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Title: Health and disability across the life-course

Year: 2021

Version: Published version

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Please cite the original version:

Lisko, I. (2021). Health and disability across the life-course. In K. Komp-Leukkunen (Ed.), Life-histories in Finland : first results from the Survey of Health, Ageing and Retirement in Europe (pp. 18-29). Väestöliitto. Working papers - Population Research Institute. E, 55.
<https://www.vaestoliitto.fi/verkkajulkaisut/life-histories-in-finland/>

3

Exploring the lives of older Finns

3.1

Health and disability across the life-course

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Ageing and health

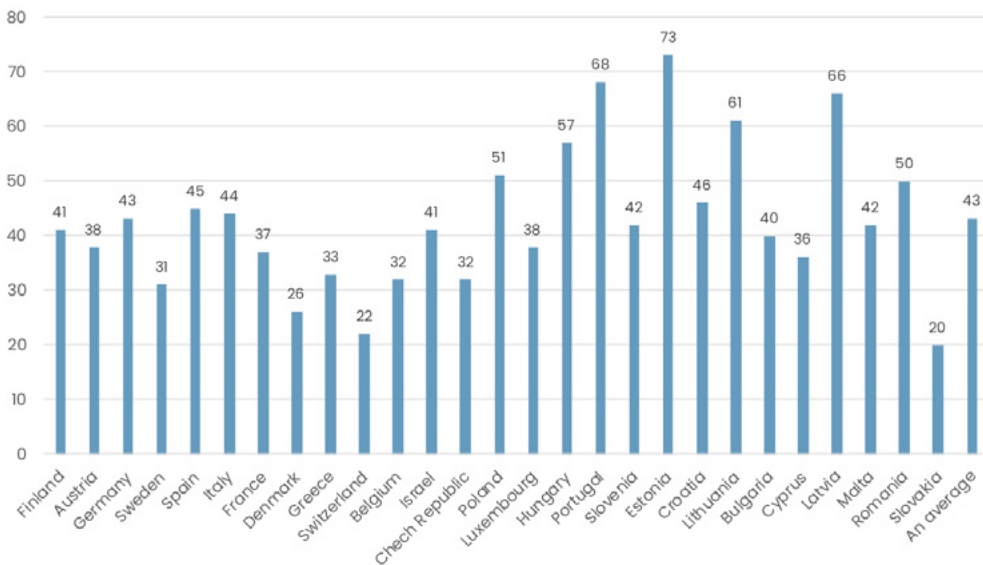
With increasing life expectancy, it is becoming more and more important to find ways to support healthy ageing, not just adding years to life. In upcoming years, especially the amount of the oldest old population is rapidly increasing. In Finland, the number of people aged 85 and over is currently about 150,000, and it has been estimated that this number will almost double by the year 2035 (Statistics Finland 2020a, 2020b, 2020c). Health and functional capacity in old age include several aspects, which all provide slightly different information. In this chapter, we provide preliminary results from the SHARE wave 7 and report the descriptive statistics showing the current state of self-rated health, prevalence of common long-term illnesses and difficulties in performing daily activities in this population, focusing mainly on Finnish cohort.

One common way to assess the health of older people is to examine their self-rated health by asking: “How is your health in general? Is it excellent, very good, good, fair, or poor?” Self-rated health is a strong predictor of future health events and is associated with functional decline, well-being, clinical diagnoses and mortality across different populations and ages (Jylhä, 2009). In SHARE population, self-rated health was assessed using a similar Likert-scaled item. Answers were dichotomized into good health (good or better) and poor health (less than good). The preliminary findings showed that there were slight differences on self-rated health in different countries. Figure 3.1.1 presents the percentages of persons reporting poor self-rated health across countries. The highest percentage of poor health was reported in Estonia (73% of the SHARE population). Relatively high percentages were observed also in Hungary, Latvia, and Lithuania. In Finland, 41% out of 1,965 respondents reported poor self-rated health.

In previous cross-national reports from mid-2000's, the proportion of poor/fair self-rated health among older adults in four European countries have ranged from 36%

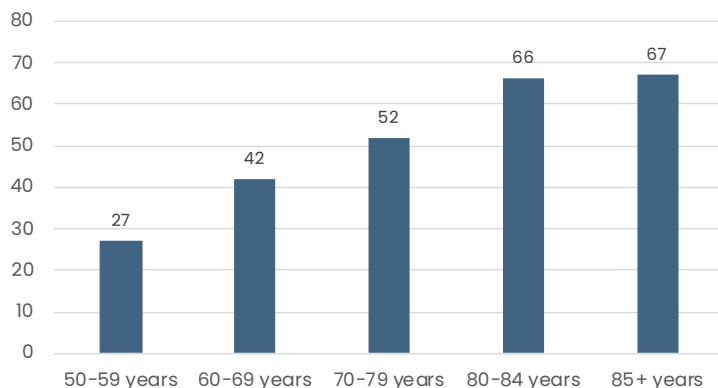
(65–74-year-olds in the Netherlands) to 72% (75–84-year-olds in Spain), thus showing similar numbers as here (Bardage et al., 2005). Findings from the Finnish Health 2001 and 2011 Surveys show that self-rated health has improved in time in all age groups over 10 years (Koskinen et al., 2012). However, in all, when interpreting results from different studies on self-rated health, it is important to take into account that cultural conventions in expressing positive and negative opinions vary and partly affect health rating (Jylhä, 2009).

Figure 3.1.1: Poor self-rated health across countries (%)



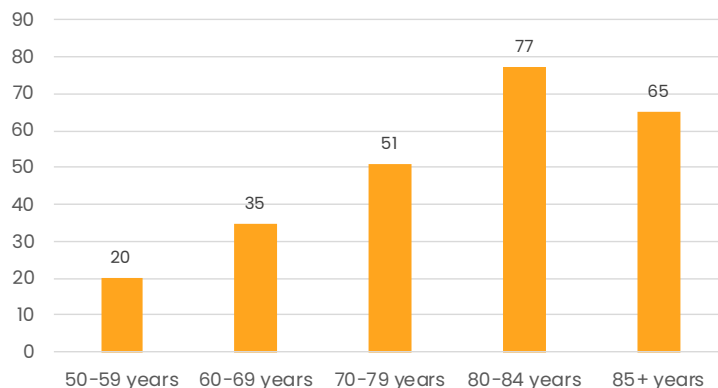
In the Finnish cohort, percentages of respondents reporting poor self-rated health increased with increasing age among both men and women. In men (n=915), poor self-rated health was reported by 27% in the youngest age group (50–59 years), but the amount increased up to 67% among persons aged 85 years and over (Figure 3.1.2). Similar findings have also been reported before. Among Finnish men, the proportion of less than fairly good self-rated health ranged from 31% (55–64-year-olds) to 54% (age 75+) in 2011 (Koskinen et al., 2012). Yet, these results are not fully comparable due to different age groups and wordings.

Figure 3.1.2: Poor self-rated health in different age groups among Finnish men (%)



Among Finnish women (n=1050), poor self-rated health was relatively rare in the youngest age groups (20%), but increased with age, being 77% among people aged 80-84 years. The results are fairly similar to previous observations among Finnish women, where the proportion of less than fairly good self-rated health ranged from 27% (55–64-year-olds) to 57% (age 75+) in 2011 (Koskinen et al., 2012). In the oldest old (aged 85 and over) age group, the percentage of women reporting poor self-rated health was 65% (Figure 3.1.3). Since poor self-rated health was very common in older age groups and it is known to be a significant indicator of adverse health outcomes, this high number deserves further attention in future studies.

Figure 3.1.3: Poor self-rated health in different age groups among Finnish women (%)



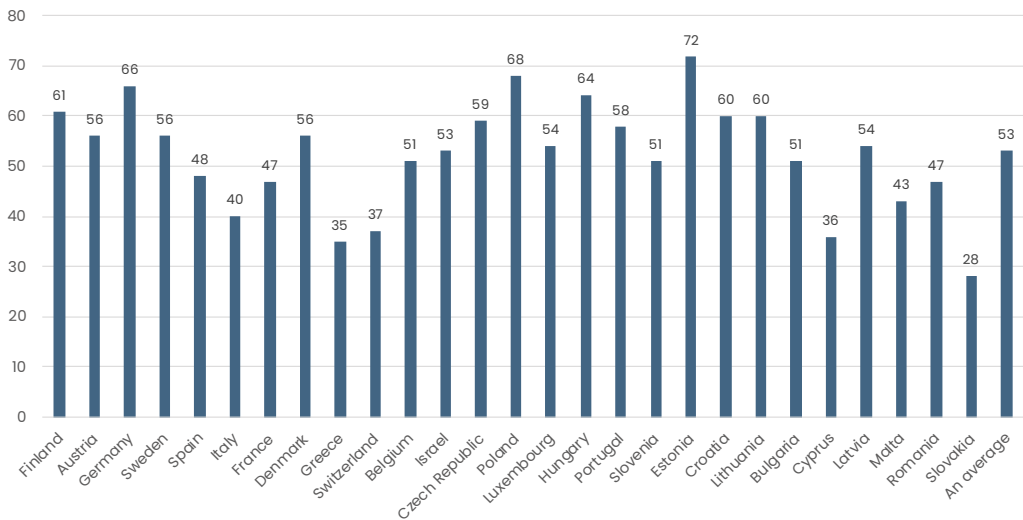
When it comes to older people, self-rated and objective health are usually not exactly the same thing. Objective health can be regarded, for example, as a medical diagnosis, while self-rated health is also influenced by social and biological pathways that mediate

information to individual consciousness (Jylhä, 2009). Even though people in higher age groups tend to rate their health worse than younger people, as people get older, they also lower their standards on what they consider as good health and they adjust their health ratings accordingly (Jylhä et al., 2001). Especially among the oldest old, discrepancies exist between objective health and self-rated health. Findings from a Danish study show that the oldest old have high prevalence of self-reported disability and functional limitations, but still most of them consider their health to be good and are satisfied with their life (Nybo et al., 2001).

Objective health is often assessed by investigating the number of chronic illnesses or conditions. With increasing age, comorbidity becomes more and more common. Common long-term illnesses, which in many cases also lead to functional decline, include cardiovascular diseases, which are still the most common cause of death, hypertension, cancer (the second leading cause of death), osteoarthritis, diabetes, and osteoporosis. For people aged 65 and over, it is also very common to have more than one chronic disease simultaneously, which further increases the risk of functional decline and need for care (Jaul & Barron, 2017).

Of the total SHARE population, 53% of people aged 50 and over reported having at least one long-term illness (heart attack, high blood pressure, high blood cholesterol, stroke or cerebrovascular disease, diabetes or high blood glucose, chronic lung disease, cancer or malignant tumor taken into account). When comparing the countries, the highest percentages of people reporting at least one long-term illness were found in Estonia (72%), Poland (68%), and Germany (66%) (Figure 3.1.4). Of the Finnish SHARE population, a total of 61% of people aged 50 or over reported having at least one long-term illness.

Figure 3.1.4: Percentages of people reporting at least one chronic illness in different countries



When looking at the Finnish SHARE cohort, only a slight increase in the prevalence of long-term illnesses with increasing age was observed. In the youngest age cohort (50-59 years), the prevalence of at least one long-term illness was 55%, and the highest prevalence was observed among those aged 80-89 years (70%; Figure 3.1.5). When looking at comorbidity in the Finnish SHARE cohort, the average number of long-term illnesses was 0.7 among 50–59-year-olds and 1.6–1.7 among people aged 80+ (Figure 3.1.6).”. Altogether, these numbers show that most of Finnish older adults live with long-term illnesses and therefore proper health care is important in order to maintain functional capacity and independency despite of these conditions.

Figure 3.1.5: Percentages of older Finns reporting at least one long-term illness

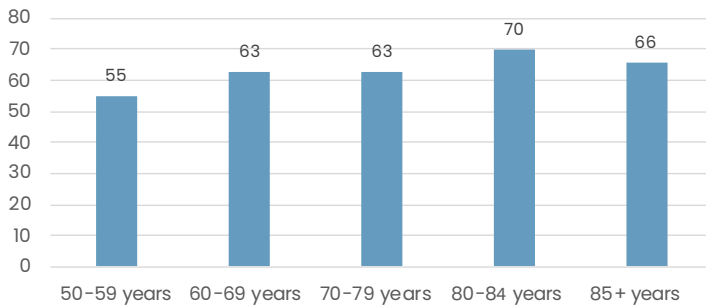
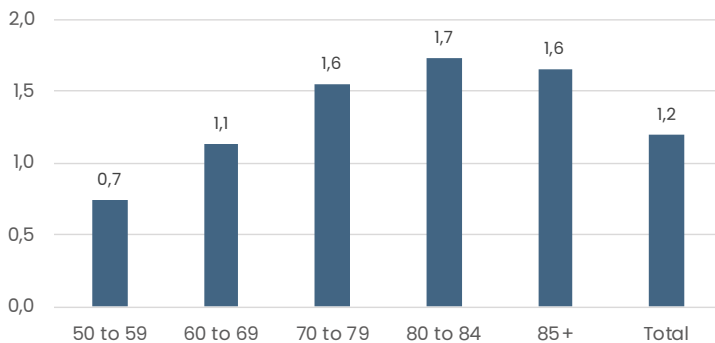
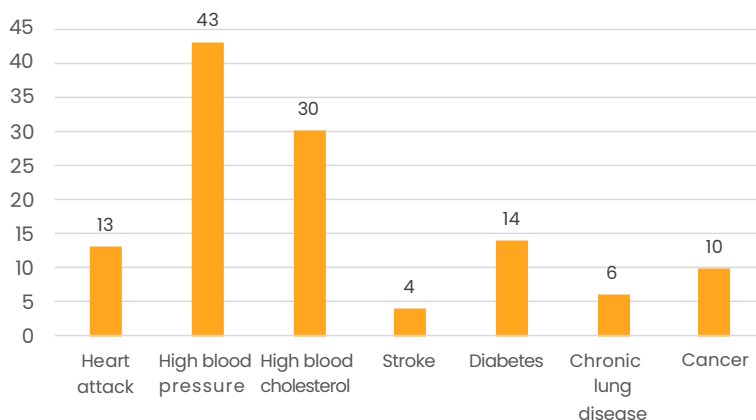


Figure 3.1.6: Mean number of chronic illnesses among older Finns



When looking at the long-term illnesses more closely, it was observed that especially high blood pressure and high cholesterol were relatively common in Finnish population. High cholesterol was reported by 30% and high blood pressure by 43% (Figure 3.1.7).

Figure 3.1.7: Prevalence of common chronic illness among older Finns (%)



Disability in old age

Disability commonly refers to difficulties or need for help in performing activities of daily living (ADL), including basic activities (bathing, dressing, eating, getting in and out of bed) and more complicated instrumental activities of daily living (IADL; handling finances, shopping, using public transportation, doing housework) (Guralnik et al., 1996). In research, a distinction is often made between functional limitations, indicating difficulties in performing activities, and disability, indicating inability to independently perform activities. Disability prevalence increases with age, and based on a sample of Finnish older adults aged 90+ years, 23 percent have disability in basic daily activities and 58 percent in mobility (Enroth et al., 2020). However, recent studies have shown that the functional capacity and cognitive performance of older people have increased in recent decades. New results from the AGNES study showed that among 75- and 80-year-old men and women, performance in maximal functional capacity tests and several cognitive tests has significantly increased in 28 years (Koivunen et al., 2020; Munukka et al., 2020). Researchers offer various explanations for these changes. Overall, people born in later years got to benefit from several social reforms and had more favorable life-course exposures. People born in earlier years went through two wars, started working at a younger age, had poorer nutrition and hygiene, and less education. Furthermore, higher education is linked to better jobs, better economic situation, and better psychological resources. The differences may also be partly explained by improved medical care and access to health care.

In the SHARE population, difficulties in daily activities were assessed using fifteen basic and instrumental activities of daily living. The assessed activities included dressing, walking across the room, bathing, eating, getting out of bed, toileting, moving around in a new environment with a map, preparing a meal, grocery shopping, using a telephone, taking medication, doing activities in the house and in the garden, handling finances, using public transportation, and doing laundry.

The number of participants with difficulties in at least one ADL task was relatively low in all countries (Figure 3.1.8). The highest numbers were observed in Portugal (22%) and Romania (18%). For IADL, the highest prevalence for difficulties in at least one IADL item were observed in Israel (26%), Hungary (25%) and Estonia (25%; Figure 3.1.9).

Figure 3.1.8: Prevalence of at least one reported difficulty in activities of daily living, by country (%)

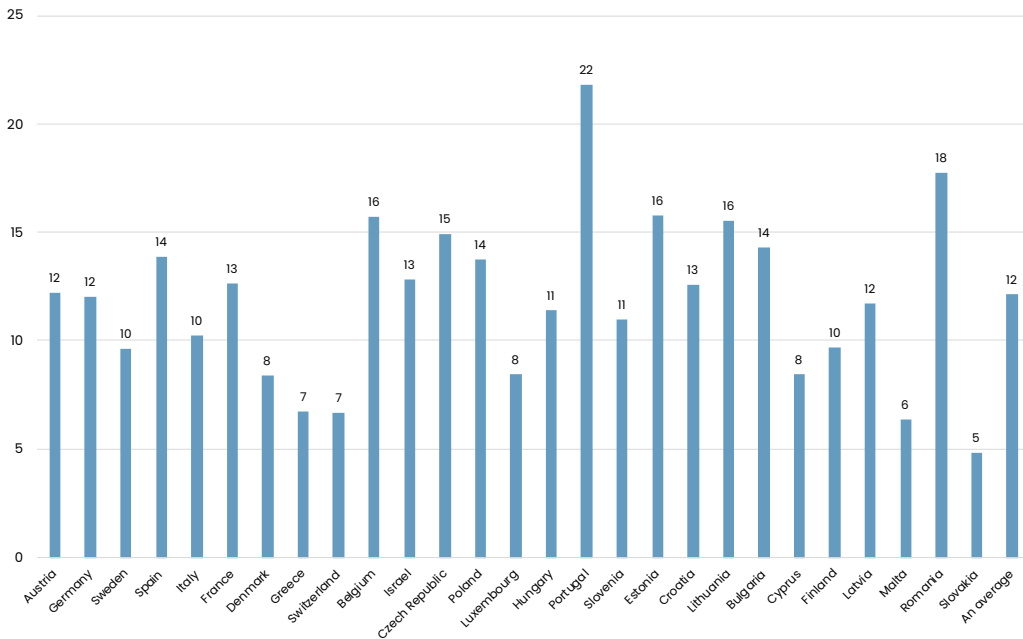
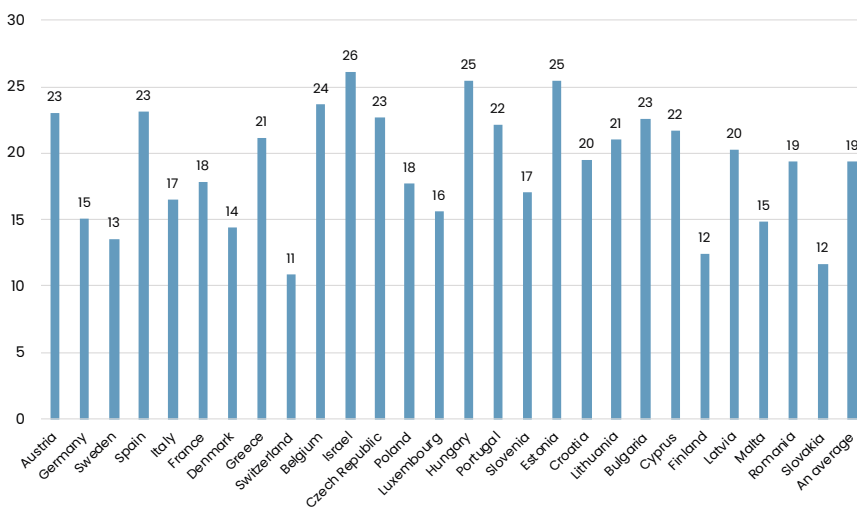


Figure 3.1.9: Prevalence of at least one reported difficulty in instrumental activities of daily living, by country (%)



Men and women report to have a similar amount of difficulties in ADL, although the prevalences are some units of percentages higher in men throughout the age groups (Figure 3.1.10). However, in IADL a slightly higher number of difficulties was reported by women, especially in older age groups (3.1.11).” This trend of women being more disabled than men is observed in many studies. The reasons for this are explained by the longer duration of disability among women, higher prevalence of non-fatal chronic disease, lower muscle strength and bone density, and life-style factors such as physical inactivity or obesity (Leveille et al., 2000).

Figure 3.1.10: Prevalence of difficulties in at least one activity of daily living among older Finns, by age group and gender (%)

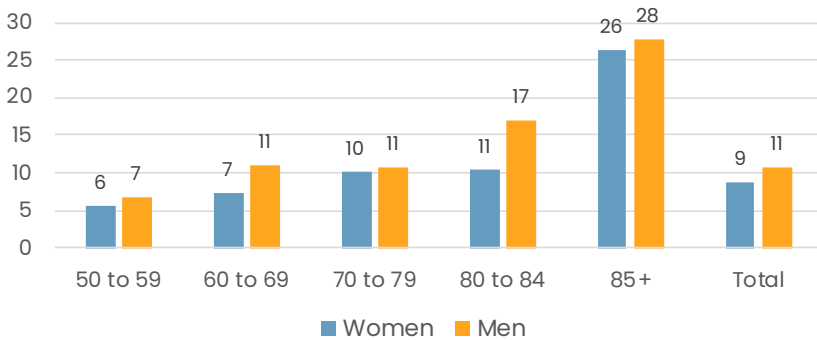
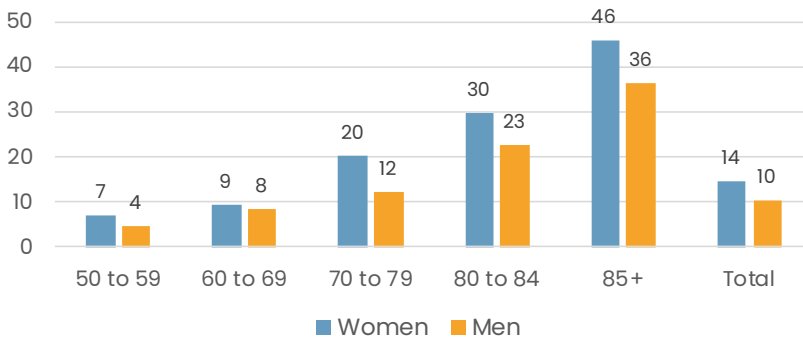
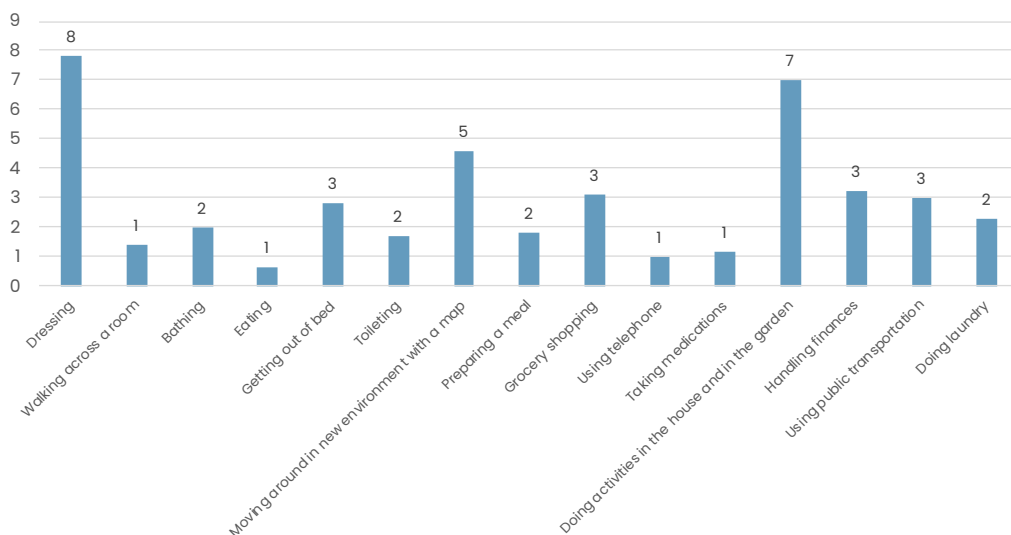


Figure 3.1.11: Prevalence of difficulties in at least one instrumental activity of daily living among older Finns, by age group and gender (%)



When looking at different daily activities, the most common activities where people reported having difficulties were dressing, moving around in a new environment with a map, and doing activities in the house and in the garden (Figure 3.1.12).

Figure 3.1.12: Percentage of older Finns reporting difficulties in daily activities



The percentage of persons reporting difficulties in daily activities increased with age. Difficulties in basic daily activities (dressing, walking across the room, bathing, eating, getting out of bed, toileting) were rare in the youngest age group, but among persons aged 85 years and over, 16% percent reported difficulties in dressing, 10% in walking across the room, and 12% in bathing (Table 3.1.1).

Table 3.1.1: Percentages of older Finns reporting difficulties in basic activities of daily living

	50–59 years	60–69 years	70–79 years	80–84 years	85+ years
Dressing	5	7	10	9	16
Walking across the room	0	1	2	5	10
Bathing	1	1	2	3	12
Eating	0	0	1	0	5
Getting out of bed	2	3	3	6	5
Toileting	1	2	1	2	5

Also, in more complex instrumental activities of daily living, the percentage of people reporting difficulties was highest among those aged 85 and over. The most difficult tasks were grocery shopping (27% in the highest age group reported difficulties), activities in the house and in the garden (26% in the highest age group reported difficulties), and using public transportation (24% in the highest age group reported difficulties; Table 3.1.2).

Table 3.1.2: Percentages of older Finns reporting difficulties in instrumental activities of daily living

	50–59 years	60–69 years	70–79 years	80–84 years	85+ years
Moving around in new environment with a map	2	3	5	9	22
Preparing a meal	1	1	2	6	15
Grocery shopping	1	1	3	7	27
Using telephone	0	0	1	2	10
Taking medications	1	0	2	4	6
Doing activities in the house and in the garden	3	5	10	13	26
Handling finances	1	2	4	8	23
Using public transportation	0	1	4	8	24
Doing laundry	0	1	3	3	23

Life-course factors promoting older age health and physical functioning

Current scientific literature has identified a large number of lifestyle-related factors associated with better health and physical functioning in old age. Physical activity is one of the most effective ways to support functional capacity. A review and meta-analyses by Tak et al. (2013) showed that a medium or high level of physical activity significantly reduced the risk of incident disability in basic activities of daily living based on nine longitudinal studies involving a total of 17,000 participants who were followed for 3-10 years. Also, a healthy diet supports healthy, active and independent old age. The components of a healthy diet are widely acknowledged, including vegetables, fruits, whole grain, fish and unsaturated fats. Several different diets include these components, but the Mediterranean diet is one of the most commonly studied and has been shown to have beneficial effects on both physical functioning and cognition. Social engagement and cognitive activities have been shown to be linked with many health-related outcomes. Evidence from observational studies and non-randomized interventions suggest that social activities may reduce the risk of disability and dementia through psychosocial, behavioral – such as time spent walking – and cognition-related pathways (Kuiper

et al., 2016; Otsuka et al., 2018). Similarly, evidence from randomized controlled trials has shown positive effects of psychosocial interventions and social interaction on cognitive abilities (Duan et al., 2018). Finland has shown how to effectively promote cognitive and physical functioning among older people. The Finnish Intervention Study to Prevent Cognitive Decline and Disability, the FINGER trial, was the first large randomized controlled trial that showed that if we effectively modify dementia-related risk factors among older at-risk individuals, we are able to achieve significant beneficial effects on several cognitive domains and improve the physical functioning and quality of life of older adults (Ngandu et al., 2015).

In summary, SHARE wave 7 results about health, diseases and disability showed that the prevalence of diseases and disabilities increases with age. Poor self-rated health is very common especially among the oldest old population, and many older people are living with long-term illnesses. But still, the prevalence of self-reported difficulties in daily activities is relatively low. This means that people are able to live independent and active life even with health problems and diseases. However, living with chronic conditions and reporting poor self-rated health increase the likelihood of functional decline, so adequate health care and preventive interventions and support to maintain daily activities are needed. With effective preventive actions, active and independent life can be maintained even in the presence of age-related deterioration in health.

References

- Bardage C., Pluijm, S., Pedersen, N., Deeg, D., Jylhä M., Noale, M., Blumstein T., Otero A. (2005) Self-rated health among older adults: A cross-national comparison. *European Journal of Ageing*, 2(2), 149–158.
- Duan, Y., Lu, L., Chen, J., Wu, C., Liang, J., Zheng, Y., Wu, J., Rong, P., & Tang, C. (2018). Psychosocial interventions for Alzheimer’s disease cognitive symptoms: A Bayesian network meta-analysis. *BMC Geriatrics*, 18(1), 175.
- Enroth, L., Raitanen, J., Halonen, P., Tiainen, K., & Jylhä, M. (2020). Trends of physical functioning, morbidity and disability-free life expectancy among the oldest old: Six repeated cross-sectional surveys between 2001 and 2018 in the vitality 90+ study. *The Journals of Gerontology, Series A*. Published online ahead of print.
- Guralnik, J.M., Fried, L.P., & Salive, M.E. (1996). Disability as a public health outcome in the aging population. *Annual Review of Public Health*, 17, 25-46.
- Jaul, E., & Barron, J. (2017). Age-related diseases and clinical and public health implications for the 85 years old and over population. *Frontiers in Public Health*, 5, 335.
- Jylhä, M. (2009). What is self-rated health and why does it predict mortality? Towards a unified conceptual model. *Social Science & Medicine*, 69(3), 307–316.
- Jylhä M., Guralnik J., Balfour J., & Fried L. (2001). Walking difficulty, walking speed, and age as predictors of self-rated health: the women’s health and aging study. *Journals of Gerontology, A Series*, 56(10), M609-M617.

- Koivunen, K., Sillanpää, E., Munukka, M., Portegijs, E., & Rantanen, T. (2020). Cohort differences in maximal physical performance: A comparison of 75- and 80-year-old men and women born 28 years apart. *The Journals of Gerontology, Series A*. Published online ahead of print.
- Koskinen, S., Manderbacka, K., & Aromaa, A. (2012). Koettu terveys ja pitkäaikais-sairastavuus [Perceived health and long-term morbidity]. In: S. Koskinen, A. Lundqvist, & N. Ristiluoma (Eds.), *Terveys, toimintakyky ja hyvinvointi Suomessa 2011 [Health, functional capacity and well-being in Finland 2011]* (pp. 77-79). Report 68/2012, National Institute for Health and Welfare. Tampere: Juvenes Print.
- Kuiper, J. S., Zuidersma, M., Zuidema, S. U., Burgerhof, J. G., Stolk, R. P., Oude Voshaar, R. C., & Smidt, N. (2016). Social relationships and cognitive decline: A systematic review and meta-analysis of longitudinal cohort studies. *International Journal of Epidemiology*, 45(4), 1169-1206.
- Leveille, S. G., Resnick, H. E., & Balfour, J. (2000). Gender differences in disability: Evidence and underlying reasons. *Aging*, 12(2), 106-112.
- Munukka, M., Koivunen, K., von Bonsdorff, M., Sipilä, S., Portegijs, E., Ruoppila, I., & Rantanen, T. (2020). Birth cohort differences in cognitive performance in 75- and 80-year-olds: A comparison of two cohorts over 28 years. *Aging Clinical and Experimental Research*. Published online ahead of print.
- Ngandu, T., Lehtisalo, J., Solomon, A., Levalahti, E., Ahtiluoto, S., Antikainen, R., Bäckman, L., Hänninen, T., Jula, A., Laatikainen, T., Lindström, J., Mangialasche, F., Paajanen, T., Pajala, S., Peltonen, M., Rauramaa, R., Stigsdotter-Neely, A., Strandberg, T., Tuomilehto, J., Soininen, H., & Kivipelto, M. (2015). A 2 year multi-domain intervention of diet, exercise, cognitive training, and vascular risk monitoring versus control to prevent cognitive decline in at-risk elderly people (FINGER): A randomised controlled trial. *Lancet*, 385(9984), 2255-2263.
- Nybo H., Gaist D., Jeune B., McGue M., Vaupel J.W., & Christensen K. (2001). Functional status and self-rated health in 2,262 nonagenarians: The Danish 1905 Cohort Survey. *Journal of the American Geriatric Society*, 49(5), 601-609.
- Otsuka, T., Tomata, Y., Zhang, S., Sugiyama, K., Tanji, F., Sugawara, Y., & Tsuji, I. (2018). Association between social participation and incident risk of functional disability in elderly Japanese: The Ohsaki cohort 2006. *Journal of Psychosomatic Research*, 111, 36-41.
- Statistics Finland (2020a). *Population projection*. Retrieved from www.stat.fi/til/vaenn/index_en.html on October 14, 2020.
- Statistics Finland (2020b). *Population structure*. Retrieved from www.stat.fi/til/vaerak/index_en.html on October 14, 2020.
- Statistics Finland (2020c). *Preliminary population statistics*. Retrieved from www.stat.fi/til/vamuu/index_en.html on October 14, 2020.