



## Active ageing: Results from Western Finland

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### Abstract

The Active Ageing Index (AAI) can be applied across countries to compare active aging outcomes, evaluate the current situation regarding ageing, and identify the most desired directions for policy action. While the AAI-EU is addressed on a national level, it can also be used for assessing active ageing policies on the municipal level, which is the case in this study. The aim of this article was to assess active ageing amongst older people in western parts of Finland by adapting the methodology used for the AAI-EU. We used GERDA data (n=5,011) collected from people aged 66, 71, 76, 81 and 86 for our descriptive analyses. The results showed that the municipalities differed in their active ageing outcomes, and that men and Swedish speakers generally scored higher on the index, which is something that warrants further investigation. Based on the results, we argue that AAI could potentially be used as a tool to monitor various dimensions of active ageing on a regional level and that gender and ethno-linguistic characteristics should be a central concern for a discussion on ageing in our study region.

**Keywords:** active ageing, linguistic groups, gender, municipality

### Background

Similar to other Western countries, Finland experiences an ageing population. The percentage of older people aged 65 and over was 15 per cent in 2000 and has increased to 22 per cent in 2018 (Official Statistics of Finland, 2018). Within the context of profound demographic change, welfare states are responding to the opportunities and challenges associated with ageing populations (Rechel et al., 2013). Alongside traditional issues related to pension and social care provision, increasing attention of public policy is drawn to recent evidence that connects social well-being across the life course to good health outcomes in older age, and to research with a focus on resources enabling people to live healthy lives while ageing (Walker, 2002). A positive approach to ageing is illustrated by the broad concept of *active ageing* proposed by the World Health Organisation (WHO) as “the process of optimising opportunities for health, participation, and security in order to enhance quality of life as people age” (WHO, 2002).

The active ageing concept has already been used in the policy and social gerontology discourse for many decades and can be traced to the development of activity theory in the 1940s and 1950s (Boudiny, 2013). Active ageing can be viewed as the antithesis of disengagement (Cumming & Henry, 1961), which assumes the social withdrawal and decline of an older person as ageing “successfully”. As such, the active

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ageing discourse emphasizes the ongoing participation of older people in society and has been implemented in the work of the World Health Organisation (2002) as well as the European Union (Council of the European Union, 2012), where it has become a part of national social policies (e.g., Ministry of Social Affairs and Health, 2011). Thus, active ageing is today seen as the leading global policy framework in response to population ageing (Walker and Maltby, 2012).

There have been several attempts to find a measurement for the broad concept of active ageing (e.g. Bousquet et al., 2015). Recently, the Active Ageing Index (AAI) was developed as a tool to monitor active ageing outcomes at the national level and to describe the potential of older people to participate actively in economic and social life (Zaidi et al., 2013). The AAI-EU was constructed as an aggregated measure representing four main domains: 1) *employment*; 2) *participation in society*; 3) *independent, healthy and secure living*; 4) *capacity and enabling environment for active ageing*. The AAI toolkit consists of an overall index, as well as gender and domain-specific indices that will be presented in more detail in the methods section.

In 2014, Sweden was ranked 1<sup>st</sup> and Finland 5<sup>th</sup> on the AAI-EU scale, whereas Eastern European countries such as Poland and Slovakia were ranked as the least favourable active ageing settings (Zaidi & Stanton, 2015). Even though Finland is one of the front-runners on most dimensions of active ageing as defined by the WHO (Zaidi & Stanton, 2015), the ageing experiences of men and women differ. In 2014, Finnish men scored higher on the employment and independent living domains, whereas Finnish women scored higher on the participation in society and capacity for active ageing domains. Thus, the AAI toolkit offers gender stratified results, thereby emphasising the goals of reducing gender inequalities on a national level; albeit active ageing is implemented to a high degree on the regional level across Europe (Karpinska & Dykstra, 2015). To a limited extent, the AAI has been applied at the subnational level to potentially be used for regional policy making. Results from recent subnational studies in Spain and Germany, for example, have revealed substantial within-country differences that need further attention in improving active ageing outcomes (Bauknecht et al., 2016; Rodriguez-Rodriguez et al., 2017; Bacigalupe et al., 2018). Regions with a lower socioeconomic status and a higher rural population tend to score lower on the index.

This study uses the Finnish case to illustrate active ageing on a regional level. The rationale is twofold. Firstly, regionally collected data creates a good opportunity to examine active ageing on a subnational level. Also, the implementation of active ageing policies in Finland is the responsibility of the municipalities and is guided by policy documents such as: *Quality recommendation to guarantee a good quality of life and improved services for older persons 2017–2019* (Ministry of Social Affairs and Health (MSH), 2017). However, there are no regional or local examples of active ageing being analysed at the municipal level in Finland. As such, our analyses can potentially guide regional authorities within social and health care to promote and adapt active and healthy ageing initiatives in different municipalities.

Secondly, for historical reasons, a Swedish-speaking ethno-linguistic minority of barely 6% of the population lives along the southern and western coastline of Finland (McRae, 1999). It enjoys constitutionally guaranteed rights as well as comprehensive networks of institutions, organisations, educational and welfare services. This Swedish-speaking minority appears to have some health advantages over the Finnish-speaking majority (e.g., Saarela & Finnäs, 2005) and they appear to be an exception in the general health trend of the majority. Previous studies showed that Swedish speakers reported better self-reported health (Nyqvist & Martelin, 2007), lower disability pensions (Reini & Saarela, 2017) as well as lower mortality rates (Saarela & Finnäs, 2005). It has also been suggested that due to the Swedish-speaking population's relatively small size, strong institutions and regional distribution, such communities live in more cohesive social networks and are characterized by a larger social capital compared to the Finnish-speaking communities (Hyypä & Mäki, 2001). How these health advantages correspond with the active ageing index (AAI) will add more knowledge to what is already known regarding the situation of this ethno-linguistic minority group in Finland.

Despite health advantages of the Swedish-speaking minority, ageing in a minority context can pose social challenges when, for example, it comes to having access to social and health care services in one's

own language in areas dominated by the majority language group (Herberts, 2009; Regeringens berättelse om tillämpningen av språklagstiftningen, 2017). In Finland, this dissimilarity is driven to a large extent by economic considerations or waves of austerity policies; structural reforms can easily weaken the administrative structure, which will in turn endanger the services provided by the local authorities in Swedish. Indeed, social risks and hardships constitute a prominent theme in the existing international research on minority ageing (Zubiar & Norris, 2015). However, a large part of this literature originates from an Anglo-American context, and the concept of minority is generally used, with few exceptions (e.g., Bouchard & Desmules., 2013; van Kemenade et al., 2015), in a narrow sense to refer almost exclusively to ethnic or racial minorities. This limited approach to minorities may lead to a neglect of several other minority groups in research, including linguistic minority groups and, thus, limit informed strategies for active ageing.

In light of the above, the aim of this study is to describe active ageing amongst older people in municipalities in western parts of Finland and to specifically assess active ageing amongst Swedish speakers and Finnish speakers. Although gender inequality should be a central concern for the active ageing discourse (Walker & Maltby, 2012), other types of regional inequalities, in our case ethno-linguistic inequalities, also need to be addressed. Based on previous research showing that Swedish speakers in Finland seem to have more social and health-related resources than Finnish speakers, we assume ethno-linguistic differences in active ageing between the two language groups, so that Swedish speakers age more actively in a relative sense. In our analyses, we adapt the methodology used for the AAI-EU. The results will describe the situation of older people in a bilingual region and highlight the potential of the AAI in regional municipal policy-making.

## Data and methods

### Data

The calculation for this regional study was based on data from the research project *Gerontological Regional Database* (GERDA) conducted in the western parts of Finland in November 2016 by researchers at Umeå University, Sweden, and Åbo Akademi University, Novia University of Applied Sciences and Seinäjoki University of Applied Sciences, Finland. The aim of the project was to map living and health conditions of older people in the Bothnia region, i.e. on both sides of the Gulf of Bothnia; in Västerbotten, Sweden, and in Ostrobothnia and Southern Ostrobothnia in Finland. For this study, we reported only the results from Finland. This western region of Finland is bilingual, comprising approximately 52 per cent Swedish speakers and 48 per cent Finnish speakers. In 2016, three out of 16 municipalities were officially unilingual (Finnish),<sup>1</sup> whereas Finnish speakers formed the local majority in two municipalities and Swedish speakers in eleven municipalities, respectively. The municipality of Larsmo had the highest share of Swedish speakers, representing 92 per cent (n=4,765) of the total population, whereas in Seinäjoki, a unilingual Finnish municipality in our study region, only 0.2 per cent (n=125) of the total population was a Swedish speaker. The overall population in the West-Finnish region of Ostrobothnia consisted of 243,493 inhabitants in 2016 (sotkanet.fi).

The GERDA project was initiated in 2005 and consists of a three-wave postal questionnaire survey. In this article, we used data from the third wave conducted in November 2016 (people aged 66, 71, 76, 81 and 86 years residing in rural areas in Ostrobothnia and in the city of Seinäjoki, and every second person from the selected age groups residing in the city of Vaasa). The participants were selected from the Population Register Centre in Finland. The initial stratification was adjusted by weighting the sample in Vaasa to make the data representative of the total rural and urban population in this region. The survey was answered by 2,296 registered Swedish speakers in Finland and 2,715 Finnish speakers, resulting in a response rate of 61.7 per cent and 54.9 per cent, respectively. The response rate was highest among 71-year-olds (Swedish

speakers 67.9%; Finnish speakers 58.3%) and lowest among 86-year-olds (Swedish speakers 48.6%; Finnish speakers 43.4%). Furthermore, a higher response rate was noticed for women (Swedish speakers 63.7%; Finnish speakers 56.8%) when compared to men (Swedish speakers 59.6%; Finnish speakers 52.5%).

### **Active ageing domains and indicators**

The AAI for Western Finland was constructed in a way that aimed, as closely as possible, at corresponding to the AAI-EU instrument used for the whole of Europe (Zaidi et al., 2013). Similar to the AAI-EU, the regional AAI-Western Finland covered four dimensions, including employment; participation in society; independent, healthy and secure living; and capacity and enabling environment for active ageing. The appendix provides an overview of the AAI-EU indicators as well as the selected indicators used in our study.

#### **Employment**

*Employment* was assessed with the question: “Are you still in paid work?” The response alternatives were yes/no.

#### **Participation in society**

The *voluntary activities* indicator was assessed by two questions. The first assessed membership in voluntary organisations. The organisations were, for example, sports or outdoor associations, political parties, religious associations, social or health associations. For each of the nine organisations to choose from, the respondents had three response options: “active member, passive member and not a member”. We counted the number of organisations where the respondents said they were active members. If the respondents were active in any of the nine organisations or responded positively to the question: “Do you take part in voluntary, unpaid work for any association?”, he or she was categorised as being voluntary active.

The respondents in the GERDA survey were asked about *informal caregiving*. Informal care referred to the care and support of an older, disabled or ill person, in his or her home with the help of a family member or another close person. In our study, informal caregiving was assessed by two questions: “To whom do you provide informal care?” The response alternatives for the first question were: “next of kin in own household, next of kin in a different household or I don’t provide informal care”. If the respondents responded positively to any of the former two response alternatives, the next question asked: “To whom do you provide help?” The response alternatives were husband/wife, grandchildren, parents, siblings, parents-in-law, children, other relative, other (non-relative). In the analyses, we separated those who reported that they provided informal care to grandchildren and children and those who provided informal care to a husband/wife, parents, siblings, parents-in-law or other relatives.

*Political participation* was assessed with the question: “During the last 5 years, have you: contacted a politician or an official, appealed against a decision, wrote a letter to the press, signed a petition, participated in a demonstration, participated in a boycott?” If the respondents replied yes to any of the activities, he or she was considered as being politically active.

#### **Independent, healthy and secure living**

*Physical exercise* was assessed by combining the responses of two questions: “During the last 7 days, on how many days did you do moderate physical activities?” and “During the last 7 days, on how many days did you do vigorous physical activities?”. If the respondents reported 4–7 days on any of the two questions, he or she was considered as undertaking physical activity almost every day. We also included a measure

assessing the *confidence in health care* provided in the municipality. The four response alternatives being: “much, neither much nor little, little, cannot say”. These response alternatives were dichotomised with the first response alternative as high confidence in health care and the latter three as low. The respondents were *living independently* if they lived in a single person household or lived as a couple.

*Financial security* was measured by two indicators. The first one assessed *disposable income* (net income). We separated those reporting  $\leq 1,000$  and  $> 1,000$ €. The second indicator was assessed with the question: “In your economic situation, is it possible to make ends meet?” We grouped the response alternative so that those reporting “without difficulty or with some difficulty” were categorised as *getting by economically*, whereas those reporting “difficult or very difficult” were considered as not getting by economically. *Physical safety* was assessed with the statement: “Many people in the area are afraid to go out in the evening.” Those reporting “quite incorrect” or “totally incorrect” were considered as *feeling safe*, whereas those reporting “totally correct” or “quite correct” were considered as feeling unsafe. *Lifelong learning* was assessed with the statement: “I am interested in learning new things”. Six response alternatives were available (totally disagree, almost totally disagree, partly disagree, partly agree, almost totally agree, totally agree). The latter three response alternatives were grouped together to indicate lifelong learning.

### Capacity and enabling environment for active ageing

*Self-rated health* was assessed with the question: “In general, how would you say your health is on a five-point scale (excellent, very good, good, fair, or poor)?” This variable was dichotomised into good health (excellent, very good, or good) and poor health (fair or poor).

Mental well-being was assessed using the Geriatric Depression Scale (GDS) 4-item version, which is a short assessment for depression comprising four yes/no questions. The four questions were: “Are you basically satisfied with your life?”, “Do you feel that your life is empty?”, “Are you afraid that something bad is going to happen to you?” and “Do you feel happy most of the time?” Scores of two or less were chosen as the cut-off point (D’Ath et al., 1994), defining an *absence of depressive symptoms* in this study. The use of ICT was measured with the question: “Do you use the internet?” If the respondent’s choice from the given alternatives was: “yes, independently; yes, with support/help from someone”, the person was considered to *use ICT*. *Social connectedness* was measured in relation to the frequency of social contacts with children, grandchildren, siblings, parents, other relatives, friends or neighbours. For this study, the response alternative “several times a week”, was coded as “frequent social contact”, and “several times a month”, “few times a year”, “never”, and “does not exist” were combined and coded as “infrequent social contact”. If the respondent reported frequent social contact with any of the seven contacts, he or she was categorised as being socially connected. Educational attainment was assessed by asking the respondents about their highest educational level attained. The cut-off was set between a lower secondary and upper secondary educational level.

### Analyses

Our analyses for active ageing follow the AAI-EU methodology (for a detailed description see Zaidi et al., 2013). For our calculations, we used the publicly available Excel file on the UNECE homepage (statswiki.unece.org). All active ageing indicators ranged from 0 to 100 percentage points, where 0 is the least positive result in terms of active ageing, i.e. the higher the value, the better the active ageing outcome. The domain-specific indices were made up of a subset of indicators as described earlier in the methods section. While the weighting of the individual indicators in each domain was conducted in a similar way to AAI-EU, the weights for the overall AAI (a summary construct of all four domains) were amended so that the weights for the employment domain were reduced to 10 per cent instead of 35 per cent as in the AAI-EU.<sup>2</sup> This increased the impact of the other domains: to 48.4% for participation in society, to 13.8% for independent, healthy and secure living and to 27.8% for capacity and enabling environment for active

ageing. We decided to reduce the impact of the employment domain after considering that the age group in our study was older (65+) than in the AAI-EU (55+). Also, the retirement age in Finland today is between 63–68 years for people born 1954 or earlier, indicating that the institutional support for employment in very old age is limited, at least in the public sector. In the results, we will first present the municipal results on our implementation of the AAI showing the domain scores as well as the overall AAI ranking for 16 municipalities in our study region of western Finland. In addition, the overall AAI score is separated for men and women. Negative values for the gender gap score imply a higher score for men, whereas a positive value indicates a higher score for women. Finally, we will present active ageing stratified by the two language groups.

## Results

Table 1. Domain score and overall AAI score for 16 municipalities in western Finland.

Municipality	Employment	Participation in society	Independent, healthy and secure living	Capacity and enabling environment	Overall AAI	Overall AAI	Overall AAI	Overall AAI
	ALL	ALL	ALL	ALL	ALL	Men	Women	Gender gap
Malax <sup>a</sup>	7.3	31.5	75.0	74.5	47.0	48.2	39.2	-9.0
Pedersöre <sup>a</sup>	3.6	32.8	73.6	71.3	46.2	45.5	40.6	-4.9
Korsholm <sup>a</sup>	4.8	30.7	76.2	72.6	46.0	46.7	38.5	-8.2
Nykarleby <sup>a</sup>	7.4	29.9	74.7	71.2	45.3	47.0	37.3	-9.6
Kronoby <sup>a</sup>	4.6	30.8	72.7	71.1	45.2	46.2	38.2	-8.1
Korsnäs <sup>a</sup>	6.5	29.5	75.2	71.4	45.2	43.5	39.3	-4.2
Vörå <sup>a</sup>	6.5	29.6	73.9	70.8	44.9	45.9	37.1	-8.8
Larsmo <sup>a</sup>	6.6	29.1	74.7	70.1	44.6	46.2	35.8	-10.3
Närpes <sup>a</sup>	6.5	28.5	75.6	69.4	44.2	45.5	35.3	-10.1
Vaasa <sup>b</sup>	4.9	27.5	72.1	72.8	44.0	44.7	36.6	-8.1
Isokyrö <sup>c</sup>	3.7	26.4	75.8	70.4	43.2	43.3	35.7	-7.6
Laihia <sup>c</sup>	4.8	25.6	73.6	71.8	43.0	43.9	34.9	-9.0
Jakobstad <sup>a</sup>	3.9	26.7	71.8	70.6	42.8	43.1	35.8	-7.2
Kaskinen <sup>b</sup>	3.6	23.9	76.3	72.5	42.6	36.4	39.2	2.8
Kristinestad <sup>a</sup>	5.2	25.0	74.1	69.7	42.2	44.8	32.1	-12.7
Seinäjäki <sup>c</sup>	4.0	22.9	74.7	70.4	41.4	42.0	33.2	-8.8

Note: a. Malax, Korsholm, Pedersöre, Kronoby, Nykarleby, Vörå, Korsnäs, Larsmo, Närpes and Jakobstad - bilingual municipalities with Swedish as the first language; b. Vaasa and Kaskinen - bilingual municipalities with Finnish as the first language; c. Isokyrö, Laihia and Seinäjoki - unilingual Finnish municipalities; for interpretation of scores, the reader is referred to the methods section of this article.

In Table 1 the active ageing domains and overall score are presented for sixteen municipalities. The low values in the employment domain were expected when considering the age groups included in the study. Malax, Pedersöre, Korsholm and Kronoby stand out in terms of the contribution towards the total AAI when it came to social participation, whereas Kaskinen and Seinäjoki recorded the lowest participation. The bilingual municipalities with Swedish as the first language showed higher figures in voluntary activities (highest in Pedersöre 64.9 and lowest in Seinäjoki 47.3) as well as political activities (highest in



Korsholm 65.4 and lowest in Seinäjoki 35.9). All the municipalities scored high values in the independent, healthy and secure living domain. Both the indicator measuring independent living (between 89.1–98.0) and the indicator getting by economically (between 88–96.1) were especially high. Women reported a lower income than men; however, no gender differences in responses of the indicator measuring getting by economically were observed. Finally, the absence of a depressive symptoms component in the capacity and enabling environment for the active ageing domain were high in all the municipalities (above 88). Overall, women ranked lower than men and the gender gap varied substantially between the municipalities, which warrants further investigation. However, when we took a closer look at the separate indicators (data now shown), a more nuanced picture of gender differences was revealed. When it came to individual indicators, women scored higher in social activities, care of children, confidence in health care, life-long learning, social connectedness as well as educational attainment.

Bilingual municipalities with Swedish as the first language came at the top of the overall AAI ranking. However, two exceptions were Jakobstad and Kristinestad. In contrast, unilingual Finnish municipalities were ranked at the lower end. In all the municipalities, women ranked lower on the AAI-Western Finland scale. The distribution of the AAI across the municipalities indicates a difference between the Finnish-speaking and Swedish-speaking language groups. Our next table shows the domain score and overall AAI score stratified by the two language groups.

*Table 2. Domain score and overall AAI score for Swedish speakers and Finnish speakers in western Finland.*

Language groups	Employment	Participation in society	Independent, healthy and secure living	Capacity and enabling environment	ALL	Men	Women	Gender gap
Swedish	5.4	32.0	74.1	72.5	46.4	47.1	45.7	-1.4
Finnish	4.3	23.4	73.5	70.8	41.6	42.1	41.2	-0.9

Note: for interpretation of scores, the reader is referred to the methods section of this article.

The pattern of the language groups in Table 2 was clear, with Swedish speakers ranked higher in all domains. Higher values for the Swedish speakers were found especially in the participation in society domain. Although there was a gender gap, favouring men, also when comparing the language groups, the differences were not as visible as in Table 2 when analysing the municipalities.

*Table 3. Indicator score for the participation in society domain according to language groups.*

Language groups	Voluntary activities	Care to children, grandchildren	Care to older adults	Political participation
Swedish	58.3	4.7	13.4	61.1
Finnish	47.2	2.4	9.8	40.5

Note: for interpretation of scores, the reader is referred to the methods section of this article.

In Table 3 we take a closer look at each indicator in the participation in society domain. The results in Table 3 gave a clear indication that older Swedish speakers were more engaged in societal activities than Finnish speakers. Differences were especially noticeable for the voluntary activities and political participation indicators.

## Discussion

In this study, we explored active ageing on a municipal level in western parts of Finland and applied the AAI-EU methodology on regional data. We were specifically interested in active ageing amongst Swedish speakers and Finnish speakers. The results of the AAI scores showed that the municipalities varied on the overall AAI score, ranging from 41 to 47, with a relatively large distribution in the participation in society domain. Bilingual municipalities with Swedish as the first language generally scored higher on the AAI ranking list. When we looked at active ageing amongst Swedish speakers and Finnish speakers, the results were, as expected, in favour of the Swedish speakers. Finally, women ranked lower, although a more diversified picture was provided when looking at the indicators separately.

The municipal results imply that active ageing across the studied municipalities differed and this warranted further investigation and attention. Based on previous research, we assumed that ethno-linguistic inequalities might explain part of the difference and we therefore stratified active ageing according to language group. Previous research has shown that Swedish speakers are more actively engaged in social activities and political life than Finnish speakers (Nygård et al., 2015), which was reflected in this study in the participation in society domain. Political and social resources are naturally intertwined with each other and it is likely that high levels of social activities or social capital enhance the likelihood that people will be engaged in politics. Nonetheless, high values in the political participation indicator should not necessarily only be regarded as positive. During recent years, the political climate in Finland has not favoured minority groups (Regeringens berättelse om tillämpningen av språklagstiftningen, 2017) and this could 'force' political awareness and activities amongst the Swedish-speaking language group, in order to maintain, for example, the rights to social and health care services for both language groups.

Still, based on the results we could argue that national policies and legislations have so far been rather successful in providing opportunities for active ageing also for the Swedish-speaking minority, at least in our study region. Although Finnish and Swedish are constitutionally recognised as official languages, municipalities are, as mentioned earlier, officially unilingual or bilingual, depending on the size of the official language minority community. As a result, Finnish bilingualism combines both person-based principles and territory. This implies that resources for active ageing for Swedish speakers are likely to be very different depending on where you live, which have also been acknowledged in various policy reports (Regeringens berättelse om tillämpningen av språklagstiftningen, 2017). An interesting way forward would therefore be to further assess regional differences across subgroups of the older population, including ethno-linguistic groups as well as other ethnic and racial minorities in other parts of Finland.

An important aspect of active ageing is the impact of gender. As such, our study provided us with results regarding the situation of the current generation of older men and women. Our descriptive results showed a gender gap, so that women scored lower on the index. The reason for gender inequalities is complex and connected to a life-course accumulation of advantages or disadvantages, in social and work life (Walker, 2002; Foster & Walker, 2013; Ilinca et al., 2016). Examples of lifetime influences for active ageing in later life include work history, marriage history, childbearing history and the history of provision of informal caregiving (Zaidi, 2014). These differences tend to be gender specific and affect gender equality throughout the life course.

We applied the AAI-EU methodology, assessing four active ageing domains, for our regional study which could, on the one hand, be seen as a strength. On the other hand, the AAI-EU has been criticised for measuring achievements rather than capturing the preferred activities of older people (de São José et al., 2017). A good example is informal caregiving. In Finland, eldercare has traditionally been carried out within public homecare or institutional care. However, due to demographic, economic and political changes, ageing in place is increasingly highlighted, including the increasing role of family members in caregiving (Anttonen & Meagher, 2013). By measuring only the activity, information about the preferred care solution is not captured. If the support service to informal caregiving is not sufficient, the caregiving experience could prevent active and healthy ageing, for the caregiver as well as the person receiving care.



This study was based on a representative sample of older people, from age 66 to 86, and contributes to an increased understanding of active ageing on a regional level. However, there are a few points that need to be considered when interpreting our results. There is a risk of non-response bias in all age groups, especially in the 86-year-olds who had the lowest response rate. The response rate was also lower for men and Finnish speakers. A regional active ageing index could be calculated based on the AAI-EU methodology, although the comparability with the AAI-EU is limited due to a different target group and a different use of indicators (see Table in Appendix).

## Conclusions

Regional AAI is needed to highlight challenges with active ageing on a subnational level. Nonetheless, in order to use this instrument for public policy design, further statistical analyses are required to disentangle inequalities, particularly regarding participation in the society-domain. Furthermore, it is necessary to acknowledge that higher values on the indicator do not necessarily indicate a better ageing outcome. Our descriptive study indicates that gender and ethno-linguistic inequalities should be a central concern for a discussion on ageing in our region.

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## Endnotes

<sup>1</sup> Municipalities are classified as unilingual or bilingual for administrative purposes. In bilingual municipalities, authorities are obliged to offer services in both languages. At present, a municipality is bilingual if the minority exceeds 8 per cent or 3,000 inhabitants. Of the total number of 311 municipalities in Finland in 2017, 33 municipalities were classified as bilingual (15 with Swedish as the majority language and 18 with Finnish as the majority language).

<sup>2</sup> For each domain, the arithmetic weighted average of the indicator was calculated. The overall aggregated AAI was then calculated as the arithmetic weighted average of the domain-specific indices. In the AAI-EU the final weights used for the four domains were 35, 35, 10 and 20, respectively. For details regarding weighting see Zaidi et al. (2013).

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## Appendix

*Table. Indicator selection for the AAI-Western Finland.*

Domain indicator AAI-EU	Domain indicator AAI-Western Finland (data source: GERDA, 2016)	Identical (++), Close (+), Alternative indicator (0) or Excluded (-) due to missing indicator
<i>1. Employment</i>	<i>1. Employment</i>	
1.1 Employment rate 55-59	1.1 Employment rate 66	+
1.2 Employment rate 60-64	1.2 Employment rate 71	+
1.3 Employment rate 65-69	1.3 Employment rate 76	+
1.4 Employment rate 70-74	1.4 Employment rate 81, 86	+
<i>2. Participation in society</i>	<i>2. Participation in society</i>	
2.1 Voluntary work	2.1 Voluntary work	+
2.2 Providing care to children, grandchildren	2.2 Providing informal care to children, grandchildren	+
2.3 Providing care to older adults	2.3 Providing informal care to older adults	+
2.4 Political participation	2.4 Political participation	+
<i>3. Independent, healthy and secure living</i>	<i>3. Independent, healthy and secure living</i>	
3.1 Physical exercise	3.1 Physical exercise	+
3.2 Access to health care	3.2 Confidence in health care	0
3.3 Living independently	3.3 Living independently	+
3.4 Financial security: relative median income		-
3.5 Financial security: no poverty risk for older persons	3.5 Financial security: >1000 €	0
3.6 Financial security: no severe material deprivation for older person	3.6 Financial security: getting by economically	0
3.7 Physical safety	3.7 Physical safety	+
3.8 Lifelong learning	3.8 Lifelong learning	0
<i>4. Capacity and enabling environment for active ageing</i>	<i>4. Capacity and enabling environment for active ageing</i>	
4.1 Remaining life expectancy at age 55		-
4.2 Share of healthy life expectancy at age 55	4.2. Self-reported good health	0
4.3 Mental well-being	4.3. Absence of depressive symptoms	0
4.4 Use of ICT	4.4 Use of ICT	+
4.5 Social connectedness	4.5 Social connectedness	+
4.6 Educational attainment	4.6 Educational attainment	+

*Note: Identical indicator (++), although the data source is different, the measure is identical; Close indicator (+), close content although the measures are different; Alternative indicator (0), due to missing indicator, proxy measures from GERDA has been used; Excluded indicator (-), due to missing indicator in GERDA.*