Active Ageing and Quality of Life in Old Age

Working Paper for the UNECE Working Group on Ageing

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Structure of the working paper "Active Ageing and Quality of Life in Old Age"

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The UNECE Working Group on Ageing will have an in-depth discussion on "quality of life and active ageing" at its next meeting in November 2011. This happens in a situation in which the challenges of demographic change are being realised and discussed in many countries throughout the world. The ageing of the population, one important aspect of demographic change, has a profound impact on societies. It affects educational institutions, labour markets, social security, health care, long-term care and the relationship between generations. In a similar vein, the European Parliament has designated the year 2012 as the "*European Year for Active Ageing and Solidarity between Generations*". Active ageing is a central political concept that takes in not only the challenges, but also the opportunities of long-living societies. This includes opportunities for older people to continue working, to stay healthy longer and to contribute to society, for example through volunteering.

The current paper intends to serve as a starting point for the Working Group's consideration of this issue. It includes [a] a brief theoretical discussion of the concept of active ageing (section 1), [b] a synthesis of currently available knowledge on investments in active ageing in the domains health, social integration, and participation in order to enhance quality of life as people age (sections 2 and 3) and on the connections between, on the one hand, national contexts, such as policy regimes, economic circumstances, norms promoting active ageing, and, on the other hand, individual behaviours, well-being and values (section 4), and [c] policy recommendations, outlining alternatives that depend on national circumstances as appropriate (section 5).

1. Introduction: Active ageing and quality of life

Since its early beginnings, research on ageing has not only strived to describe the course of ageing and to understand basic mechanisms of ageing processes, but also to add to the knowledge available so as to improve the process of ageing by changing the living situations of elders. One of the basic challenges of ageing research concerns the question whether active ageing is possible and if so, which factors enable individuals, social groups, and societies to grow older healthy and active.

1.1 Definitions of active ageing

Gerontology has seen many different conceptions of active ageing. A classic definition of active ageing was presented by Rowe and Kahn (1997) who used the term successful ageing: "*We define successful ageing as including three main components: low probability of disease and disease-related disability, high cognitive and physical functional capacity, and active engagement with life*" (Rowe & Kahn, 1997, p. 433; see also Rowe & Kahn, 1987). "Successful ageing" refers to those cases where ageing people are free of (acute and chronic) diseases, do not suffer from disability, are intellectually capable, possess high physical fitness and actively use these capacities to become engaged with others and with the society they live in. Concepts which have been used in gerontological research and which emphasize different aspects of the ageing process are healthy ageing (Ryff, 2009), productive ageing (Morrow-Howell, Hinterlong, & Sherraden, 2001), ageing well (Carmel, Morse, & Torres-Gil, 2007; European Union Committee of the Regions & AGE Platform Europe, 2009), optimal ageing (Aldwin, Spiro, & Park, 2006), and active ageing (Fernández-Ballesteros, 2008).

There is a strong normative element in these definitions of successful ageing. Successful, healthy or productive ageing are evaluated as more desirable than "normal" or even "pathological" ageing processes. Clearly, most people wish to grow old without being affected by chronic illnesses and functional disabilities. Despite the efforts to increase the proportion of healthy life expectancy, a substantial part of the old and very old population faces frailty and dependency. Hence, attention should be given to the fact that normative definitions of "active ageing" may not lead to a degradation of and a discrimination against individuals and groups who do not reach the positive goal of "active ageing". A careful ethical debate has to accompany normative distinctions between ageing processes (see the discussion on this problem in the last section of this paper).

In contrast to the strongly normative definitions mentioned above, the WHO definition of active ageing is more inclusive in respect to different ageing trajectories and diverse groups of older people: "*Active ageing is the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age*" (WHO, 2002, p. 12). Several aspects of this definition are noteworthy: Focus, process, enabling factors, and domains. Active ageing focuses not only on individuals, but also on groups and populations. Individuals are able to grow older healthily and actively, and societies offer opportunities for active ageing. Secondly, active ageing is a process which aims at quality of life as people grow older. Active ageing is not a state which may be reached by only a few (and not by the many), but is a continuous undertaking to improve ageing trajectories. Thirdly, there is an emphasis on enabling factors and societal structures. Enabling factors and societal structures which shape ageing processes can be classified as personal factors (e.g. genetic endowment, personality), social factors (e.g. unequal distribution of income, goods, services and power), behavioural factors (e.g. life style), environmental factors (e.g. climate), and institutional factors (e.g. social security, health care and long-term care systems). Opportunities for active ageing have to be created, by individuals themselves, by social groups and organisations, and by the state. Fourthly, active ageing covers broad domains of life: health, integration, and participation. Although health is a highly important precondition of active ageing, it has to be complemented by integration and by the opportunities for societal participation.

1.2 General characteristics of ageing processes

Although the theoretical conceptions discussed above stress different features of the ageing process, they resemble each other in important aspects (see also Baltes, 1987). These can be captured by general characteristics of ageing processes: life course perspective, heterogeneity, plasticity, contextuality, and social change. In addition, concepts of "active ageing" or "successful ageing" contain a value judgement concerning ageing processes.

Ageing as part of the life course: In gerontology, the process of ageing and the phase of old age is seen as part of the life course (Elder & Giele, 2009). Although there might be disruptive events in old age (like the onset of dementia), biographical trajectories through childhood, adolescence and adulthood shape the "third" and "fourth" phase in life. Hence, the cornerstones of successful ageing are already laid in early phases of the life course. It should be noted that chronological definitions of the "third" and "fourth age" are somewhat arbitrary. In gerontology, the beginning of the "third age" is often defined as the transition into retirement and/or the age of 65 years; the beginning of the "fourth age" is sometimes defined as the age of 85 years. While the majority of individuals in the "third age" have a sufficiently good health to live independently in private households and participate actively in society, the prevalence of people who are frail, dependent and in need of care

increases in the "fourth age" (see, for instance, chronological definitions and descriptions of these phases in the "Berlin Aging Study", Baltes & Mayer, 1999; Lindenberger, Smith, Mayer, & Baltes, 2010).

Heterogeneity of ageing processes: All definitions of active or successful ageing start from the observation, that there are large inter-individual differences between developing and ageing individuals. Over the life course, developmental trajectories lead to increasing inter-individual diversity, which might be explained by different life-styles or cumulated inequality (Ferraro & Shippee, 2009). Hence, in old age there are great differences between individuals in respect to health, physical capabilities, cognitive functioning, and social integration.

Plasticity in ageing processes: Despite the high relevance of biographical influences on the process of ageing, gerontological research has demonstrated over and again that the course of ageing does not occur inevitably, but can be altered and improved by adequate interventions. There is a large body of scientific evidence showing that interventions for successful ageing are effective (Braveman, Egerter, & Williams, 2011; Coberley, Rula, & Pope, 2011; Peel, McClure, & Bartlett, 2005; see also section 2 of this paper). It should, however, be acknowledged that the efficiency of interventions decreases in very old age.

Contexts of ageing processes: Although taking place within an individual person, ageing processes are influenced by factors on different levels (factors related to the individual person, factors rooted in the environmental, cultural and societal context in which a person is living, e.g. Wahl, Fänge, Oswald, Gitlin, & Iwarsson, 2009). Interventions for successful ageing can be directed at individual behaviour (e.g. health behaviour, social activities) or at a person's context (e.g. influencing education, income, health via policies on education, labour market, housing or health care, e.g. Tesch-Römer & von Kondratowitz, 2006).

Social change and ageing: The process of ageing takes place within historical time. As societal conditions change over time so does the process of ageing. Growing old at the beginning of the 21st century is different in many respect from growing old the beginning of the 20th century. Not only the average life expectancy has changed (and the fact that more members of a birth cohort grow old), but also living situations like health care systems and social networks (Ajrouch, Akiyama, & Antonucci, 2007).

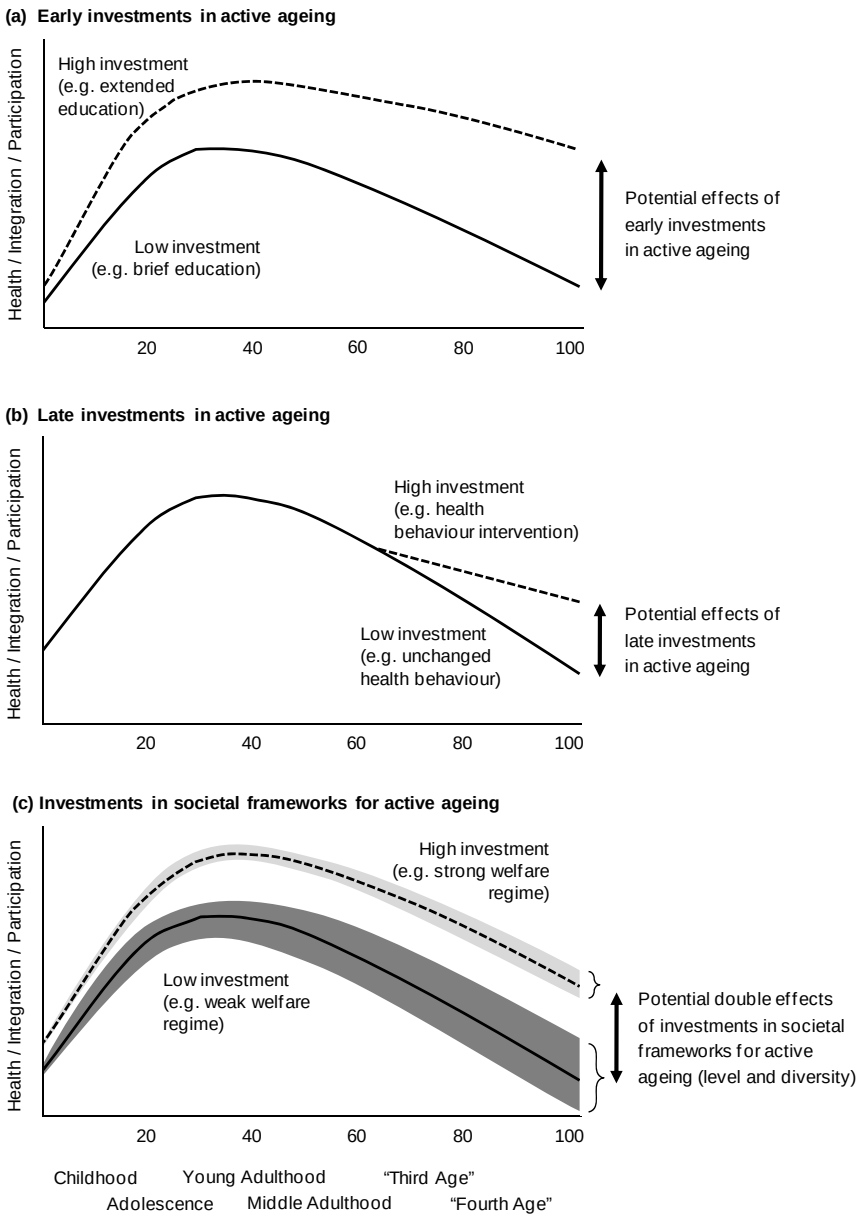
1.3 Investments in active ageing

These considerations have lead to decisions in respect to argumentation in this working paper. Firstly, we will focus on *ageing processes*. The domains chosen for this working paper are health, social integration, and participation. These domains represent dimensions of quality of life in old age which influence each other in multiple ways (see for a discussion of the construct "quality of life" Diener, 2005; Motel-Klingebiel, Kondratowitz, & Tesch-Römer, 2004; The WHOQOL Group, 1998; Veenhoven, 2005; Walker, 2005). On the one hand, good health is the precondition for active social integration and participation in late life. On the other hand, it is well known that social integration and active participation positively influence the health status of older people. Hence, "active ageing" is conceptualized as process which leads to quality of life in old age (the quality of life facets "health", "integration", and "participation" will be in the focus of this paper).

Secondly, the diversity in ageing trajectories show that good health, stable social integration, and societal participation do not occur "naturally" in old age. While some people experience a good

health status up to very old age, other people suffer from chronic diseases and may die prematurely. Different trajectories indicate that interventions may alter the course of ageing (Berkman, Ertel, & Glymour, 2011). Hence, central of the concept "active ageing" is the optimization of opportunities. In the current working paper we will focus on *investments in active ageing*. These investments can be made during different phases in the life course. Early investments, especially during the educational phase in childhood and adolescence, tend to have profound and long-lasting effects. Investments in adulthood and old age, however, are effective as well. Finally, investments in the societal frameworks for active ageing are important. Contextual factors shape the opportunities for the development of active ageing. Hence, it will be of interest to compare societies which differ in the opportunity structures (e.g. welfare regimes) for active ageing.

Figure 1: Hypothetical representations of three types of investments in active ageing: (a) early investments, (b) late investments, (c) investments in societal frameworks for active ageing (see text for more information).



In this paper, three different ways of investing in active ageing will be considered (see figure 1). First, the effects of direct investments in active ageing will be analysed (see figure 1a and 1b). Direct investments in active ageing can be made early in life (figure 1a). It should be noted that the two (hypothetical) curves in figure 1a show the developmental trajectories of two (hypothetical) people: One person has completed an extensive education, while the other person has completed a brief education only. In section 2 of this paper, empirical data will be presented on the long-lasting effects of early investments in education on health, social integration, and participation in old age. It should be mentioned, that differences in education are also discussed in the context of social inequality and/or diversity. In addition to differences in education, other relevant aspects of diversity should be taken into account when discussing investments in active ageing, like gender (Arber, Davidson, & Ginn, 2003; Crimmins, Kim, & Solé-Auró, 2010; Tesch-Römer, Motel-Klingebiel, & Tomasik, 2008), income and wealth (Pinquart & Sorensen, 2000; Schöllgen, Huxhold, & Tesch-Römer, 2010) and migration status (Longino & Bradley, 2006; Warnes, 2010). In this paper, we will concentrate on differences in educational status.

Figure 1b shows the hypothetical effects of investments in active ageing that occur later in life (e.g. in middle adulthood, old age, or very old age). Note that late investments in active ageing can be effective as well (there is a potentially positive effect in changing the ageing trajectory), but that the effects of late interventions in active ageing may be not as cost-effective as earlier investments. In section 3 of this paper, empirical data will be presented on the effects of late investments on health, social integration, and participation in old age (most of these interventions concern individuals older than 65 years of age).

Finally, figure 1c shows the potential effects of investments in societal frameworks for active ageing. Several assumptions form the basis for this figure. Firstly, it is assumed that investments in societal frameworks for active ageing may vary across societies. For instance, societies with a strong welfare regime (e.g. with a comprehensive educational system, a strong social security system, and a reliable health system) may establish better opportunities for active ageing than societies with a weaker welfare regime. Consequently, citizens of societies with a strong welfare regime may on average show higher levels of health, social integration, and participation in old age. Secondly, the diversity between members of a society due to social inequality may vary between societies. It is assumed, that diversity due to social inequality will be lower in societies with a strong welfare regime. Thirdly (not shown in this figure), the relationship between variables may differ between countries (e.g. educational family background might correlate strongly in societies with a weak welfare regime with educational status of an individual – and in societies with a strong welfare regime the relationship might be lower). In section 4 of this paper, empirical data will be presented in respect to the effects of societal investments on health, social integration, and participation in old age. In this section, special emphasis is given to the question if and how the strength of welfare state institutions like social security systems (i.e. employment, old age pensions) influence active ageing.

2. Early investments in active ageing

The foundations for active ageing are laid in the early phases of the life course. Developmental research has generated a tremendous amount of evidence for the long-lasting impact of the

conditions in childhood and adolescence on adult development. In sociology, much research has been conducted based on the idea that social inequality accumulates over the life span: Children living in advantaged families will achieve a higher educational status, work in less strenuous jobs, and will earn more life-time income (Dannefer, 2003). The socioeconomic status (SES) of a person can be described by his/her educational status, income/wealth, and reputation/ power. Educational status indicates individual knowledge and capabilities, income and wealth are resources to buy goods and services, and reputation reflects the power of directing the action of others. Early life experiences, and especially education, yield positive effects which will be visible in old age (Dannefer, 2011). Very often, education is classified according to the International Standard Classification of Education (ISCED), distinguishing six levels of education (from primary education tertiary education). In the following section, the impact of educational status (as reached in childhood and adolescence) on health, social integration, and participation in late life will be described.

2.1 Health

The increasing life expectancies of the last century have been accompanied by decreasing disability rates and improved functional health among older adults (Manton & Gu, 2007). However, despite these average improvements in health, there are still large disparities in health which have been attributed to disparities in socioeconomic status which is composed of education, income/wealth, and occupational prestige. Epidemiological research has shown that the socioeconomic status of a person is highly relevant for health (Herd, Robert, & House, 2011). Consistently, it has been shown that lower socioeconomic status is related to worse health (e.g. Adler et al., 1994; Mackenbach 2006; Mackenbach, Kunst, Cavelaars, Groenhof, & Geurts, 1997; Mackenbach et al., 2008; Marmot, Ryff, Bumpass, & Shipley, 1997; Marmot, 2007).

From a life course perspective it is has been discussed whether this relationship varies with age (Alwin & Wray, 2005). Proponents of the cumulation theory (e.g. Dannefer, 1987) assume that the influence of education and income on health increases continuously with age due to a socially stratified cumulation of resources as well as risks over the life-span. Representatives of the age-as-leveller hypothesis (Herd, 2006; Lynch, 2003) suggest that the strength of the relationship between health and socioeconomic status decreases in old age relative to middle adulthood due to a variety of factors (e.g. retirement may end inequalities in the work context; social policies may lead to less inequality in old age; biological frailty may lead to a convergence of status groups; selective survival may eliminate socioeconomic health disparities in later life). A decrease in socioeconomic differences in morbidity and mortality in old age supporting the age-as-leveller hypothesis has been found by many investigators (e.g. Beckett, 2000; House, Lepkowski, Kinney, & Mero, 1994; Marmot & Fuhrer, 2004). There is, however, also evidence for continuity of social inequalities in health (Rostad, Deeg, & Schei, 2009; Yao & Robert, 2008), and support for an increasing impact of socioeconomic status on health over the life-span (Kim & Durden, 2007; Ross & Wu, 1996). Different facets of socioeconomic status may be a reason for inconsistent results across studies (Schöllgen, Huxhold, & Tesch-Römer, 2010): While educational differences may be related to the onset of diseases, differences in income and wealth may be more important for functional health and the maintenance of daily activities. Depending on the specific relationship, health inequalities may persist up to old age.

2.2 Social integration

Social integration in old age has precursors in earlier phases of the life span. Social networks accompany the developing person over the life course like a social convoy. While the overall size of the social convoy decreases with age, the number of emotionally close persons seems to be stable up to old age (Antonucci, Birditt, & Akiyama, 2009). Loneliness in old age – a subjective indicator of poor social integration – is influenced more strongly by the quality (and not the quantity) of the social network (Pinquart & Sörensen, 2001). Loneliness is an established risk factor for physical and mental illness (Hawkley & Cacioppo, 2010; Hawkley, Thisted, Masi, & Cacioppo, 2010). There is ample gerontological evidence that social integration, like the existence of a positive partnership, prevents loneliness in old age (De Jong Gierveld, Broese van Groenou, Hoogendoorn, & Smit, 2009). Intergenerational relations in ageing families, having been analysed thoroughly over the last decades by family sociology, are characterized by emotional complexity, structural diversity, and role interdependence (Silverstein & Giarrusso, 2010). Hence, although help from adult children may be highly important for the care of ageing parents, the effects of intergenerational support, for instance via co-residence of adult children and old parents, on loneliness may depend on contextual factors, like personal income and societal wealth (De Jong Gierveld & Tesch-Römer, 2011). For a steadily increasing proportion of childless individuals, intergenerational family support in old age is not available, anyway. Hence, the focus of ageing research has turned to the role of friends and neighbours. By comparing different birth cohorts, it could be shown that the extended social network has gained importance over the last decade. Friends and neighbours of older people provide not only instrumental help, but give emotional support to an increasing proportion of older people as well (Huxhold, Mahne, & Naumann, 2010).

The effects of social status can also be seen in the domain of social integration. However, not all facets of social integration are affected by differences in educational status. Adult persons with a low education more often report having no confidant, no partner and a lack of instrumental and social support (Mickelson & Kubzansky, 2003; Weyers et al., 2008). The disadvantage of low education very often runs in families: People who come from a family with low education and have a low educational status themselves have – in middle and late adulthood – smaller social networks and get less instrumental and emotional support from non-kin than people coming from a family background with high education and with a high educational status on their own. However, in respect to kin support (both instrumental and emotional support), there are no differences between educational groups (Broese van Groenou & van Tilburg, 2003; see also Krause & Borawskiclark, 1995). Important explanatory mechanisms between educational status and social integration might be seen in the intergenerational transmission of educational status, living in poor neighbourhoods under financial strain, and behaving hostilely towards one another – with the consequence of receiving less social support (Krause, 2011).

2.3 Participation

Educational status which has been attained in childhood, adolescence, and young adulthood has a long lasting effect on participation rates (employment, volunteering). Educational status opens up career trajectories which are characterized by a variety of differences, e.g. differences in occupational stress or different opportunities for continuous education. During the late phase of employment, mostly defined as the age between 55 and 64 years early investments in education are still effective (see Hardy, 2006, for a definition of “older workers”). Individuals with higher

educational status have a higher probability of gainful employment during the last decade before retirement than individuals with lower educational status. On average, the employment rates in OECD countries among the 55-to-64-year old were in 2006 about 66 percent for the group with the highest educational level (tertiary education), about 52 percent for people with a medium educational level (upper secondary and post-secondary non-tertiary education), and about 40 percent for individuals with the lowest educational level (below upper secondary). Although the rates differ between countries and change over time (see section 4 of this paper for a discussion of country differences), the overall pattern of differences are similar over time (employment rates are reported for the years 1997 to 2006) and across most OECD countries (OECD, 2008, p. 157-158). Hence, for individuals with higher educational status there is a higher probability of working until retirement age.

Similarly, volunteering rates in middle adulthood and late life also vary between educational groups. Individuals with higher educational status more often undertake voluntary service than individuals with lower educational status. In a European study it was shown that across countries, the rate of volunteer work, defined as active engagement in voluntary or charity work during the month before the interview, was on average about 6 percent in individuals with low education, about 11 percent in the middle educational group, and about 18 percent in the group with a high level of education (Erlinghagen & Hank, 2006). Similar results concerning educational status can be found in the United States (Kaskie, Imhof, Cavanaugh, & Culp, 2008). As in gainful employment, there are great differences between countries (see section 4 of this paper), but the general pattern of volunteering differences can be seen across countries. Controlling for confounding factors in multivariate analyses (e.g. age, health, and other activities), the rate of volunteering in the high education group still was about 1.7 times higher than in the low education group (Hank, 2011b).

2.4 Early investments: Interventions for health, integration, and participation

Early investments in education definitely appear to be investments in active ageing. Educational status which has been acquired in childhood and adolescence has effects in middle and late adulthood. Individuals with higher education have better health, a higher chance of working until retirement age, and are more involved in volunteering. Two additional observations should be highlighted here: First, early education sets important framing conditions for health and participation in later phases of the life course. The curriculum, the culture of the classroom and the culture of the school are important for preparing students for active participation and civic engagement (Torney-Purta, 2002). Secondly, health, integration and participation are highly connected. Health is a necessary precondition for active participation in the labour market and in volunteering organization. On the other hand, it has been shown that social integration and participation have positive effects, for instance in relation to a better health of active volunteers (Cutler, Hendricks, & O'Neill, 2011).

3. Late investments in active ageing

Early investments in active ageing have long lasting effects as shown in the preceding section with respect to the domains health, integration, and participation. Should we conceptualize early phases as determining the life course? In human development early phases are rarely "*sensitive periods*" (i.e. developmental influences are effective during a small time window early in life; the outcomes of these early influences cannot be changed later). However, childhood and adolescence may be seen

as "*junctions for life course trajectories*" (early developmental influences determine a certain life course trajectory; while there may be subsequent changes within trajectories, it is rather difficult to change between trajectories). Alternatively, the model of "*additive exposure*" assumes that early developmental phases are highly important throughout life, but that later influences may add to (or change) the effect of earlier influences (Berkman, Ertel, & Glymour, 2011). In the next section we will report on epidemiological studies showing cumulative effects of living situations and life style throughout adulthood and on intervention studies demonstrating that developmental changes are possible up to late adulthood. We will concentrate on intervention studies with older adults (65 years and over). It should be emphasized, however, that developmental interventions are possible in early and middle adulthood as well and that the efficiency of interventions decreases with advancing age (Baltes, Rösler, & Reuter-Lorenz, 2006).

3.1 Health

Over the past decades, epidemiological research has shown complex trends in the health status of ageing and old individuals. While the prevalence of (self-reported) chronic diseases has increased in the past, the opposite picture emerges for disability and limitations in functional health which have decreased over time (Freedman et al., 2004). In the literature several explanations for the improvement in functional health have been discussed: "*Increases in education and in income, changes in life styles, improvements in nutritional intake, reductions in occupational stress, declines in infectious disease rates, and improvements in medical care are all related to each other, have lagged effects, and all changed dramatically within a very short period of time*" (Costa, 2004, p. 30). With respect to individual life-style and health behaviour, there is ample empirical evidence for the positive effects of physical activity and adequate nutrition – and for the negative effects of smoking, sedentary behaviour, obesity, and alcohol abuse (e.g. Ferrucci et al., 1999). A review on (mostly longitudinal) studies analysing the effect of physical activity on mortality showed higher mortality rates in people with a sedentary life style (Houde & Melillo, 2002).

In addition to epidemiological analyses, experimental research has shown that interventions for healthy ageing are feasible and effective up to old age. Physical activity is one of the main measures to increase physical fitness and functional health up to very old age. In general, the results of intervention and observational studies show compellingly that physical activity positively affects health outcomes (Angevaren, Aufdemkampe, Verhaar, Aleman, & Vanhees, 2008; Bravata et al., 2007; Colcombe & Kramer, 2006; Fiatarone et al., 1994; Houde & Melillo, 2002; Johnson, Scott-Sheldon, & Carey, 2010; Windle, Hughes, Linck, Russell, & Woods, 2010). Attention should be given, however, to the type of intervention (e.g. cardiovascular or resistance training, length and frequency of sessions, duration of intervention), the population studied (e.g. age, familiarity with physical activity), the outcome measures (e.g. physiological parameters, functional health, cognitive functioning), and the intervention design (e.g. randomized trial, sample size). Physical activity interventions show positive effects in cardiovascular parameters (e.g. blood pressure, weight), but across studies results are inconsistent due to small sample sizes and differences in measures of physical activity, interventions, and outcomes (Houde & Melillo, 2002). Using special equipment like pedometers can be helpful to increase physical activity which consequently leads to weight loss and reduced systolic blood pressure (Bravata et al., 2007). Exercise training is effective for increased muscle strength also in very old people (older than 85 years) who suffer from frailty, even if the intervention consisted of only three 45 minute sessions per week over ten weeks (Fiatarone et al., 1994).

In addition, it has been shown that physical training not only improves the physical fitness of a person, but may have positive effects on cognitive capacities (Angevaren, Aufdemkampe, Verhaar, Aleman, & Vanhees, 2008), especially on executive control processes (Colcombe & Kramer, 2006). Executive control processes like coordination, inhibition, scheduling, planning and working memory are highly important for the daily functioning of individuals. These processes require constant attention, are susceptible to ageing processes and can be enhanced by aerobic fitness training (Colcombe & Kramer, 2006, p. 129). Finally, physical activity also has a positive effect on subjective well-being, e.g. satisfaction with life, positive affect, in older adults (Windle, Hughes, Linck, Russell, & Woods, 2010).

3.2 Social integration

Old age can be characterized as a phase of life in which the ratio of gains to losses increasingly lowers towards losses. This is also true for social relations. Many older people, especially women, experience the loss of a partner. Widowhood has negative, long-lasting effects in subjective well-being (Lucas, 2007). In the case of widowhood, the network partners often give social support after the death of a partner (Guiaux, van Tilburg, & Broese van Groenou, 2007). Most valuable for widowed older adults is the contact with adult children (Pinquart, 2003). Although the social network tends to become smaller with advancing age many older adults have someone in whom they can confide (Wagner, Schütze, & Lang, 1999). As relationships with familiar persons, e.g. family members or life-time friends, become more important in old age the existence of a confidant is a protective factor against loneliness (Charles & Carstensen, 2007). Loneliness has a U-shaped curve over the life course: Loneliness is high in adolescence, low in young, middle, and late adulthood – and increases in very old age (beyond the age of 80 years; Dykstra, 2009). Among the risk factors for the onset of loneliness are the following characteristics: loss of a partner, reduced social activities, and increased physical disabilities (Aartsen & Jylhä, 2011). Hence, fighting loneliness in (very) old age is an important goal for late investments in active ageing.

Interventions for reducing loneliness (and improving social integration) in old age may be directed at different levers: (a) improvement of opportunity structures (e.g. creating possibilities to meet other people, White et al., 2002), (b) providing social support (e.g. visits to older people who live isolated, Ollonqvist et al., 2008), (c) strengthening social skills (e.g. training how to interact with new acquaintances, Kremers, Steverink, Albersnagel, & Slaets, 2006), and (d) addressing maladaptive social cognition (e.g. coping with involuntary, automatic negative thoughts in social interactions, Chiang et al., 2010). Meta-analyses show that the most successful interventions in reducing loneliness in adults address maladaptive social cognitions followed by providing social support (Masi, Chen, Hawkley, & Cacioppo, 2010). There is still not sufficient evidence, however, on interventions fighting loneliness in very old people. Hence, one should think of combining elements of these interventions: Providing opportunity structures for older people to meet new friends, strengthening social skills and offering social cognitive intervention might be promising ways in this field.

3.3 Participation

Retirement still poses a sharp “line of demarcation” in respect to societal participation. Labour market participation and participation in civic organizations are treated in different lines of research. In respect to labour market participation, there is a comprehensive economic discourse on labour market policies and facilitating longer working lives (e.g. Wise, 2010; see also section 4 of this paper).

However, it seems important to also look at individual and organizational factors which enhance the "employability" of older workers, i.e. an individual's capability of gaining and maintaining employment or obtaining new employment if necessary. Compared to younger workers, employability of older workers may be lower because skills may be outdated and health problems increase with age. However, higher levels of experience (in the profession, on the job), higher identification with the company, and more reliability in work related activities may outweigh these obstacles (Hardy, 2006). In addition, there are strong organizational factors related to the employability of older workers (e.g. insufficient opportunities for continuing education, unsuitable work conditions). Hence, interventions to increase employability of older workers may be directed towards both employers (e.g. offering more opportunities for further training, regular job rotation, designing workplaces to be accessible for all) and older employees (e.g. investing in one's own knowledge, skills, and health). Interventions aiming at increasing the individual employability of older workers can be successful. Analysing the effects of interventions to increase employability (and employment) of unemployed older workers (52 years and older), it could be shown that even short training measures are effective (especially in-firm training; Romeu Gordo & Wolff, 2011).

Late investments in active ageing may also be made in the context of volunteering and civic engagement. One of the main questions in this context concerns the problem of recruiting volunteers, especially from those groups who do not have a life-long history of volunteering. Clearly, organizations have to pay attention to the individual situation of potential older volunteers. A highly successful example for recruiting and retaining volunteers is the "Experience Corps Baltimore", an intervention which involves older volunteers in public schools with the dual goal of supporting students and of health promotion for older volunteers (Tan, Xue, Li, Carlson, & Fried, 2006). Apparently, the combination of a detailed screening process and positive effects of participation resulted in high retention rates between 80 and 90 percent (Martinez et al., 2006). Choice of voluntary activities and the ability to plan one's own time table are highly important for motivating volunteers. People with a low income (and mostly also a lower educational status) emphasize institutional facilitators of engagement, like compensation for the activity (Tang, Morrow-Howell, & Hong, 2009). Finally, it should be taken into account that motives for volunteering change over time (and may differ between cohorts). For instance, it has been suggested that the cohorts of the "Baby Boomers" (cohorts born between 1945 and 1965, with different peaks in the US and Europe) are motivated to volunteer in youth focused activities or activities that are connected with their local community (Prisuta, 2003).

3.4 Late investments: Interventions for health, integration, and participation

The domains of health, integration, and participation are tightly connected. Being in good health and possessing physical fitness is a requirement for labour force participation. On the other hand volunteering activities may enhance the health status of ageing individuals. There is good evidence for a reciprocal relationship between volunteering and well-being, e.g. reduced mortality, increased physical function, increased levels of self-rated health, reduced depressive symptoms, increased life satisfaction (Morrow-Howell, 2010). Volunteering has been proven to have beneficial effects on diverse psychological dimensions like well-being and quality of life (Meier & Stutzer, 2008; Parkinson, Warburton, Sibbritta, & Byles, 2010). Older people seem to profit even more from civic engagement than their younger counterparts do (Greenfield & Marks, 2004). Furthermore, mental health status appears to be enhanced for older people through formal, but not through informal volunteering (Li & Ferraro, 2005; Musick & Wilson, 2003). In addition to this, formal volunteering slows the age-related

decline of self reported health and functioning levels (Lum & Lightfoot, 2005). Similarly, being out of the labour market (e.g. unemployed or retired) is related to poor subjective health and the existence of chronic diseases (Alavinia & Burdorf, 2008). Possible reasons for the positive effects of volunteering are provided by the "Interactional" or "Multiple Role Theory", stating that larger numbers of social roles entail positive outcomes for the individual (Greenfield & Marks, 2004; Moen, Dempster-McClain, & Williams Jr, 1989). These positive effects of having more social roles could be mediated through increased psychological resources and social integration resulting from voluntary activities (Musick & Wilson, 2003). There is also ample evidence for the relationship between social integration and health: Intervention programmes reducing loneliness may also contribute to better health in later life. Finally, it should be pointed out, that midlife experiences in education, work, health, and family are related to retirement intentions. Educational investments, job changes, late transitions into parenthood, and late divorces are associated with weaker intentions to retire early. In contrast, midlife health problems are related to stronger early retirement intentions (Damman, Henkens, & Kalmijn, 2011).

4. Investments in societal frameworks for active ageing

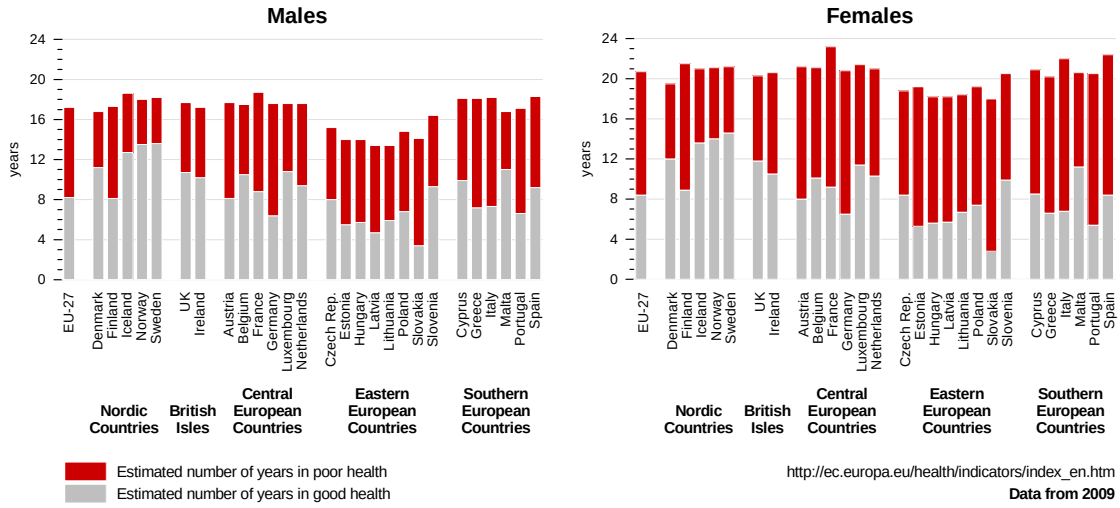
Ageing takes place in temporal, environmental, and societal contexts – and is shaped by these contexts (see for instance Bengtson & Cutler, 1976; Tesch-Römer & Kondratowitz, 2006; Wahl & Oswald, 2010). One of the best known examples for contextual influences on ageing is the increase in longevity which began to rise in Western countries and Japan around the turn of the 19th to the 20th century and later in the last century took place in other countries around the world as well (Oeppen & Vaupel, 2002). In addition to longer life expectancy, people are reaching old age in better health (Vaupel, 2010). Clearly, these changes in longevity and health cannot be explained by modifications in the genetics of populations, but rather by changing societal and cultural conditions. Changes in societal conditions like improved educational systems, less strenuous working conditions, enhanced health care and a cultural shift towards more adequate health behaviour explain these changes in longevity (Meslè & Vallin, 2011).

These societal characteristics also play a role in the discussion on investments in societal frameworks for active ageing. Despite a general trend towards longer and healthier life expectancy, there are substantial variations between societies. Differences can be seen between developed and developing countries, but also within developed countries in the UNECE region. Following a rather inductive approach, we will describe differences (and similarities) between societies and suggest interpretations for any differences (or similarities) we have found. Among the comparative studies available in this context, one study has been the basis for many analyses and should be highlighted here: The Study of Health and Retirement in Europe (SHARE) collects micro data on health, socio-economic status and social networks of more than 45,000 individuals aged 50 or over (Börsch-Supan et al., 2008). Depending on the data collection wave, up to 15 countries belong to this survey, representing different regions in Europe, ranging from Scandinavia (Denmark and Sweden), Central Europe (Austria, France, Germany, Switzerland, Belgium, and the Netherlands), the British Isles (Ireland), the Mediterranean region (Spain, Italy, Greece, and Israel) and Eastern Europe (the Czech Republic and Poland).

4.1 Health

Societies do not only differ in total life expectancy (the life expectancy estimated at birth). There are also marked differences in further life expectancy (e.g. estimated at age 65). This can be seen for the countries of the European Union (EU27) as shown in figure 2 (Source: HEIDI data tool). Further life expectancies at age 65 for men range from about 13 years (Baltic countries) to 18 years (Iceland, France, and Italy) and for women from about 18 years (Bulgaria, Romania) to about 23 years (France, Italy, and Spain). With respect to active ageing, even more interesting are the differences in healthy life expectancy, i.e. this part of further life expectancy which is spent without chronic diseases or functional disability. In figure 2 the years in good health are presented in *light grey* while the years in illness/functional disability are presented in *dark red*. As can be seen, healthy life expectancies range for men from about 3-5 years (Estonia, Slovakia) to about 12-14 years (Scandinavian countries) and for women from about 5 years (Estonia, Latvia) to about 12-15 years (Scandinavian countries, Bulgaria). Substantial inequalities in HLYs at 50 years exist within EU countries (Jagger et al., 2008).

Figure 2: Further life expectancy and healthy life expectancy at age 65 in Europe (further life expectancy: total column size, healthy life expectancy: light grey part of columns).



There is evidence that the type of welfare state regime is related to the health of adults. Comparing continental Europeans, British, and US-American adults (50 to 75 years of age), it could be shown that American adults report worse health than English or European adults (Avendano, Glymour, Banks, & Mackenbach, 2009). The impact of social inequality on health was stronger in the U.S. and England as compared to Continental European countries (Avendano, Glymour, Banks, & Mackenbach, 2009; Banks, Marmot, Oldfield, & Smith, 2007). Taking also self-reported health and other dimensions of subjective well-being (like life satisfaction and happiness) into account, it could be shown (in a world-wide study involving 132 countries) that societal wealth (gross national product per capita) is positively related to the extent of the average happiness in a society (Deaton, 2007). Societal wealth also attenuates the age effect in self-reported health (with age the level of self-reported health declines): In poor countries the decline in health satisfaction with age and the rise in self-reported disability with age are stronger than in rich countries (Deaton, 2007).

In a careful analysis of the effect of government expenditure on life satisfaction in 12 European countries (Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Sweden and the UK), three findings are worth considering (Hessami, 2010). (a) There is an inversely U-shaped relationship between government involvement and well-being (well-being increases with government spending up to a certain point, and then decreases again). (b) For the 12 European countries analysed, it was found that there might be scope for a further expansion of government involvement in the EU from a well-being perspective. An important condition in this respect is the high institutional quality of European countries (e.g. low corruption, decentralized spending). (c) Highly important is the sector of government spending: Allocating a larger share of government spending to education could raise the levels of well-being in the European countries analysed here.

There are, however, results which show a different pattern of welfare states effects on health. In middle adulthood, unemployment is related to worse health. Although there is a moderating effect of welfare state regime on the effects of unemployment on health, relative inequalities were largest in strong welfare state regimes (Bismarckian, Scandinavian, and Anglo-Saxon models; Bambra & Eikemo, 2009). Analyzing gender differences in functional health, it was found that women are more likely than men to have disabling conditions, and that men more often report heart disease. These gender differences are quite consistent across different welfare state models (Crimmins, Kim, & Solé-Auró, 2010).

4.2 Social integration

The scientific debate on comparative analyses in respect to social integration has focused on two areas: Societal influences on intergenerational family solidarity on the one hand and loneliness on the other. In respect to intergenerational family solidarity, the relationship between family and state has been discussed repeatedly. Societies can be distinguished by the degree to which care responsibilities are allocated among state and family. Hence, societies range from social democratic states with strong public welfare provisions to residualist states with rather weak public safety nets (Silverstein & Giarrusso, 2010). There is a scientific debate on the relationship between family and state, contrasting the assumptions of “crowding-out” (a strong welfare state tends to replace the family) and “crowding-in” (a strong welfare state strengthens intergenerational family solidarity; see also Künemund & Rein, 1999). Most studies show, however, that informal support through families and formal support through state funded services complement each other (Lowenstein & Daatland, 2006; Motel-Klingebiel, Tesch-Römer, & Kondratowitz, 2005). In strong welfare states, there is a “crowding in” of instrumental and emotional support given by adult children to their old parents, but a “crowding out” of tasks related to long-term care (Brandt, Haberkern, & Szydlik, 2009). Hence, families and services take over those tasks which they do best. Strong financial welfare state support of older people allows older parents to support their adult children financially (Deindl & Brandt, 2011).

Although societal differences in family composition and family exchange have been documented, one should avoid overestimating the influence of the welfare regime on intergenerational family solidarity. Commonly, it is assumed that Europe is divided into a familiastic South (with strong exchange between familial generations) and an individualistic North (with weak intergenerational family support). Considering the prevalence of different family types (descending familialism: primarily help from parents to children, ascending familialism: primarily help from children to

parents, supportive-at-distance: not living nearby, primarily financial transfers from parents to adult children, and autonomous: not living nearby, little contact, and few support exchanges), one can find examples of these family types across Northern and Southern European countries included in the SHARE study (Dykstra & Fokkema, 2011). However, the more familialistic types (descending and ascending families), were most strongly represented in Italy, Spain, Greece, and also in the Netherlands, Belgium, and were least strongly represented in Sweden, Denmark and Switzerland.

Finally, one could ask if social integration has similar effects on well-being outcomes, especially on loneliness. It could be assumed that societies with strong social integration (e.g. generational co-residence) will have a low prevalence of lonely individuals (and vice versa). While in Western countries only a minority of older adults (4-5 percent) co-resides with children aged 25 or above, the incidence of co-residence is more than 20 percent in Bulgaria and Russia, and more than 50 percent in Georgia (De Jong Gierveld, 2009). This stronger social integration in Eastern Europe does not lead to a lower prevalence of loneliness in these countries, however. Mean loneliness scores are higher in Eastern European countries than in Western European countries. The protecting effects of social integration via intergenerational family support may collapse when living circumstances are inadequate, societal wealth marginal, and welfare state support weak. In this case, the existence of close family members and the strong normative demand to mutual support may even aggravate loneliness (De Jong Gierveld & Tesch-Römer, 2011). In addition, it has been shown that loneliness among older people tends to be higher in communal societies despite larger family networks in these countries (Litwin, 2010; Van Tilburg, De Jong Gierveld, Lecchini, & Marsiglia, 1998). In communal societies expectations for social contact might be higher – and therefore loneliness stronger. Hence, both social cohesiveness and social norms might influence the relationship between social integration and well-being.

4.3 Participation

Two main characteristics of active ageing are gainful employment and volunteering. While people are living longer (and will have a longer working life in the future), fewer young people are entering the labour market. In the future, people aged between 55 and 64 will comprise a large share of the workforce. From an economic standpoint, it makes sense to encourage older workers to stay active and to utilise their skills and experience. Employers may benefit from employing older workers because this means reduction in recruitment and training costs. For the individual, the extension of working life might be seen positive, as well (e.g. continuous interweavement with society, opportunity for self-fulfilment, and higher income relative to retirement benefits). There is no empirical evidence for general beneficial health effects of the transition into retirement. Rather, early or forced retirement seems to be connected with negative consequences for health (Tesch-Römer, 2009). Despite these arguments for a long working life, however, there are great differences between countries in the employment rates of older workers (see table 1; OECD, 2010).

While the employment rates of older workers (55 to 64 years of age) are quite high in Northern Europe, the British Isles, and North America (the rates range from about 53 to 83 percent), they are lower in Central Europe (between 33 and 68 percent), Southern Europe (34 to 51 percent), Eastern Europe (31 to 51 percent), and West Asia (Turkey 27 percent, Israel 58 percent). The country specific employment rates of older workers reflect the combined effects of the strength of the economy and the retirement regulations in these countries. It should be noted, in addition, that there is no trade-off between the employment rates of younger people (aged 15 to 24 years of age) and older people

(aged 55 to 64 years of age). It is more likely that both age groups show high employment rates (as in the cases of Sweden, Switzerland, the UK, and Canada) or low employment rates (as in the cases of France, Hungary, Poland, and Turkey). Hence, in the comparative perspective the age groups of younger and older workers do not seem to compete directly on the labour market.

Table 1: Employment rates by age group (as percentage of population in that age group), Source: OECD (2010), p. 130-131.

	Persons in employment		
	15-24 years	**25-54 years**	**55-64 years**
Central Europe			
France	30,7	83,2	38,2
Austria	55,9	84,4	41,0
Belgium	26,9	80,5	32,8
Germany	47,2	81,0	53,8
Luxembourg	26,2	80,2	38,3
Netherlands	69,2	85,7	50,7
Switzerland	62,4	87,2	68,4
Northern Europe			
Sweden	45,9	86,5	70,3
Denmark	68,5	87,9	57,7
Norway	58,0	86,8	69,3
Finland	46,4	84,3	56,4
Iceland	72,1	88,1	83,3
British Isles			
United Kingdom	56,4	81,6	58,2
Ireland	46,1	78,0	53,9
Southern Europe			
Italy	24,4	73,5	34,4
Portugal	34,7	81,6	50,8
Spain	39,5	75,3	45,6
Greece	24,0	76,6	42,9
Eastern Europe			
Hungary	20,0	74,4	31,4
Poland	27,3	77,5	31,6
Czech Republic	28,1	83,8	47,6
Slovak Republic	26,2	80,1	39,3
Slovenia	38,4	86,8	32,8
Estonia	36,4	83,9	62,4
Russian Federation	37,0	84,2	50,7
Northern America			
Canada	59,6	82,3	57,5
United States	51,2	79,1	62,1
Western Asia			
Israel	27,6	73,9	58,4
Turkey	30,3	53,5	27,4

Societal participation extends beyond gainful employment, however. Human capital in the ageing population, which is even growing because of better health and education of subsequent cohorts of older people, calls for expanding volunteer involvement – for the sake of communities as well as older adults themselves. Volunteerism depends on the societal context: Societies differ in the allocation of social responsibilities and the expectation of engagement and participation from citizens (Anheier & Salamon, 1998). This can be seen in analyses of the SHARE data set which reveals that volunteering rates are quite high in Northern Europe and relatively low in Mediterranean countries (Erlinghagen & Hank, 2006). In the United States and Canada, too, the volunteering rates

are high in older age groups (Dekker & Van den Broek, 2006; Künemund, 1997). In Eastern European countries, however, volunteering rates are rather low, comparable to those of Southern European countries (Anheier & Salamon, 1999; Wallace & Pichler, 2009). Hence, there are parallels between the participation rates in employment and volunteering.

Across countries, education (higher volunteering rates in groups with higher educational status) and health (higher volunteering rates in groups with better health) are important factors which predict volunteering (Erlinghagen & Hank, 2006). This differs somewhat for the role the age of a person plays in volunteering. Two competing hypotheses predict opposite age differences: The "time-budget hypothesis" predicts that volunteering rates and volume should increase after the transition into retirement because there is an increase in disposable time. The "opportunity hypothesis", in contrast, predicts that volunteering rates should decrease after the transition into retirement because opportunities for volunteering are connected to employment (and fade away in retirement). Societies may differ in the extent of opportunities for volunteering not connected to employment. However, it is too early for conclusions yet. Although cross-national differences in age effects on volunteering rates have been reported, the results vary over the different analyses. This may be due to different methodologies (Hank & Erlinghagen, 2005; Komp, Van Tilburg, & Broese van Groenou, 2011; Künemund, 1997).

4.4 Investments in societal frameworks: Health, integration, and participation

Looking over the comparative results for health, integration and participation, two questions arise: What are the causes for these differences between countries? Which implications do these results have for societal investments in active ageing? In analysing data from 92 nations, it was reported that societal wealth (gross national product per capita), strength of welfare state (extensiveness of public institutions), economic productivity, and the stability of the political system are relevant predictors of healthy life expectancy (Veenhoven, 2009, see also Veenhoven, 1996). "*Citizens live longer and happier in nations where the legal system functions well, where the government is effective and where corruption is low*" (Veenhoven, 2009, p. 14). Clearly, there seems to be a pattern which stimulates active ageing in these three areas. In the context of the SHARE study, "successful ageing" has been defined as the joint occurrence of good health (no major disease, no disability), good functioning (high physical and cognitive functioning), and societal participation (being actively engaged; Hank, 2011a). Comparing the 15 European countries represented in the SHARE study, there are large differences in the rates of people aged 50 years and older who fulfil these criteria of "successful ageing" (Hank, 2011a). The rates of older people fulfilling these criteria range between about 20 percent of the population 50plus (Denmark, Sweden and The Netherlands) and around 5 percent and less (Italy, Spain, and Poland). Hence, we assume that the strength of a welfare state as can be seen in social security systems like unemployment protection, pension system, health care system, and long-term care system might be connected to societal investments particularly effective for creating opportunities for active ageing. The results we have found reflect the differences between "welfare state regimes" with the social-democratic model (Nordic countries), Bismarckian conservative-corporatist model (Middle European countries), the liberal model (Anglo-Saxon countries), and the still developing welfare states of Southern European model and Eastern European model (Bambra & Eikemo, 2009; Esping-Andersen, 1990) – the former might be seen as role models for fostering active ageing.

5. Policy recommendations

Early investments in education are investments in active ageing. Educational status which has been acquired in childhood and adolescence has positive effects on health, social integration, and participation in late adulthood. *Late investments* in active ageing are effective, as well. Intervention in health, integration, and participation in late adulthood are possible and might change ageing trajectories towards active ageing. In addition, health, integration and participation are highly connected. Health is a necessary precondition for active participation in the labour market and in volunteering organization. On the other hand, social integration and participation have positive effects, for instance in respect to a better health of active volunteers. Finally, *societal investments* in active ageing concern opportunities for education, for participation in the labour force and civic organisations and social security systems like unemployment protection, pension system, health care system, and long-term care system. These results are exciting and may lead to highly optimistic conclusions. We would like to point out, however, that despite many promising pathways for change in ageing trajectories, losses in functional abilities and frailty will be the reality for a substantial part of older people. Before presenting policy implications and policy recommendations we will discuss some pitfalls of focusing exclusively on positive aspects of active ageing and argue for a broader understanding of active ageing.

5.1 Towards a broader understanding of active ageing

Two potential pitfalls of focusing exclusively on positive aspects of active ageing should be highlighted. These pitfalls concern the long-term consequences of preventive interventions and unintended social exclusion of ageing individuals who suffer from multimorbidity, disabilities, frailty, and whose ageing trajectories are by definition not "successful". Hence, we would like to argue that the WHO definition of active ageing calls for a broader understanding of active ageing which strengthens the societal inclusion of all older people, both healthy and frail older people.

(a) Overcoming the limitations of active ageing

Interventions intended to improve active ageing have been shown to positively affect health status, subjective well-being, and activity of older people. Assuming that populations have a maximum average life span (taking into account within-population variance in individual life expectancies around the population mean) this could mean that health promotion and prevention may shift the onset of chronic illness and disability to a short period before death. These ideas characterized the initial conception of "compression of morbidity" (Fries, 1980). Demographic and epidemiological research in the last decades has shown a complex pattern of results, however. Although younger cohorts are characterized by improved functional health when entering the phase of old age (Freedman et al., 2004; results on the prevalence of illnesses are less positive), it has been shown that there is no limit of maximum life expectancy, so far. All assumptions regarding life expectancy have been broken in the past (Oeppen & Vaupel, 2002). Additionally, it has been shown that the onset of senescence has shifted later into later phases of the life course, but that the rate of ageing has remained unchanged (Vaupel, 2010).

Figure 3: Hypothetical representations of (a) a life course with frailty phase, (b) a life course with extension of life span, changed rate of ageing and not frailty phase, and (c) a life course with extension of life span, unchanged rate of ageing and frailty phase (see text for more information).

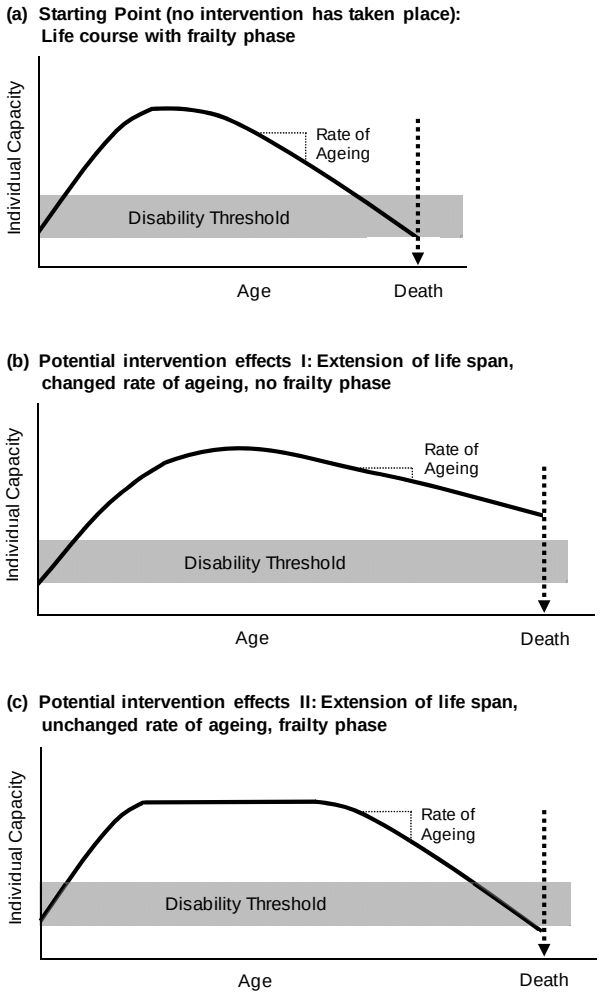


Figure 3 shows hypothetical representations of life courses which illustrate this point. Figure 3(a) is the starting point: Here the hypothetical trajectory of a person is shown who has not participated in preventive interventions and who experiences a phase of frailty before death. Figures 3(b) and 3(c) show hypothetical life courses of two persons who have participated in preventive interventions and who both benefit from these interventions: In both cases the life span increases. There are two important differences, however. Figure 3(b) shows a life course where the rate of ageing has been slowed and where death occurs before the person enters into a frailty phase. In contrast, Figure 3(c) shows a life course where senescence has been shifted to a later phase of life, but where the rate of ageing has remained unchanged and where the person goes through a phase of frailty before death (like in the first example). While the trajectory depicted in Figure 3(b) is the ideal goal of prevention and health promotion (as in the concept "compression of morbidity" by Fries, 2005), the trajectory depicted in Figure 3(c) seems to be more in line with empirical findings (Vaupel, 2010).

Hence, even if health promotion and prevention are successful (i.e. extending the life span and leading to a better health status of the "young old") it can nevertheless be expected that – late in life – a substantial proportion of the "old old" will need support because of multi-morbidity and frailty.

When emphasising health promotion and prevention in policies on active ageing, governments should be aware that these policies may improve the living situation of the "young old", but may not completely prevent frailty and dependency. Policies on active ageing should include policies for supporting frail older people, as well.

(b) Inclusion of frail older people

Definitions of active, healthy, and successful ageing tend to be normative and lead to propositions like the following: "It is better to be active and healthy in old age than to be inactive and to suffer from chronic diseases". These normative propositions may influence both the individual course of ageing and the societal acceptance of old age. Research on the consequences of age stereotypes has shown that individuals with a positive self-image of ageing are healthier and live longer than individuals with a less positive self-image (Levy, 2003; Levy, Slade, & Gill, 2006; Levy, Slade, Kunkel, & Kasl, 2002). However, positive images of ageing may have a dark side and pose a danger for those people who do not fall under the definition of successful ageing (Torres & Hammarström, 2009). Highlighting good, positive or desirable ageing trajectories implies that there are also bad, negative and undesirable ageing trajectories. In a societal perspective, a one-sided focus on successful ageing could lead to the social exclusion of frail older people who do not fit into perceptions of "active" or "successful" ageing (see the discussion in the 6th German Government Report on the living situations of older people; BMFSFJ Bundesministerium für Familie Senioren Frauen und Jugend, 2010, p. 262; for an English short version see BMFSFJ German Federal Ministry for Family Affairs, 2011). When addressing the topic of active ageing and quality of life, attention should be given to the "incomplete architecture of human ontogeny" (Baltes, 1997) and the "Janus face of ageing" (Baltes, 2003). Policies for active ageing will be necessary for ageing societies, but they should be complemented by policies on supporting frail and dependent older people to ensure their social inclusion and human dignity (see for instance the European Charter of the Rights and Responsibilities of Older People in Need of Long-term Care and Assistance, AGE Platform Europe, 2010).

5.2 Setting the framework for active ageing

Similar considerations and precautions can be found in the WHO definition of active ageing. Central component of the WHO definition is the reference to a "process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age" (WHO, 2002, p. 12; emphasis added). In this working paper, we have used the term *investment* to indicate that active ageing needs a framework of enabling factors, opportunity structures and societal institutions to amend ageing trajectories. We would like to emphasize, moreover, that investments in active ageing should be inclusive and embrace all ageing persons, regardless of their health status. Before discussing specific recommendations we would like to point out three cross-cutting issues: Education, security, and images of ageing.

(a) Investing in education

Policies on active ageing should rely on measures which foster successful development in earlier phases in life. Providing learning opportunities over the life span has long lasting positive effects on active ageing. Formal learning in childhood and adolescence sets the stage for further education and life-long learning. Education fosters the continuous development of knowledge and skills necessary for a healthy life style, for employment, for societal participation, and also for personal fulfilment. Governments and relevant stakeholders should secure that children and adolescents receive a thorough primary, secondary, and tertiary education (university education, vocational education).

The share of students which leave school early (without a leaving certificate) should be decreased, and the share of students with a tertiary degree should be increased. Educational institutions should be suited to an increasing diversity of students. In addition, more attention should be given to systematically promote life-long learning which is of high relevance for employees in modern economies which are based on knowledge and innovation. Hence, states and other relevant stakeholders may consider developing structures fostering life-long learning (e.g. institutions, funding schemes, curricula).

(b) Providing security

Active ageing needs a secure base. Social security systems provide protection against social risks like illness, disability, unemployment, and poverty – and they also regulate pension schemes. Hence, social security is a necessary condition for active ageing. Although the instruments for social security might differ between societies and might include benefits from the state, market, civil society and/or families, governments should provide a regulation for the combined effects of these stakeholders. Stimulating opportunities for older workers to participate in gainful employment until reaching retirement age (and, if they wish so, also beyond retirement age) and securing adequate income for older people who are in retirement are important tasks for states in this respect. Highly relevant is the prevention of poverty, as poverty bears the high risk of social exclusion. Combating poverty will also help to reduce health inequalities and to increase the chances to take an active part in society. Given the expectation that a substantial proportion of older people needs long-term care at present (and probably will so in the future), it is highly important that the social risk of frailty will be covered by social security systems, as well (e.g. long-term care insurance).

(c) Encouraging inclusive images of ageing

Societal and individual conceptions of ageing influence developmental trajectories over the life span. Quite often, these everyday conceptions are alluded to as “images of ageing” which are expressed in beliefs, in behaviour routines, in societal regulations, and also in pictures (as in advertising). Images of ageing concern old age (the state of being old), ageing (the process of growing old) or older people (as a social group). Both realising the potentials and dealing with the restrictions of old age are influenced by these images of ageing. The opportunities for active ageing depend to a large extent on individual and societal images of ageing. Yet many images of ageing do not do justice to the diversity of old age. It is an important task to examine the effects of these images as they may encourage (or prevent) older people to take part actively in society. Images of ageing play a role in the retirement regulation. Quite often, legal retirement ages are justified implicitly or explicitly by assuming that older people have a reduced work capacity or resilience. These images can be challenged which may be a task for a variety of different stakeholders. Bringing new “images of ageing” into the mass media and into the consciousness of the general public might show that older people are a societal resource. It should be paid attention, however, that replacing “negative” images of ageing with purely “positive” images of ageing does not do justice to frail older people in need of care. Hence, images of ageing should be inclusive and embrace both potentials and risks of old age. The introduction of social security systems for frail older people may stimulate a societal discourse on quality of care and quality of life when facing frailty.

5.3 Fostering healthy biographies

(a) Promoting a healthy lifestyle

Active ageing starts in childhood. Although experiences and events in earlier phases of the life course do not determine completely an individual's living situation in later adulthood, they are important factors for many aspects of the ageing process. A solid education acquired in early phases in life should comprise health related knowledge and skills (e.g. regarding nutrition, physical activity, risk behaviour). However, also in later phases of the life course, there should be opportunities and incentives for adequate health behaviour. Adequate health behaviour in late adulthood includes performing physical activity (at least moderate physical activities lasting 30 minutes or more for three times per week), following a healthy diet (an intake of five portions of fruit and vegetables each day; sufficient fluid intake), following screening behaviours (e.g., mammography, coloscopy) and avoiding risk behaviours (e.g. smoking, alcohol misuse). The state and other stakeholders should provide the legal and financial basis for life-long health education and promotion. Special emphasis should be given to develop and implement health promotion for older people. In addition to enhancing a healthy lifestyle, the relevant stakeholders should provide healthy settings in schools, workplaces, and neighbourhoods. Design in shaping housing, neighbourhoods, and traffic systems should stimulate health behaviour over the life span.

(b) Providing effective services of health care and long-term care

Healthy ageing needs to be supported through an effective health care system. Health policy should emphasise prevention starting early in life, promote a healthy lifestyle up to old age, and ensure good access to health care for all. The state should establish the legal and financial basis for health promotion and prevention (primary, secondary, and tertiary prevention). A precondition for real choice by users is full information about which services are available. Independent advice institutions would be one way of achieving this. Providers of health care services should offer access to health care to all age groups and should be connected in networks for adequate services. When frailty and dependency in old age happen, this should be accepted as part of the life-span, as well. Innovative solutions like fall detection devices, easy to use social interaction services, and smart use of information and communication technology (ICT) in the home may help to support older people to live independently at home. While staying at home may be the preference of many older people, in some cases residential accommodation may provide more safety and security. Also in the case of living in a residential care facility, there should be opportunities for active participation in society.

5.4 Supporting social integration

(a) Strengthening diverse family types, extending social ties beyond the family

Active ageing means also to grow old in social networks. Hence, policies on active ageing should strengthen social integration and social activities. This means to enable families realizing the opportunities for intergenerational contact, exchange and solidarity. Attention should be paid to the increasing diversity of family types. The diversity of families and private networks should be reflected in policies which attempt to strengthen social cohesion. Policies on active ageing should also strengthen private networks outside the family. Communities and other stakeholder might consider creating opportunities for the exchange between generations outside of the family. Both older and younger people may benefit from these exchanges (e.g. support in schools, in neighbourhoods, in multi-generation meeting places). It should be paid attention to the fact, however, that fighting

loneliness in older people might require also the individual attendance to personal cognitions and preferences.

(b) Giving aid to caring families

Families take over the task of caring for frail older people in many societies. Since family structures are changing, the female employment participation rate is increasing, and working life is extended, informal care through families and private networks should be supported. The state should provide legislation and financial basis for adequate long-term care services. This support should correspond to people's choices: When facing the task of family care, care policies should ensure that people have the opportunity to choose if and how to care. Hence, care policies should support a partnership approach between family carers, professional providers and cared-for persons. Informal care should be a positive choice to care, not an obligation to care.

5.5 Encouraging societal participation

(a) Reinforcing employability and stimulating employers

Active ageing and the extension of working life is not only an economic necessity in many countries, but also corresponds with many older people's wish to societal participation. Policies on the employment of older workers should not only combat early retirement, but also emphasise the maintenance of working capacity and employability. A higher retirement age calls for environments which enable older workers to remain healthy and productive, a responsibility not only of policy makers, but also of companies and individuals themselves. Hence, relevant stakeholder should promote healthy workplaces, provide age-friendly and safe work environments, and increase flexibility of work time (e.g., work time accounts, sabbaticals). Active ageing policies should consider incentives for employees to retire later and for employers to hire and keep older workers. It is also important to challenge attitudes and hiring practices of employers.

(b) Creating opportunities for volunteering

Volunteering is part of active ageing. Although volunteering can be seen as an altruistic activity, intended to promote the quality of life of other people, volunteers profit by participating in these activities as well, e.g. in terms of skill development, social integration or having a pleasant leisure time. The development of age-friendly communities should be supported by improving urban and local environments (e.g., "walkability" of neighbourhoods, creating multi-generation meeting points). Desirable places and spaces can motivate (older) citizens to participate in their neighbourhoods. A variety of organisations could get involved in supporting the development of volunteering. There are several strategies which could be used by communities to increase volunteering (e.g. providing funds to launch projects that engage volunteers; developing infrastructures for recruiting, training, and connecting older adults). A culture of participation and intergenerational transfer could be fostered in clubs and associations, emphasizing opportunity structures for realizing the potential of ageing and old citizens.

6. Mandate

At its fourth meeting on 21-22 November 2011, the UNECE Working Group on Ageing will have an in-depth discussion on 'Quality of life and active ageing'. The consultant will be responsible for composing an analytic paper that will serve as the main document for the Working Group's consideration of this issue. The document (about 10.00 words) will include

- a synthesis of best currently available knowledge on the process of optimizing opportunities for active ageing (health, participation and social security) in order to enhance quality of life as people age;
- on linkages between, on the one hand, national contexts, such as policy regimes, economic circumstances, norms promoting active ageing, and, on the other hand, individual behaviours, well-being and values,
- proposed policy recommendations, outlining alternatives that depend on national circumstances as appropriate.

The consultant will present this paper at the meeting of the Working Group and participate in its interactive discussion. He will update the paper based on the practical examples and comments presented at the meeting. The consultant will work independently and will interact with UNECE staff as needed.

1. Tangible and measurable outputs of the work assignment
   Document on 'quality of life and active ageing' in the UNECE region and its presentation at the meeting of the Working Group on Ageing. Language: English
2. Schedule of the work delivery: from 10 October to 12 December 2011:
   (a) Document to be delivered for the consideration of the Working Group by 1 November 2011;
   (b) Presentation to the Working Group on 22 November 2011;
   (c) Revised document delivered on 12 December 2011;
3. Performance Indicators
   Document of good quality completed in time and considering the variation across sub-regions of the UNECE region. Presentation delivered clearly. Final document ready for publishing.

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