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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). Section 3.1 reports 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. It concentrates on intervention studies with older adults (65 years and over). It should be emphasized that developmental interventions are possible in early and middle adulthood already 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 (Fatarone 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 and positive emotions, 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 lifetime 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 levels: (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, Hawkey, & 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).

