnoses of depression (Adams, 2001).

In a follow up study, Adams and Moon (2009) aimed to examine risk factors and symptoms of subthreshold depression in late life. The authors tested the hypothesis that adults with subthreshold depression would exhibit more symptoms of withdrawal, apathy and a lack of vigour (WAV) as identified in Adams' previous study (ibid, 2001). The second hypothesis assumed that the participants with subthreshold depression are distinguishable from participants without depressive symptoms in various dimensions (e.g., regarding the demographic characteristics or health status). The participants were recruited from six assisted living facilities in Ohio, USA and received a self-administered survey containing a variety of questionnaires, for example the GDS-30 to assess depressive symptoms and the Self-Rated Health questionnaire (SF-12). The participants were given the opportunity to participate in a follow-up telephone interview. In total, 166 (mean age = 82.9, SD = 7.12) were recruited for the follow-up diagnostic interviews.

To reiterate, depressive symptoms were measured with the self-reported GDS-30. The mean score was 6.44 (Range = 0 – 23). Additionally, the diagnostic interviews, which were conducted after the initial self-reported questionnaires, used the depression module of the Mini-International Neuropsychiatric Interview (MINI) to classify the participants in three categories: non-depressed, subthreshold depression and major depression. The MINI results revealed that 27.7% were classified within the category of subthreshold depression and 4.2% within the category of major depression. Within the subthreshold group identified by the MINI test, the mean GDS score was 8.63 and therefore, higher than the average score which was 6.44 in the entire sample (Adams and Moon, 2009). From both studies it can be concluded that subthreshold depression is not uncommon among older people, especially when the symptoms of withdrawal, apathy and a lack of vigour (WAV) are included in the diagnostic.

3.2.3 Impact and Experiences of Depression

Chachamovich *et al*. (2008) were less interested in prevalence of subthreshold depression, focusing instead on the impact of depression on quality of life among older adults. An association between major depression and quality of life (QoL) was well known before their study, however, little was known about the impact of subthreshold depression on QoL. Therefore, the aim of the authors was to investigate this further. The authors were particularly interested in QoL, measured with the *WHOQOL-BREF* instrument, and in the impact of subthreshold depression on attitudes towards ageing, which was measured with the *Attitudes to Ageing Questionnaire* (*AAQ*). Depression was assessed with the GDS-15 (ibid). The sample comprised 4,316 adults aged 60+ from different research centres around the world. The data were analysed for participants with depressive symptoms on the GDS-15 and for participants with subthreshold depression. As cut-off point, above 6 for depressive symptoms and between 3 – 5 for subthreshold depression was used (ibid, 2008).

As expected, the values for the AAQ and for the WHOQOL-BREF were significantly lower in the group with depressive score above 6 ($p = <0.001$), compared to the group with subthreshold depression (Chachamovich *et al.*, 2008). That means that participants with depressive symptoms are significantly less satisfied with their quality of live and that they have more negative attitudes towards their own ageing process. All participants with scores under 5 were then included in further analysis to answer the question about the association between QoL, attitudes towards ageing and subthreshold depression. The authors were able to show that with increasing scores on the GDS-15, the scores in quality of life were decreasing. The authors concluded that even subthreshold depression affects quality of life and attitudes toward ageing (Chachamovich *et al.*, 2008).

The final study to be discussed presents qualitative evidence about the experiences of different manifestations of depressive symptoms among very old adults. Ludvigsson *et al.* (2015) used semi-structured interviews to understand the difference in experiences between participants with non-depressive symptoms, participants with subthreshold depression and participants with symptoms of depression in very late life.

The issue of whether depression should be seen as a continuum between non-depression on one hand, and major depression on the other hand, with subthreshold depression somewhere between, or whether minor and major depression are two completely distinctive

diseases with different symptomatic profiles, is not answered by the authors. However, the authors aimed to examine what they call “depression and healthy aging in very old people” with a qualitative approach among 27 participants aged 87 and 88 (Ludvigsson *et al.*, 2015, p. 761).

The interviews followed a semi-structured approach with four topics used in the interview guide to guide the interviews. The topics comprised “life in general”, “psychological well-being”, “coping” and “ageing” (ibid, p. 762), containing different sub-questions. After the interviews, the participants completed a GDS-15 questionnaire which was used to allocate participants into one of the three above-mentioned subgroups. Participants with a score of between 2 – 5 were classified as having a subthreshold depression and above a score of 5 as depressed.

Content analysis was used to examine the interviews, and the themes of the interviews can be seen in Table 4.

Table 4: Subthemes and Themes from the Analysis

Subthemes	**Themes**
Loss of significant others Declining bodily functions End of life, old age	Decline in life curve and physical health
Self-determination Managing on their own, independence	Managing on their own
Maintaining everyday life Meaningfulness from joys and values of life Meaningfulness from participation Loneliness, sense of exclusion, abandonment Alien, frightening world	Keeping up with everything
Avoid dwelling, living in the present Rolling up the sleeves Shifting perspectives	Taking one day at a time

Source: Ludvigsson et al., 2015, p. 763

The theme *decline in life curve and physical health* was described by the participants with subthreshold depression as either a normal process of ageing or as a result of a disease. Further health deterioration was seen as stressful and feared, but not the thought of death. While those findings are interesting, it would have been helpful to see a direct comparison between all three subthemes. The theme *taking one day at the time* was described by the participants' (with subthreshold depression) as going one step after another and not to look too far into the future and focusing more on the present despite moments of sadness. However, they do not compare these notions directly with the ideas from participants with more and no depressive symptoms. Nevertheless, for the participants with subthreshold depression, it was important to be independent as far as possible, even when they had to face diseases which may restrict their independence. This was captured in the theme *managing on their own*. The last theme was *keeping up with everything*. Here, the participants mentioned that it is important for them to be active and a part of a social life despite physical restrictions, even if everything is slower for them than in their younger years (Ludvigsson *et al.*, 2015).

Instead of offering direct comparison between the quotes from participants with subthreshold depression and with depressive symptoms, the authors provide a narrative description of the differences. While both subgroups (participants with subthreshold depression and with depressive symptoms) in themes are similar regarding the experiences and notions to handle the physical decline in late life, they distinguish themselves in context of themes like *managing on their own.* Participants with subthreshold depression focussed more on this theme, compared to the subgroup with more depressive symptoms. Similarly, the focus on positive aspects of life was more emphasised in the group with participants with subthreshold depression (Ludvigsson *et al.*, 2015).

The authors mentioned that the differences between the group without depressive symptoms and the group with depressive symptoms was much more nuanced. Consistent pain and hearing issues were more often mentioned in the group of participants with subthreshold depression.

The authors argue that the themes described by the groups without and with subthreshold depression are quite similar and indeed, that both groups might be from the same entity, which would mean that both groups are not distinctive, and subthreshold depression therefore it is not pathological (Ludvigsson *et al.*, 2015).

Furthermore, the authors discussed the different themes within the context of other theories from the ageing literature. For example, the theme *declining life curve* is discussed as experiencing a greater number of losses in late life, which has been extensively discussed by Baltes (1997) and Heckhausen, Roger and Baltes (1989). Further references to the SOC model from Baltes and Baltes (1990) are seen by the authors in the theme about *keeping up with everything.* T*aking one day at a time* can be understood as an adaption process in later life (Ludvigsson *et al.*, 2015).

Despite the aforementioned flaws in the methods, the study provides interesting and valuable insights into the thoughts of older adults in very late life. Previous studies about subthreshold depression in later life focused mostly on quantitative methods to identify relations between depressive symptoms and other potential variables which might cause these symptoms. Most interesting and in line with the research idea for this thesis is the theme *taking one day at the time*. The participants with subthreshold depression were more concerned with the present-time and less with their future, which could lead to the assumption that they might perceive a limited future time perspective and that the limited future time perspective contributes to the depressive symptoms.

More recent evidence about depression and future time perspective comes from Allemand, Olaru and Hill (2025). They define future time perspective as "a cognitive phenomenon with emotional consequences" (p. 59). The authors argue that if one's future time perspective is limited, this can be a risk factor for lower well-being and depression. Similar to the discussion in Chapter 2 (Section 2.3.2), they conceptualise future time perspective as a multidimensional construct with three dimensions based on the Future Orientation Scale (Carstensen and Lang, 1996). They conducted a study to examine the relationship between depression and the three-factor model of future time perspective as measured by the Future Orientation Scale.

To test their research question, they recruited 793 participants aged 19–85 (M = 50.31, SD = 16.43) and measured depression using the Depression, Anxiety, and Stress Scale (DASS-21). Using local structural equation modelling (LSEM), they found that participants who perceived their future as limited in terms of future constraints, future extension, and future opportunities scored higher on the DASS-21. Interestingly, the authors reported that future opportunities and future extension were highly correlated, suggesting that they may measure

the same construct and might lead to questioning the validity of the proposed idea of a three-factor model of future time perspective. However, future extension did not correlate with the other two constructs. All three constructs showed a high correlation with the DASS-21, providing evidence that a limited future time perspective is associated with increased depressive symptoms and anxiety.

Furthermore, they found that a limited future time perspective affected younger adults more than older adults. They hypothesise that a limited future time perspective might be perceived as "more normal" in later life than in younger years (Allemand, Olaru and Hill, 2025, p. 68).

3.3 Summary

In summary, depression can be classified regarding the duration, timing of the occurrence and the cause of it and that the most common classifications are based on the ICD-10 and the DSM-5. The core symptoms in the ICD-10 are depressed mood, loss of interest or pleasure and decreased energy or increased fatigability and in DSM-5, sadness, feeling of emptiness and irritable mood.

The focus in the different classification systems is the timing of the occurrence of the depressive symptoms and therefore, it is important to distinguish between late-onset and early-onset of depression. In the literature, the cut-off point between late-onset and early-onset is the arbitrary point beyond the age of 60 or 65.

One common problem with depression in later life is that it is more difficult to distinguish between organic causes of depressive symptoms and symptoms based on the depression by itself. Some authors argue that depression in late life can be distinguished by a motivational factor of depression and an affective factor of depression. The motivational factor is marked by loss of interest, poor concentration and lack of enjoyment and has been observed to increase in later life, while the prevalence of the affective factors remains stable over the life course (Prince *et al.*, 1998; Prince *et al.*, 1999a).

In general, subthreshold depression increases above the age of 80 (Oh *et al.*, 2020) and a high prevalence of depressive symptoms can be observed among people aged 75 and older (Arias-de la Torre *et al.*, 2021).

To explain the increase in depression in later life, numerous studies have been conducted to identify risk factors and causes of depression. Evidence indicates that social support might be

protective against depression in later life (Prince *et al.*, 1998; Aziz and Steffens, 2013), and heredity and history of depression plays a more important role in early-onset depression (Kraaij, Arensman and Spinhoven, 2002; Kraaij, Pruymboom and Garnefski, 2002). Also, medical conditions are a strong predictor for depression in late life (Karel, 1997; Baldwin, 2008; Aziz and Steffens, 2013), as are some personality factors like neuroticism (Van den Berg *et al.*, 2001; Aziz and Steffens, 2013). Other authors view depression as a cohort effect, suggesting that past negative experiences can influence future generations (Yang and D'Arcy, 2023).

In recent years, more research was conducted regarding a subtype of depression, namely subthreshold depression, which is described as having depressive symptoms which do not fulfil the complete criteria for major depression. subthreshold depression is marked by symptoms of withdrawal, apathy and a lack of vigour (Adams and Moon, 2009), and it has been shown to have a negative impact on a person's quality of life (Chachamovich *et al.*, 2008).

Research shows that low socio-economic status, less social support, being female and a reduced sleep quality can be a risk factors for subthreshold depression (Oh *et al.*, 2020) and subthreshold depression accompanies a higher mortality among people over 80 (Ludvigsson *et al.*, 2015).

The next chapter will describe the research questions and the studies that will be conducted in order to understand the relationship between future time perspective, goals and depression in later life.

4 Methodology

This chapter describes the underlying theoretical framework for the thesis and the methods used to answer the research questions. As a reminder, the following research questions were proposed in Chapter 1 and are reiterated here:

1. Is a limited future time perspective associated with a lower goal pursuit in later life?
2. What is the relationship between the number of depressive symptoms and age?
3. If older adults with limited future time perspective pursue fewer goals in later life, will they have more depressive symptoms compared to their counterparts (who might experience an extended future time perspective and more goals)?
4. How does perceived future time perspective impact older adults' views about their own goals?

In order to answer these research questions, a mixed methods approach has been adopted and involved two studies. Study One used an online and paper questionnaire (see Appendix 2) for collecting quantitative data. The questionnaire included questions regarding individuals' future time perspective, goals, depressive symptoms and various demographic variables and will answer research question 1-3. Study Two adopted a qualitative approach (see Appendix 4) to understand the concepts of goals and future time perspective in more depth and has subsequently been used to answer research question 4.

The following sections provide an overview of the methodological framework that guided the research, the recruitment strategies, a brief description of the chosen variables for Study One and the statistical approach chosen to analyse the data, and the data analysis for Study Two. The chapter ends with an analysis of the researcher's own reflexivity about the research process and provides a chapter summary.

4.1 Methodological Framework

For many centuries, there has been a debate of how science can acquire knowledge (Johnson and Gray, 2010). In a nutshell, there are two opposite positions. On the one hand, there is the position that knowledge stems from empiricism, meaning that knowledge can only be acquired through a researcher's perception, which should be measured and acquired in a rigorous and controlled manner and clearly distinguished from other belief systems (Crotty,

1998; Benton and Craib, 2011). This perspective is often called materialism, or in a new development as physicalism (Johnson and Gray, 2010). It assumes that there is a real world 'out there' and the researcher has to find ways to measure this objective world. Benton and Craib (2011) neatly summarise that in an empiricism worldview, humans are born with no prior knowledge (known as tabula rasa), and all knowledge is acquired through human senses. Furthermore, knowledge must either be observed or tested, and constructs that cannot be measured or experienced are unsuitable for scientific inquiry, as no knowledge can be claimed about these constructs. The main goal of empiricism is to find natural laws. If these laws are correctly identified, then it should be possible to explain and predict future, similar events, again. Auguste Comte (1798-1857) was the first person who employed empiricist assumptions, which were used at his time to explain the natural world, to study the social reality. He coined the term positivism to describe the rigorous methods that often entail statistical data and quantitative methods applied to a social world (Delanty, 2005; Benton and Craib, 2011).

On the other hand, is the notion of rationalism, which means knowledge can only be acquired through ideas and reasoning (Johnson and Gray, 2010). This idea stems from the notion that the world can only be experienced through the mind as human senses can be deceptive and fallible. On this tradition, logical reasoning and deductive thinking are in this tradition the only way to learn about the reality (Benton and Craib, 2011). Over time, this worldview led to the notion of idealism (Johnson and Gray, 2010). Not only is the real world not perceivable through human senses but the world exists only in human minds (Benton and Craib, 2011).

Idealism and empiricism were heavily debated over the last centuries and critique of both of them led to the development of new research paradigms, especially in social sciences (e.g., interpretivism, phenomenology, hermeneutics and critical theory) (Delanty, 2005). Especially the notion of interpretivism seems to be important for the understanding of future time perspective, goals and subthreshold depression in later life. Interpretivism derives from Max Weber's idea of *verstehen* (understanding) of the social world where he combined not only understanding society but also tried to explain underlying mechanisms in society through interpretations (Delanty, 2005). Interpretivism rejects the positivist notions that the social reality can be understood in the same way as the natural world namely through a superordinated structure that determines social realities. In natural science that would be natural laws but in social science, humans interact with other humans and interpret their

world. Therefore interactions and actions can only be understood through interpretation (Benton and Craib, 2011).

This thesis used quantitative and qualitative methods to understand the research questions and drew on research paradigms that historically belong to different schools of thoughts and are often seen as incompatible (Benton and Craib, 2011). Therefore, the next section will provide the philosophical framework of how the different kinds of data can be used together in the context of social reality.

4.1.1 Ontological Pluralism

Following the arguments above about how social reality can be understood, either through interpretivism or through a more (post)positivist lens, this section provides an outline of why a dogmatic position of choosing one epistemological approach over the other presents a challenge to answer the research questions. I suggest that a pluralistic ontology with a philosophical pragmatic framework is the better approach to investigate the present research topic, which points towards the use of a mixed methods research approach. Johnson and Gray (2010) state that one principle of mixed methods is that it is "antidogmatic" (ibid, p.77) and that social sciences should use a "multiple paradigmatic condition" to study their topics (ibid, p.86).

I agree with Johnson and Gray (2010) about the notion that multiple realities might exist: humans act and live in social environments which are embedded in a social context that is meaningful for us and we act upon those meanings and interpretations. At the same time, there is also an aspect of reality that is objectively measurable. The idea of humans acting upon meaning can be found by Mead (1934) and Blumer (1969). Blumer formulates his ideas based on Mead's influential thinking and was less concerned with whether there is a real world or not, but rather how humans make sense of their actions. Within symbolic interactionism, which developed out of the pragmatism school of thinking, it is assumed "that human beings act toward things on the basis of the meanings that the things have for them […] that the meaning of such things is derived from, or arises out of, the social interaction that one has with one's fellows [and] […] that these meanings are handled in, and modified through, an interpretative process used by the person in dealing with the things he encounters" (Blumer, 1969, p. 2). Even if Blumer (1969) does not refer to the outside world,

for him, it was essential that humans not only ascribe meaning to their experiences. Equally important for him is also to understand how humans act in society and interact with other humans to derive meanings from these interactions. Therefore, if one tries to understand meaning, it is pivotal to consider humans' positions in a society and their interactions with others. However, it would be naïve to believe that there might be no real world 'out there' which is independent of human interpretation. To use more philosophical language, there is a mind-independent world, or one could also say a realist point of view (Crotty, 1998; Biesta, 2010). Precisely, I believe that if one wants to understand goals and future time perspective, this can only be studied by interacting with participants. The participants are the ones that experience the constructs of interest. Goals might be different in different cultures, different life stages or even historically different in different times. Therefore, trying to understand goals would be impossible by purely measuring them objectively, for example the number and types of goals that older people desire or wish to fulfil. However, the use of quantitative data can provide a direction to what extent a certain outcome can be observed among a wide range of individuals and can increase the knowledge around the topic (Ulmer and Wilson, 2003). Quantitative data can also help to see similarities and patterns among participants' behaviours, thoughts and wishes. However, it is important to note that the meaning of goals and future time perspective is subject to interpretation. For this purpose, it should also be studied with an interpretative lens.

As well as future time perspective and goals, the third construct in this thesis is subthreshold depression. Depression is classified by the DSM-5 and by other classification systems such as ICD-11 (APA, 2013; WHO, 2021b). Both diagnostic systems use symptom clusters to describe depressive symptoms. To understand depression and subthreshold depression in particular, it is helpful to use not only a realist but also an interpretivist perspective. From a realist perspective identifying individuals in a population that are at risk or affected by depressive symptoms is important not only to apply treatment but also to evaluate and compare the efficiency of the treatment, and to provide policy recommendations on a population level. At the same time an interpretivist perspective is equally important to study depressive symptoms. Research has shown that adding up symptoms to a total score to diagnose depressive symptoms, as is common practise with depression scales, is not taking into

account that depression can have multifaceted manifestations and that not all symptoms are equally contributing to the experiences of depression (Fried and Nesse, 2015).

The consequences of depressive symptoms can be severe, so it is important to gather data about its occurrence within a population, which follows a rather realist ontology and postpositivist epistemology, but it is also important to consider interpretivist assumptions. Having such different ontological positions is often labelled as "*ontological pluralism*" or "*multiple realism*" (Johnson and Gray, 2010; italics in original). Deciding to take only a postpositivist or interpretivist stance is unhelpful for understanding the chosen research topic in its holistic perspective. Johnson (2009) posited that the gap between researchers who conduct qualitative or quantitative research will widen if researchers are forced to choose one side. He pleaded for an approach to see research more on a continuum rather than a dualistic 'either quantitative or qualitative' decision. In a later publication, Johnson and Gray (2010) reiterate their idea of abandoning the dichotomous stance and tend to think more synechistically. Johnson and Gray (2010, p. 70) cite Charles S. Peirce (1893) who coined the term 'synechism'. For Peirce, synechism means "the tendency to regard everything as continuous" (1893 cit. in Johnson and Gray, 2010, p. 70), as an alternative to the ongoing debate between materialism and idealism. Precisely, they are suggesting the term "dialectic pragmatism" as one theoretical framework for mixed methods research (Johnson and Gray, 2010 , p. 88).

4.1.2 Dialectic Pragmatism as a Theoretical Framework

Dialectic pragmatism involves taking perspectives from qualitative and quantitative research and considering each of these perspectives at every stage of the research process. The researcher then decides which kind of data are most appropriate to investigate the research topic (Johnson and Gray, 2010). Biesta (2010) goes one step further and suggests that "philosophical pragmatism [can] provide *the* philosophical framework for mixed methods research" (p. 97; italics in original). Biesta argues that even the framing of 'qualitative' or 'quantitative' research is already problematic, as only the data which have been collected can be quantitative (in the form of numbers) or qualitative (in the form of text). Further, the terms 'qualitative research' and 'quantitative research' generally presuppose a whole set of

theoretical and epistemological ideologies (ibid, 2010). By emphasising whether research is 'quantitative' versus 'qualitative' just deepens the division between both approaches.

> "The notions qualitative research and quantitative research tend to obscure those aspects that really matter in the discussion and can even create quasi-problems and oppositions, for example, when researchers who use numbers and researchers who use text assume that they have nothing to share, even if their research is actually informed by similar assumptions about the nature of social reality or driven by similar ambitions about knowledge creation" (Biesta, 2010, p. 98).

Biesta (2010) considered it important to think about whether social research wants to "explain" or to "understand" (p. 104). This distinction fits into a "mechanistic" versus a "social ontology" (ibid, p. 102). The mechanistic ontology assumes a deterministic world, where causes and reactions are observed by the researcher, but the meaning of the observed actions and events is unclear. The social ontology sees a world where actions have a meaning, and it can be understood by interpreting these meanings and events (Biesta, 2010). However, Biesta (2010) argues that even if a researcher finds correlations between causes and effects, it does not mean that they have to embark on a mechanistic ontology. Biesta (2010) continues that correlations can be based on interpretative acts and are not necessarily mechanistic. A person could have learnt to act in a certain way through the interpretation of an event rather than predetermined in a biological or mechanistical sense. For example, even though depressive symptoms seem to slightly increase in the latest life stage (Arias-de la Torre *et al.*, 2021), it does not mean that depressive symptoms are a consequence of the ageing process and therefore the cause for depression (mechanistic ontology). Instead, it could mean that age is interpreted as something negative, e.g., entailing expectations of what someone should do or ought to be able to do, and therefore depressive symptoms might be more likely among older people if their expectations cannot be met (social ontology).
Therefore, based on the previous argumentation, the thesis will use a social ontology as it is, per se, a perspective about social reality and suggests a focus away from a dogmatic paradigm that only allows certain methodologies (quantitative data or qualitative data collection).

Turning to epistemology, the fundamental question to be addressed is how the mind can access the real world. While the objectivist believes that there is a real world and that science

just has to find a way to measure this world, the subjectivist rejects such a reality. Or if they do accept that a real world exists, then they claim that it is not possible or only partially possible for research to access this reality. This is known as the dualisms debate or "mind-world scheme" (Biesta, 2010, p. 106).

One epistemological position is pragmatism (Greene and Hall, 2010; Morgan, 2014a). Pragmatism aims to overcome the issue of choosing one ontological and epistemological position (Biesta, 2010). John Dewey (1859–1952) provided a theoretical framework that is different to the suggested debate about dualism and does not aim to solve the mind-world scheme, but rather provides a "theory of knowledge" which sets the epistemological question aside (Biesta, 2010, p. 106). When discussing Dewey's theory of knowledge, certain key words are important and need to be examined first. One of these key words or concepts is that of *experiences*. Experience is described as being an interaction with the environment, which Dewey also called "transactions" (Biesta, 2010, p. 106). To be precise, Dewey's idea can be described in a mechanistic way as that those interactions within a natural environment are "transactions", while transactions that involve humans with nature and the environment are "experiences" (Biesta, 2010, p. 106).
However, it does not mean that there is a dualism between the natural world and social world, as understood in the realm of realism, nor an idealist position as humans are living in the world and interact with it. Therefore, it is irrelevant whether the researcher has a subjectivist or objectivist ontology, as this is considered meaningless by pragmatists because transactions are always actions embedded in the world.

As already mentioned, pragmatism is opposed to dualism (subjectivism versus objectivism) and purports that knowledge is created by humans in "transactions" with the environment (Greene and Hall, 2010, p. 131). That means humans make sense of their world by interacting with it, and the knowledge that humans obtain in the course of their life is not fundamentally different or superior to knowledge acquired through science (Biesta, 2010; Kaushik and Walsh, 2019). More important in Dewey's pragmatism is the idea that "knowing" facilitates experiences in a way that it helps to anticipate "consequences" from actions (Biesta, 2010, p. 106-107). Morgan (2014b) provides an example:

> "From the first moments of infancy, our experiences are shaped by others. As we mature, even our private thoughts are based on concepts that have been socially shaped. Consequently, all beliefs and all actions are social, so all of our experiences are inescapably social" (p. 1047).

Furthermore, it is assumed that a certain "degree of shared experiences between two people" exist (Kaushik and Walsh, 2019, p. 3). This idea of shared experiences would allow the approach to combine not only qualitative data in understanding the participants' experiences with the research topic of goals, future time perspective and subthreshold depression, but also allow a methodological approach to use survey data to understand the participants' experiences on a larger scale as it can be assumed that - partially and without referring to causation - human experiences are shared to a certain extent. Similar arguments are brought forward by Ulmer and Wilson (2003). They argue that quantitative data can be used in an ontological pragmatism if the researcher remembers "that social causality lies not in variables or statistical models but in interpretive processes as people individually and jointly define situations and act within them" (ibid, p. 533).

Biesta (2010) describes that all experiences are "equally real" (p. 1070). However, experience by itself does not provide any knowledge per se. Knowledge comes, according to Dewey, from the "*occurrence* of experience" (Biesta, 2010, p. 108; italics in original). Similarly, Morgan (2014b) recaptures Dewey's idea of pragmatism as that experiences are concerned with two questions: 1) "What are the sources of our beliefs?" 2) "What are the meanings of our actions?" (ibid. p. 1046). Both questions follow a hermeneutic circle, where one question leads to the other, and then back to the first question (Morgan, 2014b). Human experiences are therefore an iterative process, where individuals make sense of their past to predict the future and adapting to outcomes that occur after one's actions. However, these predictions about the future are dependent on chosen actions and can only be possibilities. Human actions are, in that sense, reasonable actions, but they are also connected to desires and wishes that they have (Morgan, 2014b).

As discussed above, knowledge is described as the "*occurrence* of experiences" (p. 108; italics in original), but in Dewey's pragmatism, that is the crucial change in thinking from "understanding knowledge as being concerned with conditions and consequences" (Biesta,

2010, p. 108). Ultimately, research cannot achieve absolute knowledge but only 'warranted assertions' (Biesta, 2010; Morgan, 2014b).

Therefore, pragmatism can help to understand and identify a question and to take reasonable actions on it without prescribing to one or another precise epistemology. In that sense, the present thesis approached the research questions from a pragmatic standpoint. In doing so, the social world is understood not only from a realist perspective but also took an interpretivist perspective to shed light on the proposed research question in a complementary approach. By using quantitative and qualitative data combined in a mixed methods project the thesis gained warranted assertions about the relation between goals, future time perspective and subthreshold depression.

4.2 Overview of the Study Design

This section will provide an overview of the study design. A mixed methods approach using a quantitative and qualitative strand was adopted. Study One comprises an online and paper-based survey, and Study Two comprises semi-structured interviews (see details in sections 4.6 and 4.7). The survey was deployed in November 2022, and data were collected until September 2023. The interviews were conducted between February and May 2023. The studies were deployed sequentially, however, neither of the findings informed the other study and is therefore a simultaneous data collection.

Different ways of conducting mixed methods are described in the literature (Bryman, 2016). This thesis uses a "partially mixed concurrent equal status design" where the qualitative and quantitative data have equal weight in the research process and the data collection took place concurrently (Nastasi, Hitchcook and Brown, 2010, p. 316). The reason for adopting this design is that each study has an equal importance and has not been used to prepare the ground for the other data collection method. Both studies inform independently about the inquired questions of the thesis. The purpose of mixing the methods together is for complementarity reasons (Greene, Caracelli and Graham, 1989). Complementarity is described as a "mixed-method study, qualitative and quantitative methods are used to measure overlapping but also different facets of a phenomenon, yielding an enriched, elaborated understanding of that phenomenon" and it is aligned with a pragmatic approach (Greene, Caracelli and Graham, 1989, p. 258).

Morse (2010) warns not to confuse mixed methods with multiple methods, where different studies or methods are just used to answer the same or sub-questions within one project. Therefore, the methods need to be combined at some point to make the research truly mixed and not only apply multiple methods. Therefore, each strand of the research process in this thesis is separately described to ensure the complete process of the qualitative and quantitative study design is transparent. Particularly important is to articulate the quality criteria regarding validity and reliability for the quantitative study and trustworthiness (credibility, transferability, dependability, and confirmability) for the qualitative part (Bryman, 2016). The results will be presented in two different Results chapters, as they answer different research questions. However, the Discussion chapter in this thesis merged the findings together to provide an analysis which combined both studies.

The precise structure of each study is described in Sections 4.5 and 4.6 respectively. In the next section, ethical considerations and the recruitment strategies for the study strands will be outlined.

4.3 Ethical Considerations

Research ought to follow moral values and should be voluntary and cause no harm to the participants (Iphofen and Tolich, 2018; Babbie, 2020). Iphofen and Tolich (2018) refer to "fairness, justice, equality, truthfulness, and honesty" as important values research should adhere to (p. 3). Therefore, it is important to consider ethical considerations in research, regardless of quantitative or qualitative data collection. Valid consent, informed consent, non-coercion, confidentiality and anonymity, and data protection are highly significant pillars of research (Steffen, 2021).

Therefore, the ethics application was submitted through the University of Southampton's Faculty Ethics and Research Governance Online (ERGO II) system and was approved by the Faculty Ethics Committee and the Research Integrity Governance (RIG) on the 27th of September 2022, with the ERGO number 76030 [15/09/2022]. The ethics application included ethical approval for the online and paper questionnaire (Study One) and the approval of the interview guide for the in-depth interviews (Study Two) (see Appendix 5 and 6).

In research, certain precautions must be taken to minimise potential harm and ensure ethical integrity. As the main ethical issue, the question about life expectancy and the provoked thinking about the participants' own future time perspective was considered. However, participants were reassured in the Consent Form that they could withdraw from the online questionnaire whenever they wanted (while they were filling out the questionnaire - withdrawal afterward was not possible anymore as the questionnaire was completely anonymous). For the qualitative interviews, the participants were reassured that they could withdraw at any moment, up to four weeks after the interviews had taken place.

The participants had the right to withdraw consent within 14 days after the interview if they felt the interview was stressful and/ or did not want their data to be processed. This right to withdraw was outlined in the Participant Information Sheet and Consent Form and was also repeated verbally at the start of each interview. They also had the opportunity to withdraw their data after the interview had been completed; however, none of the participants withdrew their consent.

The online and paper questionnaire included Special Category data, such as questions about religion, ethnicity, and health status (depressive symptoms). Collecting Special Category data has ethical implications. For example, questions about religion, ethnicity, and health status (depressive symptoms) of the participants (see Appendix 2). The purpose was to understand people's perception of their own future-time perspective. Asking about their religion might provide an understanding of whether their belief is connected to an extended or limited future-time perspective and asking about depressive symptoms should help to understand the mechanism between future-time perspective, goals, and subthreshold depression. The participants were made aware at the start of the questionnaire that these details would be collected but were also informed that they could leave the survey if they no longer wished to participate.

In the qualitative interviews, questions regarding religion, to understand the previously mentioned link between future time perspective and religiosity, might be brought up as well.

Furthermore, personal details (such as names and locations) were discussed during interviews. To ensure that participants' identities and the identities of anyone else mentioned

were protected, these details were removed or disguised during the transcription of the audio recordings of the interviews. For example, participants' names were replaced with pseudonyms. Any prominent details that could have made an individual or situation recognisable were likewise anonymised or removed during transcription.

For the qualitative study, the participants received the Consent Form and the Participant Information Sheet prior to the interview via email. It was offered that the participants could use SafeSend to return the Consent Form, particularly for the online interviews. SafeSend appeared too difficult for some participants, so alternative return options were offered (e.g., email from a private email account). The in-person interviews were completed using a hard copy.

It was anticipated that the online survey could potentially cause distress for participants, as it included questions about future time perspective and depression, which might provoke thoughts about death and trigger emotional discomfort. To mitigate this, information about support organisations (e.g., contact details for Mind UK and Age UK) was provided at the end of the survey.

The same was true for the interviews. The topic of future-time perspective could have been potentially stressful for participants. However, after completing the online survey, the participants already had an understanding of the topic, which was eventually discussed in the interview. If participants expressed distress during the interview, I asked if they would like to pause, stop, and continue at a later time, or withdraw their participation.

All interviews took place in a safe environment (either online or in a preferred place chosen by the participants). After the interviews were completed, no participant seemed visibly distressed, and some mentioned that the interviews were helpful for reflecting on their own life course.

There was a potential risk that the topic would be distressing for the researcher. Close contact with supervisors was maintained, and access to necessary Student Services was known to me. Furthermore, in the qualitative interviews, I took notes in my research diary for reflexivity purposes and reflected on my own thoughts and emotions regarding the research project.

All data for this research and related thesis documents were stored securely on a University of Southampton OneDrive storage space. Audio recordings were destroyed after transcription.

4.4 Recruitment Strategies

This study was exploratory, and as such, a formal power calculation was not conducted. Instead, the sample size was determined based on feasibility and practicality, considering the nature of a mixed-methods study. A target sample size of 200 participants was considered both appropriate and achievable for this primary research. According to Field (2018), the Central Limit Theorem states that as the sample size exceeds 30, the sampling distribution of the mean will approximate a normal distribution. Therefore, a target of 200 participants was regarded as both sufficient and realistic.

However, unforeseen challenges arose during the recruitment process, with recruitment progressing more slowly than anticipated and overall participation being lower than expected. Despite various efforts, such as repeatedly reposting the survey advertisement on LinkedIn, Facebook, and Twitter, distributing paper versions of the survey in local community clubs (such as Communicare), and placing flyers on local noticeboards in libraries, participant recruitment started to stall after the second month. A decision was made to contact the local AgeUK, but this attempt was also unsuccessful due to a lack of response.

Initially, it was anticipated that recruiting 200 participants aged 65 and above would be feasible within the given timeframe. However, only 76 participants were ultimately included in the final analysis. Moreover, most participants were from a White British background, which raised concern about whether the recruitment strategies may have inadvertently favoured a certain population. A more detailed discussion on these recruitment challenges and strategies for improving diversity in future research will be provided in Chapter 8 (Section 8.2.1). This will include considerations for enhancing the inclusion of participants from Black, Asian, and Minority Ethnic (BAME) backgrounds and lower socioeconomic groups to ensure a more comprehensive and representative insight into the research topic.

Participants were tried to be recruited through various channels, including social media, community groups in Southampton, and personal contacts. Flyers and posters contained

information about the study and a QR code linking to further details were distributed (see Appendix 3). Social media platforms such as Facebook, Twitter, and LinkedIn were used to raise study awareness among potential participants.

The survey was conducted using both paper and online versions of the questionnaire. At the time of recruitment, no COVID-19 regulations were in force. However, providing both formats allowed participants to engage in the study in ways that best suited them and accommodated any concerns about potential infection. Similarly, interviews were offered either face-to-face or via MS Teams to support participants' preferences.

In total, 84 participants were successfully recruited into Study One and 18 participants into Study Two. However, due to missing data, only 76 participants were included in the final analysis.

At the end of the Study One questionnaire, participants were asked whether they would be interested in participating in a follow-up study. In total, 30 participants either returned an envelope or filled out the online section where they could leave their email address, indicating their willingness to be contacted for a further study.

In December 2022, all 30 participants were invited via email to participate in the qualitative study (Study Two). However, interviews were only held with 18 participants. This was due to some participants not responding to the email invitation and others changing their minds or becoming unavailable for an interview.

It is important to note that no explicit consent was obtained to link the data from Study One to Study Two for ethical reasons. For instance, if participants in Study One had indicated depressive feelings (measured with the GDS-15) and the topic of depression arose during the interviews in Study Two, there would be a potential risk of identifying individuals based on their responses. To prevent this and to ensure complete anonymity, the data from Study One and Study Two were not linked. Consequently, direct comparisons between the two studies will not be possible.

The following section explains how the two studies were developed, the sampling techniques employed, and the methods used to analyse the datasets.

4.5 Study One – Relationship between Future Time Perspective, Goals, and Depression in Later Life

Study One was a quantitative explorative study, using a questionnaire to explore the difference between depression and goal pursuits among the 76 participants aged 65 and over. It explored the relationship between the key variables: depression, future time perspective, and goals in later life.

The sampling strategy adopted was a convenience sample, as a precise sampling frame could not be determined (Collins, 2010; Bryman, 2016). This meant that inference to the whole population of adults aged over 65 was not possible (Bryman, 2016). The questionnaire design and the variable transformation are described in the next section.

4.5.1 Questionnaire Design

The online questionnaire was created with Qualtrics, a survey tool supported by the University of Southampton and supplemented by a paper version for people without internet access.

The questionnaire (see Appendix 2 for the full questionnaire) contains four sections. Section One included various sociodemographic variables, including age (measured as the year participants were born), gender, highest qualifications, income brackets, employment status, marital status, type of residence, religion, and ethnicity.

Section Two covered future time perspective and goals. This section was based on the Motivational-Induction-Method (MIM), first described by Nuttin (1985). The MIM uses different (positive and negative) inducers, which prompt participants to finish a sentence. An example of a positive inducer is "I am striving (to, or for) …", and an example of a negative inducer is "It would displease me very much if …". The participants were asked to finish the sentences themselves. Nuttin (1985) developed a list of 40 positive inducers and 20 negative inducers. A shorter version with 20 positive and 10 negative inducers is also available (Nuttin, 1985). The aim of the MIM is two-fold. First, the researcher can understand the types of goals and ambitions that participants have. Second, the sentences provide information about participants' time perspective. Some goals can be reached within a certain timeframe. Bouffard, Bastin and Lapierre (1996) classified these as goals which are achievable within one year and called them the short-term future, while other goals which need more than a year

to be achieved, are referred to as the long-term future. Therefore, the MIM provides insight into participants' future time perspective and their goals without offering a predefined set of goals, as was done in previous research (e.g., Emmons, 1986; Rapkin and Fischer, 1992).

In earlier studies, participants' goals were often assessed using either predefined goal lists from which they had to choose (Rapkin and Fischer, 1992) or by asking them to generate a list of their own goals, referred to as personal strivings, as done by Emmons (1986) or Saajanaho *et al.* (2014). However, providing a sample of goals could lead participants to select goals arbitrarily, as they might assume that choosing a goal is expected of them. Similarly, directly asking participants whether they have goals can be problematic, as they may assume they no longer have goals or define them differently from the researcher's perspective.

For example, Emmons (1986) developed the personal striving framework. In his research, he selected 40 undergraduate students and asked them to name 15 important strivings. Participants were then asked to rate each striving in terms of its value, importance, probability of achievement, and other dimensions. Similar to the approach used by Saajanaho *et al.* (2014), this methodology requires participants to believe they have goals in life and to be aware of them. However, this may not be the case for all individuals. In the interviews conducted for Study Two, it became apparent that some participants were not fully aware of their goals, while others referred to their goals using different terminology, such as *projects*.

The advantage of the MIM over other methodologies is that it does not explicitly ask about goals but instead provides inducers that participants complete in their own words. However, there are also limitations to this method. For instance, not every sentence generated necessarily includes a goal or a time perspective. As a result, a substantial number of responses derived from the MIM may neither reflect goals nor a future time perspective. Nevertheless, the MIM was deemed more suitable in this context, as it allows participants to complete the inducers without bias or external influence. The questionnaire used in this study includes the short version of the MIM, consisting of 20 positive inducers and 10 negative inducers.

In addition to inferring future time perspective from the sentence inducers, perceived life-expectancy was measured with a question used in research by Sakakibara and Ishii (2020, p. 23):

"How much time do you think you have left in your life? It doesn't matter if it is an intuitive estimation, please state the number of years" (YEARS) and "Do you feel the years stated above are short or long?" (FEELING).

This question helped to estimate participants' subjective life expectancy, which was seen to be a good predictor for late life depression in previous studies (Brandtstädter and Rothermund, 2003).

The third section of the questionnaire asked participants about their depressive symptoms. Depressive symptoms can be measured with a clinical tool to diagnose depression by a clinician or with a screening instrument. The screening instrument cannot diagnose depression itself but can provide an indicator about the presence and severity of depressive symptoms. Different screening instruments have been used in the past to detect depressive symptoms. Among them the Geriatric Depression Scale (GDS), the Center for Epidemiologic Studies Depression Scale (CES-D) and the EURO-D depression scale.

In contrast to the other questionnaires, the GDS was specifically created for older people (Yesavage *et al.*, 1982). Neither the EURO-D nor the CES-D are tailored specifically for older people, although they are used in measuring depressive symptoms among older adults. Given the original intent of the GDS to focus on depressive symptoms of an older population, and the wide use of the GDS in research, the researcher decided to use the GDS for the study. The GDS was created in 1982 with a 30-item version, but a shorter version also exists (Yesavage *et al.*, 1982).

The GDS contains a dichotomous answer scheme, where participants have to choose between *yes/no* (Yesavage *et al.*, 1982). In recent years, the shorter version of the original GDS has been used more frequently in studies and shows good reliability and validity. Cut-off points were established with more than four points for mild depressive symptoms (defined as 'subthreshold depression' in my research study), and more than 11 points for severe depressive symptoms (Shin *et al.*, 2019). The GDS-15 is one of the depression screening instruments that can be used as interviewer-administered or self-administered (de Waal *et*

al., 2012). de Waal *et al.* (2012) found that older adults scored more highly when the questionnaire was self-administered, compared to when it was interviewer-administered. The authors suggested that older participants might not be able to understand the questions correctly and would rather leave them blank, or that the *yes* and *no* categories do not allow for a more nuanced answer (de Waal *et al.*, 2012). However, it should also be considered that self-administered questionnaires might yield higher scores on a depression screening instrument because of a possible stigma attached to depression. Participants may have been inclined to answer self-administered questionnaires more openly compared to interview-based questionnaires. In the questionnaire, the 15-item version of the GDS was used to capture depressive symptoms, as it shows good validity and reduced the time participants needed to fill out the questionnaire (Yesavage and Sheikh, 1986; Stone, Granier and Segal, 2019).

The last section asked the participants about their Instrumental Activities of Daily Living (IADLs). The IADL scale used was invented by Lawton and Brody (1969) to assess how capable older people are to live independently (for example, by assessing their ability to perform everyday tasks such as using the telephone, shopping, accessing public transportation). The IADLs assess the extent to which participants can or cannot perform these types of activities using a Likert-Scale. Participants received a score of either 0 or 1 score for each of the eight domains, with higher scores indicating greater levels of ability (Coyne and Kluwer, 2019).

4.5.2 Variable Manipulation

In this section the variables used are explained, including how they were transformed and manipulated for the purposes of the research. Before the data could be analysed, the questions from the questionnaire had to be recoded into variables.

The key variables in this study were depressive symptoms, number of goals and future time perspective. Depressive symptoms were measured using the GDS-15 in the questionnaire. Each question in the questionnaire could be answered with *yes* or *no*. Questions that aim to identify depressive symptoms were recorded with 1 and questions that signified no depressive symptoms were recorded as 0. Participants who reached the maximum of 15 points would indicate that they had severe depressive symptoms.

The number of goals were collected with the MIM. Each goal mentioned by the participant was used in the analysis. A total sum score per participant was recorded and ranged from zero goals to a higher number of goals. The full coding procedure is found in section 4.5.3.

Future time perspective was measured using the MIM, and participants were categorised into three groups: 0 = no time perspective mentioned or unable to classify, 1 = limited future time perspective, and 2 = extended future time perspective. Long-term goals were assigned when the participant's goal needed more than one year to be achievable, whereas short-term goals were defined as those achievable within one year. In the original study by Bouffard, Bastin and Lapierre (1996, p. 260), the authors created an "extension index". This index was previously calculated as the sum of short-term goals divided by the participant's long-term goals, then multiplied by 100.

However, many participants in this study mentioned short-term goals, but no long-term goals. Since the extension index requires both types of goals, and division by zero is not possible, it could not be calculated for these participants. Given that too many participants had no long-term goals, the researcher decided to exclude the extension index from the analysis. Instead, participants who mentioned any long-term goals were classified as having an extended future time perspective, while those who did not mention long-term goals were classified as having a limited future time perspective.

The remaining variables were based on the sociodemographic questions, the perceived life-expectancy, and the IADLs. These variables were used to explore the distribution and frequency of the variables in the sample. Age was calculated from the year the participants were born, and this variable were treated as continuous variable, where the youngest person in the sample was 65 years old and the eldest 90 years or older. All remaining sociodemographic variables were categorical variables. For instance, in the questionnaire, marital status had seven possible outcomes. This variable was coded as married (= 0), cohabitating (= 1), single (never married) (= 2), widowed (= 3), divorced (= 4), separated (= 5), prefer not to say (= 8), missing value (= 9).

The perceived life-expectancy s was a numerical variable and was treated as a continuous variable, and feelings about life expectancy was categorised into a categorical variable.

The last measured variable was the IADL, which consisted of eight questions concerning the *ability to use the telephone, shopping, food preparation, housekeeping, laundry, mode of transportation, responsibility for own medication* and *ability to handle finances*.

A numerical score between 0 and 1 was given for each section where the participant was proficient. In total, eight points could be achieved, which suggested a high level of independence in performing IADLs. The variable was categorised as a continuous variable.
The section to follow describes the content analysis of the MIM and how each sentence was coded.

4.5.3 Content Analysis – Coding Technique

The APA defines goals as "the end state toward which a human or nonhuman animal is striving: the purpose of an activity or endeavor. It can be identified by observing that an organism ceases or changes its behavior upon attaining this state" (APA, 2018, para. 1).

In this study, goals were defined similarly to the APA (2018) definition as a potentially achievable end state that the participant strives towards. Additionally, participants' sentences (suggested by the inducers from the MIM) must contain a goal that the participants intend to achieve and be directed towards an object, as elaborated by Nuttin (1985).
Objects can be the participant themselves (for example, striving towards a better health status, wanting to be happy or keeping the mind healthy), but objects can also be related to other people (for example, goals towards family or partner), an exploration (for example, learning a new language or exploring a new holiday destination), transcendental (for example, wishing to be more like Jesus or having a peaceful death), to leisure time (for example, gardening) or towards a possession (for example, renovating the house, or more income to buy household items).

Some goals were more challenging to categorise. Some participants mentioned goals like 'I hope to see a fairer society,' 'I long for peace in the world,' or 'I want a peaceful life.' Arguably, they are goals, as participants might work towards their achievement. Someone who hopes for a fairer society might actively work towards that goal by treating people fairly and communicating their goal (about a fairer society) to others, or someone who 'longs for peace in the world' might participate in demonstrations and, by doing so, actively work towards this

goal. Both examples would be goals which are directed towards wider society as a whole, and therefore classified as goals related to other people. Just because these goals are more abstract and less tangible than goals that are mentioned above, the researcher decided that these goals should be included, as they were voiced by the participants. On other occasions, participants mentioned that they 'will be glad when the warmer weather comes' or they might 'be glad when it is not so cold'. These sentences do not include any motivational object in themselves as participants have no agency to work towards changing the weather and therefore, such sentences could not be classified as goals. Therefore, as a first step, the codes were organised into one of the following eight categories (adapted from Nuttin (1985, p. 141)) and are found in table 5 below.

Table 5: Goal Categories

0	Unclassified
1	Self (goals directed towards oneself)
2	Realisation (all forms of activity or productivity)
3	Contact (all goals related to social contacts or others)
4	Exploration (goals that are related to activities that involve discoveries, information or acquisition of new knowledge)
5	Transcendental (religious or transcendental goals)
6	Possession (goals related to possession)
7	Leisure (goals related to leisure and activities in one's spare time)

Source: adapted from Nuttin (1985)

A sentence was classified into the goal category *self* (1) when the object was related to the participants' personality or were related to someone's own health (ibid, 1985). For example, goals in which participants mentioned that they wanted to have a better personality, or want to be healthy, were coded with *self* in the survey, for example, 'be a good wife, mum and friend', 'to be a better person', 'feel happy', 'enjoy life', 'desire courage', 'that I keep healthy and able to do things which give me pleasure'.

Realisation goals (2) were goals related to productivity and work. These were goals that a participant wanted to achieve, but not necessarily as a hobby or leisure activity, for example, 'relocate back to Scotland', 'to continue working for at least another two years', 'to continue volunteering as long as I am able'.

Sentences were coded in the category *contact* (3) when they had a goal that was directed towards a person or a group, for example, 'to see my grandchildren grow to adulthood', 'a loving physical relationship', 'that my family will keep well and enjoy life' or 'see more of grandchildren'.

Exploration goals (4) were defined as goals related to the acquisition of new knowledge, or to explore something new (for example, 'travel to the places I want to visit' or 'get involved in more fun projects', 'see the northern lights').

If a goal was directed towards *transcendental* or *religious* pursuits, then they were coded in category 5. For example, existential or philosophical sentences, like 'make the most of each day', 'to develop my prayer life', 'to make a difference', 'keep being of use to the society I live in' or 'to make an impact in the world'.

Sentences were coded as *possession* (6) if they comprised goals that were directed towards a possession that someone wants or already has but would like to fix or maintain (for example, 'have more money to spend on things I love', 'to have the house renovations finished', or 'start sorting out boxes of books and dvds').

Leisure goals (7) were goals that participants pursued out of enjoyment and as a part of the way they occupied their free time (for example, 'find more time to practice playing the violin and the piano' or 'find lots of interests and hobbies to fill my retirement next year').

As the next step, the sentences were analysed in relation to their future time perspective. Nuttin (1985) suggests that a method to measure time perspective is to collect participants goals with the MIM and "[t]rained judges give each motivational object its temporal sign on the basis of a previously elaborated coding system […] The principle underlying this procedure is that motivational objects are mentally localized by the subjects in a time period where their realization is most normally or probably to be expected" (p. 24).

The sentences provided by the participants could either contain a hint about their future time perspective, or not. Ultimately, some goals did not contain a temporal hint and therefore, it could not always be determined when a goal could be realised or potentially achieved. Sentences containing a hint about the participants' future time perspective were coded with 1 or 2. However, the MIM does not ask participants about their own temporal timeline, for example, by when they would want to achieve a certain goal, but rather the MIM codes the time a goal would need to be achieved on average (Nuttin, 1985). In this way, a sentence was

coded as 1 when the goal could be achieved within one year, on average (time perspective is limited). A goal that could be achieved further in the future was coded with 2 to indicate an extended future time perspective. Goals that had a future time perspective, but without temporal hint or where a future time perspective could not precisely be determined was coded as 0. Table 6 below provides some examples of the coding structure.

Table 6: Coding Future Time Perspective

Future Time Perspective		**Examples**
0	No time perspective mentioned or unable to classify	• [I hope …] we can stop global warming • [I intensely desire …] good health • [I hope …] to stay healthy and in my right mind • [I hope …] to be useful • [I hope …] that I can move to a new house with my daughter & family
1	Limited future time perspective (<1 year)	• [I hope …] to enjoy Christmas • [I hope …] to achieve something in the near future. To create something • [I intend to …] make a good job of a workshop I'm running next week
2	Extended future time perspective (>1 year)	• [I hope …] to live long enough to see any grandchildren • [I intend to …] do some more trips to other continents to explore the world

Source: Author's own work

Table 6, above, shows different scenarios of how future time perspective has been coded. For example, in 'I hope we can stop global warming', a goal can be seen, and it can be assumed that the participant might work towards that goal, but there is no hint about the participant's own time perspective. In another example, 'I hope to enjoy Christmas', here is a time perspective visible. The interviews were conducted at the end of the year, and this participant was referring to an event that would occur in the near future. Other examples are more

obvious, for instance, when temporal cues are used, for example, 'next week' or 'near future'. An extended future time perspective can be found in sentences like: 'I hope to live long enough to see any grandchildren'. Grandchildren are likely to be born in the future. It can be argued that the participant is considering their future and anticipates that grandchildren could be a part of their life. However, sometimes a future time perspective is signalled by participants, but temporal cues are absent. For instance, 'I hope to stay healthy and in my right mind'. The participant expresses abstract hopes and wishes about their future, and appears to visualise their anticipated future, but the sentence does not provide a timescale over when this might be realised.

After the sentences were categorised into future time perspectives and organised within Nuttin's goal categories, the sentences were further analysed. Rapkin and Fischer (1992) described that goals could theoretically be organised in the following four categories: Achievement goals, maintenance goals, disengagement goals or compensation goals (Rapkin and Fischer, 1992). While achievement goals are described as an active pursuit towards a goal to acquire a status or object that a person does not yet have, but wants to achieve, a maintenance goal is directed towards a status or object that a person has already acquired, but strives to maintain (Rapkin and Fischer, 1992). A disengagement goal is a "selective process" (ibid, 1992, p. 128) and appears in alignment with Baltes and Baltes (1990) idea about selection, optimisation and compensation that the individual will disengage from unachievable goals (loss-based selection) if certain goals are not feasible, or are no longer feasible. The last goal category are compensation goals. Rapkin and Fischer (1992) suggest that if a person experiences a loss, then they will choose goals to compensate for their loss, which is described as "reactive accommodations" (ibid, 1992, p. 128). Theoretically, the distinction between the goal categories is convincing, however, they have practical and methodological problems.

By providing only one sentence in the MIM, it is challenging to decide objectively whether a goal is a maintenance goal or a compensation goal. For instance, a participant mentioned that they 'hope to remain well'.

The hope to 'remain well' can be perceived as a maintenance goal, as the person holds a certain health status and at the same time, strives to retain their health status. However, this may also be perceived as a compensation goal, as it is unclear at this point whether the

participant has already experienced health-related losses and therefore is motivated to 'remain well'.

An example of a disengagement goal is when a participant expresses the wish to give up certain role, for example, as treasurer of a local club; at the same time, this goal could also be classified as a maintenance goal when the participant wants to give up the role to maintain focusing on another hobby or endeavour, or even a compensation goal if the role as treasurer drains too much energy and time that could be spent otherwise. In order to accurately determine if a goal is a compensation goal or a disengagement goal, more information and context is needed. Thus, for the purposes of my research, the goals mentioned in the MIM were only be classified in two categories: achievement goals and maintenance goals (see Table 7 below).

Table 7: Goal Categories

	Category	**Definition**	**Examples**
1	Achievement Goals	Goals that are directed towards the future, and they describe a status the participant does not have but wants to achieve	• 'to have a healthy and happy life' • 'to enjoy Christmas' • 'to achieve something'
2	Maintenance Goals	Goals that are concerned with maintaining status quo (often indicated by 'keep', 'stay', 'remain' etc.)	• 'to work as long as I can' • 'hold steady' • 'stay alive' • 'Keep working as I enjoy my profession'

Source: Author's own work

The following section describes the statistical analysis that has been conducted to address the first three research questions (see Chapter 1.3).

4.5.4 Statistical Analysis

The analysis and the statistical approach can be distinguished into two parts: descriptive and hypothesis testing. The descriptive part contains the descriptive analysis of the sample. This includes the distribution for continuous variables and frequency of the categorical variables. The hypothesis testing explores the relationship between the three key variables (depressive symptoms, future time perspective and number of goals).

The first research question asked: *Is a limited future time perspective associated with a lower goal pursuit in later life?*
Variables used to answer this question were future time perspective and goal pursuit. The future time perspective was measured as a dichotomous variable and was either extended or limited. Goals pursuit was defined as the number of goals that the individual has and is a continuous variable. The hypothesis is as follows:

Hypothesis 1:
H_0: There is no difference between the number of goals held by people with a limited or an extended future time perspective.
H_1: There is a difference between the number of goals held by people with a limited or an extended future time perspective.

Independent t-tests or two-sample tests look for differences between the means of two groups and can be used if the dependent variable is normally distributed (Argyrous, 2011; Weil, 2017). Therefore, an independent sample t-test was conducted if the dependent variable *goals* was normally distributed. However, if the data were not normally distributed, Mann-Whitney U Test as a non-parametric test was applied (Argyrous, 2011).

The second research question is: *What is the relationship between the number of depressive symptoms and age?* The following hypothesis was proposed:

Hypothesis 2:
H_0: There is no relationship between increasing age and depressive symptoms.
H_1: There is a relationship between increasing age and depressive symptoms.

Depressive symptoms measured with the GDS-15 were used as continuous variable and the age of the participants in years was the second variable and was also be treated as continuous variable. If both variables were normally distributed and the scatterplot showed a linear association (rather than a curvilinear relationship) then a Pearson's correlation was conducted (Foster, Diamond and Jefferies, 2015). However, if the sample was not normally distributed, Spearman's rank-order (Spearman's rho) was used (Argyrous, 2011).

The last research question asked: *If older adults with limited future time perspective pursue fewer goals in later life, will they have more depressive symptoms compared to their counterparts (who might experience an extended future time perspective and more goals)?*

As independent variables, the future time perspective and depressive symptoms were used. Future time perspective has two (dichotomous) categories, and depressive symptoms were recoded into a categorical variable that had three categories (0 = no depressive symptoms, 1 = mild depressive symptoms, and 2 = severe depressive symptoms). The dependent variable was the number of goals measured on a continuous scale. To test a hypothesis with one continuous dependent variable and multiple independent variables an analysis of variance (ANOVA) was used (Argyrous, 2011; Tabachnick and Fidell, 2013).

A two-way ANOVA tests the main effect of the independent variable on the dependent variable and checks for the interaction effect between both independent variables. Therefore, the two-way ANOVA can be used to explore the following hypotheses (see Table 8).

Table 8: Hypotheses Research Question 3

Null hypothesis (H_0)	**Alternative hypothesis (H_1)**
There is no difference in number of goals and between the two types of future time perspective.	*There is a difference in the number of goals and between the two types of future time perspective.*
There is no difference in the number of goals and between the three types of depressive profiles.	*There is a difference in the number of goals and between the three types of depressive profiles.*
The effect of one independent variable on goals pursuit does not depend on the other independent variable.	*There is an interaction effect between future time perspective and depressive symptoms on goal pursuit.*

Source: Author's own work

A two-way ANOVA requires homogeneity of variance and assumes that the dependent variable is normally distributed. To assess whether these assumptions hold, the distribution of the dependent variable goals will be examined using a Histogram and P-P Plot (Figures 10 and 11). If the assumption of normality is met, an Analysis of Variance (ANOVA) will be conducted. However, if the assumption is violated, an alternative approach will be adopted.

As will be shown later, the assumption of normality was not met; therefore, an alternative approach was implemented. The dataset was filtered into participants with a limited and extended future time perspective, and two Mann-Whitney U tests were performed to examine differences between these groups. The detailed procedure is outlined in Section 5.2.3.

Study Two – Impact of Future Time Perspective on Goals in Later Life

In this section, the analysis method is outlined, and the rationale behind adopting a particular type of thematic analysis to analyse the qualitative dataset is explained.

4.5.5 Reflexive Thematic Analysis

Braun and Clarke (2006) describe thematic analysis as "a method for identifying, analysing and reporting patterns (themes) within data" (p. 79). In a newer publication, the authors more precisely define thematic analysis as a "method for developing, analysing and interpreting patterns across a qualitative dataset**"** (Braun and Clarke, 2022, p. 4).

Themes are described as patterns of "shared idea[s], meaning[s] or concept[s] in a dataset" and should not be understood as mere synopses of a transcript (Braun and Clarke, 2022, p. 8). Thematic analysis has long been a popular qualitative research method in the field of social sciences and beyond, and it is suitable for researchers with a mixed methods background. While it is important in thematic analysis to define the ontological and epistemological position (Clarke, Braun and Hayfield, 2015), thematic analysis is seen as a flexible method that can be used with different theoretical frameworks (Braun, Clarke and Weate, 2016; Braun and Clarke, 2019). However, there are some caveats and critiques in using thematic analysis as a flexible method. Braun and Clarke (2019) point out that its flexibility only goes so far, as the researcher has to deeply reflect on their epistemological assumptions and not, as Paul Feyerabend deliberately and provocatively proposed, as "anything goes" (1993 , p. 19, first published, 1975). Similarly, regarding the pragmatic approach (see Chapter 4.1.2), Braun and Clarke (2006) argue that it "is important [..] that the theoretical framework and methods match what the researcher wants to know, and that they acknowledge these decisions, and recognise them as decisions" (ibid., p. 80).

In recent years, Braun, Clarke and Weate (2016) thematic analysis approach has been developed further to suggest that it can be applied within two major ontological strands, without arbitrarily mixing different approaches within thematic analysis together. For researchers who are using a realist ontology, and researchers who are using a relativist ontology, the former (realist) approach is called "small q" and the latter (relativist) "big Q",

where big Q refers to a qualitative research approach that assigned itself completely to a qualitative paradigm (Braun and Clarke, 2019, p. 594).

However, Braun, Clarke and Weate (2016) point out that this is not a simple dichotomous decision, but rather requires a thoroughly reflective approach. In their paper from 2019, the authors reiterate their critique on the unreflective use of thematic analysis in research by other authors since the publication of their paper in 2006 (Braun and Clarke 2006). The problems identified by the authors include the combination of different approaches to thematic analysis in combination with other qualitative methods, without providing a clear reflection of its use based on authors' ontological and epistemological assumptions.

Therefore, it is important that researchers using thematic analysis should highlight their own philosophical understanding to justify which form of thematic analysis has been used (Braun and Clarke, 2019). Furthermore, three different forms of thematic analysis can be distinguished, guiding researchers depending on their philosophical and ontological paradigms.

Braun and Clarke (2019) distinguish between "coding reliability", "codebook TA", and "reflexive TA" (p. 593). Coding reliability has been developed partially due to the use of thematic analysis (TA) within a post-positivist epistemology, where the reliability and transparency of the findings are of great importance. With coding reliability, which can be understood as a 'small q' framework, the researcher is more likely to use predetermined and a priori themes and aim to locate them within the dataset. Extracts from the dataset are then used as illustrative examples to prove the validity of the verbatim extracts in comparison to the predetermined themes and follow a more ontological realist worldview.

On the other side of the spectrum, Braun and Clarke (2022) located the reflexive TA approach, which is informed by a constructivist epistemology and labelled as a 'Big Q' framework. In this approach, the themes are created out of the dataset inductively, and the extracts are analysed analytically and interpretatively. A third option for researchers is the codebook TA, which provides a way to combine reliability by using codebooks that can be used for initial code development (Braun and Clarke, 2019).

This recent shift in thinking around thematic analysis derives from the idea that, in a post-positivist perspective, quality criteria must apply to qualitative analysis in the same manner as in quantitative research. However, Braun and Clarke (2016) dispute the idea that thematic analysis in its original form, which has been developed for a pure qualitative tradition, can

use quality criteria, such as reliability. Quality criteria used mainly in quantitative research with a post-positivist paradigm contradict the genuine idea of thematic analysis as an interpretative and active process that interacts with the data, rather than passively emerging from the data (Braun and Clarke, 2016).

As described in Section 4.1, this thesis follows a pragmatic worldview, where actions can be understood as being embedded in society. A social reality where humans interact to make sense of their world is crucial in this understanding, and an ontological dualistic approach should be rejected. Therefore, the thesis does not locate itself under the dualistic idea within thematic analysis as captured by the small q/ Big Q framework; instead, it perceives thematic analysis as a way to navigate a continuum of possibilities to explore the phenomena of interest. However, as already outlined in Section 4.1.2, a social ontology guides my understanding of the world, and that meaning is developed through interactions with other humans and their environment. Therefore, the method chosen in this thesis can be positioned within the idea of reflexive thematic analysis, as it seems the most appropriate method to engage with the collected interview dataset. I neither held predetermined themes, nor used a codebook to analyse the data. Only the research question 'How does perceived future time perspective impact older people's view about their own goals?' guides the analysis in Chapter 6. In the next paragraphs, I will describe the process of thematic analysis in general, as proposed by Braun and Clarke (2006) and then redefine the process according to recent developments towards a more reflexive thematic analysis (Braun and Clarke, 2022).

4.5.6 Process of Conducting Thematic Analysis

Firstly, to understand thematic analysis, the terminology used in the methods should be demarcated to avoid confusion. The *data corpus* refers to the summary of all data for a research project. However, the present thesis uses only one qualitative and one quantitative dataset. A distinction between different data corpora within the qualitative study is not necessary. The *dataset* is a subgroup of the data corpus and would entail the sum of all interviews that have been conducted. *Items,* on the other hand, are each individual interview, and *data extracts* are the phrases that have been derived from each item (Braun and Clarke, 2006).

In their original and widely cited paper from 2006, Braun and Clarke suggested a six-phase process to use thematic analysis. These phases were rephrased in the newest version of reflexive thematic analysis (Braun and Clarke, 2022, pp. 35-36).

1. “Familiarising yourself with the dataset
2. Coding
3. Generating initial themes
4. Developing and reviewing themes
5. Refining, defining and naming themes
6. Writing up”

In the first phase, the researcher has to become familiar with the data. Reading all transcripts and taking notes while doing this seems to be inevitable in this phase, and it can take some time to be fully immersed in the data. Going back and forth within the dataset and reading the transcripts multiple times is perceived as desirable, rather than something to be avoided. First, ideas of coding should be written down in this phase, and thinking about the data should go beyond a simple reflection of what is superficially said to consider what meanings are behind the written words (Braun and Clarke, 2022). It is helpful in this phase to reflect on the researcher’s own position in the research project (see Section 4.6.3 on reflexivity) and which research question is being addressed.

Here, it is worth mentioning that Braun and Clarke (2022) prefer the term “address” a research question rather than “answer” a research question (p. 41). Shifting the focus to ‘addressing’ a research question reflects the nature of qualitative inquiry more precisely, as it is not assumed that there is one definite truth in the dataset that constitutes the answer, but the possibility of multiple accounts of truth is possible (Braun and Clarke, 2022).
A reading of each data item is accompanied by critical engagement with the data and should include questions directed at the data, for example, about the participants’ worldview, their own explanations of situations, or what norms might be leading the participants to describe their story in one or another way, and also to pay attention to what is not being said (Braun and Clarke, 2022).

In the second phase, initial codes are created. This can be done by re-reading the transcripts and highlighting important or meaningful topics found in the data. Codes or keywords can summarise these findings. Braun and Clarke (2006) consider it important to be aware of the researcher's purpose of the research in this phase. A theory-driven (contrary to data-driven) approach might include having specific questions in mind, and to see whether these questions can be answered by the dataset. Therefore, data analysis can occur in two ways. The first way would be to treat the data items as an "illustrative" example of a theme. Braun and Clarke (2013, p. 252) assign this kind of illustration closer to a realist epistemology, where the data items or extracts serve as an example of evidence for a theme. The second way is positioned more with an interpretivist epistemology. The interpretation of the themes derives directly out of the data item in a constructivist stance and is rather "analytical" in nature (Braun and Clarke, 2013, p. 252). However, it is important to note that the illustrative and the analytic analyses can be combined in the same dataset (Braun and Clarke, 2013).

Each data item was re-read to identify tentative codes. Codes are ideas that are attached to the extracts of a data item. The codes can have either an obvious meaning (described as "summative" codes), or codes can be "conceptual" (Braun and Clarke, 2022, p. 52). While descriptive/summative codes reflect what participants are saying on the surface, conceptual codes go beyond a pure description and provide insight into underlying structures, meanings and ideas (Braun and Clarke, 2022).

Summative codes are described by Braun and Clarke (2022) as inductively derived, and conceptual codes are deductively created. At first glance, this seems paradoxical, as in a typical quantitative research notion, deductive means that theories are tested. The researcher would then have a clearly formulated hypothesis and test this in a chosen sample (top-down, from theory to data). By contrast, induction is often described as a purely data-driven method to make assumptions or help create a theory (bottom-up, from the data to theory) (Bryman, 2016). However, in Braun and Clarke's (2022) argumentation, 'inductive' is a purely descriptive summary of the data (data-driven) without using theories or researcher's presuppositions. It is, therefore, a more realist approach towards the data, which aims to provide an accurate, but descriptive, rather than a deeper, and more interpretative account of the participants' experiences and meaning-makings. By contrast, within thematic analysis, deductive is understood as actively engaging with theories (therefore, theory-driven) about

social realities and participants' experiences and meanings. These experiences and meanings are embedded and explained within a wider social and societal context and more often lead to the creation of conceptual codes (Braun and Clarke, 2022). Furthermore, codes can be semantic or latent. Semantic codes can typically be found within an inductive approach, while latent codes are more likely to be created in a deductive approach (Braun, Clarke and Weate, 2016). However, Braun and Clarke (2022) reiterate that the analysis should be seen on a continuum between deductive and inductive, and between semantic and latent codes, and not as a dichotomous 'either-or' approach. At this stage, it was important that the initial coding was not too narrow so as not to lose the context of the text passages and codes, and this process has been applied systematically throughout the whole dataset (Braun and Clarke, 2006).

In the third step, the focus lies on creating initial themes, and here, a shift can be seen in Braun and Clarke's thinking: a move away from 'searching for themes' as proposed in the 2006 paper towards 'creating and generating themes' in the newer version of reflexive thematic analysis (Braun and Clarke, 2006;2022). Themes are understood as topics that are recurring in the dataset. but are more than just summaries of topics discussed in the data (Braun and Clarke, 2022). A theme in reflexive thematic analysis is described as "a pattern of shared meaning organised around a central concept" (ibid, p. 77).

The focus on themes, compared with codes, is at a higher level. Rather than looking for patterns in codes in a single data item, the third step searches for connecting patterns and themes from the codes across the whole dataset. These initial themes are sometimes called "candidate themes" to reflect their possibility to become final themes (Braun and Clarke, 2022, p. 79). Furthermore, it is important that the initially created themes reflect the codes, and, indeed, multiple codes. Ultimately, a theme reflects the central concept in the data, and the codes show different aspects of the central concept. The initial themes should have some characteristic features that capture the codes (Braun and Clarke, 2022).

The final outcome of the third stage should be a "thematic map" (Braun and Clarke, 2006, p. 91). A thematic map is described as a mind map that includes the created themes and subthemes and the possible connections between them, which can develop further in the

next stages of the analysis (Braun and Clarke, 2022). After the codes have been organised into initial themes and a thematic map is created, the fourth phase can start.

In the fourth phase, the authors suggest revisiting all of the data extracts to check whether the themes are coherent and logical, and whether the codes reflect and inform the created themes (Braun and Clarke, 2006; Braun, Clarke and Weate, 2016). Subsequentially, the whole dataset should be read again to evaluate whether new codes can be found once the initial themes have been created. The focus should be on the accuracy of the representation and reflections of the themes within the entire dataset. Necessary adjustments should be made to the themes, at this phase, to narrow or widen them. However, contradictions of accounts of the participants within themes are welcomed and reflect the notion that there is not one single truth that must be discovered by the researcher, but rather a multitude of views of how participants experience the world and how their environment and society shape them (Braun and Clarke, 2022).

In the fifth phase, the themes for the final report are redefined. Braun and Clarke (2013) propose that the themes created from the dataset should be accompanied by a clear definition of the theme. This includes a description of the themes and subthemes, and how these are related to each other. If it is not possible to connect the codes with the themes, then redefining the themes should be considered to present a coherent and convincing definition. Furthermore, the definitions require a "clear focus, scope and purpose" (Braun and Clarke, 2013, p. 249). The last part of this phase is to name the themes. Braun and Clarke (2022) remind the reader that a single word can barely capture the quintessence of a theme and that the theme name should "entice, but not mislead" (ibid, p. 112).

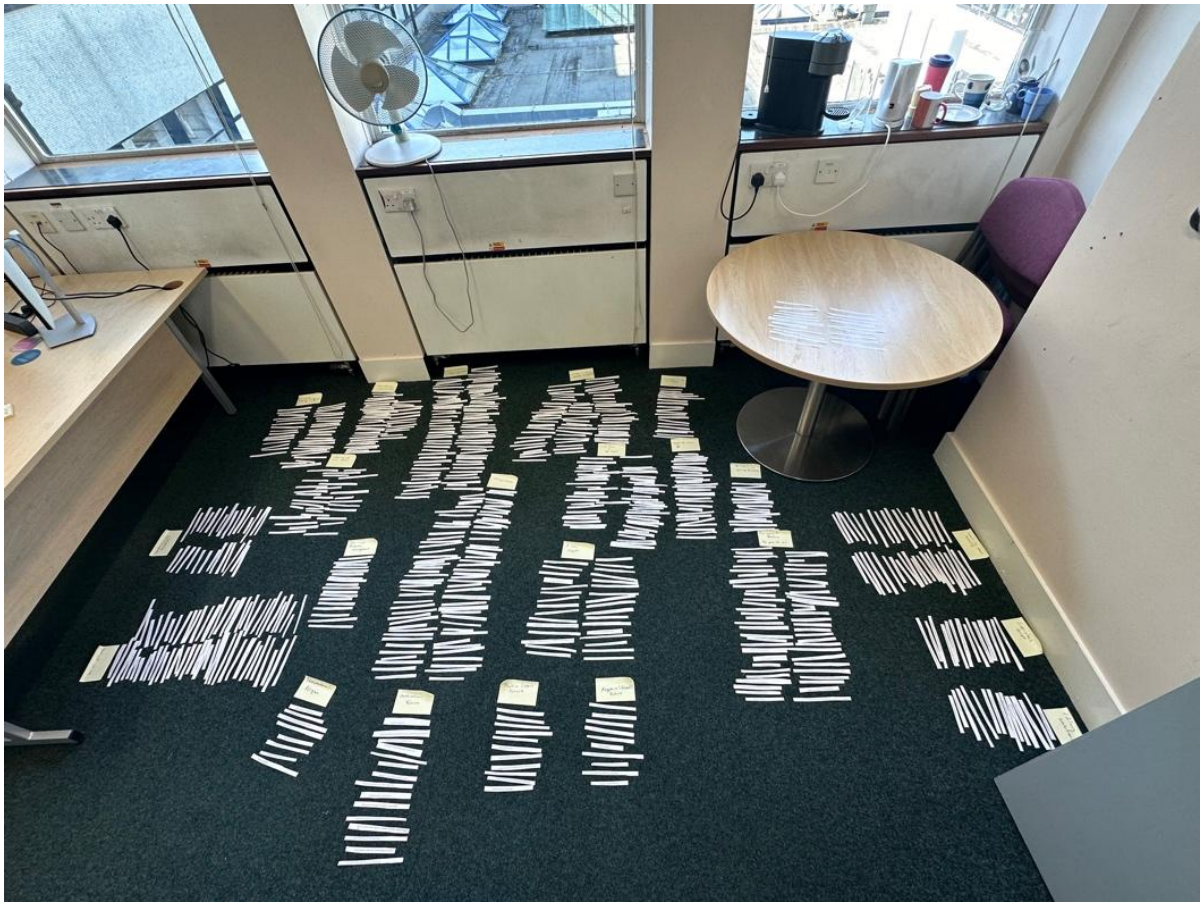
After the themes are named, the sixth and final phase of the analysis can start. In the sixth phase, the description and explanation of the themes are written up, and Braun and Clarke (2022) state that not only does the process need to be explained, but there should also be some justification of why reflexive thematic analysis has been chosen, whether the approach was "more inductive or deductive" and whether the analysis was "experiential or critical" (ibid, p. 122).

Lastly, reflexive thematic analysis sees reflexivity as an important process that permeates the entire research process (Braun and Clarke, 2022).

4.5.7 Thematic Analysis and Study Two

The 18 interviews lasted an average of 64 minutes, ranging from 28 minutes for the shortest interview to 81 minutes for the longest. All interviews were subsequently transcribed verbatim and were read multiple times, and two rounds of coding were conducted. In the first round, the data was freely coded within NVivo14 to capture everything that was of potential interest. After the first round of coding, initial themes were written down, and a preliminary chapter draft was written. After careful consideration, the first draft of the chapter was perceived as not analytical enough, and the themes appeared underdeveloped. Therefore, a second round of coding was conducted. This time, the coding was more analytical, and codes that were related directly to the research question were applied. All quotes that were related to the research question were entered into an Excel sheet. Coding was conducted directly in Excel, and in total, 969 codes were created. Subsequently, all codes were written on paper and organised into categories (for example, good old times, good future, bad future, learning about oneself). In total, 23 theme clusters were created (see Figure 2).

Figure 2: Thematic Clusters



Source: Author's own work

These theme clusters were ordered thematically, and the content of the codes was written down to capture the essence of each cluster. After multiple rounds of clustering and rewriting, four global themes became prevalent. Further refinement of the themes led to the decision that two themes related to the impact of health and retirement on goals and future time perspective, and two themes related to adjustments to these impacts.

The global themes were collated into different organising themes. The organising themes are sections that provide information about the global themes. Table 9 provides the global themes, the organising themes and examples of codes that led to the global themes. Chapter 6 describes and discusses these four themes in detail.

Table 9: Theme Development

Global Themes	**Organising Themes**	**Exemplary Codes**
Shift to present-focused goals	Decreasing Energy Levels Worries about the future Shifting goals – do something to prevent decline	• Unexpected changes in life plan • Exercise as a goal • Health is a problem • Health determines your life • To stay healthy and be careful – it's my responsibility
The retirement paradox	Keep working vs enjoying – but don't be lazy Live the unlived life The dark side of retirement	• Life can begin now • Retirement is something to celebrate • Work restricts, retirement is freedom • Work life is over, time to relax • Finally it's over (work)
Dealing with the ever-changing future	Optimistic adaptation to a changing future Agency and purpose – accepting uncertainty Living in the present to cope with the uncertainty	• Do things thoroughly, it could be the last • Time is getting shorter • Keep going – there is still a future ahead and I have goals • Optimistic about future • Good past, bad future?
The evolution of selection, optimisation and compensation	Learning about oneself Selection of goals Optimisation of what I'm doing Compensation if something doesn't work	• Resources need to be spent wisely • Selective in choosing goals • Goal is to be better at something • Goals should be flexible • You have to do your best, otherwise don't do it • Being busy is exhausting, I need time for myself

Source: Author's own work

The process of reflexivity is described in the Section 4.6.4 below.

4.5.8 Reflexivity

Interactions with participants cannot be completely neutral, and qualitative researchers accept that their relationship with participants may influence the research process to a certain extent, purely by entering the participants' world (Brown, 2010). If researchers are aware of the influences they have on the participants, then the question is, should the researcher try to distance themselves as much as possible from the interaction or should they accept the 'interference'? It can be argued that detachment from the researcher's role in the research process is impossible and might not even be desirable (Brown, 2010). Within reflexive thematic analysis, reflecting on personal, functional and topic-specific reflexivity is seen as an important process (Braun and Clarke, 2022). In general, reflexivity is a method that provides a tool to reflect on the researcher's perception to clarify where and who they are in the research process (Brown, 2010).

Therefore, the present thesis used a reflexive journal for every interview. The reflexive exercise was conducted in two stages. In the first stage, I reflected on my own stance and beliefs. To be precise, at this stage, the reflexive journal followed Brown's (2010) suggestion of distinguishing between four parts: personal reflexivity, political and ideological reflexivity, functional and disciplinary reflexivity, and reflexivity around the research topic. With this in mind, I started my reflexive journal, reflecting on my personal experiences, political and ideological beliefs, functional and disciplinary background, and my knowledge and assumptions about the research topic. This happened before the start of the qualitative interviews, to be aware of my own thinking and positioning in the research project. Afterwards, a journal entry was made after each interview to reflect on how I perceived the interview, which situation or questions were uncomfortable to ask or did not yield answers that might have been expected at this point. These reflections led to further improvements and adjustments of the interview situations. Below is an example of my reflexivity about the topic.

The research was about future time perspective and goals in later life. I am personally quite keen to learn more about goals and ambition. Based on my own experience, having goals is important for my own development. I believe that I am aware of some goals, but at the same time, I might pursue goals which I am not entirely aware of or cannot name. The same is true

about future time perspective. My goals are strongly interwoven with time - time by when I would like to achieve these goals, and the time I have left to achieve these goals. Therefore, I have a personal and an academic interest in the topic. However, I was a 37-year-old German at that time, and my participants were adults beyond the age of 65 and from Great Britain. Even if I might be an insider in regard to the topic, the age difference and my nationality made me an (partial) outsider. There are risks that I might not be able formulate words and ideas for as a native speaker can, and subtle differences in language might have different meanings for me or the participants. Also, my age could be perceived as a hindrance for the participants to speak openly, as they might think that I cannot relate to the topic. On the positive side, my enthusiasm about the topic and the interest I exuded to talk about the topic may have acted as a means of overcoming some of the age and nationality-related barriers.

4.6 Summary

This chapter outlined the ontological and epistemological thinking underlying the present thesis. It aimed to convey why a pragmatic philosophical approach was the most appropriate approach in conducting a mixed methods study to understand goals, future time perspective and depression in later life. Accordingly, ethical considerations, the recruitment strategies and the quantitative analysis were briefly described and a discussion about the current understanding of reflexive thematic analysis was provided.

In the chapters to follow, the results from the quantitative strand (Chapter 5) and from the qualitative strand (Chapter 6) are presented, before discussing the findings from the studies (Chapter 7), and its contribution to knowledge and implications for future research in Chapter 8.

5 Quantitative Analysis

After Chapter 4 outlined the methodology, Chapter 5 will provide the results from the first study strand (Study One). The chapter is divided into three sections. While Section 5.1 will describe the descriptive statistics, Section 5.2 will focus on the hypothesis testing before Section 5.3 summarises the findings.

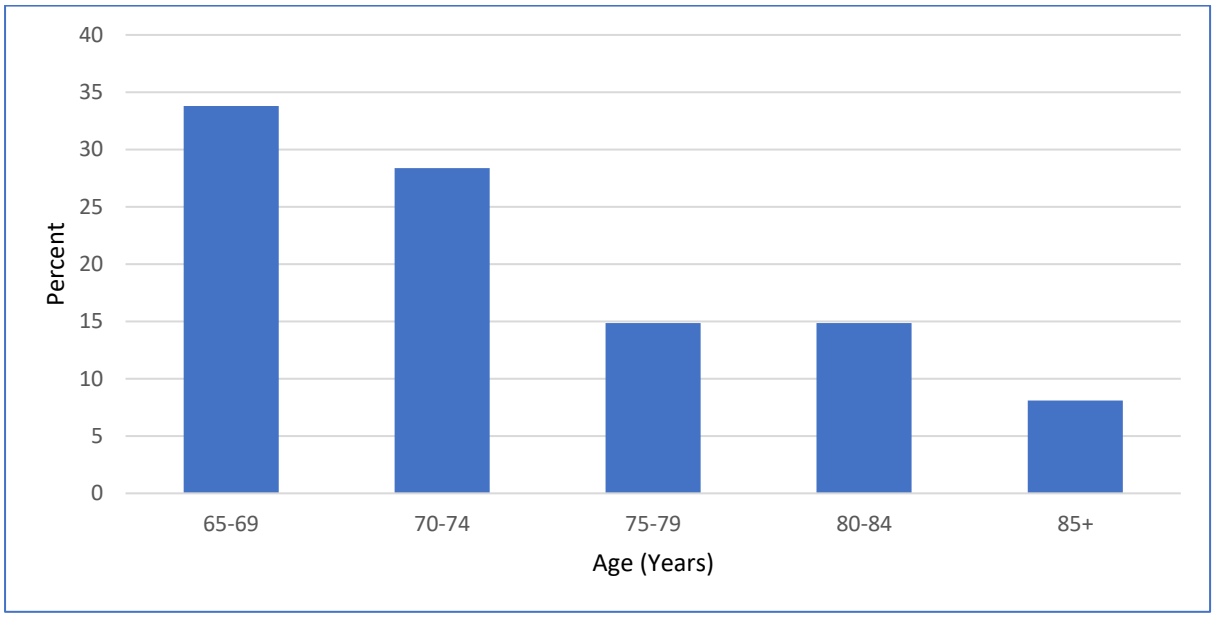
5.1 Descriptive Analysis

The descriptive analysis is further divided into two subsections. In subsection 5.1.1 the personal and socioeconomic characteristics will be presented before subsection 5.1.2 provides cross-tabulations for a more comprehensive understanding of the sample.

5.1.1 Sample Characteristics

The aim of the study strand was to explore older adults' future time perspective and their goals in relation to subthreshold depression. The questionnaires of 76 participants were analysed in this strand. All participants were over the age of 65. The mean age was 73.8 years (SD = 7.1), and participants' age ranged from 66–98 years. Age was categorised in five age groups, and Figure 3 shows the distribution of the age groups. Most participants were between 65–69 years old (33%, n = 25), followed by the age group of 70–74 (28%, n = 21). The age group 75–79 and 80–84 years represented with each 15% (n = 11) of the sample. The remaining 9% (n = 6) were in the age group 85+.

Figure 3: Age Distribution



Source: Author's own work

Participants were mostly female (75%, n = 57) and identified themselves as White English (81%, n = 61), retired (70%, n = 53) and Christian (64%, n = 48).

While most participants were White English, a small group of White Northern Irish (4%, n = 3) and White Scottish (7%, n = 5), followed by other white background (3%, n = 2) and White Welsh (1%, n = 1) were represented in the sample. The marital status of the participants ranged from being widowed (27%, n = 20) to married 33% (n = 25) and divorced (25%, n = 19). Only a small percentage of participants were cohabiting (3%, n = 2) or single (10%, n = 7). In terms of religious beliefs, Christianity was the most often mentioned religion (64%, n = 48), followed by no religious belief system (27%, n = 20) and Buddhism with 3% (n = 2). Another 3% (n = 2) indicated another religious belief but did not specify this. This findings are in line with the UK Census where the majority of older adults identified themselves as Christians, followed by no religion (ONS, 2023).

The implication of and possible reasons for the high homogeneity of the sample will be discussed in Chapter 7. Table 10 provides an overview over the sample's characteristics.

Table 10: Personal Characteristics

Variables	***n***	***%***
Gender		
Female	57	75
Male	18	25
Total %		100
Age		
65 - 69	25	33
70 - 74	21	28
75 - 79	11	15
80 - 84	11	15
85+	6	8
Total %		100
Ethnicity		
White English	61	81
White Northern Irish/ British	3	4
White Scottish	5	7
White Welsh	1	2
Other White background	2	3
Total %		100
Marital Status		
Widowed	20	27
Divorced	19	25
Married	25	33
Cohabiting	2	3
Single (Never married)	7	10
Total %		100
Religion		
No religion	20	27
Christianity	48	64
Buddhism	2	3
Other	2	3
Total %		100

Source: Author's own work

Table 11 provides an overview of the participants' socio-economic status. Here, the sample is more diverse regarding the socio-economic status compared to the personal characteristics. The income of the participants has been categorised into three income brackets. Low income was defined up to £1,500 per month and 32% (n = 24) of the participants fall into this category, followed by middle-income, which was defined as an income between £1,501- £2,500 per month. It shows that 29% (n = 22) of the participants are in the middle-income bracket and 25% (n = 19) in the high-income bracket with more than £2,500 per month. The income will be further explored in the cross-tabulation in the next section.

The majority (70%, n = 53) of the participants have some kind of university degree (Bachelor, Master or PhD) (Level 4 in the ONS Census, 2023). Secondary qualification (O-Levels, or similar) (Level 1–2) is hold by 10% (n = 7) of the participants and 15% (n = 11) reported to have a Level 3 qualification (A-Levels, or City & Guilds), and only 3% (n = 2) mentioned they have no qualification at all. Regarding the employment status, 70% (n = 53) mentioned that they are retired, and 8% (n = 6) are in full-time employment and another 8% (n = 6) in part-time employment. Self-employed or 'other' covered 9% (n = 7) of the participants at the time the study was conducted. The majority of the participants were owners of a house or a flat (83%, n = 63), and only 9% (n = 7) were renting or were living in other living arrangements (4%, n = 3) (e.g. living with other family members or in sheltered accommodation).

Table 11: Socio-economic status

Variables	***n***	***%***
Income		
Low income (up to £1,500)	24	32
Middle income (£1,501 - £2,500)	22	29
High Income (more than (£2,501)	19	25
Total %		100
Employment		
Retried	53	70
Full-time employed	6	8
Part-time employed	6	8
Self-employed/ others	7	9
Total %		100
Residence		
Property owner	63	83
Renting	7	9
Other living arrangement	3	4
Total %		100
Qualification[1]		
No Qualification	2	3
Level 1 – 2 (e.g. GCSE, O-Level, and apprenticeship)	7	9
Level 3 (e.g. A-Levels, Advanced Diploma)	11	15
Level 4 (e.g. University degree or profess. qualification)	53	70
Others	1	1
Total %		100
[1] *Categories are based on the ONS Census 2021*		

Source: Author's own work

In next step, the functional health status was further explored. The Instrumental Activities of Daily Living (IADL) has been used to understand the functional status of the sample. In the original IADL scale men can reach a maximum of five points (food preparation, laundry, and housekeeping are excluded) and women can score up to eight points (Lawton and Brody,

1969). This convention has been applied in the analysis. More recent research has shown that a IADL scores less than seven combined with a measure of Subjective Cognitive Decline (SCD) is a risk factor for Alzheimer's disease (Roehr *et al.*, 2019). However, the participants in the sample showed a good functionality and ability to manage their life independently. Most male participants (78%, n = 14) were scoring five on the IADL scale. Only two cases scored lower (four and one, respectively) on the IADL scale, indicating a higher need in the Instrumental Activities of Daily Living. For the female participants the pattern is similar with 81% (n = 46) scoring eight on the IADL scale, and only four cases were lower. Three participants scored six (6%) and one case (2%) scored only one point on the scale. Table 12 shows the mean and the standard deviations of the IADL scores.

Table 12: Instrumental Activities of Daily Living

Variables	***n***	***%***	***Mean***	***SD***
IADL				
Male	16	21	4.69	1.01
Female	50	66	7.74	1.08
Missing Cases	10	13		

Source: Author's own work

In the next section, bivariate comparisons have been conducted and will be presented accordingly.

5.1.2 Bivariate Comparison

In the next step, cross-tabulations were conducted to see the difference between the personal and socio-economic variables. Table 13 shows the results of cross-tabulation between age and sex, and it is visible that most female participants are in the age group between 65–69 (37%, n = 21) followed by 70–74 (25%, n = 14). In the male group most participants are in the age group 70–74 (41%, n = 7) followed by the age group 65–69 (23.5%, n = 4).

Table 13: Cross-tabulation Age and Sex[1]

		Female % (n)	**Male % (n)**
Age	65 - 69	37 (21)	24 (4)
	70 - 74	25 (14)	42 (7)
	75 - 79	16 (9)	12 (2)
	80 - 84	16 (9)	12 (2)
	85+	7 (4)	12 (2)
	Total %	100	100

Source: Author's own work

In the next step, the age groups of participants were compared with marital status (Table 14), followed by marital status and sex of the participants (Table 15).

Table 14: Cross-tabulation Marital Status and Age

		Widowed % (n)	**Divorced % (n)**	**Married % (n)**	**Cohabiting % (n)**	**Single % (n)**	**Total %**
Age	65-69	25 (6)	29 (7)	38 (9)	4 (1)	4 (1)	100
	70-74	25 (5)	30 (6)	25 (5)	5(1)	15 (3)	100
	75-79	20 (2)	30 (3)	30 (3)	0	20 (2)	100
	80-84	64 (7)	0	36 (4)	0	0	100
	85+	0	33 (2)	50 (3)	0	17 (1)	100

Source: Author's own work

In the age group 65–69 most participants are married (38%, n = 9) or divorced (29%, n = 7). Six participants were widowed (25%). In the age group 70–74 the distribution is similar, with

30% (n = 6) divorced and 25% (n = 5) either widowed or married. In the age group of the 80–84 the participants are either widowed (64%, n = 7) or married (36%, n = 4). No one in this group is single (never married), divorced or cohabiting.

Table 15 presents the difference in marital status and sex. While the majority of females in the sample are married (37%, n = 20) or widowed (32%, n = 17), in the male group only 17% (n = 3) are widowed and 28% (n = 5) are married. In the sample, more men were divorced (33%, n = 6) compared to women and more men were single (22%, n = 4) compared to women (6%, n = 3). The results reflect partially the last UK Census. In 2021, more men were single compared to women, and women were more often widowed (ONS, 2023). A similar pattern can be seen in the sample. However, while in the Census the divorce rate was higher for women, in the current sample more men were divorced.

Table 15: Cross-tabulation Marital Status and Sex

		Widowed (%)	**Divorced (%)**	**Married (%)**	**Cohabiting (%)**	**Single (%)**	**Total %**
Sex	Female	32	22	37	4	6	100
	Male	17	33	28	0	22	100

Source: Author's own work

A further cross-tabulation was conducted to see the difference between sex and income. Table 16 summarises the findings. Comparing the difference between the income groups, 79% (n = 19) of the female participants are in the low-income group compared to 21% (n = 5) among men. In the middle-income group, 64% (n = 14) are female and 36% (n = 8) are male, while in the high-income group 83% (n = 15) are female and 17% (n = 3) are male.

Table 16: Cross-tabulation Income (monthly) and Sex

		Female % (n)	**Men % (n)**
Income	Low Income (up to £1,500)	40 (19)	31 (5)
	Middle Income (£1,501-£2,500)	29 (14)	50 (8)
	High Income (more than (£2,501)	31 (15)	19 (3)
	Total %	100	100

Source: Author's own work

A further glance at the distribution within the female column reveals that 40% of women belong to the low-income group, 29% to the middle-income group and 31% to the high-income group. In comparison, 50% of men in the sample are in the middle-income group and 31.3% are in the low-income group and 19% in the high-income group respectively.

The Family Resources Survey (FRS) (2024) calculated that a single male pensioner had a weekly income of £286 (approximately £1,144 per month) and single female pensioner a weekly income of £259 (approximately £1,036 per month). On average all pensioners (men and women) had a weekly income of £387 which is approximately £1,548 per month (DWP, 2024). Comparing the FRS findings with the sample shows that 40% of the women in the sample had a lower income than £1,500 per month, and that would be in line with the FRS findings, while more men in the sample had an income between £1,501 - £2,500. However, it is unclear from the sample whether participants counted only their own income or the household income.

That opened the question of what the difference is between employment status and sex. Table 17 explores this further.

Table 17: Cross-tabulation Sex and Employment Status

		Retired % (n)	**Full-Time % (n)**	**Part-Time % (n)**	**Self-Employed/ Others % (n)**	**Total %**
Sex	Female	74 (39)	11 (6)	9 (5)	6 (3)	100
	Male	78 (14)	0	6 (1)	17 (3)	100

Source: Author's own work

Male and female participants in the sample are mostly retired, (78% (n = 14) and 74% (n = 39) respectively). However, a larger majority of women are still in some kind of employment (26%, n = 14) while a very small number of men were still in employment (22%, n = 4). A further crosstabulation (Table 18) shows the difference between the different age groups and employment status.

Table 18: Cross-tabulation Age and Employment Status

		Retired % (n)	Full-Time % (n)	Part-Time % (n)	Self-Employed/ Others % (n)
Age	65 – 69	31 (16)	50 (6)	33 (2)	50.0 (3)
	70 – 74	31 (16)	17 (1)	17 (1)	17 (1)
	75 – 79	15 (8)	17 (1)	17 (1)	0
	80 – 84	15 (8)	0	17 (1)	33 (2)
	85+	8 (4)	17 (1)	17 (1)	0
	Total %	100	100	100	100

Source: Author's own work

Lastly, the age groups and IADL categories were compared. IADL categories were divided into three categories (no limitations, some limitations and severe limitations). Table 19 provides an overview and shows that the most limitations are reported by participants in the age category 85+ and the lowest in the age category between 65–74 years.

Table 19: Cross-tabulation Age and IADL

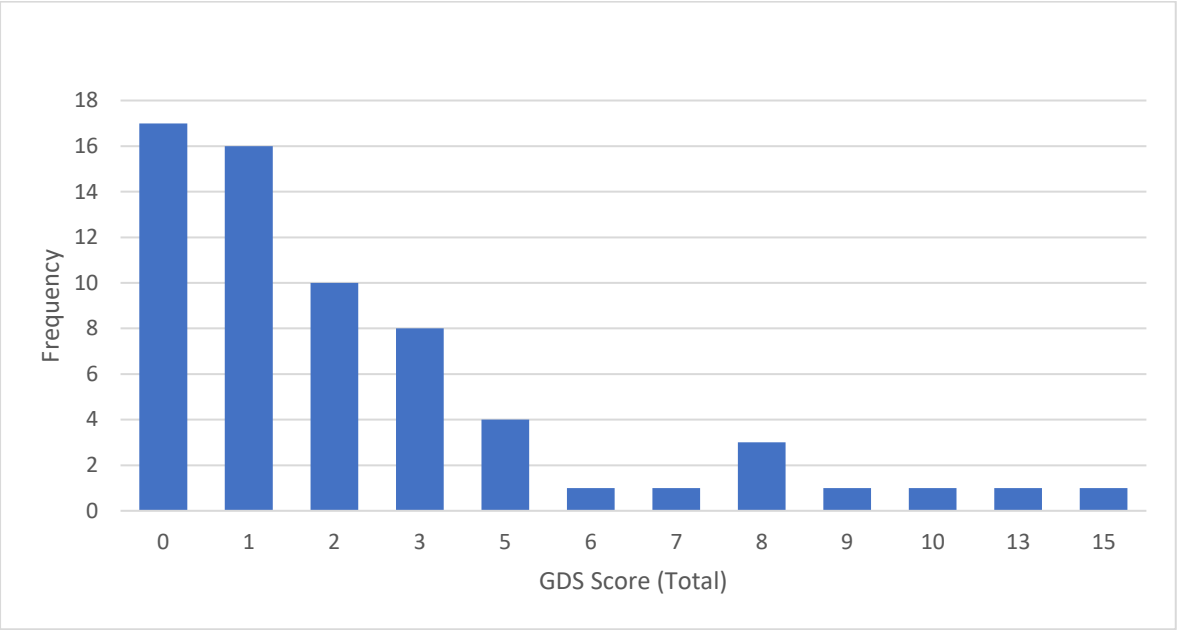
		No limitations % (n)	Some Limitations % (n)	Severe Limitations % (n)	Total %
Age	65 - 69	91 (21)	4 (1)	4 (1)	100
	70 - 74	100 (18)	0	0	100
	75 - 79	89 (8)	11 (1)	0	100
	80 - 84	89 (8)	11 (1)	0	100
	85+	67 (4)	17 (1)	17 (1)	100

Source: Author's own work

Geriatric Depression Scale

The GDS has been used in previous research to assess the depressive symptoms of older adults (see Chapter 4.5.1 for more in-depth discussion). In total, 62 participants filled in the GDS-15, and in Figure 4 the distribution of the GDS scores can be seen for the whole sample.

Figure 4: GDS scores distribution



Source: Author's own work

The participants in the sample mostly did not reach the threshold of depression (cut-off point 4 or higher) (67%, n = 51). However, 15% (n = 11) reported minor depressive symptoms, and two participants (3%) scored higher than 10 points on the GDS scale, indicating severe depressive symptoms. The mean score of the GDS was 2.59 (SD = 3.23). Nine participants (16%) did not fill in the GDS. Table 20 shows depression scores organised in the categories no depression, minor depressive symptoms and severe depressive symptoms.

Table 20: Geriatric Depression Scores

Variables	***n***	***%***	***Mean***	***SD***
GDS[1]			2.59	3.23
No Depression	51	67		
Minor depressive symptoms	11	15		
Severe depressive symptoms	2	3		

[1] No depressive symptoms (1-3 points), minor depressive symptoms (4 – 10 points), severe depressive symptoms (>10 points)

Source: Author's own work

The cross-tabulation between GDS scores and age groups shows that minor depressive symptoms occurred most often in the age group between 65–69 (55%, n = 6). Minor

depressive symptoms were reported by 17% (n = 8) of women and 20% (n = 3) by men. Only one woman and one man reported severe depressive symptoms. All values can be found in Table 21 (cross-tabulation for age and depressive symptoms) and Table 22 (cross-tabulation for sex and depressive symptoms).

Table 21: Cross-tabulation Age and Depressive Symptoms

		No Depression % (n)	Minor depressive symptoms % (n)	Severe Depressive Symptoms % (n)
Age	65 - 69	27 (13)	55 (6)	0
	70 - 74	35 (17)	9 (1)	50 (1)
	75 - 79	14 (7)	18 (2)	0
	80 - 84	16 (8)	9 (1)	0
	85+	8 (4)	9 (1)	50 (1)
	Total %	100	100	100

Source: Autor's own work

Table 22: Cross-tabulation Sex and Depressive Symptoms

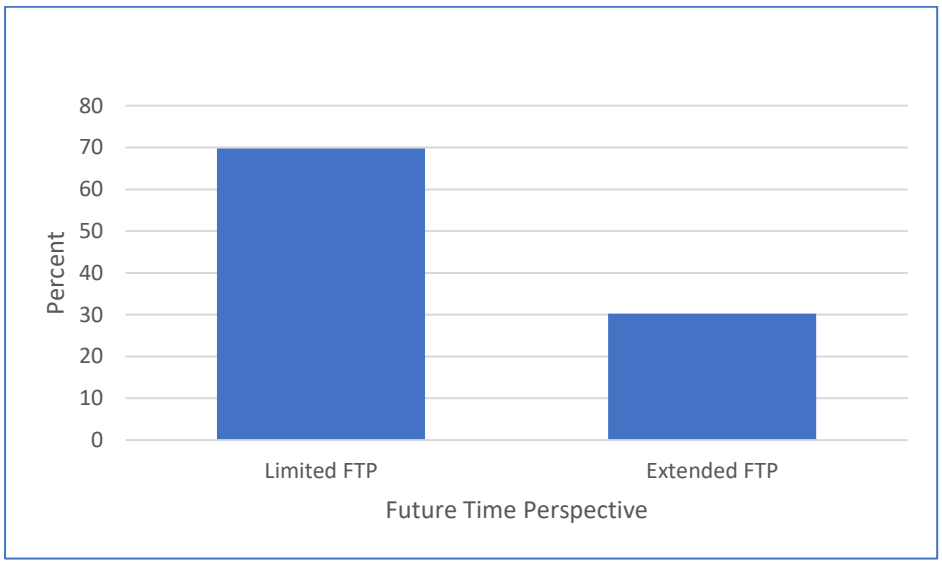
		No Depression % (n)	Minor depressive symptoms % (n)	Severe Depressive Symptoms % (n)	Total %
Sex	Female	81 (39)	17 (8)	2 (1)	100
	Male	73 (11)	20 (3)	7 (1)	100

Source: Author's own work

Future Time Perspective

In this section, the future time perspective will be examined further. The future time perspective has been recorded through the MIM (see Chapter 4 for more details). If participants indicated that they have any goals that continue into the distant future (>1 year) then it was recorded as extended future time perspective. If participants mentioned only goals that can be achieved just within 12 months, then their time perspective was recorded as limited. In total, 76 cases have been analysed and 70% (n = 53) of the participants mentioned only goals that could be achieved within one year, while 30% (n = 23) of the participants mentioned goals that need longer than one year to be achieved. Figure 5 shows the graph of the distribution in percentages.

Figure 5: Future Time Perspective (MIM - Nuttin)



Source: Author's own work

The cross-tabulation among the female participants showed that 74% (n = 42) had a limited and 26% (n = 15) an extended future time perspective. For the males in the study, 61% (n = 11) reported a limited and 39% (n = 7) an extended future time perspective (Table 23 and 24). There appears no difference between future time perspective and qualification and income respectively.

Table 23: Cross-tabulation Future Time Perspective (MIM) and sex

	Limited FTP % (n)	Extended FTP % (n)	Total %
Sex			
Female	74 (42)	26 (15)	100
Male	61 (11)	39 (7)	100

Source: Author's own work

Table 24: Cross-tabulation FTP (MIM) and age, employment and religion

	Limited FTP % (n)	Extended FTP % (n)
Age		
65 - 69	33 (17)	36 (8)
70 - 74	29 (15)	27 (6)
75 - 79	15 (8)	14 (3)
80 - 84	17 (9)	9 (2)
85+	6 (3)	14 (3)
Total %	100	100
Employment		
Retired	79 (37)	70 (16)
Some kind of employment	21 (10)	30 (7)
Total %	100	100
Religion		
No religion	34 (17)	14 (3)
Christianity	60 (30)	82 (18)
Buddhism	2 (1)	5 (1)
Other	4 (2)	0
Total %	100	100

Source: Author's own work

Another cross-tabulation was conducted to compare the time participants think they have left in life (Subjective Time Left in Life) and how they feel about it, compared to the future time perspective from the MIM (Table 25). In the group of participants who have a limited future time perspective measured with the MIM, 56% feel that the time they believe to have

left in life is long and 44% think the time they have left in life is short. In the group with the extended future time perspective, 43% believe the time is long and 57% believe the time is short. There seems to be little difference between the groups, and a chi-square test shows that the difference is not significant, X^2 (1, N = 62) = .0975, p. 0.323. Both instruments measure future time perspective, and it was expected that a limited or extended future time perspective would be associated with the perception of one's own lifetime (measured with the MIM) feeling short or long. The inconsistency is interesting, as it suggests that the scales do not measure the same construct, even though it should be assumed that they do.

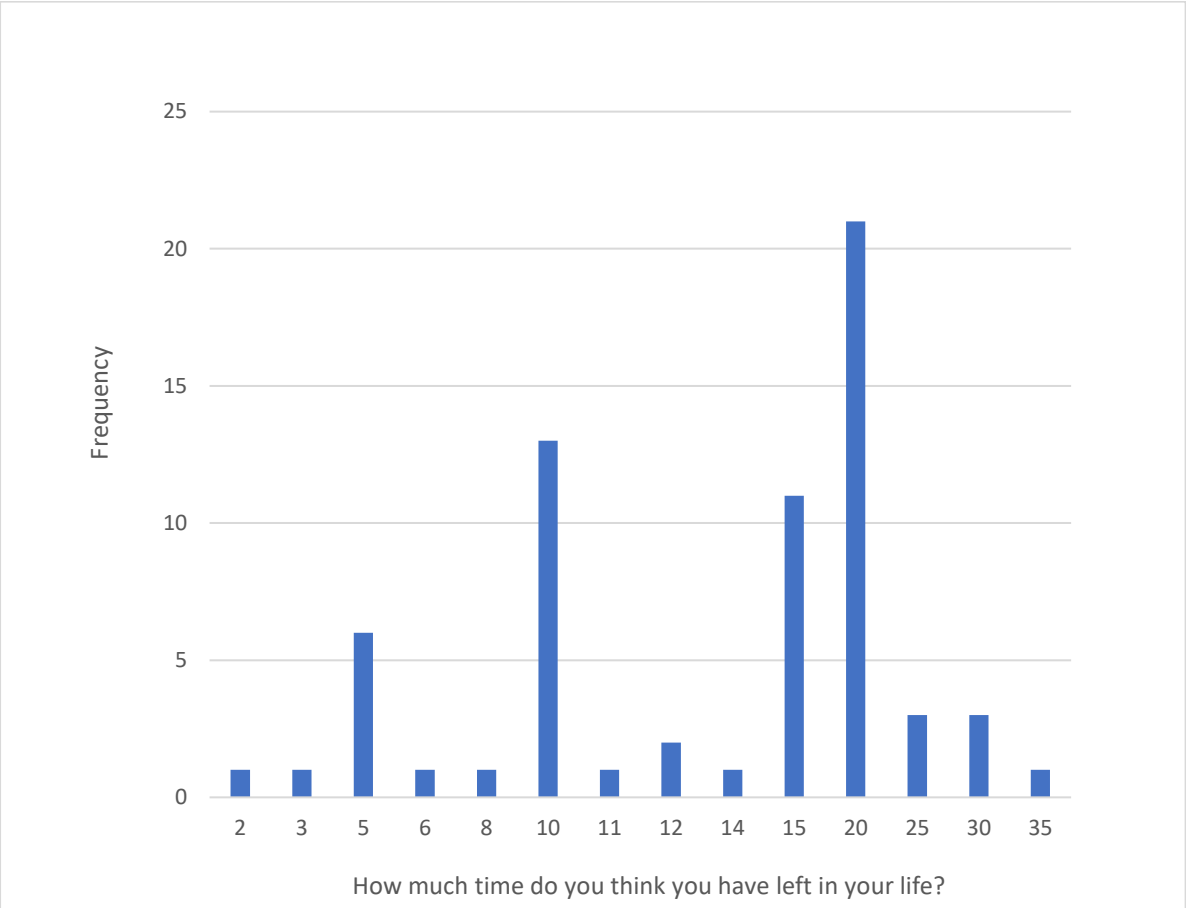
Table 25: Cross-tabulation Future Time Perspective (MIM) and Subjective TLL

	Limited FTP % (n)	**Extended FTP % (n)**
Subjective Time Left in Life		
Feels long	56 (23)	43 (9)
Feels short	44 (18)	57 (12)
Total %	100	100

Source: Author's own work

Asking participants how many years they actually believe they have left in life (in years) revealed a mean value of 15 years (SD = 7.12). Figure 6 shows the distribution.

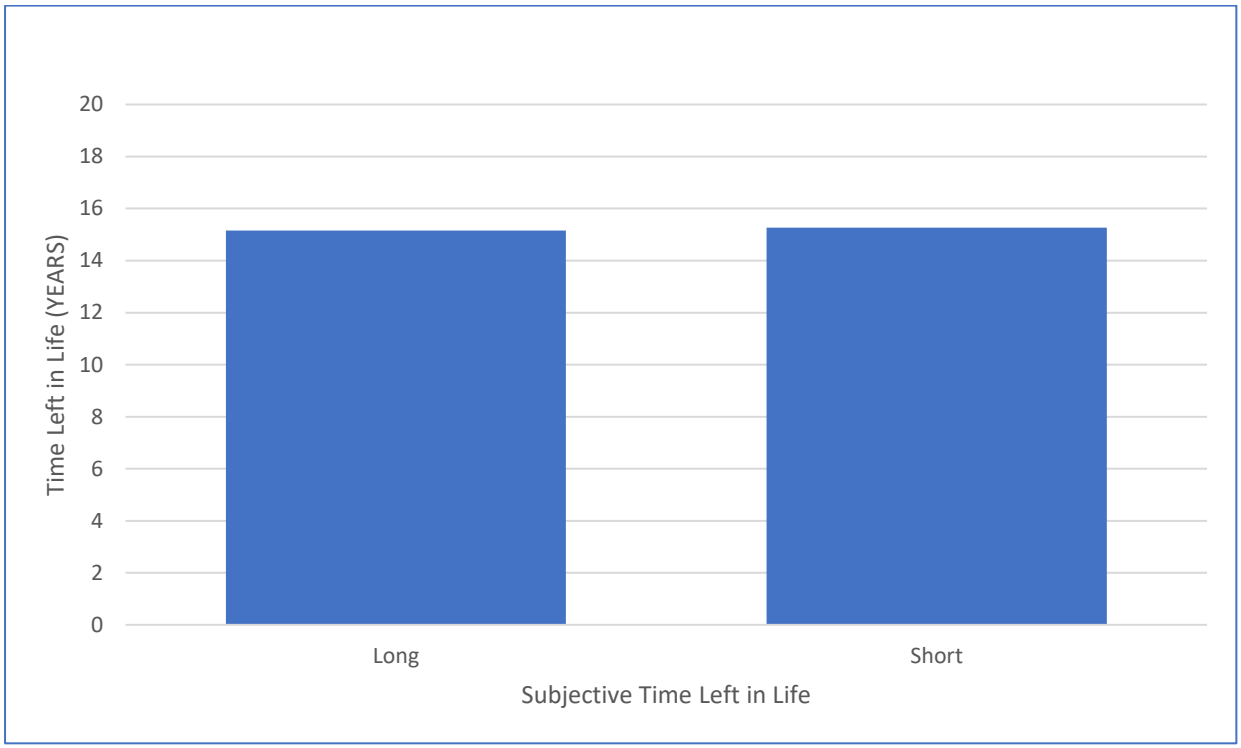
Figure 6: Time Left in Life in Years



Source: Author's own work

The next figure (Figure 7) shows the amount of time participants believe they have left in life (Time Left in Life in Years on the y-axis) and whether they think it is long or short (Subjective Time Left in Life on the x-axis). Again, there appears to be no difference between the two groups. There is no difference in the amount of time participants think they will be living depending on whether they feel the time is long or short.

Figure 7: Time Left in Life in Years compared to Subjective Time Left in Life



Source: Author's own work

Goals in later life

In this section the goals of the participants in the sample were analysed. Goals were measured with the MIM and categorised in two ways: (i) according to Nuttin's (1985) seven categories, and (ii) classified into maintenance and achievement goals as suggested by Rapkin and Fischer (1992).

In total 1,867 sentences from the MIM were categorised. In total, 70 participants provided information about goals and only six participants (8%) reported no goals at all. There is almost no difference between the age groups or sex, and the lack of reporting goals. However, it is interesting that only one participant who did not mention any goals also filled out the GDS. The remaining five participants without any goals mentioned in the MIM did not complete the GDS.

The participants mentioned on average 13.1 (SD = 4.68) goals that can be classified into achievement goals and 3.19 (mean) (SD = 1.85) goals that are maintenance goals. Only four female participants and two male participants provided no sentences that could be classified as maintenance or achievement goal. A closer look at the distribution of the goals shows that the most often named goals in the MIM are related to the *self*. Participants named on average 7.62 goals that are related to the *self* and 7.21 goals were related to *contact* with others. Goals related to *exploration* were the least named goals with on average only 0.78 goals. Table 26 shows the mean and standard deviation of goals classified in each category.

Table 26: Number of Goals related to each category

Goals	***Mean***	***SD***
Unclassified	1.04	1.17
Self	7.62	4.90
Realisation	1.39	1.48
Contact	7.21	4.49
Exploration	0.78	1.15
Transcendental	0.95	1.38
Possession	1.54	2.38
Leisure	1.39	1.33

Source: Author's own work

In the next step, the goal categories from Table 26 were recoded into bivariate variables (e.g. having a goal related to self or not having a goal related to self), and Table 27 shows which goals participants mentioned or did not mention. The most often mentioned goals were related to the *self* (91%, n = 69) and *contact* to others (91%, n = 69). Some kind of goals related to *leisure* were mentioned by 54 participants (71%), followed by goals related to *realisation* (68%, n = 52). Only 35 participants mentioned goals related to *exploration* and 38 reported *transcendental* goals (46% and 50% respectively).

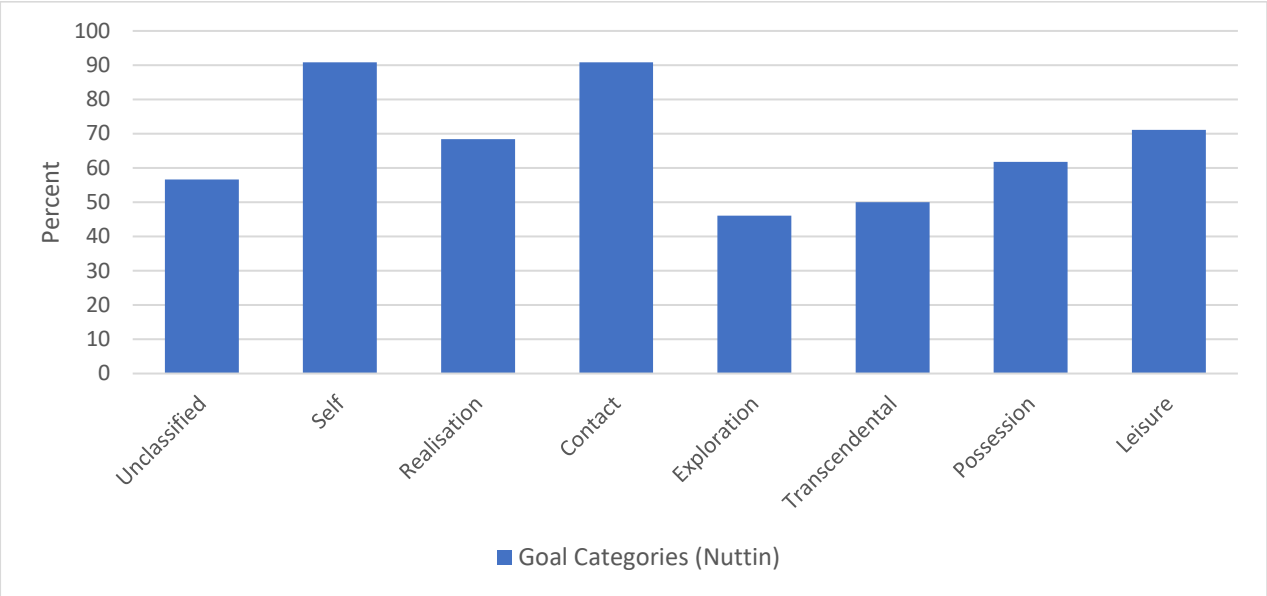
Table 27: Frequency Goals

Goals	***n***	***%***
Unclassified	43	57
Self	69	91
Realisation	52	68
Contact	69	91
Exploration	35	46
Transcendental	38	50
Possession	47	62
Leisure	54	71

Source: Author's own work

Figure 8 shows the frequency of goals named in the MIM in a bar chart for better visualisation of the distribution. It needs to be mentioned that the goals are not mutually exclusive, and the same participant can have a goal related to the *self* and at the same time a goal related to *realisation*, *contact* or any of the other listed goals.

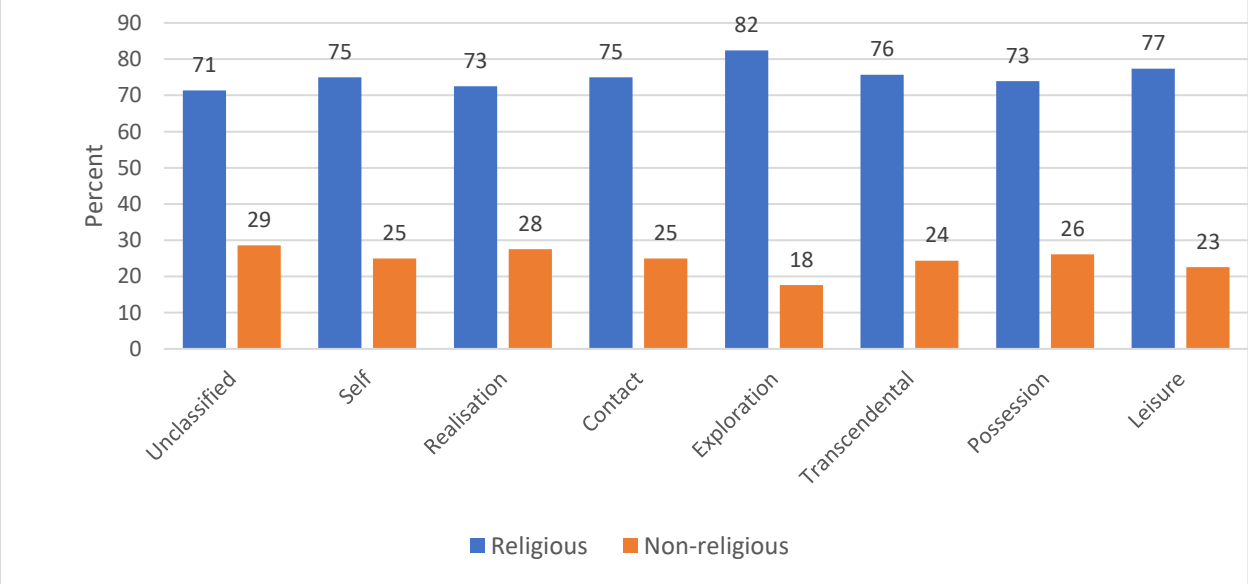
Figure 8: Goal Categories (MIM)



Source: Author's own work

Lastly, the cross-tabulation in Table 24 raised the question whether there is a difference between goals and religion. Therefore, a short analysis has been conducted to see how many religious and non-religious participants (in %) are in each goal category (Figure 9).

Figure 9: Goal Categories (MIM) divided by religion and non-religion



Source: Author's own work

Figure 9 shows that *exploration* was most often mentioned by religious participants, followed by leisure and *transcendental* goals. The least often mentioned goals by religious participants were goals that belong into the category of *realisations* followed by *unclassified* goals.

After running a chi-square test on all crosstabulations to compare whether there is a significant difference between goals chosen and whether participants are religious or not revealed no significant difference. Only *transcendental* goals reached almost the 5% threshold of significance (X^2(1, N = 72) = 0.452, p. 0.0501). Although the hypothesis that there is an association between religious beliefs and *transcendental* goals must statistically be rejected, it is important to note that these variables were expected to be connected. Therefore, further enquiry might be interesting.

5.2 Hypotheses Testing

The next section of this chapter will focus on the hypotheses testing part. Three hypotheses were proposed and will be answered accordingly.

5.2.1 Hypothesis One

The analysis begins with the first research question, *is a limited future time perspective associated with a lower goal pursuit in later life?* The following hypotheses were proposed:

H_0: There is no difference between the number of goals held by people with a limited or an extended future time perspective.
H_1: There is a difference between the number of goals held by people with a limited or an extended future time perspective.

First, the dependent variable was tested for normal distribution. The dependent variable in the sample is the number of goals participants mentioned in the MIM. Table 28 shows the mean, standard deviation and range.

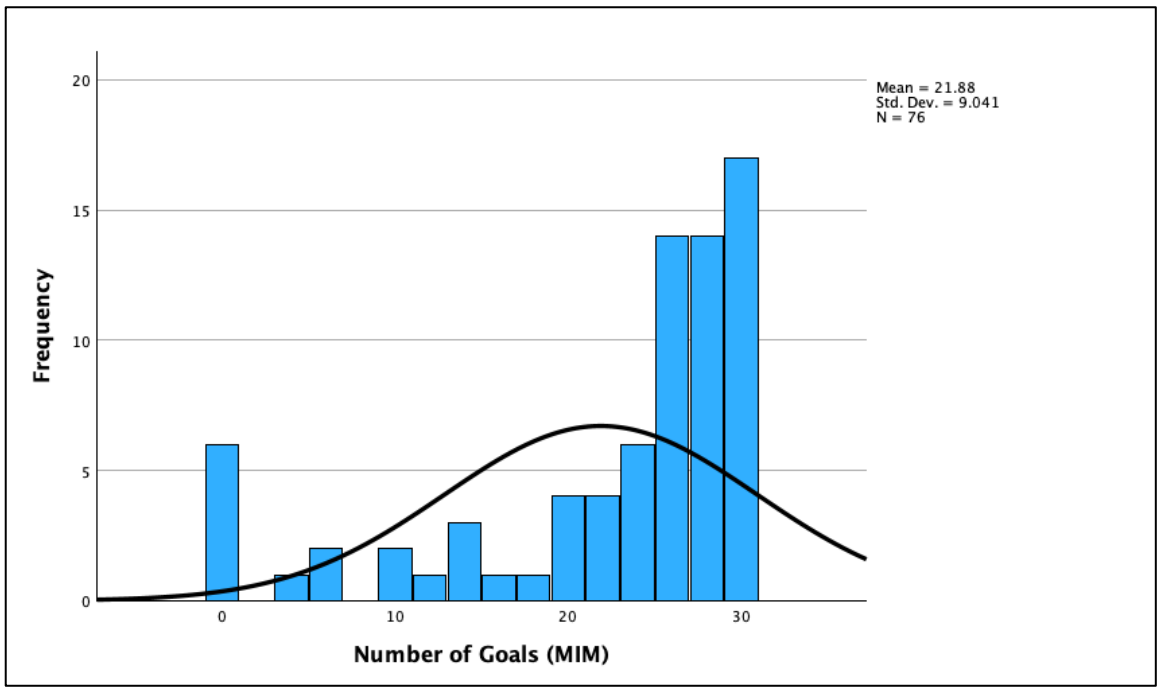
Table 28: Number of Goals (Distribution)

Sample size	76
Mean	21.88
Std. Deviation	9.04
Range	30
Minimum	0
Maximum	30

Source: Author's own work

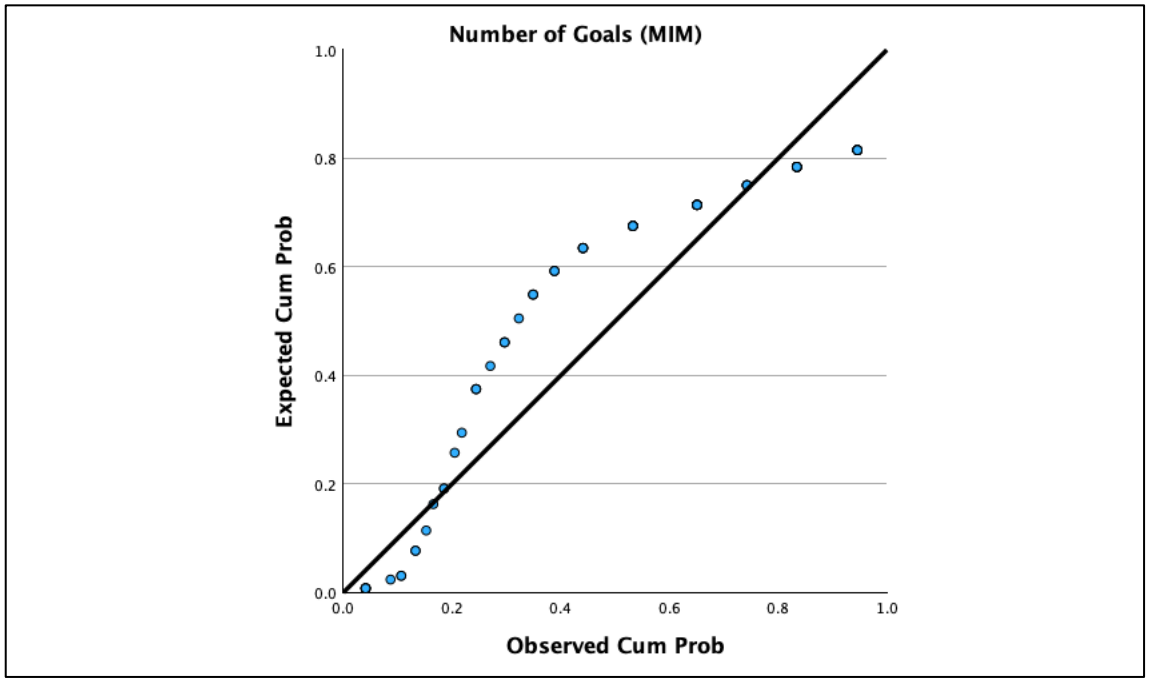
The histogram shows that the data is not normally distributed and is negatively skewed (see Figure 10). A P-P Plot confirmed that the data is not normally distributed (Figure 11) and that instead of an independent t-test a non-parametric test needed to be selected to explore the variables.

Figure 10: Histogram of Number of Goals and its distribution



Source: Author's own work

Figure 11: Normal P-P Plot for Number of Goals (MIM)

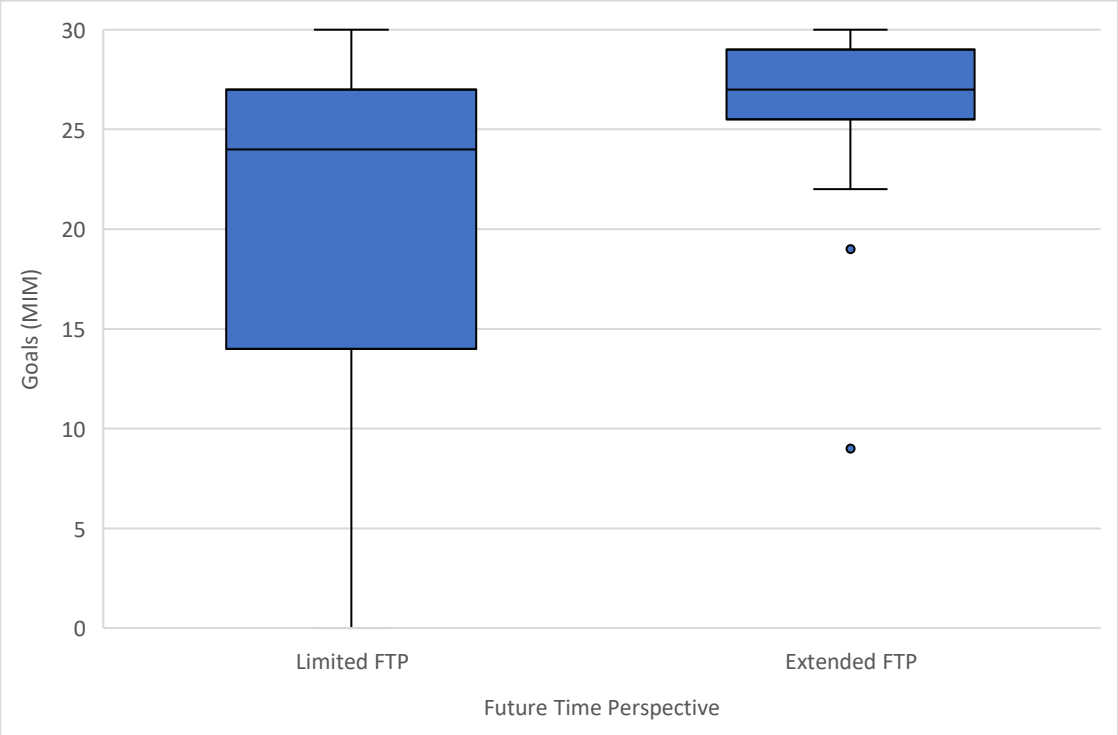


Source: Author's own work

As mentioned in Chapter 4, if the dependent variable is not normally distributed, the Mann-Whitney U Test as a non-parametric test can be applied (Argyrous, 2011; Field, 2018). The Mann-Whitney U Test ranks the data, and the group with the lowest mean rank has a higher proportion of lower numbers and the group with the higher mean rank has more numbers in the upper end (Field, 2018). After conducting the Mann Whitney U Test, it shows that participants with extended future time perspective (mean rank = 48.20) reported significantly more goals than participants from the limited future time perspective group (mean rank = 34.2), $U = 832.50$, $z = 2.53$, $p = 0.011$. The median for the limited future time perspective group was 24 and for the extended future time perspective 27.

Therefore, the null hypothesis must be rejected, and the alternative hypothesis can be accepted that there is a difference between the number of goals held by people with a limited or an extended future time perspective. Figure 12 shows the difference between the median number of goals named by participants and their future time perspective.

Figure 12: Boxplot with Difference between Goals and Future Time Perspective



Source: Author's own work

5.2.2 Hypothesis Two

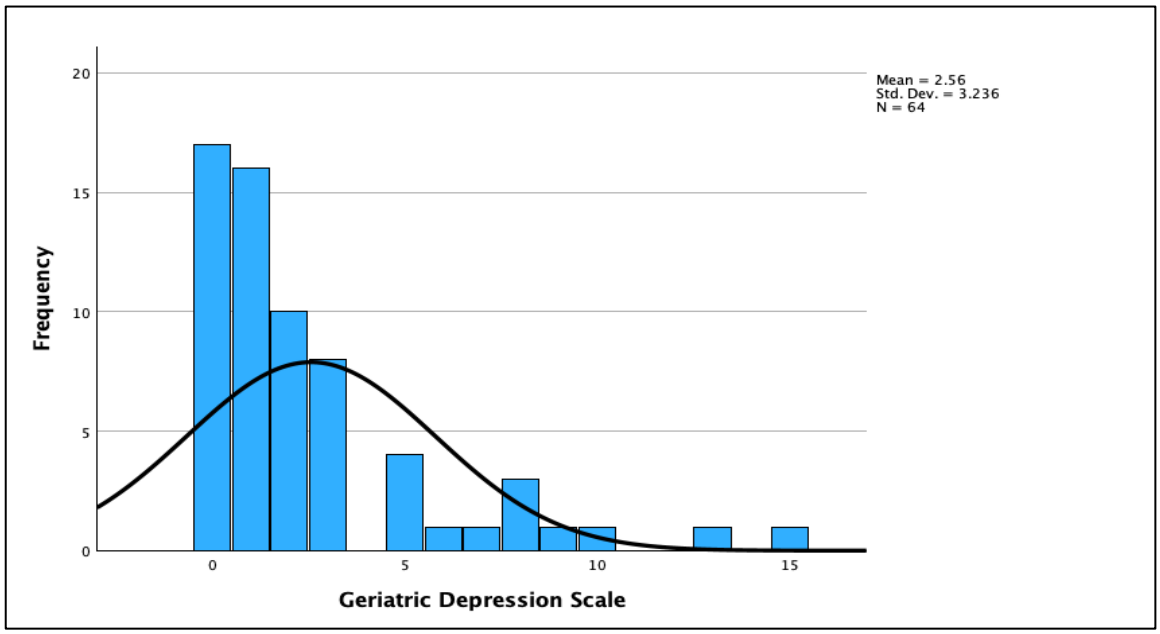
In the next step, the second research question will be answered. *What is the relationship between the number of depressive symptoms and age?* The following hypotheses were examined:

H_0: There is no relationship between increasing age and depressive symptoms.

H_1: There is a relationship between increasing age and depressive symptoms.

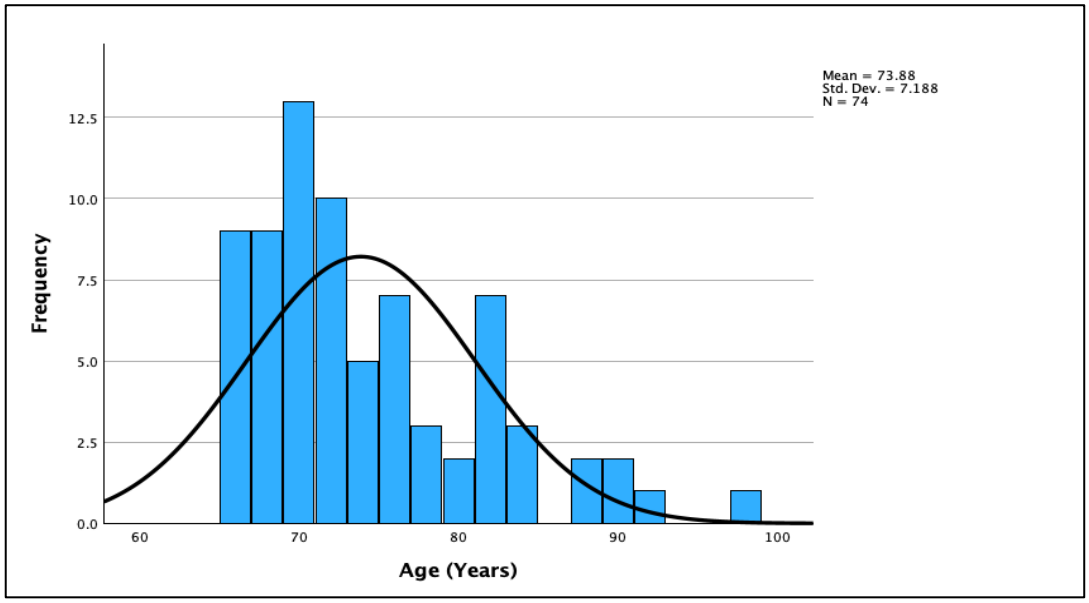
To answer the research question, the GDS-15 scores and the age of the participants have been tested for normality. Neither age nor the depression scores measured with the GDS were normally distributed (see Figure 13 for Geriatric Depression Score and Figure 14 for age in years). The P-P plots have been created to confirm the distribution of the data (Figure 15: Normal P-P Plot for Geriatric Depression Scale and Figure 16: Normal P-P Plot Age (Years).

Figure 13: Histogram of Geriatric Depression Scale



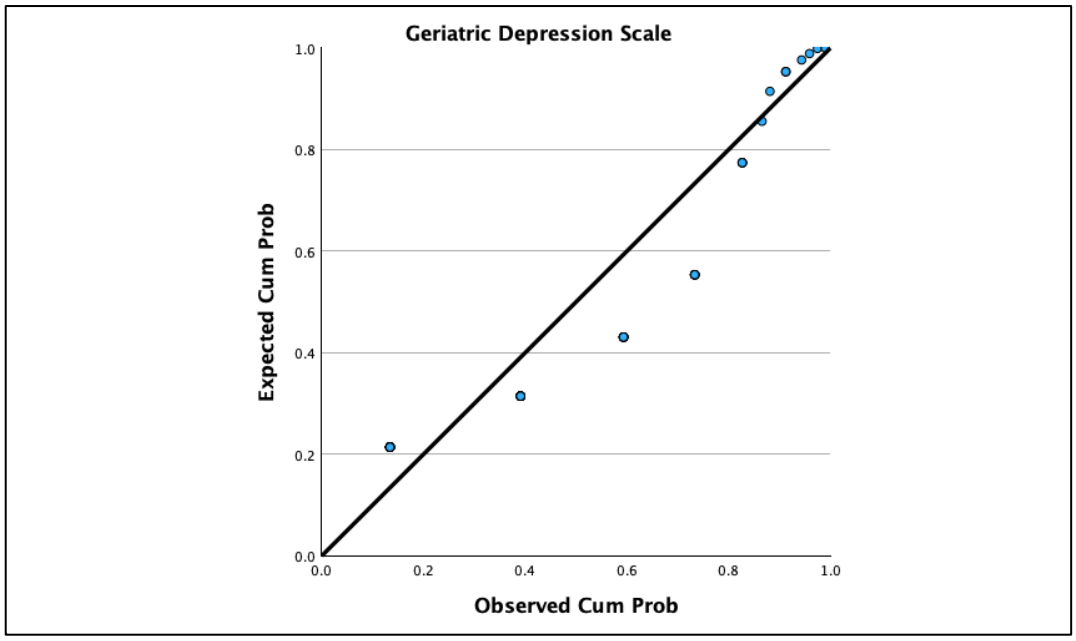
Source: Author's own work

Figure 14: Histogram of Age in Years



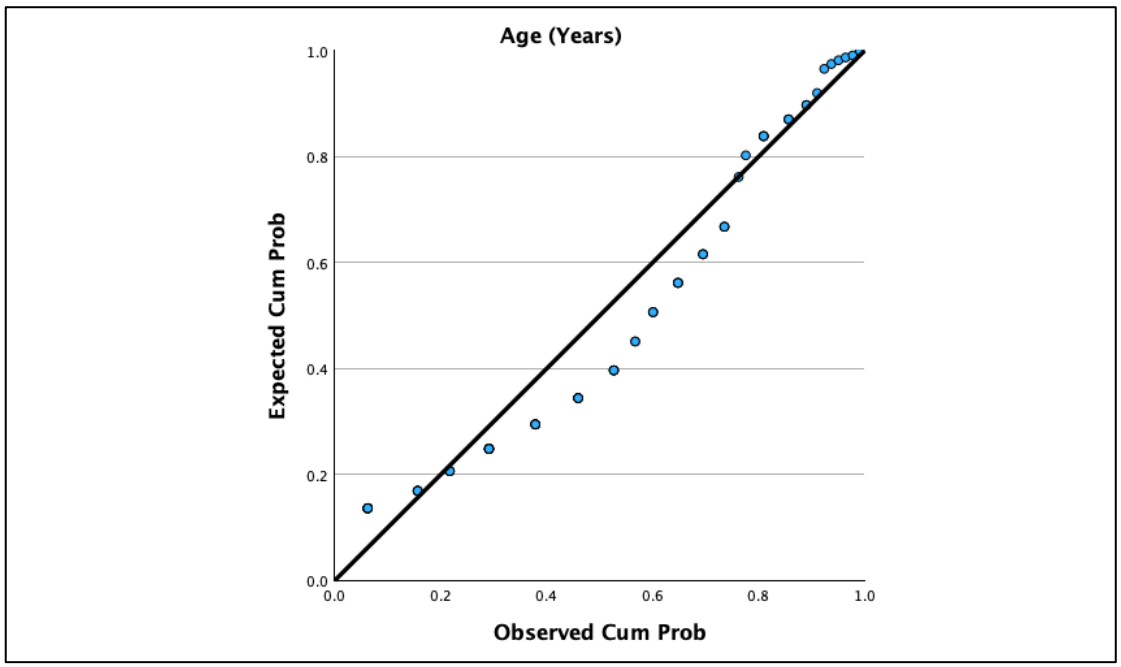
Source: Author's own work

Figure 15: Normal P-P Plot for Geriatric Depression Scale



Source: Author's own work

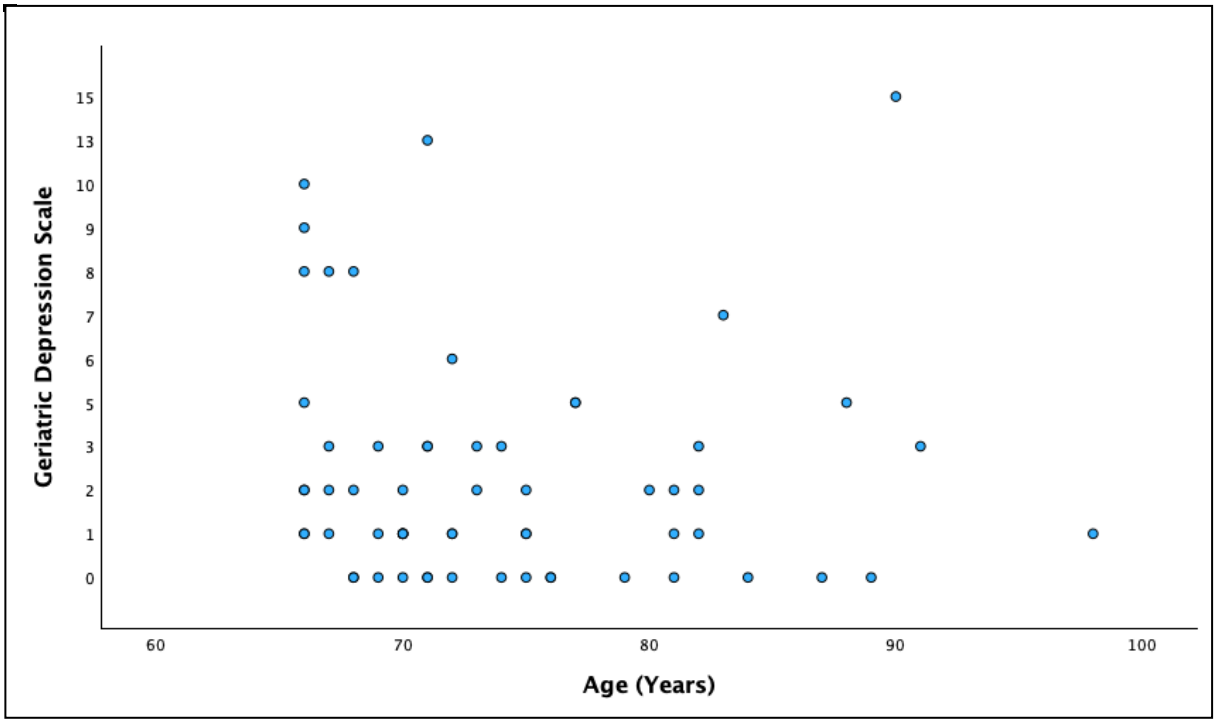
Figure 16: Normal P-P Plot for Age (Years)



Source: Author's own work

Histograms (Figure 13 and 14) and the P-P Plots (Figure 15 and 16) show that the data is not normally distributed. Additionally, a K-S test was produced, and depression scores and age in years were significantly different from a normal distribution ($D(62) = 0.245$, $p = <0.001$ and $D(62) = 0.161$, $p = <0.001$, respectively). In a further step a scatterplot was created to see if an obvious pattern can be found (see Figure 17). The scatterplot shows an outlier, and even after initial removal of the outlier the data was still not normally distributed, and the decision was made to keep the outlier in the analysis.

Figure 17: Scatterplot GDS by Age (Years)



Source: Author's own work

Given the non-normal distribution of the dependent variable the Spearman's rank-order (Spearman's rho) as a non-parametric test has been used to analyse the data (Argyrous, 2011; Field, 2018).

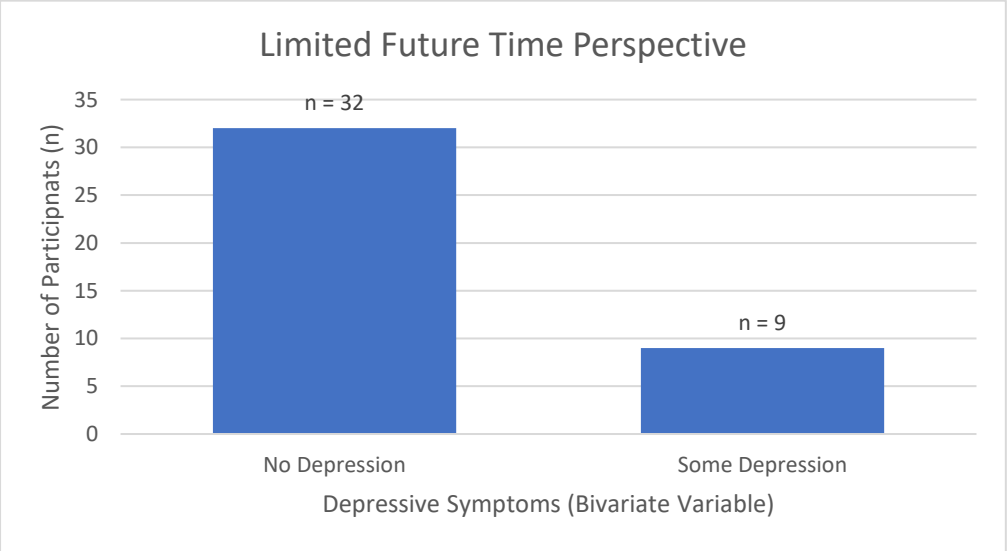
The Spearman's rank-order (r_s) shows that there is no significant relationship between age in years and depression scores r_s = -0.151, 95% CI [-0.393 – 0.110], p = 0.242. Therefore, the null hypothesis cannot be rejected. However, due to the small subgroup sizes, careful interpretation of the findings is necessary, and future research may yield different conclusions.

5.2.3 Hypothesis Three

The last research question examines *if older adults with limited future time perspective pursue fewer goals in later life, they will have more depressive symptoms compared to their counterparts (who might experience an extended future time perspective and more goals).*

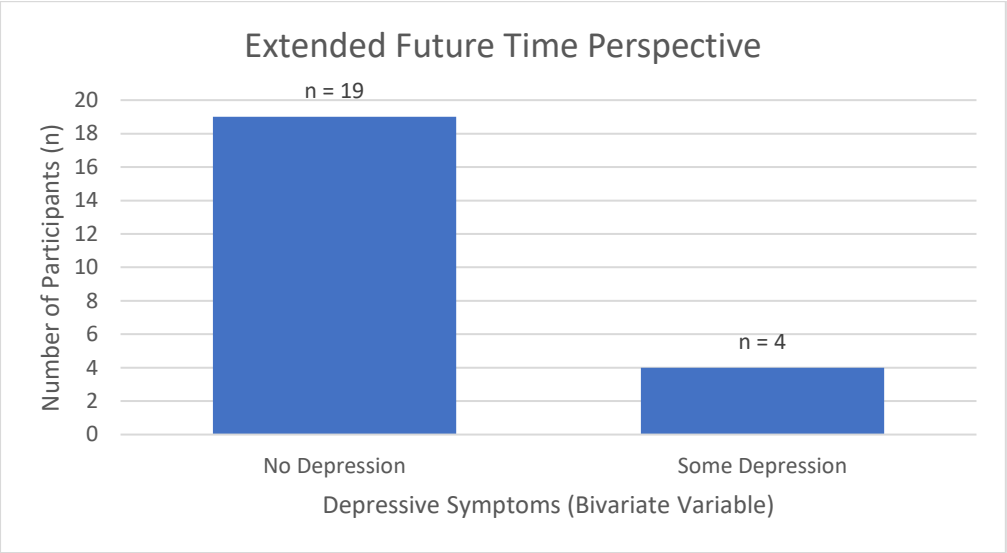
The first part of the hypothesis was already confirmed: Participants with a limited future time perspective named fewer goals than participants with an extended future time perspective. In the next step, it was tested whether there is a difference between the number of goals and depressive symptoms. Initially, an Analysis of Variance (ANOVA) was planned to be conducted, but the assumption of normality was violated (the dependent variable Goals was not normally distributed – see Histogram and P-P Plot (Figure 10 and 11). Hence, a different approach was chosen. For the analysis, the dataset was filtered into participants with a limited and extended future time perspective, and two Mann-Whitney U tests were performed. Additionally, the Geriatric Depression Scale was recoded into a bivariate variable (no depression/ some depression). Figures 18 and 19 show the differences between participants with no depression and some depression within the limited and extended future time perspective groups.

Figure 18: Categorical Difference in Depressive Symptoms among Participants with Limited Future Time Perspective



Source: Author's own work

Figure 19: Categorical Difference in Depressive Symptoms among Participants with Extended Future Time Perspective



Source: Author's own work

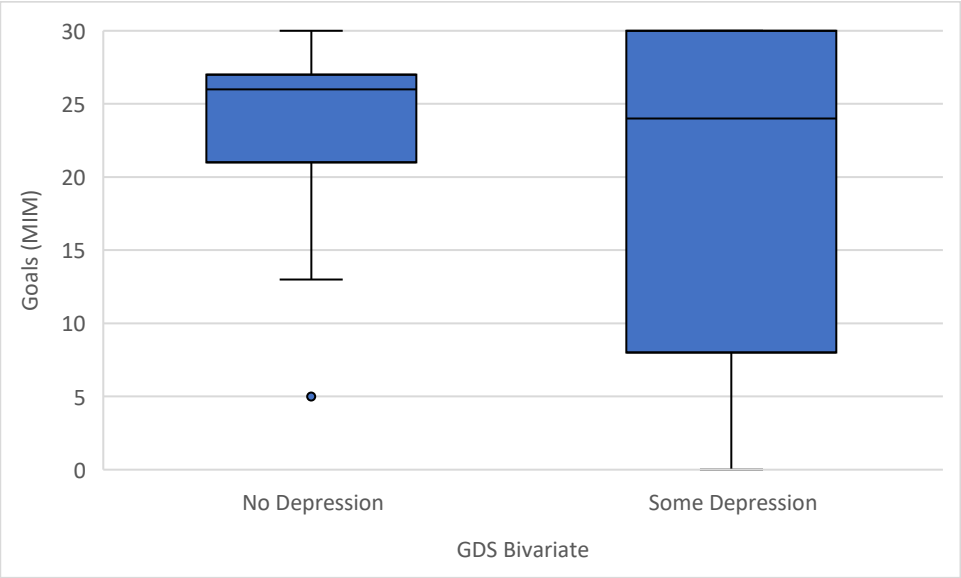
The following hypothesis was proposed, and each hypothesis was tested separately with participants who had a limited future time perspective and with participants with an extended future time perspective.

H0: There is no difference in the number of goals and the two types of depressive profiles.
H1: There is a difference in the number of goals and the two types of depressive profiles.

The Mann Whitney U Test for participants with limited future time perspective shows that there is no statistical difference between the number of goals and having depressive symptoms (mean Rank = 20.88) or not having depressive symptoms (mean rank = 21.44), U = 148.00, z = 0.127, p = 0.914.

Figure 20 shows the boxplot for the group with a limited future time perspective, displaying the number of goals on the Y-axis and whether they are experiencing depressive feelings according to the GDS on the X-axis. The median number of goals in the limited future time perspective group without depression is 26, while in the group with some depression, the median is 24. Subsequently, the same analysis was conducted for the group with an extended future time perspective.

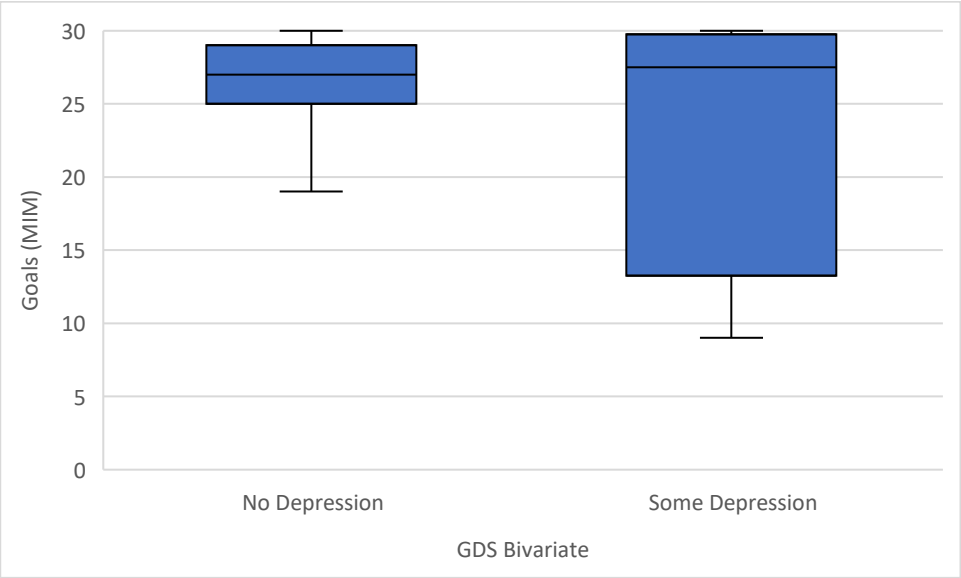
Figure 20: Boxplot Limited Future Time Perspective



Source: Author's own work

Finally, a Mann-Whitney U test was conducted for participants with an extended future time perspective. This test also did not yield statistically significant results. There is no difference between the number of goals and no depressive symptoms (mean rank = 11.87) and participants with depressive symptoms (mean rank = 12.63), $U = 40.50$, $z = 0.205$, $p = 0.845$. Figure 21 shows the boxplot for the group with an extended future time perspective, displaying the number of goals on the Y-axis and whether they are experiencing depressive feelings according to the GDS on the X-axis. The median number of goals in the limited future time perspective group without depression is 27, while in the group with some depression, the median is 27.5. Based on the test statistics, the null hypotheses cannot be rejected.

Figure 21: Boxplot Extended Future Time Perspective



Source: Author's own work

5.3 Summary

In this chapter, the sample was analysed, and the findings show that the participants in this study were predominantly White English, retired, married, and religious. Regarding socio-economic status, most participants have a university qualification, but their incomes varied. While men were more often in the middle-income group, women were more often in the low- or high-income groups. The functional health status was measured with the IADL, and it shows that the sample was highly functional, with only a few participants experiencing some limitations and even fewer with severe limitations. However, given the small sample size and the subsequent low distribution in the cell counts, more advanced statistical techniques to test if the differences between the groups are significant could not be performed.

Scrutiny of depressive symptoms revealed that the majority of participants did not have depressive symptoms that reached the criterion of subthreshold depression; only 17% of the participants were over the threshold. Furthermore, the sample showed that most participants had a limited future time perspective measured with the MIM, but a chi-square test did not find any significant difference between the extent of the future time perspective and whether it felt long or short for the participants. On average, participants believe they will live another 15 years.

Regarding goals in later life, the study found that goals related to the *self* and *contact* with others were the most often named goals. *Transcendental* goals seemed to be important for people with religious beliefs, but the difference was not significant.

In the last step, the hypotheses proposed in Chapter 4 were tested. A Mann-Whitney U test confirmed that participants with an extended future time perspective have more goals, thus confirming hypothesis one. The second hypothesis assumed that with increasing age, participants would have more depressive symptoms. This hypothesis was tested with Spearman's rank-order given the non-normal distribution of the dependent variable and had to be rejected. The final hypothesis tested if older adults with a limited future time perspective and fewer goals also have higher depression scores. Two Mann-Whitney U tests were performed, and they showed no significant difference between participants with a limited or extended future time perspective and goals and depression in later life.

In summary, the study reveals that older adults in the sample possess diverse goals despite having a limited future time perspective. As expected, those with a more extended future time perspective tend to have more goals than their counterparts. Additionally, the findings indicate that depression scores do not rise with age within this sample, contrary to previously conducted studies (Sjöberg *et al.*, 2017; Arias-de la Torre *et al.*, 2021; Lim *et al.*, 2021) and more in line with a study that found that the prevalence of depressive symptoms does not increase among older adults (Mohebbi *et al.*, 2019).

The next chapter will provide the results from the thematic analysis of the qualitative strand (Study Two) of the study.

6 Qualitative Analysis

The following chapter will answer the research question, 'How does perceived future time perspective impact older people's views about their own goals?' The themes generated from the interviews will be presented, and the research question will be answered at the end of the chapter. Before the analysis and the themes are described, I will provide a short legend of punctuation and symbols in the transcript. The transcripts were partially smoothed and shortened for better readability. If a quote in this chapter has been shortened, it is indicated with three full stops (…). If a single or a few words have been inserted for better readability, it is also signposted with the inserted word added [for example] or when identifiers were removed [identifier removed].

In Table 29, the participants' pseudonyms, as well as their age range, last occupation or field of work and retirement status, can be found to help the reader have a better understanding of the participants' background.

In total, four themes were created from interviews. Two themes surround how health and retirement impacted participants' thinking about their future and goals. The created themes were:

Theme 1: *The Shift Toward Present-Focused Goals*
Theme 2: *The Retirement Paradox*

While retirement and health impact how participants think about the future and their goals, two other themes were created that explore how participants in this study adapt to these changes:

Theme 3: *Dealing with the Ever-Changing Future*
Theme 4: *The Evolution of Selection, Optimisation and Compensation*

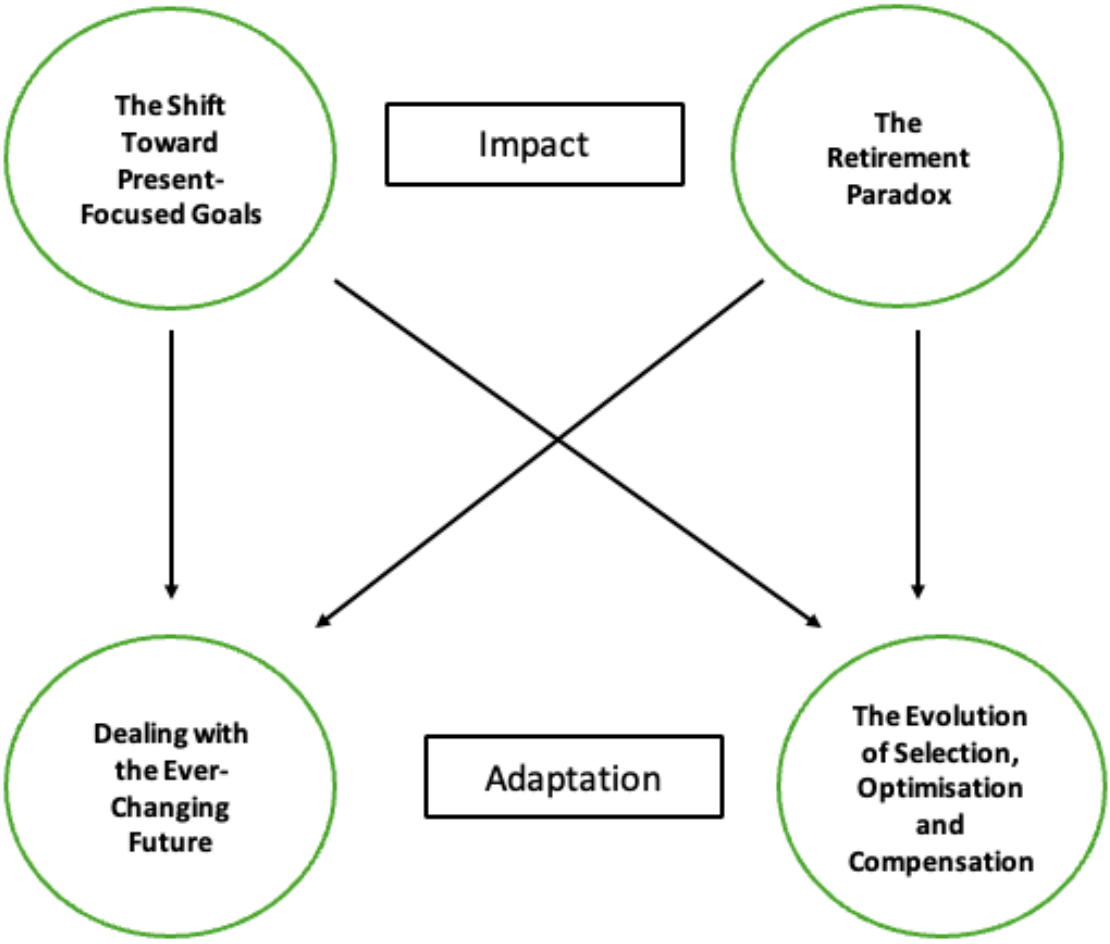
Table 29: Participants' Background

ID	Pseudonym*	Age	Field of work	Employment status
1	Christian	65 - 69	Management	Retired
2	Beth	70 - 74	Management	Retried
3	Louise	70 - 74	Professional labour	Retired
4	Alice	65 – 69	Manual labour	Full-time employed
5	Carmen	70 - 74	Management	Retried
6	Ian	70 - 74	Professional labour	Retired
7	Hannah	65 - 69	Professional labour	Retired
8	Shannon	65 - 69	Professional labour	Full-time employed
9	Barbara	65 - 69	Administrative labour	Retired
10	Carol	90 - 99	Professional labour	Retried
11	Diana	70 - 74	Manual labour	Retried
12	Thomas	75 - 80	Administrative labour	Retried
13	Helen	75 - 80	Professional labour	Retired
14	Angela	65 - 69	Professional labour	Part-time employed
15	Sarah	65 - 69	Professional labour	Full-time employed
16	Garry	65 - 69	Professional labour	Retired
17	Jonathan	65 - 69	Professional labour	Full-time employed
18	Laura	65 - 69	Professional labour	Retired
*All names are pseudonyms				

Source: Author's own work

Figure 20 shows the thematic map containing all four themes described in the following sections. The first two themes (Theme 1 and 2) are impact themes, which means they show the impact of health and retirement on participants' goals and future time perspective, while the last two themes (Theme 3 and 4) are adaptation themes. The adaptation themes describe how participants deal with the impact health and retirement have on them. The arrows indicate that each impact theme can be addressed through either adaptation theme, as they are not mutually exclusive. Each theme will be described and analysed in greater depth in the following sections.

Figure 22: Thematic Map



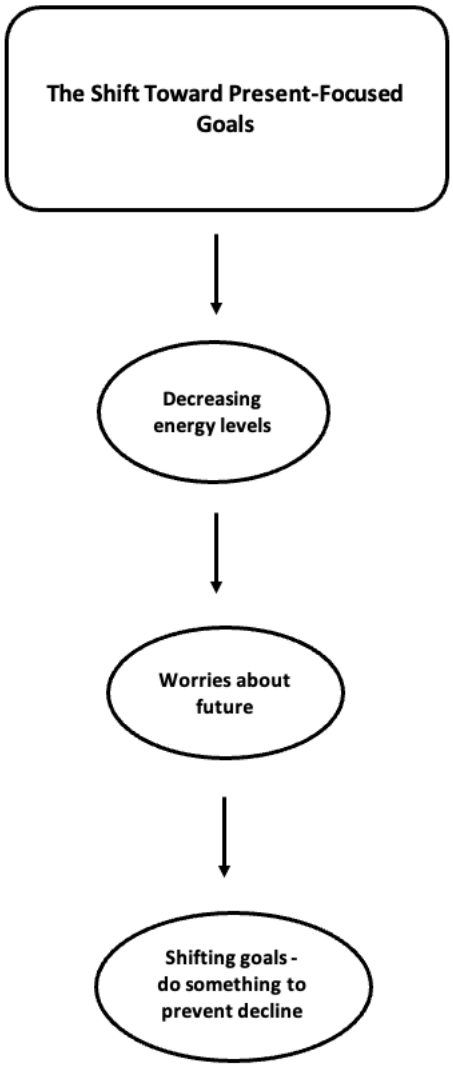
Source: Author's own work

6.1 The Shift Toward Present-Focused Goals

Health changes when one gets older, and with it, the unpredictability of the future becomes more salient, subsequently influencing their future time perspective. Participants describe that they experience decreased energy and subsequently try to prolong their health to stay fit and active to avoid possible physical and mental decline in the future. Fears and worries about cognitive or physical decline are expressed in the interviews and reflected in participants' proactive efforts to plan for their future health. Goals are adjusted to the circumstances, long-term goals are being abandoned, and short-term goals are becoming more prevalent, highlighting the limitations of their future time perspective. As the future is unpredictable, participants focus on the present and try to balance enjoying their lives and being aware of possible health declines in the future. The thematic map (Figure 21) shows

how the experience of decreasing energy levels leads them to worry about their future and subsequently shift their goals to proactively work on prevention to avoid further decline.

Figure 23: Thematic Map - The Shift Toward Present-Focused Goals



Source: Author's own work

6.1.1 Decreasing energy levels

Participants experience a decrease in their energy levels. The reason for the decrease can be multifaceted. Some report health issues and others describe how they have put too much energy into their previous goals. An example is provided by Ian, who describes how being an active party member has become increasingly difficult for him over the years as the party changed its direction and required from their members an increased workload and more complex tasks.

> *"… they were very keen, we should do a lot canvassing and campaigning and want to scan routes to do all this and have this in the town where we speak to people, which I've taken part in quite a lot. But I just felt that I'd had enough of this. I wanted to break that; basically, I think eight years is enough." (Ian, 70 - 74)*

Since retiring as a health professional, Ian has experienced various health issues. He was diagnosed with cancer a few years ago and currently has an outstanding appointment to have a pacemaker fitted. While Ian eagerly worked and supported his party, the ongoing health issues and tiredness made him change priorities. Giving up less enjoyable tasks will give Ian more time to focus on his family and other hobbies.

Some participants have experienced fluctuations in their energy levels throughout their lives, and the feeling of tiredness is familiar to them. Carmen reflects on how her energy levels have changed, particularly during her final working years and after her cancer diagnosis a decade ago. She explains that while she initially enjoyed her work, over time, the travel and early starts became tedious, and she began to feel jaded. Recognising that her work required her "*best self*", she realised her diminishing energy and enthusiasm made it unsuitable for her to continue, especially after undergoing cancer treatment. She decided to leave, feeling it was the right choice given her physical and emotional state.

> *"It was like noticing the energy I was bringing to something. If it's starting to feel tedious, if you are having to get up at half five in the morning. […] Because I think with that sort of work, you have to take your best self to it. You can't do it in a jaded sort of way" (Carmen, 70 - 74)*

Carmen learnt that she often had her energy levels up and down and was never good at pacing herself. Nowadays, she manages her time better, and she is aware that her *"time is limited now"*, which emphasises a limited future time perspective.

The change in energy levels throughout life needs to be managed and adapted to. But before it can be dealt with, the realisation that something does not feel right needs to be acknowledged. Diana began traveling more in her early 50s and fulfilled a lifelong dream by visiting all the continents. However, as she grew older, she realised that she could no longer

handle long journeys, as the excitement of traveling was increasingly overshadowed by the exhaustion that followed.

> *"I think I've always found that very long journeys are quite tiring. […] You know what I mean? […] But I think, do I really want to be that tired?" (Diana, 70 - 74)*

Diana has not travelled long distances since then. The tiredness of long travel caused her not to travel anymore. Her spatial space got narrower, and her travel goals were smaller. Instead of travelling, Diana focuses on her other hobby: singing in a choir. Ambitions are adjusted to match energy levels, and goals are adapted accordingly. Christian shares a similar experience. While he felt he had "*unlimited energy"* when he was younger, now, in retirement, he no longer has the same energy levels he once did. Christian reflects on his 12 years as a councillor, during which he balanced his full-time job with his council responsibilities. He recalls that period, from the late 1980s to the 2000s, as highly productive, marked by seemingly boundless energy that enabled him to manage multiple commitments. However, as changes at work, such as a merger approached, he decided it was time to step down, feeling he had served long enough. Looking back, he is surprised at the energy he once had, acknowledging that he no longer has the capacity to juggle these demands.

> *"I don't have the energy. But then I seem to have had looking back on unlimited energy. When I think that what I managed to do, then I look back and think just how did you do that?" (Christian, 65 - 69)*

The lack of energy makes the participants wonder how they managed everything in the past, but they seem to accept that life has changed and take smaller tasks and goals. This notion aligns with findings from a study that demonstrated a "deceleration" as participants entered retirement (Wanka, 2020, p. 507).

However, not everyone reports decreased energy. Shannon describes vividly and repeatedly that she has a lot of energy left and that it is impossible to imagine a time when she will not work anymore. Despite noticing some decline in her memory, she still has plenty of energy and enjoys her work. She plans to continue working for now but is considering moving back to Scotland, which might bring her time at the current job to an end. Shannon finds it hard to

imagine retiring and not having the routine of going to work, as she enjoys the engagement and purpose her job provides.

> *"But I still have lots of energy. […] but I will prob ... I plan to move back to Scotland so I may not be here for too much longer. […] I have a lot of energy, and I like the students, and I like coming to work. I don't really, I can't really imagine what it'd be like to retire, you know, imagine what it would be like to get up and not have to go to work." (Shannon, 65 – 69)*

Shannon's experience somewhat contradicts what other participants shared in the study. However, in the interview, she explains that she is now ready to retire and move back to her hometown to enjoy life. It remains unclear whether Shannon's shift in perspective stems from a feeling that time is running out.

6.1.2 Worries about future

Health problems impact how participants think about their future and their goals. Some participants described how they felt they were in limbo and could not enjoy life as they used to. Health problems prevent them from planning, and they are hoping for better health to do activities again. Ian describes feeling in a state of limbo while waiting to have a pacemaker implanted. Although he generally feels "*all right most of the time*", he recalls feeling quite unwell when he experienced a very slow pulse. Until the procedure is completed, he feels limited in his ability to travel or engage in activities. However, Ian is optimistic that once the pacemaker is fitted, he will regain his health and energy, allowing him to resume traveling abroad and pursuing trips he enjoys.

> *"So, but once I get, I think when I have the pacemaker fitted, I should be back in a good state, and then maybe we can go abroad again and continue. Do some more trips. And I'd love to do that." (Ian, 70 - 74)*

Ian's heart problem is at the centre of his thinking. He worries about the low pace of his heart and that he cannot do strenuous activities. Waiting for his peacemaker to be fitted gives him a reason to take life slower.

Diana reported a similar account of being in limbo. She is waiting for surgery and adapts her bathroom to make it safer for her. By waiting for these activities to be done, she cannot plan and waits until everything is sorted. Long-term goals are not visible, and her mind focuses on the short-term goals of finishing her bathroom and the surgery.

> *"Nothing planned. Well, for this summer, I don't know when they're going to do the bathroom. And I'm also waiting for more surgery […]. And I don't know when that will be. So, until those are sorted, I can't really make firm plans." (Diana, 70 - 74)*

For the participants, health issues appear to be a sign of ageing. They do not feel old until they experience problems. Experiencing health problems cause participants to focus on new goals related to disease management. While Ian focuses on his blood pressure and Diana on adapting her bathroom to be more age-friendly, Louise's goal is to live as independently as possible for as long as possible as she acknowledges the health challenges that come with ageing, such as arthritis in her hands, which she has managed to control, and undergoing laser treatment for potential glaucoma. Living alone, she is particularly conscious of the importance of maintaining her health, as there is no one else to care for her if she becomes unwell. This awareness motivates her to prioritise staying as healthy as possible to maintain her independence.

> *"Well, obviously, because I'm older, and this is what happens when you get old, you are more likely to be ill, and you're more likely to have things going wrong. […] and I'm aware that, you know, I have to really look after my health because living alone as well. Always been conscious that there was nobody to look after you if you're ill." (Louise, 70 - 74)*

Worries about the future are prevalent. Not only experiences of worsened health but imagining an unknown future cause worries. They might be worried that they will develop dementia or the realisation that in the future, problems might arise. Taking life as it comes is a way to deal with the new circumstances. Goals are no longer set for the distant future; instead, participants are focusing more on the present. By concentrating on the present, they are able to keep going and maintain a sense of equilibrium.

"One thing I have noticed, and this is true for me now, is if you, if you bruise yourself, when you're 50, or 40, or whatever, it will heal reasonably quickly. The older you get these kinds of things, don't. I think what I've seen in the people perhaps 10 years older than me, 15 years older than me, that type of age, is that. […] So, I would say in 10 years' time, I would want to be conscious of that being a potential problem." (Jonathan, 65 - 69)

Jonathan realises that health issues could become problematic in the future. His concerns seem to be less about specific issues, such as a slower-healing bruise, and more about general, abstract health worries. He will later mention in the interview that he tries actively to slow down the process. His goals are to stay mentally and physically fit to enjoy as much time as possible with his grandchildren. He imagines a future where he will live until a very old age and compares himself with other people in his family and network to imagine how this could look. In doing so, he emphasises an extended future time perspective and prepares himself for an unknown yet optimistic future, with goals focused on health and maintaining his physical abilities.

Worries about the future can become salient when others start to doubt one's ability. Life seems to be perfectly normal. However, ageist ideas are imposed upon older individuals to make them reflect on themselves. This causes them to worry that small incidents that would have been disregarded in younger years are the start of bodily decline. Christian is concerned that his younger partner is overly focused on his age, particularly after suggesting they arrange a power of attorney following a minor incident on the way to the interview.

"… I was driving with him today. And I didn't realise I suddenly, I suddenly sort of jerked forward in traffic, and then slammed the brakes on. And he said we need to sort out this power of attorney. I said, there's nothing wrong with my driving. I said that was just a slight error of judgement. Could happen to anyone. But he thinks I think that I missed the beginning of a mental decline and possibly physical decline. And is that a good thing to be living with someone who tells you that or is it a bad thing? Does it make me feel even less confident? Or is he just facing the reality that I need to I'm working out in my head as well. Is it genuinely something I need to worry about?" (Christian, 65 - 69)

As participants grow older, their time perspective is getting narrower, and the focus is more on the present rather than on the future. The future is unpredictable, and by living now, potential health issues can be ignored. The next quotes are from Helen and Diana, and they highlight how both living in the present ought to be enjoyed and, by this, ignoring the future.

> *"Yeah, just depends how my health is. I mean, you cut your coat according to your cloth, don't you? I might have a stroke tomorrow and be incapacitated, not be able to do anything. I don't know. So, you know, I do what I can do today." (Helen, 75 - 80)*

> *"Just to keep going as long as I can, I suppose. That was a difficult question in the survey [survey from Study One] because I thought I don't really know, I just take each day as it comes, and I suppose you do plan certain things. Keep living in my own house for as long as I can, keep doing the things I enjoy doing for as long as I can." (Diana, 70 - 74)*

Helen is focused on the present, noting that the uncertainty of her future and potential health issues keeps her grounded in the here and now. Diana shares a similar experience; she makes plans, such as staying in her home for as long as possible, almost anticipating that the future may be less pleasant.

6.1.3 Shifting goals - do something to prevent decline

The next theme can be interpreted as a form of adaptation. However, as will be shown, *shifting goals - do something to prevent decline*, capture the impact and consequences of ill health and declining energy levels on participants. Therefore, this theme will be discussed in the context of how health and declining energy levels affect their future time perspective and goals.

Participants are aware of their health status and try actively to change the situation. Most try to stay physically active to a certain extent, causing them to change goals from endeavours they pursued before retirement to goals that are more focused on their health. Jonathan emphasises his commitment to maintaining his physical and mental health, swimming regularly as part of his routine. Inspired by his wife's godmother, who remained in good health until age 105, he aims to stay fit and active to enjoy a long life and be present for his

grandchildren. He finds joy in swimming and supporting his wife in her swimming activities, viewing these as key to sustaining his well-being and longevity.

> *"My wife's godmother is a lady who lived to be 105, whose mental and physical health was pretty good, right up to more or less the time she died. […] So, my goal would be to stay fit and healthy to be there for my grandchildren as long as I can be" (Jonathan, 65 - 69)*

By comparing themselves with others, participants justified their own situation or actions. This kind of comparison leads to reflecting on their physical and mental state. Angela justified her lack of further exercise by highlighting that she walks her dog daily and is more mobile than her friend. While she enjoys exercising and recognises its benefits, she struggles with maintaining a consistent routine, often losing commitment after a few weeks. She reflects on her mobility compared to a less mobile friend, which reinforces her appreciation for her ability to stay active, even if her exercise habits are not always consistent.

> *"I've just had a friend staying with me, she's a little bit older than me, but she's not so mobile. So, I thought I'm quite glad that I go out every day, walking, I do try and exercise. On YouTube, I look at YouTube and have an exercise, and when I'm doing the exercise, I think this is really good. I'm gonna do this every day. And then maybe three weeks later, I might not do too much." (Angela, 65 - 69)*

Others try to be physically careful and focus on their health rather than other goals they previously enjoyed and pursued. As mentioned before, the focus changes to more feasible goals related to activities that help participants to remain physically fit.

> *"So, you've got to be more careful to pace yourself. Just literally physically, I mean, I used to walk sort of six miles a day and, and I can't quite do that these days." (Beth, 70 – 74)*

However, others are hindered by their mental health when it comes to focusing on goals. Thomas, for instance, has lived with severe depression since his teenage years, and procrastination remains one of his biggest challenges in pursuing his aspirations. He reflects on how procrastination, paired with his mental state, often prevents him from fully engaging

with his many goals. Despite having a wide range of interests, such as studying precious metals, reading art books about gems, and using his equipment to create things, he struggles to start or finish projects. This, in turn, leaves him feeling held back from realising his ambitions despite having both the resources and drive to succeed.

> *"Procrastination mostly, and I think that's it probably that, because I'm thinking I'm not finished that I didn't start it. So, actually, my mental state is going in the way of me carrying out some of the some of the goals I have. I probably got loads of goals, actually. There's lots of things I'd like to do." (Thomas, 75 - 80)*

Some goals are not worth pursuing anymore. Health is more important, and goals will be changed. Similar to the theory of assimilation and accommodation (Brandtstädter and Renner, 1990), Garry abandoned his previous goals to pursue further higher education as he experienced severe health issues in the form of stress. Garry explains that he avoids taking on demanding projects, like a doctorate, due to the stress he experienced while completing his MSc, which he believes contributed to health issues. He prioritises his well-being and sets clear boundaries for himself, such as not working past six o'clock in the evening or on weekends. He admits that this limited his effort toward the end of his MSc but emphasises that it was not worth risking his health for something he pursued out of personal interest rather than professional necessity. His wife's support reinforces his decision to avoid unnecessary stress in future endeavours.

> *"Here's the problem. I don't. I can't take on. I can't take on something that leads to like a PhD or something. For the simple reason the MSc, I got under a lot of stress. And then, I had this health problem that I think was partly related to the stress of trying to complete the project. And I don't want to subject myself to that again. […] I didn't want to die over a bloody bit of paper because I'm gonna. It's not like I need the job. It's not like I'm doing it for work, you know." (Garry, 65 – 69)*

While health status can prevent the participants from engaging in new goals, restoring one's health status or being free of health problems causes participants to feel younger again. This highlights how deeply ailments and health decline are connected with the negative assumption of ageing.

Helen shares that she does not feel old, especially after a recent knee surgery that significantly improved her quality of life. She reflects on how she and her friends feel young mentally, even as their bodies age.

> *"I don't know, I don't feel old. […] Because I think my friends are all the same. We all are young inside our heads, and the bodies crumble around us." (Helen, 75 – 80).*

Despite being "*virtually crippled*" before the surgery, she decided to pay for the operation privately to avoid further delays with the health service. Though her friend received the same surgery for free, Helen feels the expense was worthwhile for the improvement it brought to her life.

> *"I paid to have it done in the end [knee operation]. I couldn't face any more of a health service. But I got exactly the same operation. Same surgeon, same everything as one of my mates had had for nothing. There you go. It was worth it, to me, it was worth it." (Helen, 75 – 80)*

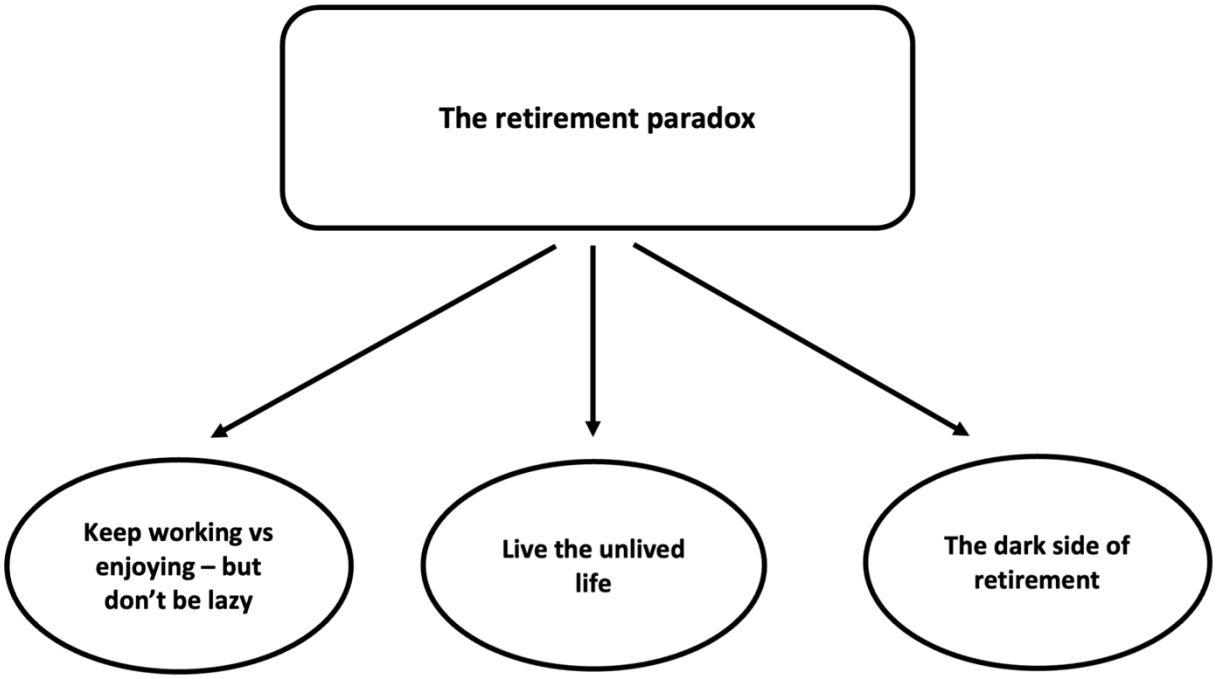
"Young inside", but the body is old and "*crumbles around us",* exemplifies the participant's view of ageing as a process accompanied by health limitations and decline. However, they believe this process can be mitigated through healthcare interventions that counteract the effects of ageing.

6.2 The Retirement Paradox

The retirement paradox contains the duality of experiences and outlooks surrounding participants' retirement and highlights a positive outlook on the future and the challenges faced.

The paradox describes how participants experience the benefits of retirement while at the same time feeling the uncertainty of transitioning to a new, unknown stage in life. For many, retirement represents a time to do what they truly want, a notion that life can now begin. It is described as an opportunity to live an unlived life, where work restrictions give way to new freedom. This life stage marks not only an end but a new chapter's start. While work largely defined individuals' identities and daily routines before retirement, this transition opens the door to new goals and aspirations. Life after retirement is often imagined as a time of discovery, travel, and adventure, allowing some participants to pursue hobbies neglected during their earlier years. Participants in this transition express that they have fulfilled their obligations, and now it is time to focus on their desires and interests. However, the post-retirement phase is less clearly defined than other life stages. Unlike previous transitions, life after retirement must be actively constructed, and time must be filled with meaningful activities. Some choose to continue working in a different capacity, such as volunteering. This type of engagement fundamentally differs from paid employment, as it offers flexibility and the freedom to pursue one's passions. Transitioning into retirement requires careful planning, as participants must adapt to new circumstances, which takes time. Filling the time after retirement until death becomes a personal responsibility, with choices influenced by individual resources and desires. However, the transition into retirement is not always as smooth as one might hope. An abrupt ending of one's work life can be disruptive, giving rise to mixed emotions; sadness and relief, as individuals restructure this new life stage. The thematic map for this theme (Figure 22) explains the different impacts of retirement on the participants.

Figure 24: Thematic Map – The Retirement Paradox



Source: Author's own work

6.2.1 Keep working vs enjoying – but don't be lazy

The time after reaching the state pension age is spent in various ways, but a common theme in the interviews was keeping up paid work. Work provides a structure and is, by some, simply described as fun, as it can be seen in Sarah's quote when she is talking about her current job where she is uncertain about when she will retire and has no immediate plans to do so. She finds her current job enjoyable and fulfilling, describing it as "*fun"* and driven by a sense of purpose. She sees herself as always being on a mission, which keeps her engaged and motivated to continue working.

> *"I'm not sure whether I'll be ready to retire then or not. People keep asking me. But at the moment, I'm not particularly planning it." (Sarah, 65 – 69)*

There can be many reasons for continuing paid work. As long as work does not feel like work but is more like a vocation, participants are happy to continue working beyond their state pension age. Being healthy and happy with the work appears to be a genuine reason to keep going, while others seem to be driven by external forces (e.g., the need to earn money), which can be mentioned in plain sight or hidden. Jonathan describes in the interview a rather

genuine wish to keep on working, ideally until age 75, as long as he remains healthy and enjoys his work. He supports the idea of people working into their late 60s and beyond, as he found fulfilment in his current role. He feels encouraged by church members who have expressed a desire for him to stay, and if the mutual appreciation remains, he would be enthusiastic about continuing his work past 75.

> *"If I'm still healthy and happy at 75, that if the church wanted me, and various [church members] have said to me that love it if would stayed on, you know, they definitely want to. I think there would be an open door there. And if I get to 75, and they love me, and I love them, I would definitely want to continue." (Jonathan, 65 - 69)*

The continuation of paid work has some financial implications. The financial implications highlight the precarious situations of some participants. They describe that they are considering retiring, but the financial imperative keeps them working, as Angela highlights it. She feels torn about retirement. On one hand, she looks forward to it, envisioning more time to enjoy activities like walking her dog and inspired by the happiness of her retired friends. However, her current financial needs, particularly due to ongoing divorce-related expenses, make her feel she must continue working to afford legal advice and support. For now, income remains a priority, delaying her plans for retirement.

> *"… all my friends who have retired are happy and they enjoy retirement. So that makes me feel, I think I would enjoy it. But right now, I feel I need the income because of this divorce I'm going through." (Angela, 65 - 69)*

Angela wants to retire to enjoy her life more and move on from her divorce. The dilemma she describes is that she wants to move closer to family and friends and imagine how she might enjoy a different life in the future. However, the divorce she is going through is also why she cannot move on. Working provides her with the necessary financial means, and the future she imagines will be paused until the divorce is settled. Alice describes a similar need to keep up paid work. Although she describes that she enjoys her work and that she "*obviously"* carries on working, the reason behind her decision to continue working is more financial. The choice to use the term "*obvious*" indicates, on one hand, that she is strengthening her argument that she is not done working yet, but on the other hand, throughout the interview

with her, the notion that money matters was a prevalent topic. Keeping working can, therefore, have different meanings and reasons for participants.

> *"I will get my pension in October. I have continued my National Insurance contributions. So, I've had the full pension in October from the government. I will then obviously carry on for another couple of years at this pace. And then, I will go down to doing shorter days, less responsibility." (Alice, 65 - 69)*

But thinking about the future post-retirement can also provoke thinking about new paths that one has to pursue, and that can be frightening. Work offers not only income but is defined by a clear structure and can provide a sense of purpose. Shannon is still working and thinking about her time after she retires seems difficult to imagine. She finds it challenging to imagine her future clearly but anticipates it will be different from her current life. After maintaining a rigid lifestyle for the past 35 years, she looks forward to a change, although she is uncertain about what that might look like. The prospect of difference and flexibility seems to be the most significant aspect of her expectations for the future.

> *"Think it's a, it's a little bit hard to think of the future because I don't know what it would be. In my mind, I have an idea of what it might be. It's going to be different from what I'm doing." (Shannon, 65 - 69)*

A rather typical way to spend time after they have retired is described as a time of joy and time to travel as long as one's health is good and allows one to do this. This can be seen with Carol.

> *"I think when we first retired, we, our goals were to do things that we hadn't had much time for when we were working, sailing, long distance walking. We did a lot of that. The time was there, and we had no responsibilities, but obviously, since I've lost my husband, I'm more limited to what I can do but. So, I'm conscious that I'm [age]. It's no good to have a 10-year plan." (Carol, 90 - 99)*

Carol depicts how she used her time to spend with her husband to do the activities she always wanted to do, but nowadays, it is not her age that prevents her from doing new things, but the loss of her husband. The wording *"since I've lost my husband, I'm more limited"* suggests

how she might have relied on her husband for decisions or physical help. Spending time after retirement engaging in various activities aligns with the concepts of the third and fourth age (Laslett, 1989). Laslett (1989) described the third age as a period of heightened functional ability following retirement - a time when older adults enjoy greater freedom and fewer responsibilities compared to earlier life stages. The fourth age, however, is characterised by a decline in functional ability (Settersten Jr, 2021). In Carol's account, she hints that, following the loss of her husband, she is able to do less than she could in the past. The transition from the third to the fourth age appears to be connected with the loss of her husband rather than being purely age-related.

Ian explicitly mentions a similar view of retirement as a time to enjoy and travel, which became a significant part of his life after retiring. He and his wife have taken various long-haul trips they could not do before he retired and consistently visit her parents each year. They also enjoy traveling to European destinations like France or Spain for short stays. Ian values travel not only for the experiences but also as a way to keep his mind active and engaged. Thereby, he is reinforcing the idea of the third age as a period of freedom. However, he also highlights the need to remain mindful of potential health issues which delineates the third from the fourth age (Higgs and Gilleard, 2015), and indicates a limited future time perspective.

Certainly money makes a difference, not only whether and when someone retires, as outlined above, but also what can be done when one retires. Because Ian worked as a General Practitioner and Carol as a Pharmacist, it can be assumed that both have the financial means to use the time after retirement to enjoy life as much as possible.

How much free time will be spent after retirement seems to be dependent on someone's health and financial situation. Barbara seemed to look quite energetically towards her retirement, mentioning that she is *"fairly confident that [her] future is secure".*

She feels assured about their stable living situation in a good area and values the strength of their relationship with her husband. Overall, she is optimistic about their future and the stability of their finances and life together.

"So, finances are good, my husband's extremely good earner, and he's going to have a very good pension. I've got a little bit of pension; we're going to be fine." (Barbara, 65 - 69)

However, the time after one is retired should not only be used for relaxation. The time has to be spent wisely, and some of the participants try to do different things to be engaged, and new goals are formed. Helen, for example, believes that keeping the brain active requires making small changes to routines. About five years ago, concerned about developing repetitive strain injury (RSI) from using a mouse with her right hand, she decided to teach herself to use it with her left hand. Now, she consistently uses a mouse left-handed and highlights how she is committed to stay mentally engaged.

"I think to keep the brain going, you need to do little alterations in your pattern of how you do things." (Helen, 75 - 80)

Another example is Garry. In his interview, he often came up with the idea that one has to keep going and have a project to work on. Having a goal seems to be an essential part of his life. Garry mentioned one of his brothers who said:

"He said you have to do something. We, [identifier removed], we have to have something to do in our lives. We can't. You can't just sit around reading a book; lazing around, you have to have something to do." (Garry, 65 – 69)

The negative idea of sitting around and being lazy is so deeply embedded in Garry's thinking that he talks about "*allowing"* himself to play on a computer on a Sunday and phrasing it as a goal to stay mentally fit.

"I've always read a lot, and I play. I used to play a ... I play. I love computers. I like playing the strategy games. But I have to limit myself to one hour a day because I think it's good for my brain. But I could probably play ... I mean, Sundays I play half of the day, that I'm not … I'm not working my life. So, I have to allow myself, I allow myself an hour or two of games, computer games, because it keeps me, mind active, you know." (Garry, 65 - 69)

A similar notion has been explored by Wanka (2020). In her study, she describes participants who are actively avoiding the social practice of “doing nothing” (ibid, p. 509). “Doing nothing” is presented as a form of “wasting time,” a notion that participants want to avoid, as they do not want to be perceived as idle in their retirement years. At the same time, they feel that time is now more limited, prompting a desire to “live life to the fullest” (ibid, p. 509).

Although participants did not always speak explicitly about goals, from many, it can be inferred that they still have plans, wishes, goals and clear ideas about what to do with their lives after they retire.

6.2.2 Live the unlived life

The subtheme ‘*keep working vs. enjoying – but don’t be lazy*’ focused on the tension between continuing some form of work and fully retiring to enjoy the post-retirement period. In contrast, the subtheme ‘*live the unlived life*’ emphasises the discovery of new activities and the sense of freedom that comes with retirement. Live the unlived life is a concept brought up by Carmen and can be found with other interviewees as well. The notion that when paid work finishes, with nothing left to achieve in one’s career, can be scary and a source of distress. Carmen reflects on her decision to stop working with someone she enjoyed collaborating with, describing it as both a sad and relieving moment. Taking her pension allowed her to work less and create more time for herself. This shift gave her the opportunity to reflect on "*the life unlived*", a concept introduced by a friend; prompting her to consider the paths and interests she may have set aside while focusing on her previous commitments.

> *“So, I had more time. And I went right back to ... I was interested in the idea of the life unlived. One of my friends spoke to me about this ... in pursuing the past that you have, what did you give up on?” (Carmen, 70 - 74)*

Living an unlived life bears the notion that many hobbies and activities are neglected or not even discovered yet during paid work. Work offers structure but also determines and restrains activities that participants formerly enjoyed. With leaving paid work, resources and energy are released that can be spent on new projects and goals. Although money is important, free time can even be used without having the financial means.

Hannah describes the newfound freedom in her life, no longer constrained by the need to earn a living. She values the spontaneity to explore interests and pursue opportunities without being overly practical, except for a few considerations like timing for buying a car. She feels liberated to make decisions, such as moving or staying in motels, without restrictions, describing this stage of life as the first time she has truly felt free.

> *"I mean, that's the thing with being spontaneous. I could start exploring these things and find something else completely, which I'm finally happy to follow up. Because I don't have to earn my living any longer. […]. For the first time in my life, I'm free." (Hannah, 65 - 69)*

Hannah describes how she felt the relief not having the commitments of paid work anymore, and time and resources to be flexible. A similar notion is conveyed by Laura, who, for the first time in her life feels financially secure. She has fully paid off her mortgage, which has given her a sense of ownership and stability she never thought she would achieve. This milestone has lifted a lifelong burden, allowing her to feel at ease knowing her home is truly her own.

> *"My house is my own now, which I never thought was going to happen. So, I haven't got a mortgage anymore. So, I haven't got that thing over me that I've had all my life, basically, all my adult life, that I haven't got home, that's really my own." (Laura, 65 - 69)*

Work life has been described as restricting by some participants and with the underlying imperative to make a living. Hannah reflects on how financial obligations significantly shape one's life unless born into wealth. She notes that working to cover essential expenses like mortgages, cars, loans, and clothing largely influences the course of life, acknowledging that while it does not entirely define it, finances play a substantial role in determining one's choices and opportunities.

> *"… unless, you know, you're born wealthy, and you manage not to lose all the money that you were born with. You have to work for a living, and you have to pay all of your outgoings, you know your mortgage, your car, your loans […] you know your clothes, whatever. So that, I wouldn't say it wholly determines your life. But it far more than partially determines it." (Hannah, 65 – 69)*

But with retirement and reaching state pension age, the future can finally be lived and enjoyed. From the interviews, it can be concluded that participants have mixed feelings about retirement. The majority of participants describe the time after they retired as a time when they wanted to enjoy their life as much as possible. Participants who have not retried yet justify their decision not to retire for different reasons; either they describe enjoying their work too much to give up with a strong sense of goal pursuit within their career, or they describe a financial imperative to keep working.

The last quote is from Hannah, who describes how her work life determined her whole life and her future time perspective, but with reaching her state pension age and being retired, her future time perspective appears to have opened up new goals to enjoy the next years of her life. She further reflects on how her working life felt constrained, similar to a closed tunnel where her future was dictated by the need to earn money, leaving little room for a sense of openness or choice. Although she made significant changes during her career, she did not feel free to perceive her life as flexible or expansive at the time. Since retiring, however, she feels liberated from the "*tunnel vision*" and financial pressures, experiencing a newfound sense of openness and possibility. For the first time, she does not feel her life is limited by time or predetermined paths and she starts to embrace the freedom ahead.

> *"When I was working, my future always seemed to be, seemed to be foreclosed. […] But since retiring in the last year, I've realised there's no ... I no longer have the tunnel vision. […] I have a sense of everything open ahead of me and no sense of foreclosure in the future. I no more feel now than I've ever felt that my life is short and is delineated in terms of the years ahead." (Hannah, 65 – 69)*

This neatly exemplifies the restrictions and impact of work on Hannah's future perspective. Previously, she was focused on prioritising work-related goals through a "*tunnel vision*". However, with retirement, the tunnel opens up, allowing her to feel free to focus on new goals.

6.2.3 The dark side of retirement

Not everyone in the study sees retirement as a positive transition. The time after official retirement needs to be newly structured. The freedom that comes along with leaving paid

work needs to be actively filled or restructured. Barbara's quote highlights the need to establish a routine. Since her retirement, she felt unsettled due to ongoing renovations in her recently purchased house. The frequent presence of workers and the disruption of moving things around for the renovations have prevented her from establishing a routine. As a result, her retirement experience so far has been unusual and somewhat disjointed.

> *"So, I feel a little bit, you know, unsettled in that I can't get into any sort of routine because, you know, we've got workmen coming in here and there and mess here and moving stuff around to get the workmen in or whatever done then. Yeah, so well. So, it's been a very strange retirement so far." (Barbara, 65 - 69)*

Others describe how disappointed they were when they left paid work. Although it was not, per se, the end of her work life, Helen felt concerned and disappointed by the way she had to leave her job. The closure of her workplace was abrupt, leaving her unable to say goodbye to the clients she had grown close to over the years. Although a colleague said goodbye on behalf of her, Helen felt that this impersonal farewell marked an unsatisfying and abrupt end to her career.

> *"And the disappoint ... I was incredibly disappointed at the end because I went in one day and saw people, and then the unit closed, and I never went back." (Helen, 75 - 80)*

A similar notion is conveyed by Ian, who felt quite ambivalent about the retirement transition. He retired at 60, feeling a mix of sadness and relief. While he enjoyed his job, increasing work pressures and eight years as a senior partner left him ready to step away and pursue other interests. Initially, he did not miss the job much, especially given the modern requirements for annual appraisals to continue practicing as a GP, which he found demanding compared to the simpler expectations of earlier times. Retirement allowed him to leave those challenges behind and focus on new opportunities.

> *"I mean, in some ways, I was sad to retire because I enjoyed the job. But it was getting more and more difficult. You know, the work pressures were enormous. […] it's not like the old days where you could just do the old surgery not too much as you like it." (Ian, 70 - 74)*

The deeply embedded structure of work does not end with reaching the state pension age and retirement. The long shadow of work remains in participants' minds. The joy of freedom is overshadowed by a lingering sense of guilt about no longer working, a troubling feeling that highlights the lasting impact of work on participants even long after retirement.

> *"Well, that was great. The only thing that took some getting used to it was waking up in the morning tense and feeling guilty. What's the deadline? What am I behind on what needs to be, and then nothing needs to be done. Nothing needs to be done I'm telling myself and going back to sleep again." (Hannah, 65 - 69)*

Hannah experienced a difficult transition and needed to relearn and remind herself that she did not have to get up to work in the morning anymore. As Hannah describes it, a bodily sensation can be experienced as feeling "*tense and feeling guilty".* Another participant describes more metaphorically how she still feels that the urge to do something surrounds her thinking. Louise started volunteer work shortly after retirement to fill the void work left in her. She reflected on her transition to working just one day a week, which she does not regret but similar to the sensation of kicking a football that is not there. Still feeling the momentum and drive to be active and productive. She found herself with lingering habits of thinking she needs to accomplish tasks, even though her workload has significantly decreased.

> *"But I always think, you know, when you go to kick a football, and the football is not there, you've still got the impetus. And I was kind of still like that, still thinking, I need to do this, and I need to do that. And I need to be doing stuff." (Louise, 70 - 74)*

Volunteering is described as a way to give something back to the community. However, it also reveals the belief that one must contribute to society as a pensioner, which seems to be an indicator of a prevailing ideology that only through work are people contributing to a better society regardless of their age and is in line with a neoliberal notion that segregates society into citizens who contribute to society and those who are dependent on the welfare state (Datta Roy and Panda, 2022). The neoliberal notion can be clearly seen by Carol. She described that her motivation stems from a desire to give something back to society, feeling that as a

pensioner, she is not contributing enough. To address this, she actively engages in community work, fulfilling her need to make a positive impact and contribute meaningfully.

> *"I think the motivation was, sounds, conceited, but I wanted to give something back to society and I feel as a pensioner I'm not contributing anything to society. So, I need to do something for the community. Which I do." (Carol, 90 – 99)*

Keeping up working, paid work, or volunteering is a structural outline. It provides a sense of purpose and meaning in life. Angela explains that while she could retire now, she does not want to until her divorce is finalised, and she relocates after selling her house. She considers possibly retiring at that point, especially if she cannot find another part-time job, and may engage in community work instead. However, she enjoys the structure and social aspects of work, getting up, meeting people, and feeling she's contributing something worthwhile, which motivates her to continue working for now.

> *"Well, I could retire now, but I don't want to until I, you know, once I divorce, I will have to sell this house. […] I actually like the structure of work and getting up and going to work and meeting people and feeling like you're doing something worthwhile, you know?" (Angela, 65 - 69)*

Compared to other life stages, retirement is less clearly defined. What one is supposed to do or not to do is not clearly articulated. In contrast, work life can have different career stages and a defined end with reaching pension state age; the time after retirement needs to be reimagined. For example, Louise reflects on the progression of a typical career, where each stage built upon the last, always with the anticipation of a "*next stage*". Retirement, however, brought an abrupt end to that forward momentum, leaving her with the unsettling realisation that there is no further career stage, except the inevitable end of life. She compares this to finishing a train journey, arriving at the station, and wondering, "*what we're gonna do now?*" This lack of a clear next step in retirement feels both strange and disorienting to her.

> *"… and then suddenly, and all it's in the back of your mind that one day I will retire and I'm saving up this money. And then suddenly, you're there. And there isn't a next stage. Well, I suppose the next stage is dying. But you know that, um, that is quite a strange feeling." (Louise, 70 - 74)*

Louise's quote exemplifies the structure that work in adulthood provides and highlights how later life is often not defined by society. The concept of building a career and achieving success is deeply embedded in her thinking; however, with reaching retirement, participants find themselves responsible for structuring the final stages of their lives. While Erikson (1963) suggests focusing on ego-integrity in later life, participants may have different ideas about approaching the future.

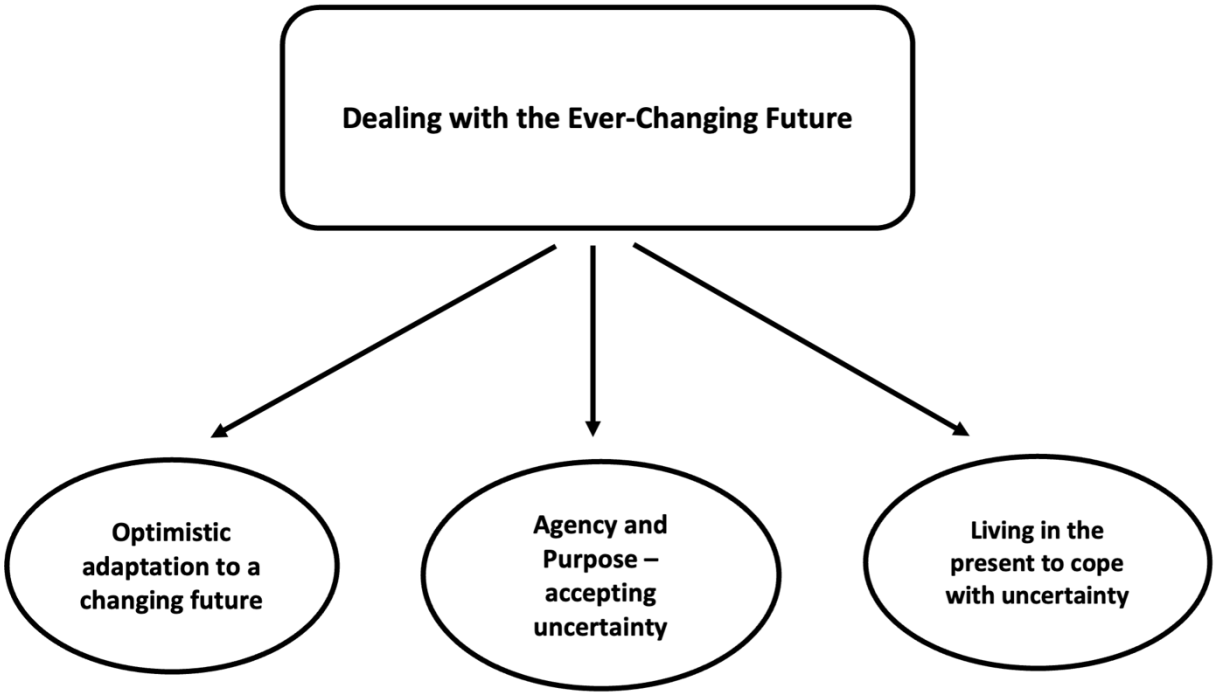
This section described the impact of health and retirement on participants' goals and future time perspectives. In the next section, the adaptation themes: '*dealing with the ever-changing future*' and '*the evolution of selection, optimisation, and compensation*', will be presented and discussed. These themes highlight how participants navigate the changes they experience and, consequently, adapt to their evolving circumstances.

6.3 Dealing with the Ever-Changing Future

Feelings toward one's future are shaped by an ever-changing future. The future is uncertain and can quickly shift over the life course. Some participants have experienced events in their past that have led them to think differently about their own futures, making them aware that the future may turn out differently than anticipated. Changes can also occur later in life and diseases or sudden changes in relationships can prove difficult and challenging. Adaptation is necessary to change course and achieve a positive outcome. In the interviews, three ways of dealing with the uncertainty of the future can be found. One adaptation is to remain optimistic about potential changes and embrace what may come. Another way to cope with the uncertainties of the future is by ignoring it and focusing on the present. Negative thoughts about the future can be suppressed by focusing on the present. The final observed mechanism is to be proactive about the future. Agency and purpose in navigating changes can help participants prepare and plan for their futures. Active decision-making and finding meaning in life help them to reimagine their futures, giving them a sense of control over their destinies. The three identified subthemes, (i) *optimistic adaptation to a changing future*, (ii) *agency and purpose – accepting uncertainty*, and (iii) *living in the present to cope with uncertainty*, will be described and analysed in greater depth.

The thematic map for dealing with the ever-changing future (Figure 23) highlights different pathways participants engage in to deal with changes they might anticipate for their future.

Figure 25: Thematic Map - Dealing with the Ever-Changing Future



Source: Author's own work

6.3.1 Optimistic adaptation to a changing future

Optimistic adaptations are characterised by a shift in perspective about a situation. Although the future may not turn out as expected, participants find something positive in their changing circumstances by changing their outlook and remaining optimistic. Angela expresses optimism about her future, despite it not aligning with her initial expectations. She feels reassured by the security of owning property, which reduce concerns about rent and ensures her financial stability. While not expecting to be wealthy, she is confident she will have enough to live comfortably, socialise with friends, and participate in community activities.

> *"So yeah, I think I'll be okay. I won't have the future that I thought I was going to have, as we talked about, but it will still be a good future […]" (Angela, 65 - 69)*

Feeling secure is another goal described by participants in the interviews. This feeling of security can take different forms and shapes and is often discussed in terms of having one's own home or the hope of owning a home in the future. Despite the uncertainty, participants remain positive and optimistic that owning a house is still reachable and timely.

For example, Alice looks toward a positive future where she owns her own property again, something she has not had for years. She hopes to use her share of her mother's house to afford a small home, possibly in a city close to her daughter, as owning her own place symbolises security to her.

> *"Future? I see myself well, and I'd love to own my own property. I haven't owned my own property for many years. […] I think after I have my share of my mum's house, I want to feel secure. I want my own place. That's where I see myself." (Alice, 65 - 69)*

Changes in relation to power and status are also discussed. Some participants describe losing power and status in the past and how they regained control over their future. Though the loss of power and status is not always explicitly mentioned, it can be inferred from the ways participants talk about their past experiences. Alice resides in her mother's home, balancing caregiving responsibilities for her mother, who lives with dementia, alongside her own work commitments to support herself financially. This represents a marked change from her previous life, which she described as secure and carefree, with no financial concerns, as her husband had managed their household finances.

> *"I had house servants and a very lovely lifestyle, a fabulous environment to raise a kid in. I did cooking, but I didn't have to do the washing up because the house staff dealt with it, so I didn't have to do much. Although I helped out, I didn't work as such." (Alice, 65 - 69)*

However, this sense of security was shattered when she discovered that her husband had never truly accumulated sufficient funds and had depleted their savings to sustain a luxurious lifestyle. Alice had been living outside of England before returning to support her mother and daughter financially, as she describes it. This prompts her to reflect on her past with mixed emotions; a time when she lived carefree, yet one she now feels no desire to return to. She is reclaiming control over her past and focusing on the future.

Participants describe different strategies for regaining control. Some strive to continue working and remain actively involved in the decision-making process, while others focus on preserving their status within the profession, they previously worked in.

> *"In the profession, it's all about status. It's all about not wanting to lose my position, if you like, as a major player in Southeast England, I suppose. I was … there was a lot of ego involved." (Christian, 65 - 69)*

Health issues are another reason participants adapt to changes. Some enjoyed travelling or being active in their churches or music choirs, but a change in health status has led them to adjust their expectations and activities. Baltes and Baltes (1990) concept of selection, optimisation, and compensation helps explain how age-related losses lead individuals to set goals more suited to their current situations. The focus might shift from a previous world traveller to a "*maybe more of Europe"* traveller (Diana). As their world narrows, they adapt to the changes.

6.3.2 Agency and purpose – accepting uncertainty

The future is unknown, and uncertainty comes with it. Some participants have experienced negative events in the past, such as the loss of relatives and friends, leading to a cautious outlook on their futures. They know life can end suddenly. Others are worried about losing partners and family members in the future. Alice, for example, is concerned about her mother and what will happen to the house she stays in when her mother dies. She worries about needing to sell the house to pay her sisters. Shannon, on the other hand, is uncertain whether her partner will join her when she moves to Scotland, revealing her unspoken worries.

> *"No, I'm not married. I have a partner. But he might come with me. I don't …" (Shannon, 65 - 69).*

Participants have developed different strategies for dealing with these uncertainties, summarised as taking agency and staying in control. Some participants focus on staying active and fit or planning ahead for a future where they may no longer be able to live independently. Some make arrangements with their children, while others make their environment more age friendly. Having agency and control involves taking action and reflects the mindset participants adopt. For instance, Beth emphasises the importance of personal responsibility and accountability in life. She believes that true independence comes from taking ownership of one's actions and decisions, rather than relying on others. Her perspective, as she points

out, is not rooted in broader movements like female liberation but in a universal human need to be self-reliant and treat others properly through personal accountability.

> *"I realised I had to take responsibility for myself. […] So, I'm not female liberation or anything. It just literally as a human being, you have to take. You have to take accountability for yourself." (Beth, 70 – 74)*

By focusing on things within their control and sometimes approaching whatever happens with a sense of humour, participants demonstrate a sense of agency and control over their own situation.

6.3.3 Living in the present to cope with uncertainty

Another strategy for dealing with uncertainty is to ignore the future and focus on the present. Some participants continue working to avoid thinking about their futures, as discussed further above. Others adopt a positive view of the future, which allows them to avoid thinking about it in detail. Barbara, for example, imagines a future where her husband is retired, they have completed a long-wished trip abroad, and she is helping her children raise their future grandchildren.

> *"I expect my life to be excellent. I'm an optimist. I see no reason why life shouldn't be sweet in five years' time." (Barbara, 65 - 69)*

Barbara describes a vague yet positive outlook on the future; a hopeful vision of how things will unfold. By framing her future in this way, Barbara is able to maintain the status quo, keeping up her optimism while avoiding excessive focus on potential uncertainties. Other participants prefer not to dwell on the future at all, as they feel it is outside their control.

> *"I don't particularly want to dwell on the future because I don't know what will happen. I mean, I'm more interested in the parts of the future I can control." (Garry, 65 - 69)*

By emphasising living in the moment, they find a way to manage the anxiety associated with an uncertain future.

> *“I don’t really think I want to strive for anything in particular. I’m enjoying living in the moment.” (Carmen, 70 - 74)*

Living in the moment is seen as a rewarding approach one participant strives for. They enjoy the freedom it brings.

> *“I do what pleases me. I don’t have the responsibility of going to work anymore. I don’t have to think, ‘Oh, I’ve got to get up for work.’ It’s much more pleasant, and since my husband was an invalid before he passed, I no longer have those ties either.” (Carol, 90 - 99)*

By focusing on the present, Carol adapts to the uncertainty of the future by engaging in activities that bring her pleasure. Without caregiving responsibilities, she is free to live life on her own terms and pursue what she enjoys.

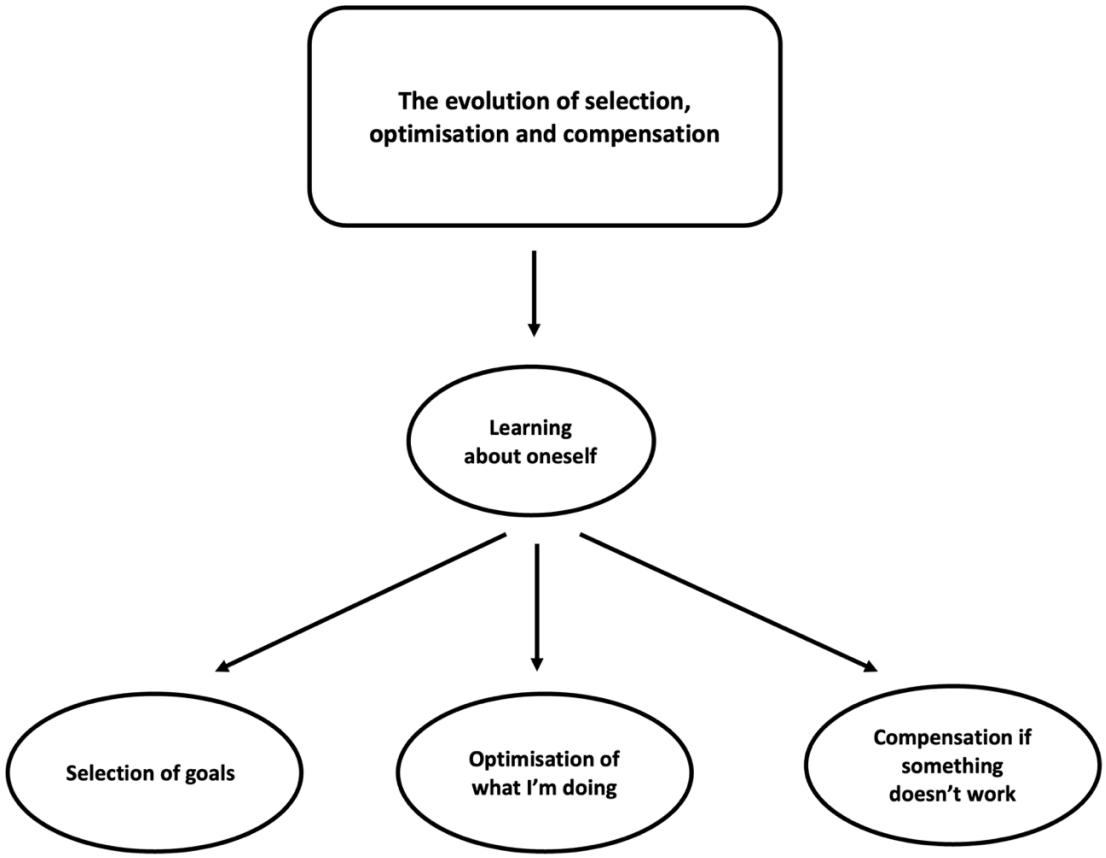
The next section will present the final theme: the evolution of selection, optimisation and compensation.

6.4 The Evolution of Selection, Optimisation and Compensation

"Living is learning", as Havighurst described in his book about *Human Development and Education* (1953, p. 1). The same can be said about the participants in Study Two. Development is one of the underlying themes that can help to understand participants' thinking about their goals. Often, participants take a step back, reflect on their past, and make sense of the past decision. Life is, therefore, characterised by learning something about oneself. Participants highlighted the importance of learning throughout their lives, and it is impossible to pursue all goals simultaneously. Sometimes, one has to be flexible and embrace life as it comes. Changes are often observed when they get older and their energy level decreases. Resources need to be adjusted and managed well. Baltes and Baltes (1990) conception of selection, optimisation and compensation (SOC) is reflected in the participants' interviews, and they describe how it helps them to navigate through life. Although in some cases, strategies of assimilation and accommodation (Brandtstädter and Renner, 1990) and tenets of the socioemotional selectivity theory (Carstensen, Isaacowitz and Charles, 1999) have been found, however, Baltes and Baltes' SOC model clearly resonated with the interviews and therefore has been used to guide the next steps in the analysis.

The final thematic map (Figure 24) illustrates how learning about oneself helps to identify what one likes and what one does not like. It can be seen as a step towards the realisation of using SOC strategies in one's life to adjust goals. A drop in energy levels as described in section 6.1.1. might lead to self-awareness to adjust and select certain goals, while optimisation helps to identify one's strengths and limitations. Finally, compensation strategies are described as strategies for situations when previous goals are not attainable anymore.

Figure 26: Thematic Map - Evolution of Selection, Optimisation and Compensation



Source: Author's own work

6.4.1 Learning about oneself

Learning about oneself is a crucial part of human development. This entails understanding oneself and reflecting on the past. Reflecting on the past as a form of integrity with one's life course can be found in Erikson's framework (1963). When someone is becoming older, Erikson (1963) described that in their last life stage, individuals need to integrate their life and make sense of their past. Erikson further elaborates that the individual might not have time to change decisions from the past (1963). In contrast with Erikson's idea, creating a sense of integrity happens in earlier years of old age and not necessarily at the end of life.

In Angela quote, she reflects on her journey toward seeking an autism assessment, prompted by a colleague in mental health who suspects she might be on the spectrum. She describes how the potential undiagnosed autism has influenced her life, including difficulties with communication, understanding others' motivations, and frequent job changes. Angela believes that understanding these challenges earlier might have made her life easier.

> *"And I think maybe I've always been a little bit autistic. And that's made life a bit more difficult for me. […] But I think having an understanding of why you're having these difficulties maybe it would have helped me." (Angela, 65 - 69)*

As Angela reflects on her life to try to understand why she has been different to other people, a similar notion is conveyed by Thomas, who has been living with depression since his teenage years. He describes his quest to understand his depression and anxiety. For Thomas, the idea that depression is "*all about chemical imbalances"* is not entirely convincing. There must be more behind it. While acknowledging that medication can address chemical imbalances, he believes there is a root cause that triggered his challenges.

> *"But there's some underlying reason that sent you off in the first place, I think, find out what it is now. So, I've got this feeling that whilst I might suffer from anxiety, that I didn't want to be depressed again". (Thomas, 75 - 80)*

However, Thomas does not elaborate on how he plans to find answers to his questions, suggesting that this remains an ongoing concern and underscoring his need for greater self-understanding.

Learning about oneself can also take other forms. Christian has a clear idea of how *"aggressive"* he should be at work, and as he lost his aggression, he started thinking about what needs to be changed and started to think about retirement. He has a clear expectation of how work should be done, and as he began to stop reinforcing his work ethos with others, he assumed that his age was the issue.

> *"But what had happened was I had now reached the age of, what, 64. I was aware that I wasn't doing things the way I would have done them before. I wasn't as if, I wasn't as ... I would say, as aggressive as I was before, I was beginning to be a bit too tolerant of people who are not up to the standard. And this was sort of put to me, and I said, actually, probably, I am getting to the point where I need to think about retiring." (Christian, 65 - 69)*

Christian did not expect to have a trait of lacking assertiveness and aggression. Being aggressive can be interpreted as a masculine ideology trait associated with gender

stereotypes (Malonda-Vidal *et al.*, 2021). It raises the question of whether Christian, who is gay, may have used aggression in the past to compensate in order to fit into a predominantly heteronormative society, where men and women are expected to conform to specific traits and roles.

Past experiences led participants to reflect on themselves and their actions. Some describe that their confidence level increased, and the focus shifted to a more egocentric perspective. Alice reflects on how life's challenges have made her more confident, resilient, and less concerned about others' opinions. While she was always confident, as she said, she used to be sensitive and easily affected by what others thought. Through ongoing significant hardships, including her husband's death, family illnesses, and her own cancer, she said she has gained a sense of perspective and pride in herself, focusing on what truly matters and letting go of unnecessary worries.

> *"I mean, I was already quite confident. But it's made me confident in different ways. In that, I used to be quite thin-skinned. Even if I was confident, I'd be upset easily, or I would care what people thought about me. I'm getting now to the stage after this year, where I'm so proud of myself." (Alice, 65 - 69)*

Others start to be more concerned with their past actions, which lead to regrets. For example, Christian's past behaviour is still haunting him, and he cares about what other people think. He reflects on past regrets about avoiding terminally ill friends, recognising that his reluctance comes from a fear of confronting illness and mortality. For Christian, the turning point came when a dying friend questioned his absence, which prompted him to realise the importance of supporting others during such times.

> *"… And this is a man who was dying. And I suddenly realised you have been, you've been, you've run away from this person. Because he's ill. It's not that you didn't want to see him, but you you've not. You've not faced up to what he's got. You've not faced up to the fact you one day will be there, too. And you may want people to see you. And I changed then. […] And I am ashamed. I will say that I am ashamed of that. That I've done that." (Christian, 65 - 69)*

He describes how this experience led to personal growth and a commitment to face such situations better in the future, though he acknowledges feeling ashamed of his earlier avoidance.

In both cases, participants explain how their reflections on the past are brought into alignment with their current way of thinking. Sometimes, it takes time to be sure what one wants and does not want. In the next quote, Hannah reflects on her career choice, describing how, as a child, her talent for verbal expression led her toward a career in journalism. She explains that she was guided in this direction due to her ability, rather than genuine interest. In hindsight, she expresses a preference for a career in biology, a path that was not encouraged during the time she was growing up.

> *"In retrospect, I did not wish to choose, I did not wish to follow. It was probably a good 20 years before I realised that what I wanted to do but did not have the skill base to do". (Hannah, 65 - 69)*

Furthermore, Hannah describes her despair with her past and that she could have done better if she had just been encouraged. Nowadays, she hopes to "*live a very long time"*, not only to reprimand the government, as she says, but also hopefully to have the chance to live the life she wanted to live.

6.4.2 Selection of goals

Baltes and Baltes (1990) describe the selection of goals as the individual option to adapt to losses participants might experience. Selection can be either loss-based or elective. In the interviews, both kinds of selections can be found. In one interview section, Jonathan reflects on how his ability to multitask has changed with age. While he once managed multiple tasks instinctively, by his mid-60s, he noticed a decline in this skill and recognised the need to approach tasks more deliberately and selective.

> *"… I think that the thing that may have changed in my mid-60s is my ability, to use the English expression, spin plates, you know, you know, this idea that you're doing multitasking […] I came to the point where I didn't feel I was as good at spinning plates,*

as I had been previously, you know, I needed to take more, I couldn't do things instinctively is a good word." (Jonathan, 65 - 69)

Jonathan provides a good description of loss-based selection. He experienced that he became less and less able to multitask ("*spinning plates"*), but he wanted to do what he was doing well. So, he actively decided to focus on less work and reduced the number of parishes he was previously looking after. By doing this, he now can put the same energy into what he had done before, just with fewer parishes. Selection can be achieved by realising that when the workload is too high and one's personal interest decreases, dropping out of activities can free resources that can be spent on more enjoyable activities.

Ian joined a political party, as he said, a "*long time"* ago but dropped out last year as he felt that was too much, they were asking him to do.

"And I used to put a lot of work into going around delivering leaflets and speaking to people and taking part in conferences and all this kind of thing. […] But I gave that up last year because I thought I'd had enough, you know because there's quite a lot to do it. And it wants you to keep going all the time." (Ian, 70 - 74)

Instead, Ian uses the now freed energy to play more in the choir and to spend with his grandchildren. Another interpretation here would be the socioemotional selectivity theory, where it is assumed, Ian would focus more on important networks when he sees his time horizon narrowing (Carstensen, Isaacowitz and Charles, 1999). However, Ian indicates that he does not have a narrowing in his perception of time despite being in his 70s. He describes that he always had a feeling that time could end soon due to an accident that he experienced in his younger years, where he was supposed to be on a flight but learnt later that the plane crashed and everyone on this plane died. Since that day, Ian says he never took life for granted anymore. This time perception differs from what Carstensen, Isaacowitz and Charles (1999) meant with a limited future time perspective, but Ian provides no further indication that his actual time perspective is getting shorter. Therefore, the SOC model can, in his case, better describes his decision to select more important goals (e.g. choir and spending time with grandchildren).

Barbara also showed how she used her resources to focus on new goals. In the interview, Barbara elaborates that she started to get into mindfulness due to the lack of opportunities during the COVID-19 pandemic.

> *"Well, one of the things I did during, this weird time when we were not going out anywhere was, I developed my interest in mindfulness, and I took an online teaching course. So, I trained as a mindfulness teacher." (Barbara, 65 - 69)*

Her decision to start mindfulness training as a hobby after she retired appears not to be based on a direct loss of resources but more on the loss of paid work and her need for routine. However, she mentioned previously that paid work is not something she enjoyed.

> *"I think, when I was working, my thoughts about the future, were always I want to be retired. So, and I'm looking forward to the retirement and the freedom that comes with that. So, the freedom to organise my life as I wish and do whatever I want to do." (Barbara, 65 - 69)*

Reaching state pension age and being able to retire opened new possibilities for her to engage in activities and pursue goals that were not manageable previously. The kind of selection of goals would be an example of elective goals described by Baltes and Baltes (1990).

Another example of goal selection comes from Hannah. She exemplifies her personal growth by comparing her life with Darwin's branching tree of life. She sees her life as an evolution; a series of choices along different paths where she encounters change and adaptation and sometimes wrong turns require retracing steps to find a better direction.

> *"I think I've always been on a path with branches. You remember that famous Darwin drawing on Darwin's paper on the origin of species as a very famous story of the branching tree of life, something like I think he written underneath it, I think this is what it's like, how species evolve. And, to me, that's, that's how I try. No, I don't try to evolve. That's how I do evolve." (Hannah, 65 - 69)*

Nowadays, she does not have any particular goals but describes how she strives towards *"the joy of higher thinking"*.

Her description of "*having to back up"* and then realising that one went the wrong way is an interesting metaphor for how human development is not always linear but a rather messy process, and as described in learning about oneself, it is a chance to reflect on one life and to reach integrity with oneself (see Erikson, 1963).

However, not everyone talks about goals as something worth pursuing. While many of the participants' goals are visible in the ways they act towards an objective, Sarah was quite hesitant to talk about them. She described that she does not like to think about goals in a too rigid way and emphasises the importance of flexibility in pursuing goals, cautioning against becoming too fixated on rigid objectives. She believes that staying open to alternative paths can lead to unexpected and potentially better outcomes, rather than missing out on other valuable experiences.

> *"… because [if] you're too focused on a goal that is never going to happen or may never happen. Sometimes, an alternative path turns out to be better." (Sarah, 65 - 69)*

It is unclear whether Sarah's own experiences and looking back on her life course caused her to make sense of her past decisions and, therefore, evoked her to think back and justify the flexibility regarding goal pursuits. However, it exemplifies the importance of having the flexibility to change goal directions when necessary.

6.4.3 Optimisation of what I'm doing

Mastering what one is doing is described as optimisation in the SOC model, but it is also described in Brim's work about ambitions (1992). It describes the importance of improving oneself in one area. Participants describing the notion that they want to do whatever they are doing well. In Ian's next quote, he highlights the role that music plays in his life.

> *"The music is a major part of my life. And it's something it's certainly a goal to, to be able to play better, because however much you work at it, there's always plenty of room for improvement, you know, and you want to get there better anyway." (Ian, 70 - 74)*

Ian wants to be better at playing music and gave up other less important goals he previously had. As described above, Ian gave up his work with the political party and now has time to

focus more on music, which is an important part of his life. He not only wants to play music but master it and improve on it. The need to focus on fewer goals and doing them right can also be found by Jonathan. He reflects on his desire to focus on a few chosen pursuits and excel in them. While he acknowledges that younger people may successfully juggle multiple tasks, he values dedicating time and attention to fewer activities to ensure they are done well.

> *"I think when you're younger when you're your age, you can concentrate on many things and do them well. But I felt that I wanted to do whatever I chose to do. I wanted to be able to spend time doing and to do it well." (Jonathan, 65 - 69)*

He even went on to describe how important it is for him to deliver whatever he is doing with enough care. Time also plays an important role here. Having enough time to do as best as one can. For Jonathan, it is important to produce work to the best of his ability, as personal satisfaction comes from achieving a reasonable standard of quality. He highlights the risk of losing morale when overwhelmed with too many responsibilities, which can prevent dedicating sufficient time and effort to do his best.

> *"I think you can't create a situation for yourself, where you lose your own sense of morale, because you don't feel that you're doing your best because you haven't had enough time to do it. And the reason you haven't had enough time to do it is because you've got too many other things on your plate, as we would say." (Jonathan, 65 - 69)*

Hannah also describes how she optimised and mastered an important goal for herself: to watch important films. Hannah's goals were shifting throughout her life. She describes how she found a new interest and pursued it until she mastered it and became involved in new activities.

> *"I became a film buff. And now I'm sliding out of the, you know, I've seen all the films that I want to see. And we've got them stored on my computer so I can see them again if I want to see them again. But so, I'm sliding out of being a film buff". (Hannah, 65 - 69)*

In line with the SOC model, Hannah pursued her interest until she felt satisfied and had achieved mastery in her goal. The freed-up energy and resources can now be directed toward new goals.

6.4.4 Compensation if something doesn't work anymore

The last mechanism in the SOC model is compensation. Compensation strategies are used when losses are prevalent, and selection and optimisation strategies are not sufficient anymore to compensate for losses.

These can take different forms and are less clearly described in the literature. A form of compensation can be seen in Diana's interview. Diana, who has experienced a few health problems in the past, is now more conscious of possible pitfalls and caveats in her own house.

> *"Getting my bathroom finished. Making it safer for me, I'm having the bath taken out if, well when he's done the ceiling. […] Safety, you know, those sorts of things." (Diana, 70 - 74)*

While volunteering in an organisation that helps older adults to be safe at home, she realises that her home could be improved to be safer for the time she might be less mobile.

> *"Thinking about it for a long time thinking I could easily fall over here. And also, I think because I volunteer with [identifier removed], I visit elderly people, and you are made. Well, we're encouraged to look out for possible safety hazards, trip hazards. […] And then I start thinking, why am I stepping out of the bath soaking wet? I should be getting I don't use it as a bath anymore." (Diana, 70 -74)*

Another way to compensate for losses can be found in the interviews where participants mentioned a loss of energy. They describe different ways in which the loss of energy can be compensated. This can be seen by Carmen who shares in her interview how she incorporates recovery days into her routine after activities that require significant effort. For example, she helps care for her energetic young granddaughter every other week, which can be physically demanding. Upon returning home, she allows herself two days to rest, recharge, and handle light tasks, ensuring she regains her energy.

> *"So, I put in recovery days after things where I know that it's going to be a big effort. […] And now I know when I come home, two days, just be at home, do the washing go to the supermarket, you know, just two recovery days, and then I'll be okay again". (Carmen, 70 - 74)*

Carmen realises her energy loss and actively builds in days where she focuses on herself to recover from stress. A similar case is Jonathan, who found the "*perfect kind of compromise"* by doing what he enjoys but now on a smaller scale.

> *"So, I mean, it is a job that could be defined as full-time. So, I'm not retired. So, for me, it's a perfect kind of compromise that I've, I'm doing the job, which, compared with what I was doing when I was looking after a huge number of churches, is much smaller job. But it's a job that I find very worthwhile". (Jonathan, 65 - 69).*

Brim (1992) provides a similar example of his father, who, as he grew older, was no longer able to tend to his fields and instead focused on tasks closer to his home. Eventually, his father could no longer care for the house itself and, in very late life, concentrated on caring for the plants on his windowsill. Jonathan describes a similar ambition; while his scope has narrowed, he continues his work with the same dedication, now focusing on fewer churches, rather than the extensive number he previously managed.

6.5 Summary

The chapter addressed the research question: *How does perceived future time perspective impact older people's views on their own goals?*

Drawing on interviews with participants, four key themes were identified and explored. The first two themes highlighted the impact of health, ageing and retirement on participants' goal-setting and future outlook. As participants experienced declining health and energy, they adjusted their goals to focus on short-term, achievable aims, while retirement presented both opportunities for freedom and challenges related to lost structure or identity.
The other two themes examined how participants adapt to these shifts. In particular, the third theme explored strategies for coping with an uncertain future, including maintaining optimism, accepting uncertainty, and focusing on the present. The final theme used the Baltes' Selection, Optimisation, and Compensation (SOC) model, illustrating how participants manage the realities of ageing by adjusting goals, optimising their strengths, and compensating for losses when necessary.

Overall, the chapter showed the role that future time perspective plays in how older adults reassess and plan their goals. While future time perspective is not always explicitly mentioned, this shift is visible in the way participants shift from long-term goals to more short-term goals over the life course. This highlights how future time perspective changes in later life, influencing the notion of how participants think about their goals.

Health, retirement, and the unpredictability of life shape their thinking, leading them to adapt to these changes through a combination of reflection, acceptance, and strategic adjustment of their objectives. These themes show the complex ways in which older participants in this study maintain a sense of purpose and agency as they navigate the later stages of life. As Ian phrased it in the last part of the interview, when I asked him about his remaining goals, he said, *"I think I've said all I can think of, enriching the golden time, really".*

The next chapter will discuss the research findings from both study strands in context with the broader literature.

7 Discussion

This Chapter discusses the findings from both study strands in light of recent empirical research (Sections 2.2. and 2.3.3.) and connects the findings with theoretical assumptions (Sections 7.1 – 7.2). Subsequently, in Section 7.3, the ideas from both study strands are brought together to discuss the utility of the proposed theoretical framework (Figure 1).

7.1 Relationship Between Future Time Perspective, Goals and Subthreshold Depression

In the following three sections, the findings from Study One are discussed, and the results compared and discussed with the findings from previously conducted research to show the differences and similarities between Study One and other empirical and theoretical work, while drawing out implications.

7.1.1 Future Time Perspective and Goals

The first research question concerned whether a limited future time perspective is associated with a lower goal pursuit in later life.

The results from the statistical analysis showed that participants with limited future time perspectives (defined as not mentioning goals requiring more than 12 months to achieve) had significantly fewer goals than participants from the extended future time perspective group. Therefore, the first research question confirms the hypothesis that having a longer perspective on future time is associated with more goals. These results are aligned with the idea that all humans strive towards goals, they strive to master these goals, and ultimately, strive towards personal growth (Brim, 1992). The goal to achieve personal growth can be seen in the first study, when participants identify goals surrounding the *self*, which is the most often named goal. This type of goal is identical to the study from Lapierre, Bouffard and Bastin (1997), where the authors also used the MIM to analyse the goals of 708 participants, and their most often named goal was *self*, followed by goals related to *contact*. In the current study (Study One), 91% of the participants named goals related to self, and 90.8% named goals associated with *contact* to others.

Goals related to contact play an important role in socio-emotional selectivity theory (SST) (Carstensen, Isaacowitz and Charles, 1999). Although SST explicitly refers to the preference for emotionally close relationships and the reduction of network members who do not provide emotional support, these goals remain central to the theory's framework. In Study One, participants identified contact with others as the second most important goal. However, the size and closeness of their social networks were not established. Therefore, the study can neither confirm nor reject the assumptions of socio-emotional selectivity theory, as the core tenets of SST were not tested. However, similar to the notion of the SST, some participants in Study One experienced a more limited future time perspective and, were choosing goals related to *contact* with others, over goals related to *exploration*. However, socio-emotional selectivity theory does not make any assumption that goals, in general, are limited in later life. Study One showed that participants with an extended future time perspective had more goals, and participants with a limited future time perspective mentioned fewer goals.

SST offers dichotomous goals, either close contact for emotional gratification, if the time horizon is narrower, or goals related to knowledge, if individuals had an extended future time perspective. Participants in the present study named goals related to contact more often and fewer goals related to *exploration*. This would align with SST, as most participants reported a limited future time perspective, and goals related to *contacts* would serve for emotional gratification. However, goals related to the *self* were equally important. It is unclear how goals related to oneself can be explained with the SST. However, the SST does not claim that goals related to close family are the most important goals, but that if someone has to decide between two goals, they are more likely to choose goals that provide emotional support. Both kinds of goals can be found in the study, and it shows that goals are not either-or decisions. Individuals might decide to pursue multiple goals simultaneously.

In Study One, participants completed the sentence completion technique developed by Nuttin (1985), in which 30 inducers were provided, and participants were required to finish the sentences. From the 1,867 provided answers, only six participants reported no goals at all (8%). The low number of mentioned goals is similar to the findings in the study by Saajanaho *et al.* (2016), where 6% of the participants reported no goals. However, the sample size varied, with 824 participants from Saajanaho *et al.* (2016) and 76 in the current study. Furthermore, in Saajanaho *et al.* (2016) participants reported between zero and seven goals. In the current

study (Study One), participants reported on average 21.8 goals. Therefore, the above-mentioned goals seem more numerous in this study than in Saajanaho *et al.* (2016). However, the reader should be reminded that in Study One, contrary to other studies about goals, participants had the chance to write up to a maximum of 30 sentences that might contain goals. This more flexible approach enabled participants to include sentences that might not necessarily be associated with goals from their perspective, while in other studies participants either explicitly named only important goals or were given a list of goals to choose from (Rapkin and Fischer, 1992; Saajanaho *et al.*, 2014; Saajanaho *et al.*, 2016). The more openness regarding the questionnaire design (using the MIM) in Study One and the ability of the researcher to classify what can be understood as a goal can differ from individuals' views of what a goal is or may be limited to the number of goals that a researcher considers important (see Rapkin and Fischer, 1992; Saajanaho *et al.*, 2016). A comparison to Rapkin and Fischer (1992) cannot be drawn as the authors did not report how many goals in their study were classified as maintenance goals and how many were classified as achievement goals.

Many achievement goals can indicate that the study population is healthy. If one takes the concept of gains and losses, particularly the notion of selection, optimisation and compensation, then it would be expected that when an individual experiences more losses than gains, they will focus more on goals to compensate for losses, which can be interpreted as maintenance goals. The current participants, however, reported more achievement goals. These are goals that one would like to achieve. Therefore, it can be argued that the participants had not yet reached the fourth age when loss-based selection or compensation goals are important (Marsiske *et al.*, 1995; Baltes, 1997). This can be supported by the findings that the majority of participants did not report any difficulties when performing Instrumental Activities of Daily Living, as an indication of their functional ability.

Another interesting point concerns the transcendental goals often named by religious older adults in Study One. Although not statistically significant, these can be a hint towards Gerotranscendence (Tornstam, 1989), namely that older participants are less concerned about material goals and more often thinking about goals related to the afterlife or spiritual aspects of life or that spirituality has been important to them consistently throughout their life course.

The future time perspective was measured using two different methods. While the first measure was based on the MIM, the MIM cannot pinpoint participants' future time perspective but can provide some insights into the extent that their thinking contemplated the future, choosing goals that needed a certain amount of time to be realised. The majority of the participants in the sample had a limited future time perspective, but an extended future time perspective was observed more often among women. The reason for this is unclear, but given the distribution of the sample with more women than men, this result could be coincidental. The more direct method was to ask participants how much longer they think they might live, similar to the approach in previous research (Sakakibara and Ishii, 2020). On average, participants felt they had 15 years left to live, but there was no difference about whether this time felt long or short. Therefore, the direct method of asking about how much time participants believed to have left in life did not indicate an emotional response towards the time left.

In line with Brandtstädter and Rothermund (2003), the results of the quantitative study strand (Study One) indicated that most participants (70%) had short-term goals, and only 30% mentioned long-term goals. Brandtstädter and Rothermund (2003) assume that later life is more restricted regarding one's future time perspective. Therefore, the results fit with previous research in that the time perspective in later life narrows down, but goals are still visible. While the future time perspective gets narrower, goals can be adjusted, and short-term goals tend to be preferred over long-term goals.

Furthermore, some authors believe that a limited future time perspective leads to more positive emotions (Carstensen, Isaacowitz and Charles, 1999) while others think it can lead to negative feelings and depression (Grühn, Sharifian and Chu, 2016). However, Choi *et al.* (2024) distinguish between two types of future time perspective: "temporal focus on everyday thoughts" (p. 3), which refers to a focus on the immediate (near) future, and the future time perspective (FTP) described by Carstensen, Isaacowitz and Charles (1999), which incorporates a motivational component oriented towards long-term goals and the distant future. In short, older adults might think about their future differently, either in a short-term or long-term perspective. Additionally, they propose that older adults think less about the everyday future. Choi *et al.* (2024) results confirmed that older participants generally think less about the future than younger people. Furthermore, Choi *et al.* (2024) discuss Lang and

Carstensen (2002) notion that younger adults are more likely to engage with goals related to acquiring knowledge, and older adults have more emotional goals.

A direct comparison between Choi *et al*. (2024) and Study One is not possible, as Study One focused exclusively on older adults aged 65 and above, while Choi *et al.* (2024) compared younger adults (aged 18–28) with older adults (aged 50–85). Nevertheless, this raises the question of whether such simple dichotomous thinking is appropriate for comparing younger and older adults. Although Study One found that the majority of older adults in the sample perceived the future as limited, this was not true for everyone. This challenges the validity of studies that rely on simple dichotomous comparisons and suggests that future time perspective may be better understood as a multifaceted construct.

The variety of goals participants chose were an indication that they have emotional goals (goals related to *contact*) and knowledge goals (e.g., *self*, *exploration*) simultaneously. Emotional goals are understood as goals that are related to *contact* to others where a person is interested in already existing social relationships to increase their emotional well-being. Goals related to the *self* and *exploration* are goals that could be classified as knowledge goals, as they include the aim to learn something new, not only something about another person but something about oneself (*self*), and the *exploration* refers to goals to explore something new or have a new experience. Furthermore, in Study Two, participants explicitly reported goals related to education and acquiring knowledge. These were not necessarily goals regarding studying towards a university degree, but rather to learn and understand the world and oneself better. This raises questions about the validity of socio-emotional selectivity theory, specifically whether individuals who perceive their time as limited necessarily shift from knowledge-based goals to more emotional goals, or whether both types of goals can coexist simultaneously.

In Study One, the most frequently mentioned goals were related to *self* (mean 7.62) and *contact* (mean 7.21), while goals related to *travel* were mentioned less often (mean 1.39). This differs from a more recent study, which found that ‘activities and experiences’ were the most important goals. Burton *et al.* (2024) asked 1,551 older adults from six countries about their goals, and ‘activities and experiences’ were found to be the most often named goal category. However, by asking participants directly in the interview, similar notions about

travel and activities were mentioned in the qualitative study and can be found under the theme of the *retirement paradox*. Furthermore, this is similar to Timmer, Bode and Dittmann-Kohli (2003), where the authors used the concept of gains rather than goals, and instead of the MIM, the authors used a sentence completion instrument (SELE). While the MIM asked directly for goals participants wanted to achieve, the instrument used by Timmer, Bode and Dittmann-Kohli (2003) asked for expectations regarding gains. The authors discuss focusing on gains rather than goals, and goals are broadly defined as gains, but a clear definition remains omitted. How participants distinguish between goals and gains while completing the sentences remains unclear. For example, SELE comprises 28 sentences with inducers such as 'In the years to come …,' 'Later when I am older …,' or 'I plan to …,' which are quite similar to those in the MIM (Timmer, Bode and Dittmann-Kohli, 2003, p. 8).

Timmer, Bode and Dittmann-Kohli (2003) found that travelling was one of the most often mentioned expected gains. Interestingly, in their study, most participants mentioned gains in relation to "changes in the way of life" (ibid. 9). These were defined as gains towards oneself and to make more time for oneself. This could be interpreted as similar to the construct used in the quantitative strand as *self*. Goals related to *self* and *contact with others* mirrored the evidence from Timmer, Bode and Dittmann-Kohli (2003). However, while goals related to others were the second most important goal in the Study One, Timmer *et al.* (2003) reported that gains related to contact and social relationships were ranked as the third most important. The authors hypothesised that older participants were more likely to engage in community and volunteering activities to achieve a sense of generativity, as described by Erikson, Erikson and Kivnick (1986). Whether this observation stems from the increased free time available to retirees or is purely driven by generativity-related motivation remains unclear. Furthermore, the authors concluded that the current sample focused more on personal concerns and that future cohorts with higher education would be more likely to engage with the wider community and society in the form of volunteering. This raises a concerning question: Do older generations have more egocentric goals, while younger generations focus more on goals directed towards society. A different notion was perceived in the findings from the qualitative strand (Study Two), which showed that many of the older participants were interested in and concerned about society. Nonetheless, it remains unclear whether Erikson's (1963) idea of generativity as a key developmental goal is universal. For Erikson, Erikson and Kivnick (1986)

it is a universal task in the psychosocial stages of life (Stage 7). The authors referred to these as “syntonic” and “dystonic” positions (ibid., p. 33), describing them as opposite poles. In the seventh developmental stage, an adult must achieve generativity, which is described as the syntonic position on one side of the pole. Failure to achieve a sense of generativity results in self-absorption, representing the dystonic side of the pole. Erikson (1963) explains self-absorption as a “regression to an obsessive need for pseudo-intimacy […], often with a pervading sense of stagnation and personal impoverishment” (p. 267).

While individuals need to create a sense of generativity according to Erikson (1963), it might be equally possible that they are not able to achieve this developmental goal. In turn, this would lead to a dystonic state of self-absorption.

The fact that the 76 participants in the present study, in line with Timmer, Bode and Dittmann-Kohli (2003), do not prioritise goals related to generativity does not necessarily imply that the notion is wrong. It could be argued that the developmental task of reaching generativity is a task that not every individual reaches, and Erikson (1963) did not propose a biological theory where the reach of generativity is inherently possible for everyone, but more a developmental task that needs to be solved.

In summary, the study shows that an extended future time perspective is associated with a greater number of goals, while participants with a limited future time perspective reported on average, fewer goals. Additionally, the study revealed that *self*-related goals and goals related to *contact* with others were the most frequently mentioned.

Emotional goals (e.g., *contact with others*) align with SST’s emphasis on close emotional relationships, particularly when the future is perceived as limited. However, knowledge-based goals (e.g., *self* and *exploration*) were equally important, challenging SST's dichotomous framework, which suggests that knowledge goals are predominant when one is younger or has an extended future time perspective, and emotional goals take precedence when one is older or perceives the future as limited. These findings suggest that both types of goals can coexist in later life.

Goals related to community and volunteering were less prominent, despite Erikson’s (1963) emphasis on generativity as a key developmental task. This raises questions about whether

generativity is a universal developmental task or whether participants might achieve generativity in ways other than through community or volunteering work.

The next section will focus on the second hypothesis and discuss the findings regarding age and subthreshold depression in later life.

7.1.2 Age and Subthreshold Depression

The second research question explored where there was a relationship between the number of depressive symptoms and age. The statistical analysis proved that there was no significant relationship between age in years and depressive feelings measured with the Geriatric Depression Scale (GDS). Although, the findings must be interpreted with caution given the small sample size.

A scrutiny of depressive symptoms revealed that the majority of participants did not have depressive symptoms that reached the limit of subthreshold or major depressive symptoms; only 14% of the participants reached the threshold for minor depressive symptoms (subthreshold depression) and two participants (3%) reached the threshold of severe depressive symptoms (major depression). The threshold of subthreshold depression is similar to a previously conducted study about subthreshold depression (Adams, 2001; Shin *et al.*, 2019). Adams (2001) found that 12.9% of her study sample reported minor depressive symptoms that were classified as subthreshold depression. Oh *et al.* (2020) and Arias-de la Torre *et al.* (2021) found that subthreshold depression increases from the age of 75. The majority of the current sample was aged under 75 years (61%), which might explain the low number of participants with subthreshold depression among the participants. However, the findings differ from Rothermund and Brandtstädter (2003) who found an increase in major depression in the age group above 69 years. The low sample size of 76 participants might also explain the low number of subthreshold depression cases in Study One.

An alternative explanation is that people living with subthreshold depression may be less motivated to fill out the survey in the first place. The findings that minor depressive symptoms (subthreshold depression) occurred more often in the younger age groups (65-69) and among women are noteworthy. While being female is recognised as a risk factor (Rothermund and

Brandtstädter, 2003), other studies found that the depressive score increases in the oldest age groups (Prince *et al.*, 1999a; Oh *et al.*, 2020; Arias-de la Torre *et al.*, 2021). However, statistical tests could not examine the significance of the relationships due to the small cell counts. Owing to the design of the study, no information was obtained regarding the onset of depressive symptoms. It remains unclear whether participants in the present survey developed depressive symptoms before they reached the age of 65 or developed the symptoms after this age threshold. The qualitative study, however, provides insight into a few participants who reported having had depressive feelings over the life course. However, due to the anonymous nature of the survey, it is unknown whether the participants who reported higher GDS scores were the same participants who spoke about experiences of depressive symptoms in the qualitative strand of the study.

As described above (see Table 12, p. 110), the participants had a high functional ability, as measured by the IADLs, which indicate low physical disability. Prince *et al.* (1998) found in their study that physical disability was a strong predictor for late-onset depression, which could be one factor for why depression and subthreshold depression reporting were low in the sample.

Although it is unclear whether participants from the qualitative strand of the study experienced subthreshold depression, the themes and narratives from the qualitative study strand are similar to the study conducted by Ludvigsson *et al.* (2015). The authors found that participants with subthreshold depression saw a *decline in life curve and physical health* as a normal path of ageing. The concept of the life curve was not precisely defined by the authors, but they described it as being similar to the idea of the fourth age: a period in which older adults experience more losses than gains. This is akin to the experiences reported in this study that participants realise the impact of health on their goals (see theme: *the shift toward present-focused goals*) and how they adapt to these changes. Furthermore, in Ludvigsson *et al.* (2015), the participants with subthreshold depression more often described what the authors called *taking one day at the time* (p. 763). The authors describe that participants with subthreshold depression were not looking too far into the future and were focusing more on the present. Being present-oriented was also found in Study Two, but it could not be established that all participants who described the importance of being present-oriented have depressive symptoms. It does not prove that Ludvigsson *et al.* (2015) or the findings of

Study Two are wrong, but it raises the question of whether looking not too far into the future and being more present-oriented are a distinguishing theme of people living with depression or whether they represent a way of adapting to the process of ageing.

Another theory relevant to this discussion is disengagement theory (Cumming and Henry, 1961). Howarth (1998) suggests that disengagement theory should not be regarded as valid or invalid. The author provides an alternative view: when older adults have lived a satisfactory life, then the time in old age can be used to "re-engage in a manner which activity-driven middle-aged researchers may confuse for disengagement" (*ibid*., p. 675). Late-life can be seen by Howarth (1998) as a time when older adults have the time and freedom to engage in activities that were neglected in their younger (working or child-rearing) years. A similar notion can be used to explain older adults' perspectives on their present and future goals. It is imaginable that in later life, older adults indeed focus on the present to enjoy activities and the freedom they have, rather than looking towards the far future as younger professionals may do who have a working career ahead of them and are perhaps caught in prioritising thinking about their future career steps. Therefore, the finding is different from the assumption raised in Chapter 3.2, that being present-oriented is a cause of depressive symptoms. This needs to be explored further in future research.

7.1.3 Future Time Perspective, Goals and Subthreshold Depression

The third research question consolidated the first two research questions and asked whether older adults with limited future time perspective pursued fewer goals in later life and whether they would exhibit more depressive symptoms compared to their counterparts (who might experience an extended future time perspective and more goals). The analysis showed no difference regarding depressive symptoms in the groups with limited or extended future time perspectives. Therefore, it can be concluded that older adults with limited future time perspectives who pursue fewer goals are not different regarding their depression profile compared to participants with extended future time perspectives and who pursue more goals.

In the study from Sakakibara and Ishii (2020), the authors found that an extended future time perspective is in tandem with better well-being. Similar findings were present in other studies,

where the authors showed that a decrease in goals in later life does not lead to lower well-being and higher rates of depression (Brandtstädter and Rothermund, 2002; Brandtstädter and Rothermund, 2003). In terms of number of goals, Study One showed that an extended future time perspective is not associated with a higher goal pursuit. However, any assumptions about the well-being of the participants cannot be made, as variables concerning well-being and happiness have not been measured. The idea that a limited future time perspective is associated with fewer goals and be a cause of subthreshold depression must be rejected for the current sample, as no evidence was found. However, the small sample size could be a reason for this outcome, and the notion that a limited future time perspective and fewer goals could lead to subthreshold depression should not be entirely rejected on the basis of this sample.

The role of adaptability, which also played an important role in Havighurst's (1953) theoretical proposition of development, can be used to interpret the findings. Havighurst (1953) states that older adults need to learn to adapt to changes in later life based on losses. A limited future time perspective can be understood as a loss: the loss of time left in life and one's perception about it. However, not every participant experienced a loss of perceived time, as shown in Study One, but those who did might have adapted to the situation. To understand how participants might adapt to this situation, the concepts of gains and losses can be used (Uttal and Perlmutter, 1989). A loss of perspective on future time can correspond with gains in other areas.

In Chapter 2 (p. 10), it was highlighted that the experiences of losses might not lead to depressive symptoms, as late life is marked by high adaptability. This research finding can be interpreted with Baltes and Baltes' (1990) proposition two ("there is much heterogeneity in aging", p. 8) and proposition seven ("the self remains resilient in old age", p. 18). In proposition two, Baltes and Baltes (1990) argue that late life is marked by interindividual variability. This is a concept that refers to the highly individual ageing process: two older adults might have different developmental trajectories and can differ in their physical, emotional, and psychological dimensions from each other. In light of the findings, that means that participants in this study differ regarding their developmental process, and different life experiences might have shaped their experiences of future time perspective and goal pursuit. This is discussed in more detail in Section 7.2, and how participants adapt to these changes.

Closely related to this is the proposition that individuals in later life can have a high level of resilience. Therefore, a limited future time perspective might not necessarily lead to lower well-being or even subthreshold depression. Resilience and life experiences can mitigate the feelings that might come with a limited future time perspective, and goals might be redirected towards more important pursuits related to the *self* or *contact with others*. Another strategy might even be to ignore the time left in life, as discussed in Section 7.2.

Another question that should be asked is whether the sample was too young to experience a limited future time perspective. Too young in this context does not necessarily mean chronological age, but the time when individuals might experience more losses than gains, which is disconnected from chronological age. Baltes (1997) draws on Laslett's (1989) idea of the third and fourth age and extends it to the notion that functional ability is the delineating point between the third and fourth age. Participants in the third age might not yet have experienced losses that led them to reflect on their future time perspective. While Erikson (1963) argued that late life is the time of reaching ego integrity, one could ask whether the perception of a limited future time perspective is the turning point when older adults start to feel their time is running out and change their developmental course in the direction of ego-integrity. However, further research is needed to explore this possibility.

In summary, older adults maintain goals even when the majority of participants report a limited future time perspective. Specifically, participants with a limited future time perspective reported fewer goals compared to their counterparts. According to socio-emotional selectivity theory (SST), older adults prioritise goals aimed at emotional gratification over those focused on knowledge acquisition when their time horizon is perceived as shorter. However, the interpretation of self-related goals within the framework of SST remains an open question.

The analysis also highlights some gender differences in marital status, income, employment, depressive symptoms, and future time perspective within the sample.

Regarding marital status, a larger proportion of women were married (37%) or widowed (32%) compared to men, where only 28% were married and 17% widowed. Conversely, men were more frequently divorced (33%) and single (22%) than women, of whom only 6% were

single. These trends are partially consistent with the 2021 UK Census, where men were more likely to be single and women more often widowed. However, in contrast to national data, the sample showed a higher divorce rate among men than women. The reasons for this remain unclear, but it is possible that divorced men had a greater interest in the study's focus on goals and future time perspective. Future research could explore whether there are differences in goals and future time perspectives between married and divorced men, which would offer an interesting insight into how marital status influences perceptions of the future in later life.

Income and employment patterns also differed between men and women in the sample. Women were more likely to be in the low-income group, while men were more evenly distributed across income levels. However, women were also more likely than men to be in the high-income group, whereas men were more represented in the middle-income category. These findings raise an interesting question about why women from higher income groups were more likely to participate in the study compared to men. One possible explanation could be that women in higher-income groups generally have a higher interest in research around health and well-being. Future research could explore whether factors such as education, occupational background, or personal interest in the study topic contributed to this pattern. Furthermore, understanding why higher-income women were more likely to participate could provide insight into who engages in this form of research and why. This would help to improve recruitment strategies for future studies. It also raises broader questions about how socio-economic status influences perceptions of ageing, goal-setting, and future time perspective.

Employment patterns also varied by gender in the study. While most men and women in the sample were retired, a slightly larger proportion of women remained in some form of employment. Employment was most common among those aged 65–69, while a small percentage of participants aged 80–84 were still self-employed or engaged in other work. The Office for National Statistics (ONS, 2022) has reported an increasing trend of older adults remaining in the workforce beyond 65, largely due to the rise in part-time work, self-employment, and changes in the statutory retirement age, which may explain these findings.

Interestingly, women in Study One were more likely to have a limited future time perspective compared to men, although the difference was not statistically significant. Future research

could investigate whether this finding is coincidental or if women indeed tend to have a more limited future time perspective than men.

Another key finding from Study One is the observation that older adults do not focus on a single goal but often pursue multiple goals simultaneously. This challenges the dichotomous perspective that goals must be either emotionally gratifying or knowledge oriented. Future research should reconsider how the valence of goals in later life is conceptualised, moving away from binary assumptions.

Depressive feelings were reported at low levels in Study One. It remains unclear whether the study design discouraged older adults experiencing depressive feelings from participating, or if the relatively young age of participants prevented depressive symptoms from manifesting - symptoms that might become more prevalent after the age of 75.

The main research question, whether participants with a limited future time perspective and fewer goals also exhibit more depressive symptoms, could not be confirmed in the current study. Adaptability may play an important role here. The number of goals a person has may not necessarily indicate their well-being or life satisfaction. It is conceivable that having fewer but more meaningful goals could lead to higher satisfaction than having many less significant goals. The importance of goals, therefore, needs further exploration in future research. Similarly, a limited future time perspective might not inherently lead to lower well-being or depressive feelings.

As Tornstam (1989) suggested, transcendental goals may become more significant in later life, with remaining time used to reflect on one's life and achievements. Future research should explore the concept of future time perspective through a gerotranscendental or ego-integrity lens, as proposed by Tornstam (1989) and Erikson (1963).

7.2 Impact of Future Time Perspective on Goals in Later Life

The last research question explored how the perceived future time perspective impacts older people's views about their own goals. This section is divided into two parts. The first part

discusses the findings from the qualitative research on the impact theme, and the second part discusses the adaptation themes derived from the qualitative study.

7.2.1 Health and Retirement

The first two themes from the qualitative study concerned the way health, ageing, and retirement affect older adults' views about goals and their future.

The Shift Toward Present-Focused Goals, predominately explored how the experience of health problems and ageing leads to a decrease in energy and to more fear and worries about the participants' future. Health problems and ageing-related changes lead participants to focus more on the present and less on the future. Together, both cause the participants to shift goals and focus more on prevention and avoidance of further decline.

The decrease in energy levels and experiences of health issues causes participants to prioritise new goals that are directed towards hobbies (*leisure*) and family (*contact*). This is similar to the goals mentioned in the MIM, and participants in the quantitative strand of the study mentioned more goals related to *leisure* and *contact*. The focus on contact can be explained with the socio-emotional selectivity theory, as discussed above (Carstensen, Isaacowitz and Charles, 1999). When time is perceived as limited, it is expected that individuals shift their goals towards emotional gratification, which is more likely to be found in close relationships. The focus on hobbies can also be explained by reaching emotional gratification as proposed by Carstensen, Isaacowitz and Charles (1999) in a way that by focusing on hobbies, participants derive a sense of pleasure pursuing goals that are important to them.

The perception of a decreased energy level further led some participants to realise that time is limited and that the unlimited energy from the past is gone. Some of the participants attributed the decrease in energy level to the ageing process, but it did not stop them from pursuing goals. Baltes (1997) described in his theoretical framework that the human lifespan is "incomplete" (*ibid*. p. 366), and that human biology has not adapted to cultural progress in society (see page 14). Experiences of decreased energy can, therefore, be attributed to the incomplete "ontogenesis" in later life (p. 366). However, not all participants experienced a

decline in energy levels, and the reason for this might be that some participants were healthier than others and had experienced fewer physiological losses.

Ongoing health issues among participants led to worries about the future, a sense of being in limbo, and an increased focus on short-term goals, as concentrating on the present was more likely to bring them joy. Some participants described being in limbo as a state of waiting for their health to improve so they could resume activities they once pursued. For some, health decline was associated as an inevitable and progressive part of ageing, leading them to ignore the future as it might not bring an improvement in their health. However, others aimed for a medical intervention as a goal and were waiting for it to happen. Illness can be reversible due to medical progress. Some participants reported that they had felt old until they had a medical procedure that restored their health. This is closely aligned with Rowe and Kahn (1997) notion of successful ageing and that health issues are not inherently connected to ageing, but that lifestyle and individual factors can contribute to better health in later life. As already discussed, health issues can delineate the transition from the third to the fourth age (Baltes, 1997) but this process is not irreversible thanks to (medical) procedures (Settersten Jr, 2021).

The subtheme, *shifting goals – do something to prevent decline*, highlights the consequences of health problems and its switch from focusing on health-related goals and how the mechanisms of assimilation and accommodation are used. The process of assimilation and accommodation is described as a mode where a person focuses on a goal and cannot disengage from it, which can lead to rumination and even depressive feelings (Brandtstädter and Renner, 1990). When the switch from assimilation to accommodation happens, previous goals are devalued, new goals become more important, and relief can be experienced (Brandtstädter and Renner, 1990). For example, in the interview with Garry, he mentioned his ambition to pursue a PhD in his field, but he described his recent experiences of finishing his MSc, which caused him unmanageable stress. The assimilation mode can be observed in that he finished his MSc degree, despite experiencing health problems, but he had to learn that his health is more important than pursuing further academic pursuits, thereby switching from the assimilative mode to an accommodative mode and letting go of his goal.

The second theme, *the Retirement Paradox,* describes the impact that retirement has on participants, highlighting the mixed feelings of freedom and challenges that simultaneously

go along with retirement. While retirement is often seen as a new life chapter with a narrative that older adults can enjoy life to the fullest, in reality, retirement can be both a time of enjoying the last stage of life and a time of new worries. These worries can be attributed to the unclear structure and expectations of the retirement stage compared to other life stages, as well as the underlying precarity faced by individuals without the financial means to enjoy retirement, in contrast to financially well-equipped retirees. While some participants stayed in the labour market after reaching retirement age, others continued working on a volunteer basis. Those who remained in the labour market reported different reasons. Some described it as pure joy to work, and others more openly admitted that they needed the money, and that retirement was not possible for them. However, that did not make them feel concerned; they rather reconstructed their thinking about their job and highlighted that other colleagues were also working in certain areas after retirement, which allowed them to normalise the necessity of working beyond the state pension age. Others started volunteering to give something back to the community, a notion that is closely related to the concept of generativity. Erikson, Erikson and Kivnick (1986) describe generativity as the desire to give something back to society and to create something that endures beyond oneself. However, unlike Erikson, Erikson and Kivnick (1986), who assumed that generativity is located in middle adulthood, Carol, one of the participants in the study who highlighted her wish to give something back to society, is in her 90s and thus does not conform to Erikson's definition. This raises the question of how rigid Erikson's developmental tasks (1963) need to be perceived and whether these tasks are more fluid, extending beyond specific age stages. In a later publication, Erik Erikson and his co-authors Joan Erikson and Helen Kivnick (1986) extend their life stages model and reflect on whether the stages will be revisited in later life rather than achieved in a linear process. This could be possible in Carol's case, as she may revisit all her life stages and reflect on each developmental task. However, it is also possible that reaching generativity (Stage 7) and ego-integrity (Stage 8) may be pursued simultaneously rather than in a linear manner. However, this cannot be confirmed in the present study, and further investigation would be required.

Although the study was conducted shortly after the COVID-19 pandemic (data collection took place between November 2022 until May 2023), hardly any participants reported the effect of the pandemic on their retirement. Only one participant (Barbara) reflected on how the

pandemic interrupted the first months of her retirement. This differs from studies that focused on how the pandemic affected older adults' time perspective. For many, time seemed to 'run out' as the pandemic brought public life to a halt. Some older people expressed a desire to make the most of their remaining lifetime, leading to an observed shortening of their future time perspective (Rupprecht *et al.*, 2022). Furthermore, the restrictions forced them to stay at home, instead of enjoying their third age as Leinonen and Era (2024) phrased it. Leinonen and Era (2024) explored older adults' perceptions of present and future times during the pandemic and revealed that some of them experienced the uncertainty of the future as a "stolen future" (*ibid.* p. 12) with the possibility of being deprived of their 'third age' which is often conceptualised as a time of leisure and travel (Higgs and Gilleard, 2015) before the 'fourth age' starts - a time of decline or "the future before frailty" (Leinonen and Era, 2024, p. 12). Therefore, volunteering, being active and having goals seemed to be important for most of the participants.

Another important theme that was visible in the interviews was the notion of living an unlived life. This was described as the pursuits of participants to engage in activities that they were formerly not able to pursue. Work restricted them and structured their daily goals. By leaving the labour market behind, they experienced a newfound freedom where resources and time could be spent on activities and self-development. This is in line with the conception of the third and fourth age, especially following Laslett (1989) notion that the third age is the time of leisure. Participants in the study reported that they used the time after retirement to enjoy travelling and hobbies that were neglected during their time working.

However, the impact of retirement on goals and future time perspective is not only positive. The *dark side of retirement* exemplified the long shadow of work, and the time participants needed to recover from the strenuous time of being embedded in the labour market. Some experienced an abrupt ending to their work career, and others left their vocation with mixed feelings. Ian's description in particular is interesting, that he felt relief and sadness at the same time as he left his job behind. He was sad because he described his job as a vocation to which he was fully committed, but at the same time relieved as the new structures of work had changed drastically since he became a GP. Although disengagement theory has its critics, some aspects could be found in the present study. Cumming and Henry (1961) described in their theory that disengagement is provoked by society and by the individual and serves the

purpose of releasing the person from societal pressures to achieve optimal performance in the workforce. Ian might have experienced the high pressure and changing environment in his profession, without which he might have felt able and willing to continue for longer. Withdrawal from his vocation allowed him to escape the pressure of the new expectations laid upon him. Although it can be observed in Ian's case that he withdrew from the job as he found effective adaptation no longer possible for him, in light of the many changes in his work, it does not follow that Ian was satisfied with the solution. This can be seen by his ambiguous emotions as he left the profession. Rather, his experiences point towards the neoliberal notion that labourers are only useful for the labour market if they are high performers, and members are excluded if they do not reach previously held expectations that younger labourers might display.

The way health, ageing and retirement impact older adults' perspectives on their future time perspective and goals raises the question of how they adapt to the changes experienced in later life. The next section discusses both adaptation themes that were created from the interviews.

7.2.2 Adaptations in Later Life

The other themes from the qualitative study were summarised as themes that concerned how older adults adapt to their *ever-changing future* and how the model of *selection, optimisation, and compensation* helps them deal with changes in later life.

The third theme, *dealing with the ever-changing future*, highlights the notion of an uncertain future in the context of quick and ever-changing circumstances that can happen in every life stage, but are more commonly experienced in later life. These changes can be based on changes in health or in relationship status and require adjustments. Participants in the current study highlighted different strategies to deal with the expectations of a changing future. Some remained optimistic and tried to accept changes as they came; agency and having a purpose guided them through these uncertainties and helped them to regain control. Others were focusing more on the present to avoid thinking too much about the future.

For some, the future they were hoping for turned out to be different than expected; nevertheless, they tried to stay positive and hoped for the best in order to regain control over their life narrative. However, some experienced fear and worry, which led them to think differently about their future. One strategy to deal with these worries was to regain agency by planning ahead and making arrangements for future scenarios in order to be able to live independently for as long as possible. Another way to deal with the uncertainties of the future was to either think positively about a vague but unknown future or to ignore the future altogether. Both strategies helped participants to live in the moment. Living in the moment is a concept often associated with palliative and end-of-life care (Dönmez and Johnston, 2020). Future research could investigate whether this concept can be applied to all stages of late life and whether it represents a preferable way of thinking about life without being in a terminal stage.

The participants' strategies to deal with the ever-changing future can be explored with the concept of selection, optimisation, and compensation (Baltes and Baltes, 1990). Participants reported how they had experienced losses in their past and present. The losses of the past made them think differently about their future. Significant life events, such as losing someone in the past, led participants to reflect on how precarious life can be. Participants reported that while looking too far ahead into the future, one might risk forgetting to live in the present. Furthermore, age-related losses led individuals to set new goals to adapt to the changes they experienced. This is exemplified by Jonathan, who has realised that he can no longer manage multiple parishes. He now focuses on fewer parishes with the same dedication he previously applied to managing many. This finding is in line with loss-based selection as described by Baltes and Baltes (1990); when individuals experience ageing-related losses, they prioritise goals that are more likely to be achieved rather than elective goals. Elective goals are those that are purposefully chosen, not driven by the need to compensate for losses, but rather aimed at maximising gains.

Not thinking too much about the future was also explored by Clarke and Warren (2007), who found that some of their participants reported that they never looked ahead. Therefore, the authors assumed that thinking about one's future was not something that happens automatically when one grows older (Clarke and Warren, 2007). Similarly to Thomas's pessimistic account in Study Two, where he stated that he expected nothing exciting will

happen to him in the future, some participants in Clarke and Warren's (2007) study did not believe that something exciting would happen in the future either, although they would embrace it if it did. Furthermore, participants described that they switched goals from "activity driven goals of younger people" to more "ordinary everyday activities" (*ibid.* p. 472). This highlights a shift in thinking about the future away from ambitions that individuals might have in younger years to goals that are more likely to be achievable in the near future.

The concept of selection, optimisation and compensation was particularly helpful to analyse the interviews (Baltes and Baltes, 1990). Therefore, the fourth theme was named *the evolution of selection, optimisation and compensation*. Evolution highlights the evolving character of the process with ageing. Participants reported that they developed throughout their lives and learnt about themselves. Later in life, they realised that resources were becoming scarce, and that their remaining resources must be managed well.

The evolution of selection, optimisation and compensation is further explored through four subthemes. One of these subthemes emphasises the process of *learning something about oneself* and how this led to the different strategies depicted in the SOC model. Learning about oneself can be interpreted with Erikson's (1963) life stage model. Learning about oneself and making sense of one's past can potentially help one reach ego-integrity. Reflecting on one's life seems to be crucial for participants, as it helps them to make sense of their behaviour and decisions. Sometimes, the reflection leads to decisions in the present, as exemplified by Christian, who recognised his lack of ambition at work and decision to retire. Reflecting on the past helped other participants to reach a more egocentric perspective and thus to realise what they truly wanted from life, as Alice said.

Learning about oneself also means realising that available resources need to be managed. Using the SOC-lens, all three strategies proposed by Baltes and Baltes (1990) can be found in the interviews. For example, Jonathan describes how he used to manage multiple churches, but that he cannot 'spin plates' as well as he could in the past. This is a good example of a loss-based *selection of goals* and how Jonathan chose to focus only on one church to produce the same quality of work he used to do in the past.

Optimisation of what I'm doing is described as mastering goals and specialising in one domain (Baltes and Baltes, 1990). A few participants reflected on how they strived towards perfection in the different domains of their lives. On the one hand, Hannah switched goals as soon as she mastered one, and chose to pursue a new goal, and on the other hand, Ian focused on his goal of improving his technique in playing musical instruments as this was one of his lifelong endeavours besides his professional career as a GP.

Lastly, *compensation, if something doesn't work anymore,* reflects on participants' concerns that they might need to prepare for age-related losses. As they became aware of their declining energy, they developed strategies to compensate. This is exemplified by Carmen, who schedules days of rest after visiting her granddaughter to focus on her own well-being.

In summary, the discussion highlights the various ways in which future time perspective and goals are interrelated. Health issues and ageing seem to be associated with a shift towards focusing on more short-term goals and prioritising well-being-enhancing goals through leisure activities and social contact. Goals change from long-term aspirations to more achievable objectives as participants adapt to the energy decline many of them experienced. Although retirement can be a time of opportunities, it also brings challenges, worries, and a loss of structure. Volunteering offers a way to restructure this new life stage and fill it with purpose, providing a structure similar to work but with more flexibility and freedom.

Participants adapt to the uncertainties of later life stages by living in the moment, planning ahead, or embracing positive perspectives to regain control over their life narratives. Without necessarily being aware of this, the participants employ strategies of selection, optimisation, and compensation to adjust their goals based on their energy levels and capabilities, while maximising gains and adapting to losses. This is particularly facilitated by reflecting on their own life course. Therefore, participants' accounts from the interviews can be neatly explored in the context of Baltes and Baltes' (1990) SOC model and Erikson's (1963) life stage model.

The next section brings the ideas together. The conceptual framework proposed in Section 1.2 is revisited and discussed in light of the findings of the study.

7.3 Bringing the Ideas Together

As discussed in the methodology chapter (Chapter 4), a pragmatic paradigm was used to guide this thesis, and a mixed method study was conducted to explore the overarching research question of the relationship between goals, future time perspective and (subthreshold) depression in later life. A mixed method study requires 'mixing' the findings at some point, and different authors have different views of which stage this should happen (Greene, Caracelli and Graham, 1989; O'Cathain, Murphy and Nicholl, 2010). This research used the ideas of O'Cathain, Murphy and Nicholl (2010) where the authors suggest that integrating different study strands can happen directly in the analysis or at the discussion stage. Following their suggestion, the findings from both studies were analysed separately, and after a discussion of each study strand, they are now interpreted in a combined discussion.

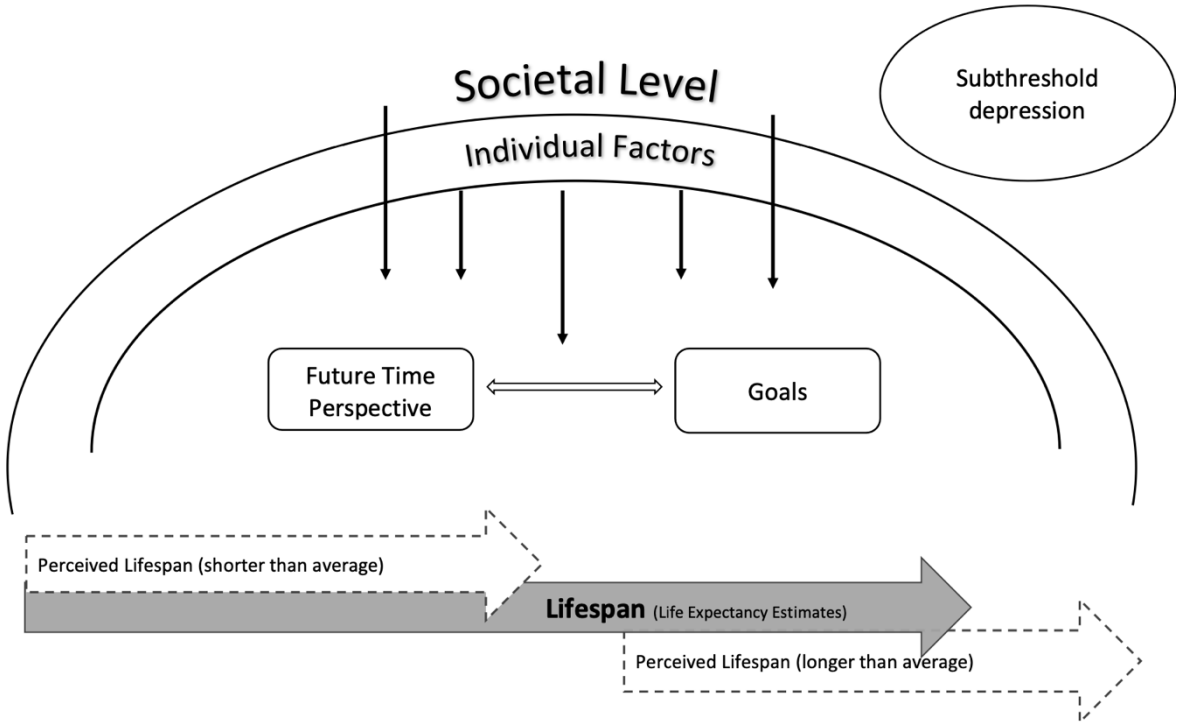
At the beginning of this thesis, a conceptual framework was created which assumed that fewer goals in later life and a limited future time perspective can contribute to explaining subthreshold depression. After carefully examining the sub-research questions, the overall research question: 'What is the relationship between goals, future time perspective and depression in later life?', can be partially answered with the help of a modified conceptual framework (Figure 25).

In the original framework, there was an assumption that fewer goals, a limited future time perspective, and subthreshold depression were related. However, after testing the different hypotheses (Study One), it can be suggested that in this study sample, there is no relationship involving depression, likely because only a small number of participants in the sample were living with subthreshold depression (Hypothesis 3).

Therefore, depression was removed from within the conceptual framework and placed outside of the framework. Furthermore, it was hypothesised that with increasing age, older adults were more likely to feel depressed, as has been found in other studies (Rothermund and Brandtstädter, 2003; Arias-de la Torre *et al.*, 2021). This hypothesis has also been rejected (the limitations of the study will be discussed in section 8.2.1.). However, a relationship between goals and future time perspective was found (Hypothesis 1); participants with limited future time perspective reported fewer goals. Therefore, the relationship between

these variables remains within the conceptual framework. In the original conceptual framework, the environmental context and individual factors were proposed as having a role to play in developing subthreshold depression. The participants in the qualitative strand of the study did not explicitly report depressive feelings. Therefore, it was not possible to make assumptions about how the environment and individual factors may influence the feelings of subthreshold depression. However, the qualitative study provided some interesting insights into how environment and individual factors can influence the goals and future time perspective of older adults.

Figure 27: Conceptual Framework Revised



Source: Author's own work

Figure 25 presents the revised developed conceptual framework. As found in the current study, future time perspective and goals are interrelated. When participants perceived their future time perspective as more limited, fewer goals were observed. Additionally, individual and societal factors appeared to play a role, particularly when considering the findings from the qualitative study.

The qualitative strand (Study Two) identified three factors influencing older adults' perceptions of goals and time: health, and retirement (Themes 1 and 2) and how these

themes lead participants to adapt to changes they experience (Themes 3 and 4). On an individual level, participants mentioned that health issues, decreased energy, and worries or fears about their future impacted on how they thought about their future and led them to adapt goals they had previously set. Health problems, in particular, prompted participants to reflect on their goals and prioritise those related to their health and safety, such as staying active or improving their environment to enable them to remain at home for as long as possible. This was seen as an effort to prepare for a time in their (distant) future when health problems could make independent living more difficult.

Retirement was another significant factor that influenced goal-setting, especially for younger participants, who were either not yet retired or who had recently retired. Participants described retirement as a period to live the life they could not fully enjoy during their busy working years. However, some participants reflected on the notion that retirement could also be viewed as the final stage of life, with no clearly defined stages following this transition. The interviews conveyed the idea of enjoying the 'third age' as a time to make the most of life before entering the 'fourth age', which is often perceived as a period of loss and decline (Higgs and Gilleard, 2015).

Other individual factors also influenced participants' goals. For instance, some participants continued to engage in paid work due to financial concerns, which interfered with their long-term goals, such as relocation. Similarly, participants described how the loss of a spouse significantly affected their goals and leisure activities, necessitating a reorganisation of their priorities and plans.

From a societal level, different factors shape individuals' goals and perceptions of future time. Expectations placed on participants, such as a high and often changing workload, could limit their time and energy to focus on personal or long-term goals and force them to retire. This restriction could lead to more present-oriented goals and cause individuals to focus on the ambitions that they might have had in their younger years.

Challenges, such as waiting for essential appointments like surgery or home improvements, could delay individuals' abilities to engage with new goals. These delays may leave individuals

in limbo, unable to thoroughly plan or act on their future goals until these immediate issues are resolved.

Societal factors, such as ageist stereotypes, can cause participants to think differently about time. The ideas may cause people to question their abilities and can lead to abandoning goals that might be perceived as unsuitable for older adults. Similarly, societal pressures - such as the stress of educational demands and tight deadlines, can push individuals to prioritise immediate responsibilities over personal aspirations, sometimes abandoning long-term goals altogether, as exemplified in Garry's interview and his previous goal to pursue a doctorate.

Retirement is often viewed as a time of freedom and opportunity, provided individuals have the financial resources to support their aspirations. For those with sufficient means, retirement can open doors to pursue meaningful activities. However, societal expectations often dictate that even in retirement, individuals must remain active or productive, discouraging them from simply enjoying leisure or rest.

Societal structures, such as rigid work environments and societal norms about productivity, can create a 'tunnel vision' effect (for example, Hannah), where individuals feel constrained in their ability to live their lives fully, or pursue different goals during their worktime, which can lead to difficulties in adjusting during retirement.

These societal pressures and expectations shape not only the goals individuals set but also their broader perspectives on the time they have available to achieve them. On the one hand, this can lead to an increased sense that time is running out after reaching retirement and might prompt individuals to embrace future opportunities to fulfil their wishes and achieve their goals. On the other hand, societal expectations that time is limited after retirement can create risk-averse thinking and a focus on maintaining the status quo. Therefore, society influences whether people view their future as open and full of possibilities or constrained by external factors.

8 Conclusion

In the following section, the original contribution to theory and research are discussed, followed by the limitations of the mixed methods.

8.1 Original Contribution

In contrast to this study, in previous research the future time perspective has been predominately measured with the Future Orientation Scale (Carstensen and Lang, 1996) and explained through the socio-emotional selectivity theory lens (Carstensen, Isaacowitz and Charles, 1999). Goals in later life have often been measured with pre-defined tick-box questionnaires or, when measured with free-text boxes, participants were explicitly asked to nominate goals (Rapkin and Fischer, 1992; Saajanaho *et al.*, 2014; Saajanaho *et al.*, 2016). However, in the past, alternative measures were also used, which allowed a more nuanced perspective on goals and future time perspective with the help of the MIM (Nuttin, 1985; Lapierre, Bouffard and Bastin, 1992; Bouffard, Bastin and Lapierre, 1996; Lapierre, Bouffard and Bastin, 1997). As far as is known, this is the first study that combined goals, future time perspective and subthreshold depression in later life. Furthermore, it is the first study that combines future time perspective and goals in a qualitative study, as few studies have explored future time perspective (Leinonen and Era, 2024) or goals (Burton *et al.*, 2024) with a qualitative study design.

The thesis makes two key contributions to the field of gerontology. Firstly, it offers a novel qualitative insight into how health, ageing, and retirement shape older adults' perceptions of their goals and future time perspective. Secondly, it examines how older adults adapt to the changing circumstances of later life. These contributions are highlighted by the finding that, despite having a limited future time perspective, participants demonstrated a wide variety of goals in later life. While future time perspective is not always explicitly mentioned, a shift is visible in the way participants transition from long-term to more short-term goals over the life course. The study further reveals how older adults adjust their goals in response to their limited future time perspective and how factors such as health and retirement influence their outlook on the future and their aspirations.

Although the original hypothesis that a lower future time perspective and fewer goals is associated with an increase in subthreshold depression needs to be rejected based on the findings from the current sample, it does not mean that the notion is incorrect. Further research should be conducted to explore whether this holds true in a larger, more representative sample size (see Chapter 8.3. for an in-depth discussion of future research). Nevertheless, the research found that later life and the experiences of losses is not necessarily associated with subthreshold depression (Study One). The qualitative strand of the study (Study Two) provided insights into how, despite the limited future time perspective of older adults in later life, they adapt to the changes in health they experience over the life course and how strategies outlined in the SOC model help them to focus on important goals. Therefore, the findings from the thesis support the argumentation provided in the SOC model. Furthermore, this research contributes to the extensive body of work on adaptation in later life, highlighting how a focus on the present and the strategies of selection, optimisation, and compensation help older adults navigate the later years of their lives.

8.2 Limitations

8.2.1 Limitations of Study One

Study One's original aim was to reach a study sample of about 200 participants. Despite various methods of distributing flyers, advertising the online survey and distributing the paper version to local communities, only 83 participants were successfully recruited. Out of those 83 participants, only 76 responses could be used in the analysis.

The lower-than-expected numbers could be explained as follows. The survey was advertised from September 2022 until May 2023; a longer advertisement period may have increased the number of participants, although most participants responded towards the beginning of the advertisement period. Another possible reason for the low participant numbers could have been the wording in the flyer. The flyer invited participants over 65 to talk about their goals and time perception. Throughout the interviews, some participants mentioned repeatedly that they did not have any goals, but rather projects and aims. In future research, it might be necessary to rephrase advertisements to reflect other terms (for example, projects, aims, endeavours) which might resonate with potential participants and yield a higher response rate.

The lower-than-expected number of participants subsequently led to a more limited possibility for statistical analysis. A normal distribution was not reached for some variables, and statistical procedures that require a normal distribution of the data (see Chapter 4.5.4) could not be deployed. However, non-parametric tests were used instead.

Furthermore, the limited number of participants and the purposive sampling strategy also affected the findings' generalisability. As already mentioned in Chapter 4.5, due to the lack of systematic sampling, results from the study can only be viewed as exploratory in nature.

Another limitation of the study is concerned with the questionnaire used. The MIM gave rise to the extension index in previous studies (Bouffard, Bastin and Lapierre, 1996). The extension index was described in Chapter 4.4.2. as the sum of short-term goals divided by the participant's long-term goals, then multiplied by 100. However, given that some participants mentioned only short-term goals and no long-term goals, a sensible extension index could not be created in this study, which limited the comparison of the thesis findings with other studies that also used this index (Nuttin, 1985; Lapierre, Bouffard and Bastin, 1992; Bouffard, Bastin and Lapierre, 1996; Lapierre, Bouffard and Bastin, 1997). This raised the question of how authors in the past have dealt with the situation when participants did not mention any long-term goals. At this point, the reader should be reminded that the researcher classified the responses of the MIM in short- and long-term goals. It is possible that other researchers would have made a different decision about when to classify a goal as a short- or long-term goal; depending on how strictly one applies the criteria of when a goal is reachable in the far future, the results may have been different. In this thesis, the criteria were applied conservatively, meaning that when in doubt, a goal was classified as a short-term goal, so as not to artificially inflate the number of long-term goals.

The last limitation relates to measuring future time perspective using the MIM. The decision to use the MIM was justified in Chapter 4.5.1. However, when analysing the questionnaire, it was evident that participants appeared to struggle to answer the sentence completion questions. Not all participants used all of the inducers to write about their goals, and some mentioned in the questionnaire their dissatisfaction with the repetitive nature of the inducers. Although other questionnaires exist, for example, the Future Orientation Scale (Carstensen and Lang, 1996), the author decided to use the MIM for its novel way to analyse

goals and interpret individuals' future time perspective (see Section 4.5.1.), rather than asking participants directly about their future time perspective or their attitudes and feelings towards their own future. Nevertheless, future research needs to reconsider whether the MIM can be used with a shortened version of the 30 inducers to accommodate participants' willingness to fill out the questionnaire, as this may also have been a factor which influenced participants' decisions as to whether to complete the questionnaire.

8.2.2 Limitations of Study Two

The second strand of the study used a qualitative approach to explore participants' thoughts about their goals and future. The sample size of 18 participants aligns with other qualitative research projects, where determining an ideal sample size is inherently challenging (Braun and Clarke, 2022). One strength of the qualitative strand is that the sample was taken from Study One, which has the advantage that participants already had time to reflect on their goals and future perspectives before they were interviewed.

Nevertheless, the interviews were conducted in a single interview session, which could have influenced participants' willingness to open up to the researcher. Multiple interview rounds may have facilitated a stronger rapport between the interviewer and participants. More than one interview with the participants would also have allowed the researcher to clarify questions arising during the analysis process, which could have enriched the analysis. As interviews are often conducted in an artificial situation, the author aimed to mitigate this by providing the participants with different options regarding the location of their interview (for example, their home, the office or a neutral venue). Approximately half of the participants travelled to the researcher's office, while the other half chose to be interviewed at home. None of the participants opted to be interviewed on neutral ground (away from their home or outside of the researcher's office). Future studies could use different techniques to gather qualitative data (instead of creating an artificial interview situation), such as naturalistic data collection methods, for example, ethnographic methods (Silverman, 2021). Although ethnographic methods may not readily provide straightforward information about goals, by observing and interacting with participants (unspoken) goals can become more apparent than in an interview setting.

The last limitation in Study Two concerns depression in this study. For ethical reasons, depression was not explicitly advertised or explored in the qualitative study strand and was only occasionally reported by participants. Therefore, one limitation of Study Two is the limited ability to report on depressive feelings and their impact on future time perspective and goals in later life.

8.3 Future Research Directions and Policy Implications

In this section, the possibilities for future research and policy implications from the research findings are presented and discussed.

8.3.1 Future Research Directions

Despite the limitations, the quantitative strand of the study provoked interesting questions that could be addressed in future research. For example, what goals do people have and pursue among a non-healthy older population? A lack of goals and a limited future time perspective are indicators of subthreshold depression, even if the hypothesis in this study could not be confirmed (presumably because of the small sample size). Furthermore, most of the research about goals and future time perspective focuses on the majority group within a population. As far as the author is aware, no research has been conducted with different ethnic groups to explore how the findings might be different from a White Western perspective (Eurocentric). This research also evoked the question about transcendental goals and religion. Although the relationship was statistically not significant, more research is needed to explore whether transcendental goals have more importance to religious older adults.

There are some research desiderata that can be derived from the qualitative study as well. As mentioned in the limitation section, future research studies could be longitudinal or include more than one interview session to build a better rapport with participants and explore changes over time. It would be interesting to explore how goals and future time perspectives might change during the transition into retirement. Another possibility is to extend the research to the oldest old age group. In the current study, most participants were in their 60s

and 70s, and a small minority were in their 80s and 90s. It is probable that participants in the oldest age group have different goals than their younger counterparts.

Lastly, as suggested in Section 7.1, the absence of generativity as the highest goal pursuit does not imply that it is unimportant in later life. A lower priority does not equate to a lack of importance. Here, it would be reasonable to explore whether a higher sense of generativity is synonymous with a higher sense of satisfaction or whether one's construction of a sense of generativity leads to a more successful transition into the next stage where individuals reach ego integrity as described by Erikson, Erikson and Kivnick (1986). Further quantitative studies could operationalise generativity and ego-integrity, and longitudinal quantitative studies could explore how generativity changes over the life course, particularly among the oldest old.

8.3.2 Practical and Policy Implications

The study revealed that, on average, participants estimated they had 15 years left to live. This finite period appears to be a timeframe in which participants can choose to engage in activities they enjoy and find pleasurable. The goals they reported most often focused on maintaining relationships and increasing personal growth. This raises an important question: how can goal development be effectively supported and facilitated for older adults?

Past research explored the notion that older adults mainly focused on improving health issues, mobility or goals related to their safety (Rapkin and Fischer, 1992; Saajanaho *et al.*, 2014). Participants also mentioned goals related to leisure and self-development. Similarly to the findings in Burton *et al.* (2024), policy recommendations could be used to inform health care professionals and social workers that older adults should also focus on achievement goals. A shift in culture could tackle ageist assumptions that older adults should only focus on maintenance goals. This approach would enable health professionals, social workers, and others who work with older adults (e.g., those in the volunteer sector) to discuss goals holistically, addressing both safety and health issues as well as the personal goals older adults wish to achieve (Burton *et al.*, 2024).

Another way to encourage goal development in later life is through training programmes for older adults. The model of selection, optimisation, and compensation could serve as an

underlying theoretical framework to design programmes that help older adults reflect on their past behaviour and consider how decisions about goals can inform their thinking about future goals. This approach would be similar to reminiscence training or life review therapy (Butler, 1963), a psychotherapeutic method that focuses on the past experiences of older adults, particularly those with depression. It aims to help individuals reinterpret past situations, and research has demonstrated its effectiveness as a non-pharmacological approach to treating depression (Liu *et al.*, 2021). By designing therapy programmes, it is important to facilitate barrier-free access for older adults to mental health services. A therapy programme to support a life review could be implemented as a community activity. Such an approach can lower the threshold for seeking mental health support and potentially intervene before detrimental health outcomes emerge. The findings about transcendental goals are also important to consider in later life. As outlined above, a training programme could also cover the importance of reflecting on possible outcomes of transcendental goals and would align with the notion of Erikson's framework of the last two developmental tasks of generativity and ego-integrity.

As some participants in this study highlighted the importance of volunteering, future policy recommendations could focus on how volunteering could be further facilitated throughout one's life and not necessarily only as a task that can be done when one has already retired. Although volunteering is already a part of the Department of Health's (2011) strategy (renamed to Department of Health and Social Care in 2018), participation rates have declined. In 2021/22, only 16% of the population engaged in formal volunteering activities in the UK, compared to 23% in 2020/21 (UK Parliament, 2024). Barriers such as limited time, concerns about future life circumstances, and potential health-related challenges can hinder older individuals from actively participating in volunteer work (Hansen and Slagsvold, 2020). Research on the benefits of volunteering suggests that it can enhance both physical and mental health in later life (Salt, Crofford and Segerstrom, 2017; Yeung, Zhang and Kim, 2017). Therefore, future research could focus on strategies to address concerns about the future and potential health-related challenges, facilitating greater participation in volunteer activities during later life while emphasising its benefits.

Another important theme participants spoke about in the study was the need to maintain paid work beyond the state pension age, highlighting the precarity of some older adults

remaining in work. Here, the financial precarity of some older adults should be highlighted and requires the government to rethink how older adults can be supported and how younger adults can be prepared to think about their own pension once they leave the labour market. Current research suggests that increased awareness of the financial implications of the future can begin during school age, providing an opportunity to prepare individuals to plan effectively for their future (Yin *et al.*, 2024).

Furthermore, some participants reported about the disruptive ending of the work life. Training for a successful transition into retirement could potentially promote successful ageing and a smoother transition into the years after retirement.

Older adults also mentioned the unpredictability of their future; consequently, they focused on short-term goals. This indicates that focusing on short-term goals is not purely intrinsic; external factors also play a role. Recent events like the COVID-19 pandemic, the cost-of-living crisis, and political instability can cause older adults to focus more on their immediate future and thus on short-term goals. Local politics could focus on age-friendly policies. Possible options include engaging with the WHO's Ageing Better Framework and the 'Age-Friendly Cities' Framework, developed by the Centre for Ageing Better and aligned with the WHO's Ageing Better Framework (WHO, 2007; Handler, 2014). Besides recommendations for outdoor spaces and buildings, transportation, and housing, the framework emphasises social participation and social inclusion, highlighting their importance in preventing older adults from becoming detached from society and supporting intergenerational activities within neighbourhoods. This approach would closely align with the idea of community engagement programmes and the potential to facilitate volunteering opportunities, helping older adults remain active and engaged with local communities. Another important step would be improving access to healthcare and mental health services. Recent research highlights the challenges and barriers faced by older adults living with mental health problems, for example in Southampton (Wang, 2024; Jana and Heuser, under review). Additionally, discussions between policymakers and academics aimed at increasing financial security in later life can be adapted to address economic inequalities both locally and nationally.

Finally, the phase after retirement is less clearly defined than other life stages (for example, childhood or work-life); thus, policymakers and society should reflect on how older adults can

be actively included to contribute and create better policies to accommodate the needs of younger people in the workforce and older, retired people alike.

8.4 Conclusion

In Chapter 1, a conceptual framework (Figure 1) was proposed and was revised in Chapter 7.3 (Figure 25) in light of the findings of this thesis. The main focus was based on the assumption that lower goal pursuit and limited future time perspective would be associated with more depressive feelings in the form of subthreshold depression. After analysing and reflecting on the findings, the conceptual framework was adjusted. The research in this doctoral thesis showed a connection between goals and future time perspective, namely, that a more limited future time perspective is associated with a lower goal pursuit. However, no relationship was found between age and depressive symptoms. There was no evidence in this study that lower goal pursuit and limited future time perspective is associated with an increase in subthreshold depression. However, as only a few (15%) participants in the study had subthreshold depression, this hypothesis remains open for future testing.

Interestingly, the qualitative study showed the impact of individual and societal levels on participants' thinking about their own future and their goals. The *shift toward present-focused goals* is influenced by the mechanism through which older adults, in the context of declining energy and concerns about their future, reorient their goals toward the present. Additionally, retirement is experienced in its duality, referred to as the *retirement paradox*, where participants viewed retirement as both a time of new opportunities and a period of challenges.

The impact on goals and future time perspective is not only an intrinsic factor that arises from individuals thinking about their time and goals, but is also determined by societal structures, such as how retirement impacts on their goals and how financial constraints impact on older adults' goal perception. Lastly, the research indicates that older adults adapt to the *ever-changing future* by using different strategies, such as thinking about the future differently or taking back control over their lives. It also suggests that development in later life does not stop and that learning about oneself is described by participants as an essential developmental step toward using selection, optimisation and compensation strategies to navigate the later stages of life.

Appendices

Appendix 1: Original Booklet (Nuttin 1985)

On each page of the two booklets that you have before you, you will find some phrases, for example, “I wish…”, “I fear …”. These phrases constitute the beginning of the sentence. You are asked to complete this sentence on the page of the booklet by applying the words to yourself. Thus, in the first example given, you continue the sentence by indicating something which you personally, really wish.

You need not to think for a long time about each sentence; simply write whatever comes to your mind when you apply the words on each page to yourself.

The essential thing is that you mean what you write. It is not a question of constructing a grammatical sentence, but of expressing the real objects of your wishes, plans, intentions, etc., on each page.

Try to reply in such a way that each sentence has a meaning by itself.

If a phrase ends in one or two word within paratheses, for example, “I wish (that or to) …”, then you may say “I wish that …” or “I wish to …”, whichever statement seems to express your wish more accurately.

We understand that people don’t like to tell others what they wish or fear. This is why you are asked to reply without giving your name. It is not important for our research that we know the name of the person who completes the sentence, but it is essential that he does it sincerely and personally. It is absolutely guaranteed that no one will try to identify the person who made these responses. The experimenter has arranged to insure that your booklet will not be identified. Therefore, you should not hesitate to express your most intimate wishes or fears, even when they may seem socially unacceptable. The only condition is that they exist in you or come to your mind from time to time.

You may have the impression that similar phrases are repeated on several pages. This is to give you the chance to express many objects of motivation. When you have such an impression, you should not try to remember what you have written before, but simply write what come to your mind when you read the words on the new page.

Do not change the words printed on each page.

One last remark. You have been asked to take part in a psychological study. This research is

valid only if the questionnaire is completed truthfully. If you are not willing to do this seriously, please return the booklets blank.

Thank you for your cooperation.

Appendix 2: Online and Paper Questionnaire

University of Southampton

The Time and Goals Study

Researcher: Christoph Heuser
University email: ch4n20@soton.ac.uk

Contact telephone number: 023 8059 2353
Ethics/ERGO no: 76030 [15/09/2022]

What is the research about?

My name is Christoph Heuser, and I am a Gerontology PhD student at the University of Southampton in the United Kingdom. I am inviting you to participate in a study regarding older people's perceptions about their future and what kind of ideas, goals and wishes they might have and what they would like to achieve in the near future. I want to understand whether plans for the future are somehow related to people's mood and the activities they perform every day.

What will happen to me if I take part?
This study involves completing an anonymous questionnaire which should take approximately 30 minutes of your time. If you are happy to complete this survey, you will need to tick (check) the box below to indicate that you consent to participate. This survey is anonymous which means the researcher will not be able to know whether you have participated or not. Any personal details about you, or what answers you provided will not be traceable back to you. At the end of the survey, you will be asked if you would like to participate in a follow-up study. You can provide your email address if you wish to participate, but you don't have to. If you decide to take part in the follow-up study, then you will have the chance to provide your email address in an extra section which is separated from the original survey to guarantee your anonymity. Your email address will only be used for the purpose to contact you for the follow-up study. The first 20 participants who express an interest in taking part will be invited for a follow-up interview. It might be possible that you provide your email address, but I will not invite you. This means I already have 20 participants.

Why have I been asked to participate?
You have been asked to take part because you are aged 65 or over, and you are living in the United Kingdom. I am aiming to recruit around 200 participants for this study.

What information will be collected?
The questions in this survey ask for information in relation to your hopes, intentions and wishes. Additionally, it will also ask you about your mood. For example, how you feel when you think about your future. The questionnaire will also ask you about some demographic characteristics (e.g., age, sex, educational level, income, employability, marital status and place of residence) and about circumstances and activities in your life (for example to what extent you can go shopping on your own or if you need help for housekeeping and laundry). Some of the survey questions contain textboxes where you will be asked to type in your own answers. Please note that in order for this survey to be anonymous, you should not include in your answers any information from which you, or other people, could be identified. You do not have to answer all the questions if you do not wish to do so.

What are the possible benefits of taking part?

If you decide to take part in this study, you will not receive any direct benefits; however, your participation will contribute to knowledge in this area of research.

Are there any risks involved?
Thinking about the future or depressive symptoms might be distressing for you. You can stop the questionnaire whenever you want and can continue whenever you feel able, if you want to, or stop completely. I have provided some information for organisations who can help you if you feel psychological discomfort.

Mind
For information about mental health support and services: Call 0300 123 3393 or email info@mind.org.uk or visit www.mind.org.uk. Direct link to help website: https://www.mind.org.uk/need-urgent-help/using-this-tool/

Age UK
For information and support regarding concerns about ageing and later life: Call 0800 678 1602 or visit www.ageuk.org.uk. Direct link to support: https://www.ageuk.org.uk/information-advice/health-wellbeing/

What will happen to the information collected?
All information collected for this study will be stored securely on MS OneDrive (University's Online Cloud Service). In addition, all data will be pooled and only compiled into data summaries or summary reports. Only the researcher and their supervisor will have access to this information. The information collected will be analysed and written up as part of the researcher's thesis and will be published in a journal and presented at conferences. The University of Southampton conducts research to the highest standards of ethics and research integrity. In accordance with our Research Data Management Policy, data will be held for 10 years after the study has finished when it will be securely destroyed.

What happens if there is a problem?
If you are unhappy about any aspect of this study and would like to make a formal complaint, you can contact the Head of Research Integrity and Governance, University of Southampton, on the following contact details: Email: rgoinfo@soton.ac.uk, phone: + 44 2380 595058. Please quote the Ethics/ERGO number above. Please note that by making a complaint you might be no longer anonymous.

More information on your rights as a study participant is available via this link: https://www.southampton.ac.uk/about/governance/participant-information.page

Thank you for reading this information sheet and considering taking part in this research.

Please tick, **I consent**, to indicate that you have read and understood the information on this form, are aged 65 or over and agree to take part in this survey.

I consent ☐

I would like to start with some general questions.

1. When were you born? [YEAR] _____

2. Which of the following best describes your sex? [choose one only]: Male □ Female □
   Nonbinary □ prefer not to say □ other: _____

3. What is the highest qualification you reached? _____

4. Which of the following best describes your monthly (gross) (pension included) income? [choose one only]: Up to £500 □ £501 – £1000 □ £1001 – £1500 □ £1501 – £2000 □ £2001 – £2500 □ £2051 to £3000 □ more than £3000 □ no income □ prefer not to say □

5. Which of the following best describes your employment status? [you can choose multiple]: Retired □ self-employed □ full-time employed □ part-time □ employed □ prefer not to say □ other [please state] _____

6. Which of the following best describes your marital status? [choose one only]: Married □ cohabitating □ single (never married) □ widowed □ divorced □ separated □ prefer not to say □

7. Which of the following best describes your place of residence? [choose one only]: My own house □ my own flat □ rented house □ rented flat, in someone else's home (e.g., with children) □ care home/ nursing home □ sheltered housing □ prefer not to say □

8. Which of the following best describes your religion? [choose one only]: Hindu □ Muslim □ Christian □ Sikh □ Buddhist □ Jain □ Jewish □ prefer not to say □ no religion □ other [please state] _____

9. Which of the following best describes your race or ethnicity? [choose one only]:

I. Asian or Asian British (a)Indian □ b) Pakistani □ c) Bangladeshi □ d) Chinese □ e) Any other Asian background □

II. Black, Black British, Caribbean or African (a) Caribbean □ b) African □ c) Any other Black; Black British; Caribbean background □

III. Mixed or multiple ethnic groups (a) White and Black Caribbean □ b) White and Black African □ c) White and Asian □ d) Any other Mixed or multiple ethnic background □

IV. White (a) English □ b) Welsh □ c) Scottish □ d) Northern Irish or British □ e) Irish □ f) Gypsy or Irish Traveller □ g) Roma □ h) Any other White background □

V. Other ethnic groups (a) Arab □ b) Any other ethnic group □

In the next section I will ask you some more specific questions.

In the next section you will find some phrases, for example, “I wish…”, “I don’t want …”. These phrases constitute the beginning of the sentence. You are asked to complete this sentence by applying the words to yourself. You need not think for a long time about each sentence; simply type whatever comes to your mind when you apply the words to yourself. You may have the impression that similar phrases are repeated. This is to give you the chance to express as many goals as possible. When you have such an impression, you should not try to remember what you have written before, but simply write what comes to your mind when you read the next words.

I hope …

I intensely desire …

I intend to …

I wish …

I long (for/ or to) …

I will be glad when …

I want …

I am striving (to, or for) …

I have a great longing to …

I would like to be able to …

I would like so much …

I am trying (to, or for) …

I am resolved to …

I will be very happy when …

I ardently desire …

I will do everything possible to …

I would like very much to be allowed to …

I am doing my best to ….

I hope with all my heart to …

Quite strongly I strive (to, or for) …

It would displease me very much if …

I don’t want …

I would oppose it if …

I would not like it …

I try to avoid …

I am afraid that …

I would regret it very much if …

I really don’t want …

I wouldn’t like …

I would not want …

The next two questions are about your own life expectancy.

How much time do you think you have left in your life? Of course, this is just an intuitive estimation, please state the number of years (YEARS) _____

Do you feel the time stated above is short or long? _____

I would like to ask you some questions about your mood, your sleep and about your thoughts in general.

Are you basically satisfied with your life?	Yes ☐ No ☐
Have you dropped many of your activities or interests?	Yes ☐ No ☐
Do you feel that your life is empty?	Yes ☐ No ☐
Do you often feel bored?	Yes ☐ No ☐
Are you in good spirits most of the time?	Yes ☐ No ☐
Are you afraid that something bad is going to happen to you?	Yes ☐ No ☐
Do you feel happy most of the time?	Yes ☐ No ☐
Do you often feel helpless?	Yes ☐ No ☐
Do you prefer to stay at home, rather than going out and doing new things?	Yes ☐ No ☐
Do you feel you have more problems with your memory than most?	Yes ☐ No ☐
Do you think it is wonderful to be alive?	Yes ☐ No ☐
Do you feel pretty worthless the way you are now?	Yes ☐ No ☐
Do you feel full of energy?	Yes ☐ No ☐
Do you feel that your situation is hopeless?	Yes ☐ No ☐
Do you think that most people are better off than you are?	Yes ☐ No ☐

The last section is about some activities you might (or might not) do in your daily life.

Ability to Use Telephone

- ☐ I operate the telephone on own initiative
- ☐ I look up and call numbers, I call a few well-known numbers, I answer telephone, but do not call
- ☐ I do not use the telephone at all

Shopping

- ☐ I take care of all shopping needs independently
- ☐ I shop independently for small purchases
- ☐ I need to be accompanied on any shopping trip, I am completely unable to shop

Food Preparation

- ☐ I plan, prepare, and serve adequate meals independently
- ☐ I prepare adequate meals if supplied with ingredients
- ☐ I heat and serve prepared meals or prepare meals
- ☐ I need to have meals prepared and served

Housekeeping

- ☐ I do housework independently with occasional assistance (heavy work)
- ☐ I perform light daily tasks such as dishwashing, bed making,
- ☐ I perform light daily tasks
- ☐ I need help with all home maintenance tasks
- ☐ I do not participate in any housekeeping tasks

Laundry

- ☐ I do personal laundry independently
- ☐ I launder small items (e.g. rinse socks, stockings, etc.)
- ☐ all laundry must be done by others

Mode of Transportation

- ☐ I travel independently on public transportation or drive my own car
- ☐ I arrange own travel via taxi, but do not otherwise use public transportation
- ☐ I travel on public transportation when assisted or accompanied by another
- ☐ I only use taxis or other modes of transport with the assistance of others
- ☐ I do not travel at all

Responsibility for Own Medications

- ☐ I am responsible for taking medication in correct dosages at correct time
- ☐ I take responsibility if medication is prepared in advance in separate dosages
- ☐ I am not capable of dispensing my own medication

Ability to Handle Finances

- ☐ I manage financial matters independently (budgeting banking, paying bills) collect and keep track of income (including handling shared accounts)
- ☐ I manage day-to-day purchases, but need help with banking, major purchases, etc
- ☐ I cannot handle money

_____ 

Thank you very much for your time spent taking this survey.

In order to understand goals in later life I will conduct a follow-up study to learn more about how goals are chosen and change over time, and I would like to invite you to take part in a follow-up interview.

If you are interested, please leave your contact details here:

_____

(Phone number or address or email address)

Appendix 3: Flyer and Advertisement

University of Southampton

The Time and Goals Study

Is life all about goals and ambition, and about the ways we handle challenges and success? What keeps us motivated and engaged throughout our life?

In that sense, I would like to invite you to participate in the time and goals study.

I am interested in people's perceptions about their future and what kind of ideas, goals and wishes they might have and what they would like to achieve in the near future. I want to understand whether plans for the future are somehow related to people's mood and the activities they perform every day.

If you are over 65 and interested to be a part of the study, then you can scan the following QR code or visit the following link https://southampton.qualtrics.com/jfe/form/SV_3m93M4bhZuRqK8e

to participate.

Thank you for your support. For every participant who takes part I will send a donation to AgeUK to support their work.

Contact:
Christoph Heuser (Postgraduate Research Student)
ch4n20@soton.ac.uk
Department of Gerontology
Faculty of Social Sciences

Supervisor
Dr Rosalind Willis
r.m.willis@soton.ac.uk

Appendix 4: Interview Guide

Interview Guide

R4: How does perceived future-time perspective impact older people's view about their own goals?

Introduction

As I said before, my name is Christoph Heuser and I'm studying towards my doctoral degree in Gerontology at the University of Southampton.
I'm interested in your perception about your future and what kind of ideas, goals and wishes you have and what you would like to achieve in your future.
My general interest is to figure out how older adults think about their future and their goals.
During the interview I will ask you about those two topics and will ask you some questions
Try to be as honest as possible. It's important that you say what you think about this based on your opinions, and not about what you think other people would say or to say what you think I might want to hear.

Warm up

I would like to start with some basic questions. As you might know, my focus is on experiences in later life.

- Could you tell me a bit about your life, starting from when you left school?
- Have you been involved in paid work? If yes, could you tell me about the work you have done before you retired?
- What prompted your decision to retire?
- What changed when you retired?
- How old do you feel? What makes you say that?
- What age do you think is being old? Why? What does 'being old' look like to you?

Goals and Ambitions

I'm interested in understanding people's goals in life, for example, a goal might be that I want to finish my PhD in the next 4 years, or a shorter goal might be to go on holiday next month.

- What would you say are your goals?
- Why have you chosen these goals?
- What plans will you make to achieve these goals?
- What will you need to achieve these goals?
- Despite some up and downs in life, some people get up every morning and go about their daily lives. What is your motivation to get up in the morning?
- Thinking back to your working life (if they were working), what were your ambitions? How are they different now you have retired/are not working?

- Why do you think that is? If you would have to choose two important projects or goals that you would like to achieve over the next few years, what would they be?
- Why are these goals or projects important to you?
- How are they different from other projects or goals that you have planned in the past? Why do you think that is?
- If someone gave you £10,000, what would you do with it?
- Where would you go away on holiday? Why there? Or why would you not go away?
- Who do you spend time with? Who would you like to spend time with?

- ➢ You mentioned … Can you tell me more about that?
- ➢ Do you mean … as you said?

Future-Time Perspective

- I'd like to know a bit more about whether, and how, you think about the future. I wonder if you could tell me your thoughts about your own future and if it has this changed from how you perceived your future when you were younger?
- What does the future mean to you?
- In what way, if any, has the meaning of the future changed from how you perceived the future when you were younger?
- Why do you think that is?
- Where do you see yourself in 5 years?
- Where do you see yourself in 10 years? Why do you think that? How does it make you feel?
- Some people say that when someone is getting older, the future is limited, or the end is near. What are your thoughts about this?
- How does it make you feel?

- ➢ You mentioned … Can you tell me more about that?
- ➢ Do you mean … as you said?

Cool down question

What would you say to your younger self if you could give him/her/them some advice about life? Why?

Closing questions

- We are coming to the end of the interview. Is there anything else you would like to add regarding the topic of goals or the topic about the future?
- Thank you

Appendix 5: Confirmation Ethics Approval

76030.A2 - The relationship between goals, future-time perspective and subsyndromal depression in later life (Amendment 2)

Submission Overview | Submission Questionnaire | Attachments | History

Details

Status Approved
Category Category A
Submitter's Faculty Faculty of Social Sciences (FSS)

The end date for this study is currently 01 December 2025

Request extension

If you are making any other changes to your study please create an amendment using the button below.

Latest Review Comments

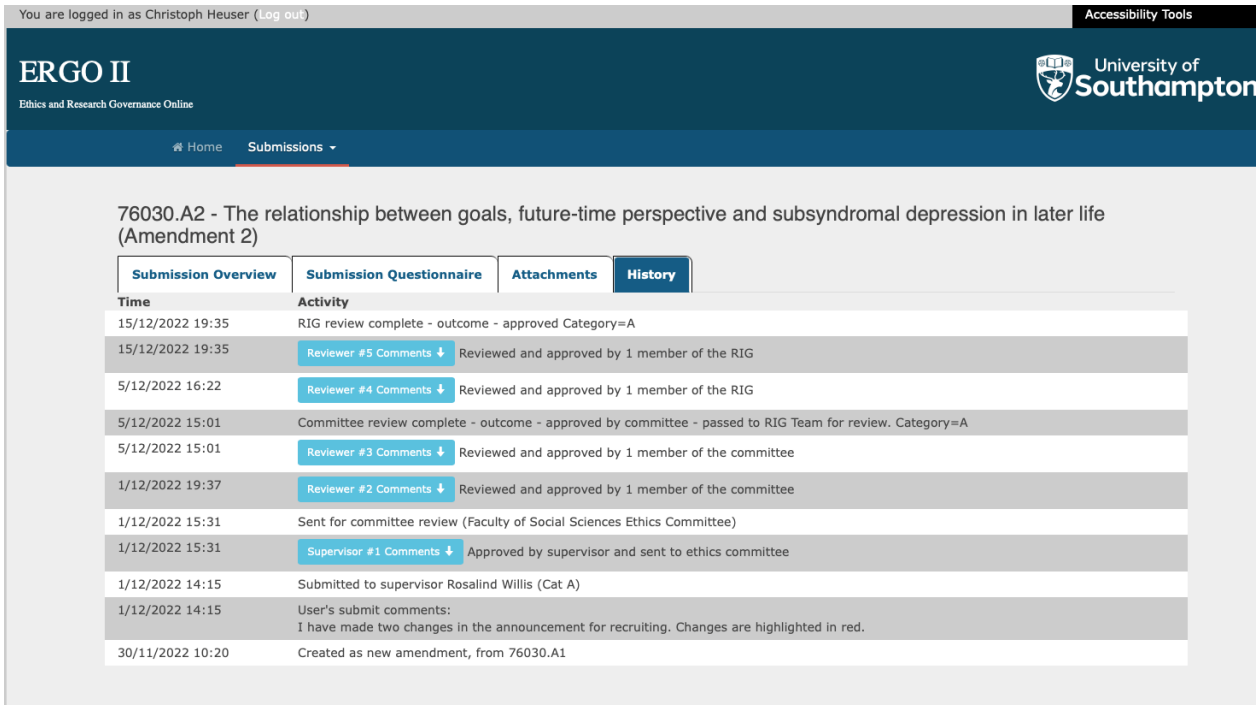
05/12/2022 16:22:30 - RIG: Approved

No comments

15/12/2022 19:35:31 - RIG: Approved

Comments:

Thank you for this information concerning an amendment that introduces a donation to AgeUK for every participant recruited. We are pleased to approve this amendment but ask you to please ensure you maintain proper accounts such that it is clear how much you will donate per participant, what the overall donation to AgeUK is at end-of-study, and when the donation was made/acknowledged.



Appendix 6: Ethics Application

ETHICS APPLICATION FORM
Faculty of Social Sciences

Please note:

- ***<u>You must not begin data collection for your study until ethical approval has been obtained</u>.***
- ***It is your responsibility to follow the University of Southampton's Ethics Policy (https://www.southampton.ac.uk/about/governance/policies/ethics.page) and any relevant academic or professional guidelines in the conduct of your study. This includes providing appropriate information sheets and consent forms, and ensuring confidentiality in the storage and use of data.***
- ***You are advised to read the Advice on Applying guidance document, downloadable from the ERGO II website, before you submit your application.***

Important notice on Risk Assessment:
Health and Safety-type risk assessment is no longer part of the ethics review process. Questions pertaining to ethical and reputational risks have been moved from the old 'Risk Assessment Form for Assessing Ethical and Research Risks' to this form. Please do NOT upload a separate Risk Assessment Form to your ethics application.
However, it is your responsibility to undertake a Risk Assessment for your research study. Depending on whether your study is office based, involves off-site data collection and/or international travel, there are different risk assessment forms you can use. Please use this link to access the forms:
https://groupsite.soton.ac.uk/Administration/FSHS-Health-and-Safety/Documents/Forms/AllItems.aspx?RootFolder=%2FAdministration%2FFSHS%2DHealth%2Dand%2DSafety%2FDocuments%2FRisk%20assessments%20and%20risk%20register%2FERGO%20interim%20documents&FolderCTID=0x012000BE79A4A3B3DC1143ABB38DFA6B580A8C&View={A5E79215-986A-4471-8CF9-B11F85214687}
If you need guidance or are unsure about which form to use, please contact your Discipline Health and Safety Rep in the first instance, and the Faculty Health and Safety Officer, Aloma Hack (A.J.Hack@soton.ac.uk), if you have further questions. Supervisors and Line Managers are responsible for ensuring risk assessments are completed for all research studies.

1. Name(s): Christoph Heuser

2. Current Position: PhD Student in the Department of Gerontology

3. Contact Details:
Division/School School of Economics, Social and Political Science
Email c.heuser@soton.ac.uk
Phone 023 8059 2353

4. Is your study being conducted as part of an education qualification?

Yes x No ☐

5. If Yes, please give the name of your supervisor

Dr Rosalind Willis and Dr Elisabeth Schroeder-Butterfill

6. Title of your project:

The relationship between goals, future-time perspective and subthreshold depression in later life

7. Briefly describe the rationale, study aims and the relevant research questions of your study

In recent years, a growing number of researchers have tried to understand the concept of future-time perspective (Carstensen *et al.*, 1999, Lang *et al.*, 1998, Isaacowitz *et al.*, 2003) and its consequences on depression and anxiety (Kooij *et al.*, 2018), well-being (Sakakibara and Ishii, 2020) and on subjective and objective health (Korff and Biemann, 2020). A few have also tried to connect the concepts of goal development with the notion of a future-time-perspective (Brandtstädter and Rothermund, 2003, Lapierre *et al.*, 1992).
Authors have found that individuals with a limited future-time perspective have more depressive symptoms compared with individuals with an extended future-time perspective. Therefore, investigating what happens to individuals who perceive their own futures as limited, or who no longer have goals, is of particular research interest. Furthermore, whether the results that demonstrate an increase in depressive symptoms among individuals with limited future-time perspective can be repeated is also of interest. Therefore, this research attempts to narrow the empirical gap between goal development and subthreshold depression in later life in the context of future-time perspective.

In particular, this doctoral research intends to answer the question: 'What is the relationship between goals, future-time perspective and subthreshold depression in later life'. To answer this question, the following four research sub-questions are posed:

1) Is a limited future-time perspective associated with a lower goal pursuit in later life?
2) What is the relationship between the number of depressive symptoms and age?
3) If older adults with a limited future time perspective pursue fewer goals in later life, will they have more depressive symptoms compared to their counterparts who might experience an extended future-time perspective and more goals?
4) How does perceived future-time perspective impact older people's view about their own goals?

8. Describe the design of your study

The design of the study is two-fold with two consecutive studies (mixed methods approach). Study one is a quantitative online questionnaire. The questions cover sociodemographic variables (age, gender, educational level, marital status, religion, ethnicity and place of residence), Geriatric Depression Scale (depression scale with 15-items), 31-motivational inducer, questions about Instrumental Activities of Daily Living and a single question about perceived life expectancy (see document "Online Questionnaire" for full list).

At the end of the questionnaire, participants will have the opportunity to leave their contact details if they are interested in a follow up interview which might take place approximately one month after the online survey is closed. The second part of the study is an in-depth qualitative interview with 10 – 15 participants from the first group. Interviews will need about 60 minutes and will focus on questions to understand older peoples' perspective of their own "future-time" and about "goals and ambitions" in later life. A list of all questions can be found in the document "interview guide".

9. Who are the research participants?

The research participants are adults 65+ who are willing to fill out the online questionnaire and are living in the United Kingdom. From the main sample (the participants in the online study) a subsample of 10 – 15 volunteers will be selected for a second study with in-depth interviews.
The first 10 – 15 participants who fill out the questionnaire and provide their email address will be chosen for the interview.

10. If you are going to analyse secondary data, from where are you obtaining it?

Please note that if you are analysing individual-level secondary data (e.g. survey data), you must also fill in and upload the Ethics Application Form for SECONDARY DATA ANALYSIS.

n/a

11. If you are collecting primary data, how will you identify and approach the participants to recruit them to your study?

Please upload a copy of your information sheet. This must be based on the GDPR-compliant template that can be downloaded from the ERGO II website. Note that there is a separate template for UG/PGT applicants. If you are not using an information sheet, please explain why. If you are using posters, fliers or emails for recruitment, these must be uploaded, too. Please note that recruitment by mass emailing to @soton.ac.uk email addresses is not allowed.

I will contact ageing organisations in the UK and ask them to disseminate the description of my study and my link to my online questionnaire via their social media channels and via email-newsletter (see attached email draft). Additionally, I will disseminate the link to the study in local organisations in Southampton (**redacted for anonymity reason**). For this purpose, I will create a flyer with information about my study and the QR code linked to my study. Furthermore, I will use my own social media channels (Facebook, Twitter and LinkedIn) to make people and potential participants aware of my study.
The participants for the qualitative study will have a short explanation about the purpose of the second study at the end of the survey and will then have the chance to leave their email address if they are interested in further participation. For this, the participants will be asked to click on a link which leads to another MS Forms site where they can add their email addresses. This will ensure that the email addresses are not connected to the actual online dataset.

12. Will you be collecting Special Category data as defined by UK data protection legislation? Will you be collecting Criminal Offence data? If so, please give details.

Special Category data are sensitive personal data that require greater protection. They include data on an individual's religion; race; ethnicity; health; sex life and sexual orientation; politics; trade union membership; genetics; biometrics. For further information, see: https://ico.org.uk/for-organisations/guide-to-the-general-data-protection-regulation-gdpr/lawful-basis-for-processing/special-category-data/
Criminal Offence data are personal data relating to criminal convictions and offences, or related security measures. For further information, see https://ico.org.uk/for-organisations/guide-to-the-general-data-protection-regulation-gdpr/lawful-basis-for-processing/criminal-offence-data/

I will be collecting Special Category data. The online questionnaire will contain questions about religion, ethnicity and health status (depressive symptoms) of the participants (see "Online Questionnaire"). I want to understand people's perception of their own future-time perspective. Asking for their religion might give me an understanding if their belief is connected to an extended or limited future-time perspective and asking for depressive symptoms should help to understand the mechanism between future-time perspective, goals and subthreshold depression. The participants will be made aware at the start of the questionnaire that these details will be collected but will also be informed that they can leave the survey if they no longer wish to participate.
In the qualitative interview I might ask for religion to understand the previous mentioned link between future-time perspective and religiosity better. However, I will not bring up the topic about depression or depressive symptoms in the qualitative part of the research.

13. Where will your data collection take place?

The data for the first study will be collected via an online survey tool (Qualtrics). The second study will involve interviews. The interviews take place wherever the participants feel comfortable to be interviewed (for example on campus or in their house). Additionally, if the participants are living outside of Hampshire the interviews are scheduled purely online with the Video platform MS Teams.

14. Will participants be taking part in your study without their knowledge and consent at the time (e.g. covert observation of people)? If yes, please explain why this is necessary.

No

15. If you answered 'no' to question 14, how will you obtain the consent of participants?

Please upload a copy of your consent form. A template consent form can be downloaded from the ERGO II site. Note that there is a separate template for UG/PGT applicants. If you are not using a consent form, please explain why.

The online survey will contain information about the study and a consent form agreement. The participants have to read and tick the box that they have read and understood the purpose of the study to proceed with the survey.
For the qualitative study, the participants will receive the Consent Form and the Participant Information Sheet prior to the interview via email. It will be offered that the participants can use SafeSend to return the Consent Form, particularly if the interview is online. If SafeSend

appears to difficult then alternative options will be offered, for example an email from a private email account. If the interview is in-person, participants have the option to return the form via SafeSend before the meeting or can complete a hard copy.

16. Is there any reason to believe participants may not be able to give full informed consent? If yes, what steps do you propose to take to safeguard their interests?

No. All participants must be able to give full consent.

17. If participants are under the responsibility or care of others (such as parents/carers, teachers or medical staff), what permission do you have to approach the participants to take part in the study?

Please upload evidence of approval from gatekeepers (e.g. Head Teacher, if conducting research in a school).

n/a

18. Describe what participation in your study will involve for study participants.

Specify in meaningful detail the experience of participation from the point of view of the participant. You MUST attach copies of any questionnaires and/or interview schedules and/or observation topic lists to be used.

The participants will come across the study via social media channels like Facebook or Twitter and via newsletters, posters and word of mouth. From there they will be able to access the survey either via weblink or via QR-code. From there, the participants will be a part of an online survey which will need approximately 20 – 30mins for completion. After the questionnaire is filled out, the participants will be asked if they are interested in a further discussion about the topic in the form of a qualitative interview. They can finish the survey without providing any email address. However, if they are interested in a further study, they will have to leave their email address for me to contact them. They would then receive another Consent Form and Participation Information Sheet for the qualitative part of the study by email. The qualitative part of the study will be a single interview of about one hour duration about the participants' experiences and understanding of future-time perspectives and about their goals and ambitions and how they might have changed over the life course. The interview will be face-to-face or conducted via a video platform (MS Teams).

During the interview, the participants can expect that I will ask questions about their current goals and motivations and what they might do activity-wise on a daily basis. The second part of the interview will be about future-time. What the future might mean for them and what expectations of the future they might have (see "interview guide").

19. How will you make it clear to participants that they may withdraw consent to participate at any point during the research without penalty?

If there is a point after which it is not practicable to eliminate someone's data (e.g. after submission of dissertation), then please state this clearly here and on the Information Sheet. Please note that in fully anonymous online or paper questionnaires, it is not possible to withdraw data after submitting / handing in the questionnaire.

The participant's ability to withdraw consent within 14 days after the interview will be stated in the Participation Information Sheet and Consent Form and will be repeated verbally at the start of the interview. If participants wish to withdraw their data after the interview has been completed, they will be asked to notify me within a month of the interview. Once the data have been incorporated into research output, it is not possible to withdraw them. The online survey, however, is completely anonymous. Withdrawal after submission for the online survey is not possible, and this will be made clear in the information at the start of the survey.

20. Detail any possible distress, discomfort, inconvenience, harm or other adverse effects the participants may experience, including after the study, and how you will deal with this.

Give consideration to aspects such as emotional distress, anxiety, unmet expectations, unintentional disclosure of participants' identity, and assess the likelihood and severity of risks. Specify what precautions you will take or suggest to your participants to minimise any risks of harm (e.g. providing information about support services).

The online survey can potentially cause distress for participants as the survey asks about future-time and depression and might provoke thoughts about death. I will provide information of help organisations at the end of the online survey (see below).
The same will be true for the interviews. The topic of future-time perspective can be potentially stressful for participants. However, after the completion of the online survey, the participants will already have an understanding of the topic which will be asked about in the interview. Nevertheless, if participants express distress during the interview, I will ask the participant if they would like to pause, stop and continue at a later time, or withdraw their participation. Participants will also be given contact details for organisations that can provide information and support about the topics discussed, as follows:

Mind
For information about mental health support and services: Call 0300 123 3393 or email info@mind.org.uk or visit www.mind.org.uk.
Age UK
For information and support regarding concerns about ageing and later life: Call 0800 678 1602 or visit www.ageuk.org.uk.

21. Specify any possible distress or harm to YOU arising from your proposed research, and the precautions you will take to minimise these.

Give consideration to the possibility that you may be adversely affected by something your participants share with you. This may include information of a distressing, sensitive or illegal nature.

I do not think that talking about the topic or analysing the data will cause distress for me. Nevertheless, I will be in close contact with my supervisors and know the access to necessary Student Services. Furthermore, for the qualitative interviews, I will be taking notes in my research diary for reflexivity purposes and can here reflect on my own thoughts and emotions in regard to the research project.

22. Does your planned research pose any additional risks as a result of the sensitivity of the research and/or the nature of the population(s) or location(s) being studied?
Give considerations to aspects such as impact on the reputation of your discipline or institution; impact on relations between researchers and participants, or between population sub-groups; social, religious, ethnic, political or other sensitivities; potential misuse of findings for illegal, discriminatory or harmful purposes; potential harm to the environment; impacts on culture or cultural heritage.

None anticipated.

23. How will you maintain participant anonymity and confidentiality in collecting, analysing and writing up your data?

The online survey does not collect personally identifying data, unless people provide their contact details for follow-up.
Personal details (such as names and locations) could be discussed during interviews. To ensure that participant identities and the identities of anyone else mentioned are protected, these details will be removed or disguised during the transcription of the audio recordings of interviews. For example, participant names would be replaced with ID numbers or pseudonyms. The document that identifies the codes will be saved separately from the dataset. Any prominent details that could make an individual or situation recognisable would likewise by anonymised or removed before submission of the thesis.

24. How will you store your data securely during and after the study?
The University of Southampton has a Research Data Management Policy, including for data retention. The Policy can be consulted at
http://www.calendar.soton.ac.uk/sectionIV/research-data-management.html
Please note that for UGs and PGTs, it is NOT correct that the University will store data for 10 years or longer. Instead, UG and PGT dissertation study data should be destroyed securely after conferment of the degree, unless strong justifications are made to retain the data for longer.

All data for this research and related thesis documents will be stored securely on my University of Southampton OneDrive storage space. Audio-recordings will be destroyed after transcription is complete.
I am aware of the University's Research Data Management Policy. I completed the Data Management Plan tutorial and I revisit my Data Management Plan along my PhD milestones.

25. Describe any plans you have for feeding back the findings of the study to participants.

Participants will be provided with my contact details and informed that they can request a copy of a summary of the findings. However, this will be optional.

26. What are the main ethical issues raised by your research and how do you intend to manage these?

The main ethical issue might be the question about the life expectancy and the provoked thinking about the participants' own future-time perspective. However, I will reassure participants in the Consent Form that they can withdraw from the online questionnaire

whenever they want (while they are filling the questionnaire out – withdrawing from the questionnaire afterwards will not be possible anymore as the questionnaire is completely anonymous). For the qualitative interviews, I will reassure the participants that they can withdraw at any moment up to four weeks after the interviews have taken place.

27. Please outline any other information you feel may be relevant to this submission.
For example, if you have professional qualifications or experience relevant to your study, you may wish to state this here.

I worked for seven years as trained Geriatric nurse in a retirement home. Afterwards, I started my masters in Psychogerontology and joined for my PhD in Gerontology the University of Southampton. Here I work beside my role as PhD student also as Teaching Fellow in the Department of Gerontology.

Appendix 7: Coding Guide

Goals are defined as a potentially achievable end state. Participants' sentence must content a goal they might intent to achieve and directed towards an object.
Objects can be the participant themselves (e.g., they strive towards a better health status, want to be happy or keep the mind healthy), but objects can also be related to other people (e.g. goals toward family or partner), an exploration (e.g., learning a new language or exploring a new holiday destination), transcendental (e.g., be more like Jesus or having a peaceful death), to leisure time (e.g. get in the garden today) or towards a possession (e.g. sorting out the house or more income to buy objects for the house).

The coding itself entailed three steps. In the first step the codes were organised in one of the following eight categories that are adapted from Nuttin (1985, p. 141)

Table 30: Goal Categories - adapted from Nuttin (1985)

0	Unclassified
1	Self (goals directed towards oneself)
2	Realisation (all forms of activity and productivity)
3	Contact (all goals related to social contacts or others)
4	Exploration (goals that are related to activities that involves discoveries, information or acquisition of new knowledge)
5	Transcendental (religious or transcendental goals)
6	Possession (goals related to possession)
7	Leisure (goals related to leisure and activities in one's spare time)

A sentence has been classified as *self* (1) when the object is related to the personality or the general self of the participant (ibid, 1985). Goals, where participants mentioned they want to have a better personality or want to be healthy were coded with '*self*' in the survey, e.g. 'be a good wife, mum and friend', 'to be a better person', 'feel happy', 'enjoy life', 'desire courage', that I keep healthy and able to do things which give me pleasure', 'keep being of use to the society I live in'.

Realisation (2) were goals related to productivity and work. In contrast to leisure (7), goals here were coded as realisation if participants mentioned goals related to work or activities that they feel they want to do but not necessarily as a hobby or leisure activity, e.g. 'relocated back to Scotland', 'to continue working for at least another 2 years', 'to continue volunteering as long as I am able'. Leisure (7) were goals that participants do out of enjoyment and as a part of the way to spend their free time (e.g., 'find more time to practice playing the violin and the piano', 'find lots of interests and hobbies to fill my retirement next year' or 'see the northern lights'. Sentences were coded in the category contact (3) when they have a goal that is directed towards a person or a group, e.g., 'to see my grandchildren grow to adulthood', 'a loving physical relationship', 'that my family will keep well and enjoy life' or 'see more of grandchildren'). Exploration (4) are defined as goals related to the acquisition of new knowledge, or to explore something (e.g., 'travel to the places I want to visit' or 'get involved in more fun projects'). If a goal is directed towards transcendental or religious pursuits, then they were coded in category 5. Existential or philosophical sentence that were coded here encompass 'make the most of each day', 'to develop my prayer life', 'to make a difference' or 'to make an impact in the world'. Sentences were coded as possession (6) if they comprise goals that are directed towards a possession someone wants to already has but would like to fix or maintain it (e.g., 'have more money to spend on things I love', 'to have the house renovations finished', or 'start sorting out boxes of books and dvds').

In the next step, the sentences were scrutinised in relation to their future time perspective.

Future Time Perspective

0 = no time perspective mentioned

1 = short time perspective (<1 year)

2 = long time perspective (>1 year)

3 = Time perspective but undefined

And lastly, the sentences were analysed if they are achievement goals, maintenance goals, disengagement goals or compensation goals (Rapkin & Fisher, 1992).

0 = unclassified

1 = Achievement Goals (are goals that are towards the future, and it describes a status the participant doesn't have yet, e.g. to have a healthy and happy life is towards the future

2 = Maintenance Goals (are goals that are concerned with maintenance of status quo, e.g. keep healthy implies that participant is currently healthy and wants to stay healthy

3 = Disengagement Goals

4 = Compensation Goals (are goals that compensate for something after something got lost, e.g. to be useful or to regain full health, can be indicated by "I wish I were healthier" or I wish I have had …"

References

Adams, K.B. (2001) 'Depressive symptoms, depletion, or developmental change? Withdrawal, apathy, and lack of vigor in the geriatric depression scale', *The Gerontologist*, 41(6), pp. 768-777.

Adams, K.B. and Moon, H. (2009) 'Subthreshold depression: Characteristics and risk factors among vulnerable elders', *Aging and Mental Health*, 13(5), pp. 682-692.

Allemand, M., Olaru, G. and Hill, P.L. (2025) 'Future time perspective and depression, anxiety, and stress in adulthood', *Anxiety, Stress, & Coping*, 38(1), pp. 58-72.

Antonucci, T.C., Akiyama, H. and Sherman, A.M. (2007) 'Social networks, support, and integration', in Birren, J.E. (ed.) *Encyclopedia of gerontology*. Second edn. Amsterdam Elsevier, pp. 531-541.

APA (2013) *Diagnostic and statistical manual of mental disorders*. Fifth edn. Arlington: American Psychiatric Association

APA (2018) *Goal*. Available at: https://dictionary.apa.org/goal (Accessed: 02/05/2024).

Argyrous, G. (2011) *Statistics for research*. Third edn. London: SAGE.

Arias-de la Torre, J., Vilagut, G., Ronaldson, A., Serrano-Blanco, A., Martín, V., Peters, M., Valderas, J.M., Dregan, A. and Alonso, J. (2021) 'Prevalence and variability of current depressive disorder in 27 european countries: A population-based study', *The Lancet Public Health*, 6(10), pp. e729-e738.

Aziz, R. and Steffens, D.C. (2013) 'What are the causes of late-life depression?', *Psychiatric Clinics of North America*, 36(4), pp. 497-516.

Babbie, E. (2020) *The practise of social research* 15th edn. Boston: Cengage Learning Inc.

Baldwin, R. (2008) 'Depressive disorder', in Jacoby, R., Oppenheimer, C., Dening, T. and Thomas, A. (eds.) *Oxford textbook of old age psychiatry*. Fourth edn. Oxford: Oxford University Press, pp. 529-556.

Baltes, P.B. (1997) 'On the incomplete architecture of human ontogeny: Selection, optimization, and compensation as foundation of developmental theory', *American Psychologist*, 52(4), pp. 366-380.

Baltes, P.B. and Baltes, M.M. (1990) 'Psychological perspectives on successful aging: The model of selective optimization with compensation', in Baltes, P.B. and Baltes, M.M. (eds.) *Successful aging - perspectives from the behavioral science* Cambridge: Cambridge University Press, pp. 1-34.

Benton, T. and Craib, I. (2011) *Philosophy of social science - the philosophical foundations of social thought*. Second edn. London: Palgrave Macmillan.

Biesta, G. (2010) 'Pragmatism and the philosophical foundations of mixed methods research', in Tashakkori, A. and Teddlie, C. (eds.) *Sage handbook of mixed methods in social & behavioral research* 2nd edn. Los Angeles: SAGE.

Blumer, H. (1969) *Symbolic interactionism - perspective and method* Berkeley: University of California Press.

Bouffard, L., Bastin, E. and Lapierre, S. (1996) 'Future time perspective according to women's age and social role during adulthood', *Sex Roles*, 34(3/4), pp. 253-285.

Brandtstädter, J. (1989) 'Personal self-regulation of development: Cross-sequential analyses of development-related control beliefs and emotions', *Developmental Psychology*, 25(1), pp. 96-108.

Brandtstädter, J. and Baltes-Götz, B. (1990) 'Personal control over development and quality of life perspectives in adulthood', in Baltes, P.B. and Baltes, M.M. (eds.) *Successful ageing - perspectives from the behavioral science*. Cambridge Cambridge University Press.

Brandtstädter, J. and Renner, G. (1990) 'Tenacious goal pursuit and flexible goal adjustment: Explication and age-related analysis of assimilative and accommodative strategies of coping', *Psychology and Aging*, 5(1), pp. 58-67.

Brandtstädter, J. and Rothermund, K. (2002) 'The life-course dynamics of goal pursuit and goal adjustment: A two-process framework', *Developmental Review*, 22(1), pp. 117-150.

Brandtstädter, J. and Rothermund, K. (2003) 'Intentionality and time in human development and aging: Compensation and goal adjustment in changing developmental contexts', in Staudinger, U.M. and Lindenberger, U. (eds.) *Understanding human development - dialogues with lifespan psychology*. New York: Springer, pp. 105-124.

Braun, V. and Clarke, V. (2006) 'Using thematic analysis in psychology', *Qualitative Research in Psychology*, 3(2), pp. 77-101.

Braun, V. and Clarke, V. (2013) 'Analysing and interpreting patterns across data', in Braun, V. and Clarke, V. (eds.) *Successful qualitative research: A practical guide for beginners*. London: SAGE.

Braun, V. and Clarke, V. (2016) '(mis)conceptualising themes, thematic analysis, and other problems with fugard and potts' (2015) sample-size tool for thematic analysis', *International Journal of Social Research Methodology*, 19(6), pp. 739-743.

Braun, V. and Clarke, V. (2019) 'Reflecting on reflexive thematic analysis', *Qualitative Research in Sport, Exercise and Health*, 11(4), pp. 589-597.

Braun, V. and Clarke, V. (2022) *Thematic analysis - a practical guide*. Los Angeles: SAGE.

Braun, V., Clarke, V. and Weate, P. (2016) 'Using thematic analysis in sport and exercise research', in Smith, B. and Sparkes, A.C. (eds.) *Routledge handbook of qualitative research in sport and exercise*. London: Routledge, pp. 191-205.

Brim, O.G. (1992) *Ambition - how we manage success and failure throughout our lives*. New York: Basic Books.

Brown, P. (2010) 'Qualitative approaches for studying environmental health', in Bourgeault, I., Dingwall, R. and de Vries, R. (eds.) *The sage handbook for qualitative methods in health research*. Los Angeles: SAGE, pp. 730-747.

Bryman, A. (2016) *Social research methods*. Fifth edn. Oxford: Oxford University Press.

Burton, E., Chonody, J., Teater, B. and Alford, S. (2024) 'Goal setting in later life: An international comparison of older adults' defined goals', *BMC Geriatrics*, 24(1), p. 443.

Butler, R.N. (1963) 'The life review: An interpretation of reminiscence in the aged', *Psychiatry*, 26, pp. 65-76.

Carstensen, L.L. (1987) 'Age-related changes in social activity', in Carstensen, L.L. and Edelstein, B.A. (eds.) *Handbook of clinical gerontology*. New York: Pergamon Press, pp. 222-237.

Carstensen, L.L. (1992) 'Social and emotional patterns in adulthood: Support for socioemotional selectivity theory', *Psychology and Aging*, 7(3), pp. 331-338.

Carstensen, L.L. (1995) 'Evidence for a life-span theory of socioemotional selectivity', *Current Directions in Psychological Science*, 4(5), pp. 151-156.

Carstensen, L.L., Fung, H.H. and Charles, S.T. (2003) 'Socioemotional selectivity theory and the regulation of emotion in the second half of life', *Motivation and Emotion*, 27(2), pp. 103-123.

Carstensen, L.L., Isaacowitz, D.M. and Charles, S.T. (1999) 'Taking time seriously - a theory of socioemotional selectivity', *American Psychologist*, 54(3), pp. 165-181.

Carstensen, L.L. and Lang, F.R. (1996) 'Future orientation scale' *Unpublished work*. Stanford University.

Cate, R.A. and John, O.P. (2007) 'Testing models of the structure and development of future time perspective: Maintaining a focus on opportunities in middle age', *Psychology and Aging*, 22(1), pp. 186-201.

Chachamovich, E., Fleck, M., Laidlaw, K. and Power, M. (2008) 'Impact of major depression and subsyndromal symptoms on quality of life and attitudes toward aging in an international sample of older adults', *The Gerontologist*, 48(5), pp. 593-602.

Choi, Y., Lay, J., Lu, M., Jiang, D., Peng, M., Fung, H.H., Graf, P. and Hoppmann, C.A. (2024) 'Age differences in the experience of everyday happiness: The role of thinking about the future', *Psychology and Aging*, 39(1), pp. 1-13.

Clarke, A. and Warren, L. (2007) 'Hopes, fears and expectations about the future: What do older people's stories tell us about active ageing?', *Ageing and Society*, 27(4), pp. 465-488.

Clarke, V., Braun, V. and Hayfield, N. (2015) 'Thematic analysis ', in Smith, J.A. (ed.) *Qualitative psychology - a practical guide to research methods*. Third edn. Los Angeles: SAGE.

Collins, K.M.T. (2010) 'Advanced sampling designs in mixed research', in Tashakkori, A. and Teddlie, C. (eds.) *The sage handbook of mixed methods in social & behavioral research*. Second edn. Los Angeles: SAGE.

Coudin, G. and Lima, M.L. (2011) 'Being well as time goes by: Future time perspective and well-being', *International Journal of Psychology and Psychological Therapy* 11(2), pp. 219-232.

Coyne, R. and Kluwer, W. (2019) *The lawton instrumental activities of daily living (iadl) scale*. Available at: https://hign.org/consultgeri-resources/try-this-series (Accessed: 25/07/2023).

Crotty, M. (1998) *The foundations of social research: Meaning and perspective in the research process*. London: SAGE.

Cumming, E. and Henry, W.E. (1961) *Growing old - the process of disengagement* New York: Basic Books Publishing Co. Inc.

Datta Roy, M. and Panda, M. (2022) 'Is generativity erikson's answer to human ageing in the neoliberal world?', *Journal of Aging Studies*, 62, p. 101057.

de Waal, M.W.M., van der Weele, G.M., van der Mast, R.C., Assendelft, W.J.J. and Gussekloo, J. (2012) 'The influence of the administration method on scores of the 15-item geriatric depression scale in old age', *Psychiatry research*, 197(3), pp. 280-4.

Delanty, G. (2005) *Social science*. Second edn. Maidenhead: Open University Press.

Demiray, B. and Bluck, S. (2014) 'Time since birth and time left to live: Opposing forces in constructing psychological wellbeing', *Ageing and Society*, 34(7), pp. 1193-1218.

Department of Health (2011) *Social action for health and well-being: Building co-operative communities - department of health strategic vision for volunteering*. Leeds: Department of Health Strategic Vision for Volunteering.

Dönmez, Ç.F. and Johnston, B. (2020) 'Living in the moment for people approaching the end of life: A concept analysis', *International Journal of Nursing Studies*, 108, p. 103584.

DWP (2024) *Pensioner's incomes: Finanical years ending 1995 to 2023*. Available at: https://www.gov.uk/government/statistics/pensioners-incomes-financial-years-ending-1995-to-2023/pensioners-incomes-financial-years-ending-1995-to-2023 (Accessed: 26/06/2024).

Emmons, R.A. (1986) 'Personal strivings: An approach to personality and subjective weil-being', *Journal of Personality and Social Psychology*, 51(5), pp. 1058-1068.

Erikson, E.H. (1963) *Childhood and society*. Second edn. New York: W.W. Norton & Company Inc.

Erikson, E.H., Erikson, J.M. and Kivnick, H. (1986) *Vital involvement in old age*. New York: W.W. Norton & Company.

Feyerabend, P. (1993) *Against methods*. Third edn. London: Verso.

Field, A. (2018) *Discovering statistics using ibm spss statistics*. Fifth edn. London: SAGE

Fiske, A. and Jones, R. (2005) 'Depression', in Bengtson, V.L., Coleman, P.G., Kirkwood, T.B. and Johnson, M.L. (eds.) *The cambridge handbook of age and ageing*. Cambridge: Cambridge University Press.

Foster, L., Diamond, I. and Jefferies, J. (2015) *Beginning statistics - an introduction for social scientists* Second edn. Los Angeles: SAGE.

Fredrickson, B.L. and Carstensen, L.L. (1990) 'Choosing social partners: How old age and anticipated endings make people more selective', *Psychology and Aging*, 5(3), pp. 335-347.

Fried, E.I. and Nesse, R.M. (2015) 'Depression sum-scores don't add up: Why analyzing specific depression symptoms is essential', *BMC Medicine*, 13(1), p. 72.

Gatz, M. (2001) 'Variations on depression in later life', in Qualls, S.H. and Abeles, N. (eds.) *Psychology and the aging revolution - how we adapt to longer life*. Washington American Psychology Association pp. 239-254.

Greene, J.C., Caracelli, V.J. and Graham, W.F. (1989) 'Toward a conceptual framework for mixed-method evaluation designs', *Educational Evaluation and Policy Analysis*, 11(3), pp. 255-274.

Greene, J.C. and Hall, J.N. (2010) 'Dialectics and pragmatism - being of consequence', in Tashakkori, A. and Teddlie, C. (eds.) *Sage handbook of mixed methods in social & behavioral research* Second edn. Los Angeles: SAGE.

Grühn, D., Sharifian, N. and Chu, Q. (2016) 'The limits of a limited future time perspective in explaining age differences in emotional functioning', *Psychology and Aging*, 31(6), pp. 583-593.

Handler, S. (2014) *A research & evaluation framework for age-friendly cities*.

Hansen, T. and Slagsvold, B. (2020) 'An “army of volunteers”? Engagement, motivation, and barriers to volunteering among the baby boomers', *Journal of Gerontological Social Work*, 63(4), pp. 335-353.

Havighurst, R.J. (1953) *Human development and education*. New York: Longmans, Green and Co., Inc.

Heckhausen, J. (1999) *Developmental regulation in adulthood - age-normative and sociostructural constraints as adaptive challenges*. Cambridge Cambridge University Press.

Heckhausen, J. (2003) 'The future of lifespan developmental psychology: Perspectives from control theory', in Staudinger, U.M. and Lindenberger, U. (eds.) *Understanding human development: Dialogues with lifespan psychology*. New York: Springer Science + Business Media pp. 383-400.

Heckhausen, J., Roger, D.A. and Baltes, P.B. (1989) 'Gains and losses in development throughout adulthood as perceived by different adult age groups ', *Developmental Psychology* 25(1), pp. 109-121.

Higgs, P. and Gilleard, C. (2015) *Rethinking old age - theorising the fourth age*. London: Palgrave.

Holman, A.E. and Silver, R.C. (1998) 'Getting “stuck" in the past: Temporal orientation and coping with trauma', *Journal of Personality and Social Psychology*, 74(5), pp. 1146-1163.

Howarth, G. (1998) ''Just live for today’. Living, caring, ageing and dying', *Ageing and Society*, 18(6), p. 673(1).

Iphofen, R. and Tolich, M. (2018) 'Foundational issues in qualitative research ethics', in Iphofen, R. and Tolich, M. (eds.) *The sage handbook of qualitative research ethics*. London: SAGE.

Isaacowitz, D.M., Smith, T.B. and Carstensen, L.L. (2003) 'Socioemotional selectivity and mental health among trauma survivors in old age', *Ageing International*, 28(2), pp. 181-199.

Jana, D. and Heuser, C. (under review) 'Making sense of mental health in later life: Social network dynamics and service access'.

Johnson, B. and Gray, R. (2010) 'A history of philosophical and theoretical issues for mixed methods research', in Tashakkori, A. and Teddlie, C. (eds.) *Sage handbook of mixed methods in social & behavioral research*. Second edn. Los Angeles: SAGE.

Johnson, R. (2009) 'Toward a more inclusive “scientific research in education"', *Educational Researcher*, 38(6), pp. 449-457.

Kahn, R.L. and Antonucci, T.C. (1980) 'Convoys over the life course: Attachment, roles and social support', in Baltes, P.B. and Brim, O. (eds.) *Life-span development and behavior*. New York: Academic Press, pp. 253-286.

Karel, M.J. (1997) 'Aging and depression: Vulnerability and stress across adulthood', *Clinical Psychology Review*, 17(8), pp. 847-879.

Kaushik, V. and Walsh, C.A. (2019) 'Pragmatism as a research paradigm and its implications for social work research', *Social Sciences*, 8, pp. 1 - 17.

Kessler, E.-M. and Staudinger, U.M. (2009) 'Affective experience in adulthood and old age: The role of affective arousal and perceived affect regulation', *Psychology and Aging*, 24(2), pp. 349-362.

Kliegl, R., Smith, J. and Baltes, P.B. (1989) 'Testing-the-limits and the study of adult age differences in cognitive plasticity of a mnemonic skill', *Developmental Psychology*, 25, pp. 247-256.

Koenig, H.G. and Blazer, D.G. (1992) 'Mood disorders and suicide', in Birren, J.E., Sloane, R.B. and Cohen, G.D. (eds.) *Handbook of mental health and aging* Second edn. San Diego: Academic Press, pp. 379-407.

Kooij, D.T.A.M., Kanfer, R., Betts, M. and Rudolph, C.W. (2018) 'Future time perspective: A systematic review and meta-analysis', *Journal of Applied Psychology*, 103(8), pp. 867-893.

Korff, J. and Biemann, T. (2020) 'Adjusting the lookout: Subjective health, loneliness, and life satisfaction predict future time perspective', *Psychology and Aging*, 35(8), pp. 1170-1183.

Kotter-Grühn, D., Grühn, D. and Smith, J. (2010) 'Predicting one's own death: The relationship between subjective and objective nearness to death in very old age', *European Journal of Ageing*, 7, pp. 293-300.

Kraaij, V., Arensman, E. and Spinhoven, P. (2002) 'Negative life events and depression in elderly persons: A meta-analysis', *Journal of Gerontology: Psychological Science*, 57b(1), pp. 87 - 94.

Kraaij, V., Pruymboom, E. and Garnefski, N. (2002) 'Cognitive coping and depressive symptoms in the elderly: A longitudinal study', *Aging and Mental Health*, 6(3), pp. 275 - 281.

Lang, F.R. and Carstensen, L.L. (2002) 'Time counts: Future time perspective, goals, and social relationships', *Psychology and Aging*, 17(1), pp. 125-139.

Lang, F.R., Staudinger, U.M. and Carstensen, L.L. (1998) 'Perspectives on socioemotional selectivity in late life: How personality and social context do (and do not) make a difference', *Journal of Gerontology: Psychological Science*, 53B(1), pp. 21-30.

Lapierre, S., Bouffard, L. and Bastin, E. (1992) 'Motivational goal objectives in later life', *International Journal of Aging and Human Development*, 36(4), pp. 279-292.

Lapierre, S., Bouffard, L. and Bastin, E. (1997) 'Personal goals and subjective well-being in later life', *The International Journal of Aging and Human Development*, 45(4), pp. 287-303.

Laslett, P. (1989) *A fresh map of life - the emergence of the third age*. London: Weidenfeld & Nicolson.

Lawton, P.M. and Brody, E.M. (1969) 'Assessment of older people: Self-maintaining and instrumental activities of daily living', *The Gerontologist*, 9, pp. 179-186.

Leinonen, E. and Era, S. (2024) 'Forced to live in the present: Older people's temporal experiences of the lockdown during the covid-19 pandemic', *Ageing and Society*, pp. 1-18.

Lim, H.J., Cheng, Y., Kabir, R. and Thorpe, L. (2021) 'Trajectories of depression and their predictors in a population-based study of korean older adults', *The International Journal of Aging and Human Development*, 93(3), pp. 834-853.

Liu, Z., Yang, F., Lou, Y., Zhou, W. and Tong, F. (2021) 'The effectiveness of reminiscence therapy on alleviating depressive symptoms in older adults: A systematic review', *Frontiers in Psychology*, 12.

Ludvigsson, M., Marcusson, J., Wressle, E. and Milberg, A. (2019) 'Morbidity and mortality in very old individuals with subsyndromal depression: An 8-year prospective study', *International Psychogeriatrics*, 31(11), pp. 1569-1579.

Ludvigsson, M., Milberg, A., Marcusson, J. and Wressle, E. (2015) 'Normal aging or depression? A qualitative study on the differences between subsyndromal depression and depression in very old people', *The Gerontologist*, 55(5), pp. 760–769.

Lyness, J.M., Chapman, B.P., McGriff, J., Drayer, R. and Duberstein, P.R. (2009) 'One-year outcomes of minor and subsyndromal depression in older primary care patients', *International Psychogeriatrics*, 21(1), pp. 60-8.

Lyness, J.M., Heo, M., Datto, C.J., Ten Have, T.R., Katz, I.R., Drayer, R., Reynolds, C.F., Alexopoulos, G.S. and Bruce, M.L. (2006) 'Outcomes of minor and subsyndromal depression among elderly patients in primary care settings', *Annals of Internal Medicine*, 144(7), pp. 496-504.

Malonda-Vidal, E., Samper-García, P., Llorca-Mestre, A., Muñoz-Navarro, R. and Mestre-Escrivá, V. (2021) 'Traditional masculinity and aggression in adolescence: Its relationship with emotional processes', *International Journal of Environmental Research and Public Health*, 18(18).

Marsiske, M., Lang, F.R., Baltes, P.B. and Baltes, M.M. (1995) 'Selective optimization with compensation: Life-span perspectives on successful human development', in Dixon, R. and Bäckman, L. (eds.) *Psychological compensation: Managing losses and promoting gains*. Hillsdale, NJ: Erlbaum, pp. 35-79.

Mead, G.H. (1934) *Mind, self, and society - from the standpoint of a social behaviorist*. Chicago: The University of Chicago Press.

Mohebbi, M., Agustini, B., Woods, R.L., McNeil, J.J., Nelson, M.R., Shah, R.C., Nguyen, V., Storey, E., Murray, A.M., Reid, C.M., Kirpach, B., Wolfe, R., Lockery, J.E. and Berk, M. (2019) 'Prevalence of depressive symptoms and its associated factors among healthy community-dwelling older adults living in australia and the united states', *International Journal of Geriatic Psychiatry*, 34(8), pp. 1208-1216.

Morgan, D.L. (2014a) *Integrating qualitative and quantitative methods - a pragmatic approach* Los Angeles: SAGE.

Morgan, D.L. (2014b) 'Pragmatism as a paradigm for social research', *Qualitative Inquiry*, 20(8), pp. 1045 - 1053.

Morse, J. (2010) 'Procedure and practice of mixed method design - maintaining control, rigor, and complexity', in Tashakkori, A. and Teddlie, C. (eds.) *The sage handbook of mixed methods in social & behavioral research*. Second edn. Los Angeles: SAGE.

Nastasi, B.K., Hitchcook, J.H. and Brown, L.M. (2010) 'An inclusive framework for conceptualizing mixed methods design typologies - moving toward a fully integrated synergistic reseach models', in Tashakkori, A. and Teddlie, C. (eds.) *The sage handbook of mixed methods in social & behavioral research*. Second edn. Los Angeles: SAGE.

Newmann, J.P., Klein, M.H., Jensen, J.E. and Essex, M.J. (1996) 'Depressive symptom experiences among older women: A comparison of alternative measurement approaches', *Psychology and Aging*, 11(1), pp. 112-126.

Nuttin, J. (1985) *Future time perspective and motivation - theory and research method*. Leuven: Leuven University Press. Louvain psychology series: Studia psychlogica.

O'Cathain, A., Murphy, E. and Nicholl, J. (2010) 'Three techniques for integrating data in mixed methods studies', *BMJ*, 341, p. c4587.

Oh, D.J., Han, J.W., Kim, T.H., Kwak, K.P., Kim, B.J., Kim, S.G., Kim, J.L., Moon, S.W., Park, J.H., Ryu, S.-H., Youn, J.C., Lee, D.Y., Lee, D.W., Lee, S.B., Lee, J.J., Jhoo, J.H. and Kim, K.W. (2020) 'Epidemiological characteristics of subsyndromal depression in late life', *Australian & New Zealand Journal of Psychiatry*, 54(2), pp. 150-158.

ONS (2022) *People aged 65 years and over in employment, uk: January to march 2022 to april to june 2022*. Available at: https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/peopleaged65yearsandoverinemploymentuk/januarytomarch2022toapriltojune2022 (Accessed: 26/06/2024).

ONS (2023) *Profile of the older population living in england and wales in 2021 and changes since 2011* Available at: https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/ageing/articles/profileoftheolderpopulationlivinginenglandandwalesin2021andchangessince2011/2023-04-03 (Accessed: 26/06/2024).

Prince, M.J., Beekman, A.T.F., Deeg, D.J.H., Fuhrer, R., Kivela, S.-L., Lawlor, B.A., Lobo, A., Magnusson, H., Meller, I., Oyen, H.V., Reischies, F., Roelands, M., Skoog, I., Turrina, C. and Copeland, J.R.M. (1999a) 'Depression symptoms in late life assessed using the euro-d scale -

effect of age, gender and marital status in 14 european centres', *British Journal of Psychiatry*, 174, pp. 339-345.

Prince, M.J., Harwood, R.H., Blizard, R.A., Thomas, A. and Mann, A.H. (1997) 'Social support deficits, loneliness and life events as risk factors for depression in old age. The gospel oak project vi', *Psychological Medicine*, 27(2), pp. 323-332.

Prince, M.J., Harwood, R.H., Thomas, A. and Mann, A.H. (1998) 'A prospective population-based cohort study of the effects of disablement and social milieu on the onset and maintenance of late-life depression. The gospel oak project vii', *Psychological Medicine*, 28, pp. 337-350.

Prince, M.J., Reischies, F., Beekman, A.T.F., Fuhrer, R., Jonker, C., Kivela, S.-L., Lawlor, B.A., Lobo, A., Magnusson, H., Fichter, M., Oyen, H.V., Roelands, M., Skoog, I., Turrina, C. and Copeland, J.R.M. (1999b) 'Development of the euro-d scale - a european union initiative to compare symptoms of depression in 14 european centres', *British Journal of Psychiatry*, 174, pp. 330-338.

Rapkin, B.D. and Fischer, K. (1992) 'Personal goals of older adults: Issues in assessment and prediction', *Psychology and Aging*, 7(1), pp. 127-137.

Rappaport, H., Enrich, K. and Wilson, A. (1985) 'Relation between ego identity and temporal perspective', *Journal of Personality and Social Psychology*, 48(6), pp. 1609-1620.

Reed, A.E., Chan, L. and Mikels, J.A. (2014) 'Meta-analysis of the age-related positivity effect: Age differences in preferences for positive over negative information', *Psychology and Aging*, 29(1), pp. 1-15.

Roehr, S., Riedel-Heller, S.G., Kaduszkiewicz, H., Wagner, M., Fuchs, A., van der Leeden, C., Wiese, B., Werle, J., Bickel, H., König, H.-H., Wolfsgruber, S., Pentzek, M., Weeg, D., Mamone, S., Weyerer, S., Brettschneider, C., Maier, W., Scherer, M., Jessen, F. and Luck, T. (2019) 'Is function in instrumental activities of daily living a useful feature in predicting alzheimer's disease dementia in subjective cognitive decline?', *International Journal of Geriatic Psychiatry*, 34(1), pp. 193-203.

Rohr, M.K., John, D.T., Fung, H.H. and Lang, F.R. (2017) 'A three-component model of future time perspective across adulthood', *Psychology and Aging*, 32(7), pp. 597-607.

Rothermund, K. and Brandtstädter, J. (2003) 'Depression in later life: Cross-sequential patterns and possible determinants', *Psychology and Aging*, 18(1), pp. 80-90.

Rowe, J.W. and Kahn, R.L. (1987) 'Human aging: Usual and successful', *Science*, 237(4811), pp. 143-149.

Rowe, J.W. and Kahn, R.L. (1997) 'Successful aging', *The Gerontologist*, 37(4), pp. 433-440.

Rowe, J.W. and Kahn, R.L. (2015) 'Successful aging 2.0: Conceptual expansions for the 21 century', *Journals of Gerontology Series B*, 70(4), pp. 593-596.

Rupprecht, F.S., Martin, K., Kamin, S.T. and Lang, F.R. (2022) 'Covid-19 and perceiving finitude: Associations with future time perspective, death anxiety, and ideal life expectancy', *Psychology and Aging*, 37(2), pp. 260-271.

Ryff, C.D. and Keyes, C.L.M. (1995) 'The structure of psychological well-being revisited', *Journal of Personality and Social Psychology*, 69(4), pp. 719-727.

Saajanaho, M., Rantakokko, M., Portegijs, E., Tömäkangas, T., Eronen, J., Tsai, L.-T., Jylhä, M. and Rantanen, T. (2016) 'Life resources and personal goals in old age', *European Journal of Ageing*, 13, pp. 195-208.

Saajanaho, M., Viljanen, A., Read, S., Eronen, J., Kaprio, J., Jylhä, M. and Rantanen, T. (2014) 'Mobility limitation and changes in personal goals among older women', *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, 71(1), pp. 1-10.

Sakakibara, R. and Ishii, Y. (2020) 'Examination on how emotion regulation mediates the relationship between future time perspective and well-being: A counter-evidence to the socioemotional selectivity theory', *European Journal of Ageing*, 17, pp. 21-30.

Salt, E., Crofford, L.J. and Segerstrom, S. (2017) 'The mediating and moderating effect of volunteering on pain and depression, life purpose, well-being, and physical activity', *Pain Manag Nurs*, 18(4), pp. 243-249.

Salthouse, T.A. (1984) 'Effects of age and skill in typing', *Journal of Experimental Psychology*, 113(3), pp. 345-371.

Sargent-Cox, K.A., Anstey, K.J. and Luszcz, M.A. (2013) 'Longitudinal change of self-perceptions of aging and mortality', *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, 69(2), pp. 168-173.

Settersten Jr, R.A. (2021) 'How life course dynamics matter for precarity in later life', in Grenier, A., Phillipson, C. and Jr, R.A.S. (eds.) *Precarity and ageing - understanding insecurity and risk in later life*. Bristol: Policy Press.

Shin, C., Park, M.H., Lee, S.-H., Ko, Y.-H., Kim, Y.-K., Han, K.-M., Jeong, H.-G. and Han, C. (2019) 'Usefulness of the 15-item geriatric depression scale (gds-15) for classifying minor and major depressive disorders among community-dwelling elders', *Journal of affective disorders*, 259, pp. 370-375.

Silverman, D. (2021) *Doing qualitative research*. Sixth edn. Available at: https://app.talis.com/textbooks/9781529771282.

Sjöberg, L., Karlsson, B., Atti, A.-R., Skoog, I., Fratiglioni, L. and Wang, H.-X. (2017) 'Prevalence of depression: Comparisons of different depression definitions in population-based samples of older adults', *Journal of affective disorders*, 221, pp. 123-131.

Steffen, E.M. (2021) 'Ethical consideration in qualitative reseach', in Lyons, E. and Coyle, A. (eds.) *Analysing qualitative data in psychology*. Third edn. Los Angeles: SAGE.

Stone, L., Granier, K. and Segal, D. (2019) 'Geriatric depression scale', in Gu, D. and Dupre, M. (eds.) *Encyclopedia of gerontology and population aging*. Cham: Springer

Strough, J., Bruin, W.B.d., Parker, A.M., Lemaster, P., Pichayayothin, N. and Delaney, R. (2016) 'Hour glass half full or half empty? Future time perspective and preoccupation with negative events across the life span', *Psychology and Aging*, 31(6), pp. 558-573.

Tabachnick, B.G. and Fidell, L.S. (2013) *Using multivariate statistics*. Sixth edn. Boston: Pearson.

Thomas, A. (2021) 'Depression in older people ', in Dening, T. and Thomas, A. (eds.) *Oxford textbook of old age psychiatry* Third edn. Oxford: Oxford University Press pp. 595-622.

Timmer, E., Bode, C. and Dittmann-Kohli, F. (2003) 'Expectations of gains in the second half of life: A study of personal conceptions of enrichment in a lifespan perspective', *Ageing and Society*, 23(1), pp. 3-24.

Tornstam, L. (1989) 'Gero-transcendence: A reformulation of the disengagement theory', *Aging Clinical and Experimental Research*, 1, pp. 55-63.

UK Parliament (2024) *Contribution of volunteers*. Available at: https://commonslibrary.parliament.uk/research-briefings/cdp-2024-0086/#:~:text=Formal%20volunteering%20statistics&text=In%202019%2F20%2C%2023%25,12%20million%20people%20in%20England). (Accessed: 02/12/2024).

Ulmer, J.T. and Wilson, M.S. (2003) 'The potential contributions of quantitative research to symbolic interactionism', *Symbolic Interaction*, 26(4), pp. 531-552.

Uttal, D.H. and Perlmutter, M. (1989) 'Toward a broader conceptualization of development: The role of gains and losses across the life span', *Developmental Review*, 9, pp. 101-132.

Van den Berg, M.D., Oldehinkel, A.J., Bouhuys, A.L., Brilman, E.I., Beekman, A.T.F. and Ormel, J. (2001) 'Depression in later life: Three etiologically different subgroups', *Journal of affective disorders*, 65(1), pp. 19-26.

Wang, F. (2024) *Hearing the unheard: Transforming mental health care for older adults in southampton*. Southampton. Available at: https://eprints.soton.ac.uk/492157/1/106504_A4_4pp_Policy_Brief_-_New_Things_Fund_-_Fei_Wang_v1.pdf.

Wanka, A. (2020) 'No time to waste – how the social practices of temporal organisation change in the transition from work to retirement', *Time & Society*, 29(2), pp. 494-517.

Weil, J. (2017) *Research design in aging and social gerontology - quantitative, qualitative, and mixed methods*. New York: Routledge.

WHO (1992) *The icd-10 classification of mental and behavioural disorders : Clinical descriptions and diagnostic guidelines*. Available at: https://apps.who.int/iris/handle/10665/37958 (Accessed: 27/10/2021).

WHO (2007) *Global age-friendly cities: A guide*. Available at: https://iris.who.int/bitstream/handle/10665/43755/9789241547307_eng.pdf?sequence=1.

WHO (2021a) *Depression*. Available at: https://www.who.int/news-room/fact-sheets/detail/depression (Accessed: 07/03/2022).

WHO (2021b) *International classification of diseases 11th revision* Available at: https://icd.who.int/en (Accessed: 27/10/2021).

WHO (2022) *Icd-11 2022 release*. Available at: https://www.who.int/news/item/11-02-2022-icd-11-2022-release (Accessed: 26/05/2022).

Yang, G. and D'Arcy, C. (2023) 'Age, period and cohort effects in depression prevalence among canadians 65+, 1994 to 2018: A multi-level analysis', *The International journal of social psychiatry*, 69(4), pp. 885-894.

Yesavage, J.A., Brink, T.L., Rose, T.L., Lum, O., Huang, V., Adey, M. and Leirer, V.O. (1982) 'Development and validation of a geriatric depression screening scale: A preliminary report', *Journal of psychiatric research*, 17(1), pp. 37-49.

Yesavage, J.A. and Sheikh, J.I. (1986) 'Geriatric depression scale (gds)', *Clinical Gerontologist*, 5(1-2), pp. 165-173.

Yeung, J.W.K., Zhang, Z. and Kim, T.Y. (2017) 'Volunteering and health benefits in general adults: Cumulative effects and forms', *BMC Public Health*, 18(1), p. 8.

Yin, Y., Aparicio, F., Mcgowan, T., Akhtar, S.N., Mocnik, S., Vlachantoni, A. and Dey, B. (2024) *Pupil attitudes to ageing, pensions and saving for later life*.

Zhang, J.W., Howell, R.T., Allemand, M., Snell, A.N., Januchowski, J.A. and John, O.P. (2024) 'Future time perspective: Factor structure, age pattern, and implications for psychological well-being and life satisfaction', *Journal of Personality*, 92(2), pp. 636-648.