

STOCKHOLM STUDIES IN SOCIAL WORK

Living conditions in old age: Coexisting disadvantages
across life domains

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Living conditions in old age:
Coexisting disadvantages across life
domains

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Abstract

The aim of this thesis was to analyse coexisting disadvantages in the older Swedish population. Coexisting disadvantages are those that occur simultaneously in various life domains. A person who simultaneously experiences several disadvantages may be particularly vulnerable and less well-equipped to manage daily life and may also need support from several different welfare service providers. Concerted actions may be needed for older people who experience not only physical health problems and functional limitations, but also other problems. Research that encompasses a wide range of living conditions provides a basis for setting political priorities and making political decisions.

The studies in this thesis used data from two Swedish nationally representative surveys: the Level of Living Survey, which includes people aged 18 through 75, and the Swedish Panel Study of Living Conditions of the Oldest Old, which includes people aged 77 and older.

Study I showed that the probability of experiencing coexisting disadvantages was higher in people 77 and older than in those aged 18 through 76. These age differences were partly driven by a high prevalence of physical health problems in older people. In all age groups, coexisting disadvantages were more common in women than men.

The longitudinal analyses in Study II indicated that coexisting disadvantages in old age persist in some people but are temporary in others. Moreover, the results suggested a pattern of accumulating disadvantages: reporting one disadvantage in young old age (in particular, psychological health problems) increased the probability of reporting coexisting disadvantages in late old age.

Study III showed that physical health problems were a central component of coexisting disadvantages. The results also showed that being older; female; previously employed as a manual labourer; and divorced/separated, widowed or never married were associated with an increased probability of experiencing coexisting disadvantages. However, the experience of coexisting disadvantages differed: the groups associated with coexisting disadvantages tended to report different combinations of disadvantage.

Study IV showed that the prevalence of coexisting disadvantages in those 77 and older increased slightly between 1992 and 2011. Physical health problems

became more common over time, whereas limited ability to manage daily activities (ADL limitations), limited financial resources and limited political resources became less common. Associations between different disadvantages were found in all survey years, but certain associations changed over time. The results suggest that in general, the composition of coexisting disadvantages in the older population may have altered over time.

In sum, results showed that coexisting disadvantages were associated with specific demographic and socio-economic groups. Physical health problems and psychological health problems were of particular importance to the accumulation and coexistence of disadvantages in old age.

Sammanfattning

Det övergripande syftet i den här avhandlingen är att studera ansamling av välfärdsproblem i den äldre svenska befolkningen. Begreppet ansamling av välfärdsproblem syftar till den företeelse då en person har bristande resurser i två eller flera olika livsområden på samma gång. I denna avhandling analyseras bristande ekonomiska resurser, fysisk ohälsa, fysiska funktionsnedsättningar och problem att förflytta sig, psykisk ohälsa, bristande sociala resurser (sociala kontakter och/eller socialt stöd) samt bristande politiska resurser, mätt som en bristande förmåga att formellt överklaga myndighetsbeslut.

Analyserna avser att a) studera om förekomsten av ansamlade välfärdsproblem skiljer sig mellan olika åldersgrupper och mellan olika sociala och demografiska grupper inom den äldre befolkningen, b) undersöka om och hur enskilda och ansamlade välfärdsproblem är relaterade till varandra över tid under den senare delen av individens livslopp, samt d) studera utvecklingen av ansamling av välfärdsproblem i den äldre befolkningen över tid, det vill säga i olika födelsekohorter av äldre personer.

I Studie I analyserades ett riksrepresentativt urval av personer som var 18 år och äldre. Resultaten visade att två eller fler välfärdsproblem var vanligast bland personer som var 76 år och äldre. Denna åldersskillnad berodde till stor del på att fysiska hälsoproblem är vanligt förekommande bland äldre personer. I alla åldersgrupper var det vanligare bland kvinnor än bland män att rapportera flera välfärdsproblem samtidigt. Resultaten visade också att de vanligaste kombinationerna av välfärdsproblem ofta inkluderade psykiska hälsoproblem, både bland äldre och yngre personer. Fysiska hälsoproblem var dominerande bland de allra äldsta (77+) men var inte lika vanligt förekommande i övriga åldersgrupper.

I Studie II undersöktes mönster av stabilitet och ackumulering av välfärdsproblem under den senare delen av livet. Vi använde longitudinella data för att studera en grupp personer år 1991 när de var i åldern 57-75 och år 2011 när de var mellan 77 och 95 år gamla. Att rapportera ansamlade välfärdsproblem år 1991 ökade sannolikheten att också uppleva en ansamling av välfärdsproblem år 2011. Detta samband var dock måttligt, vilket tyder på att under den senare delen av livet är ansamling av välfärdsproblem en permanent företeelse för vissa, men inte alla.

Personer som år 1991 rapporterade bristande sociala resurser, bristande ekonomiska resurser, psykiska hälsoproblem, fysiska hälsoproblem eller mobilitetsproblem hade en ökad sannolikhet att rapportera ansamlade välfärdsproblem tjugo år senare. Detta kan tolkas som en tendens till ackumulering av välfärdsproblem under den senare delen av livsloppet. Sannolikheten att rapportera ansamling av välfärdsproblem år 2011 var särskilt stor för dem som rapporterade psykiska hälsoproblem år 1991.

Studie III baserades på tvärsnittsdata från 2011 – ett nationellt representativt urval av personer som var 76 år och äldre – vilket användes för att identifiera olika grupper av äldre personer som i högre utsträckning än andra grupper upplevde en ansamling av välfärdsproblem. Kvinnor, personer som tidigare varit verksamma i arbetaryrken och personer som var änkor/änklingar eller frånskilda/separerade hade en högre sannolikhet att rapportera ansamling av välfärdsproblem än män, personer som tidigare arbetat i tjänstemannayrken och personer som var gifta/sammanboende. De grupper som var associerade med ansamling av välfärdsproblem var dock inte utsatta för alla de problem som analyserats i studien. Snarare var specifika demografiska och socioekonomiska grupper associerade med specifika problem.

Fysiska hälsoproblem förekom i majoriteten av alla de unika kombinationer av två eller fler välfärdsproblem som rapporterats. Utifrån detta resultat skapade vi parvisa kombinationer av problem, där fysiska hälsoproblem ingick i varje kombination, och testade hur stor sannolikheten var för olika grupper att uppleva särskilda kombinationer av problem. Resultaten visade att de grupper som upplevde ansamling av välfärdsproblem tenderade att rapportera olika kombinationer av problem.

I Studie IV studerades utvecklingen av välfärdsproblem i den äldre befolkningen över tid, genom att analysera tvärsnittsdata från tre olika tidpunkter. Nationellt representativa data av befolkningen över 77 år från år 1992, 2002 och 2011 användes i analyserna. Resultaten visade att det under denna period blev något vanligare att rapportera ansamling av välfärdsproblem. Utvecklingen för de enskilda problemen skiljde sig dock åt. Mellan åren 1992 och 2011 ökade förekomsten av fysiska hälsoproblem, medan svårighet att klara dagliga aktiviteter, (ADL), bristande ekonomiska resurser och bristande politiska resurser minskade.

Associationer mellan olika välfärdsproblem fanns vid alla undersökningsår. Särskilt tydliga var korrelationerna mellan fysiska hälsoproblem, psykiska hälsoproblem och ADL-nedsättningar. Hälsorelaterade problem tenderade också att vara associerade med bristande ekonomiska resurser vid de flesta undersökningsåren, men associationerna förändrades över tid. Exempelvis var

bristande ekonomiska resurser och fysiska hälsoproblem korrelerade år 2011, ett samband som inte framträtt år 1992.

I korthet visar resultaten att ansamlade välfärdsproblem är vanligare bland de allra äldsta än bland personer under och strax över pensionsåldern. I den äldre befolkningen varierar sannolikheten att uppleva ansamlade välfärdsproblem mellan olika demografiska och socioekonomiska grupper. Hälsorelaterade problem, både fysisk och psykisk hälsa samt fysiska funktionsnedsättningar, var centrala i ansamlingen och ackumuleringen av välfärdsproblem i den äldre befolkningen.

De som upplever en ansamling av välfärdsproblem kan ses som en sårbar grupp, då det är troligt att flera samtidiga bristande resurser begränsar förmågan att hantera det dagliga livet. Dessa personer kan behöva stöd från flera olika instanser i välfärdssystemet. Forskning om äldre människors livssituation från ett övergripande perspektiv, där en rad olika levnadsförhållanden inkluderas, kan utgöra underlag för politiska prioriteringar och beslut. Tidigare studier av ansamling av välfärdsproblem har i stor utsträckning exkluderat den allra äldsta delen av befolkningen. Denna avhandling bidrar till en ökad kunskap om förekomsten av välfärdsproblem bland äldre personer i Sverige.

List of original publications

The thesis is based on the following studies referred to in the text by their respective Roman numerals.

- I Heap, J., Lennartsson, C. & Thorslund, M. (2013). Coexisting disadvantages across the adult age span: A comparison of older and younger age groups in the Swedish welfare state. *International Journal of Social Welfare*, 22, 130–140.
- II Heap, J. & Fors, S. (2015). Duration and Accumulation of Disadvantages in Old Age. *Social Indicators Research*, 123(2), 411–429.
- III Heap, J., Fors, S. & Lennartsson, C. (Accepted for publication). Coexisting disadvantages in later life: Demographic and socio-economic inequalities. *Journal of Population Ageing*.
- IV Heap, J., Fritzell, J. & Lennartsson, C. (Submitted). Associations between and coexistence of disadvantages in the oldest old people in Sweden: Patterns of change between 1992 and 2011.

Contents

1. Introduction	15
2. The Nordic welfare research tradition	18
Level of living components and criteria for measurement.....	19
Criticism of the command over resources perspective.....	20
Applying a welfare approach to studies of older people.....	21
3. Coexisting disadvantages: Health and beyond	23
Ageing, multimorbidity, and complex health problems.....	23
Coexisting disadvantages by demographic and socio-economic subgroups.	24
Coexisting disadvantages in Sweden over time	26
Persistence and accumulation of disadvantages in older people.....	26
4. The Swedish welfare state.....	28
Pensions and financial resources in old age	28
Health care and social care services for older people.....	30
5. Aims.....	32
6. Material and variables	33
Data	33
Selection of components of living conditions	34
Components not included in the thesis	37
Variables	38
7. Results	48
Study I: Coexisting disadvantages across the adult age span: A comparison of older and younger age groups in the Swedish welfare state.....	48
Study II: Duration and accumulation of disadvantages in old age.....	49
Study III: Disadvantages across life domains: Demographic and socio- economic inequalities among oldest old people.....	50
Study IV: Associations between and coexistence of disadvantages in the oldest old people in Sweden: Patterns of change between 1992 and 2011.	51
Summary of results.....	52
8. Discussion	55
Coexisting disadvantages and Walzer's theory of distributive justice	55
Coexisting disadvantages and the Swedish welfare state	57

Causality	61
Studying disadvantages in later life.....	63
Operationalising disadvantages.....	64
Concluding remarks	65
9. Acknowledgements	67
10. References	70

1. Introduction

Many societies across the world are ageing. In Western countries today, there are more people over 60 than under 15. People aged 80 and older make up the fastest growing segment of the population worldwide (United Nations, 2013). In Sweden, those 80 years and older constituted 5.2% of the population in 2014 (Statistics Sweden, 2015). This worldwide ageing of populations is driven by decreasing fertility rates, increasing longevity and decreasing mortality. In Sweden and elsewhere, life expectancy has grown considerably since the early 20th century. In 2014, life expectancy at birth in Sweden was 83.7 years for women and 80.1 for men (Statistics Sweden, 2014a). Reductions in infant and child mortality in the early twentieth century were followed by reductions in old-age mortality (Harper, 2014).

Still, the decrease in old-age mortality does not necessarily imply good health among the living (Fritzell & Lundberg, 2007). Studies of time trends in health have revealed conflicting trends. Differences in study results are attributable, at least in part, to variations in the methods and health indicators used. Studies that use indicators of symptoms and diseases generally show an increase in prevalence rates of ill health over time, whereas studies that use health indicators based on disability (e.g. activities of daily living or ADLs) have had mixed results (Crimmins & Beltrán-Sánchez, 2011; Galenkamp, Braam, Huisman, & Deeg, 2013; Martin, Schoeni, Andreski, & Jagger, 2012; Parker & Thorslund, 2007).

It is well established that the risk of experiencing physical health problems and functional limitations increases as people grow older. In advanced old age it is also common to experience multiple health problems, such as several chronic diseases (Marengoni et al., 2011) or coexisting health problems and functional limitations (Meinow, Parker, Kåreholt, & Thorslund, 2006). People in advanced old age are comparatively disadvantaged in terms of health and are also, in general, susceptible to disadvantage in several other life domains (Dean, 2009). For example, older people are generally more financially vulnerable than people of working age, since they are usually more dependent on financial transfers (e.g. pensions) and have fewer opportunities to influence

their financial situation than people who are active in the labour force. Moreover, bereavement becomes more common in old age and potentially increases vulnerability to lower social interaction and social support.

The topic of this thesis is the simultaneous occurrence of disadvantages in various life domains; in other words, coexisting disadvantages. Particular focus will be placed on the oldest old people.

When people experience coexisting disadvantages in different life domains, it may hamper their ability to manage everyday life, and they may need support from several different welfare service providers. However, the presence of different kinds of disadvantages might impede people's capacity to navigate the welfare system. Limited financial resources could require public financial transfers. Health problems may imply a need for health care services. People with health problems may also need help from social service providers in managing daily tasks – help that is especially essential if these people have limited social networks and thus restricted sources of informal help. Coexisting disadvantages in different life domains could pose a challenge to the welfare system similar to the challenge that multiple health problems pose to the health care system: the presence of multiple health problems necessitates the coordination of different medical treatments (Barnett et al., 2012) and collaboration between medical care and social services providers (Meinow et al., 2006).

Moreover, coexisting disadvantages may represent the most considerable form of inequality. Other researchers have argued that overall inequality is more substantial if it is the same people who, for example, are both poor and in ill health (Fritzell & Lundberg, 2000). Similarly, scholars have argued that from the perspective of social justice, a person's access to resources and advantages in one life domain should not determine her access to resources and advantages in other life domains (Walzer, 1983).

There are various approaches to the multidimensional study of disadvantageous living conditions. One comes from the field of poverty research, in which the idea of expanding the study of income poverty to include other poverty measures has long been present. In the multidimensional deprivation approach, not only financial deprivation but also deprivation in domains such as education, housing, or health are taken into account. Researchers using this approach analyse deprivation at the individual level, community level, or both (e.g. Noble, Wright, Smith, & Dibben, 2006; Wagle, 2014; Whelan, Layte, & Maître, 2002).

Moreover, several efforts have been made to operationalise philosopher and economist Amartya Sen's theory of capabilities in studies of welfare or well-being (e.g. Anand, Hunter, & Smith, 2005; Muffels & Headey, 2013). Sen's

capability approach expands the components of people's standards of living beyond the material. It focuses on 'a person's ability to do valuable acts or reach valuable states of being' (Sen, 1993:30). The starting point is 'functionings', which represent different things that people manage to do or to be. Functionings can be basic things such as being in good health, being well-nourished, and being well-sheltered, but also more complex acquirements such as self-respect or participation in community life (Sen, 1992, 1993). 'Capabilities' are the different combinations of functionings that the person can achieve and represent the different ways of living that a person can choose (Sen, 1993). Capabilities have also been described as the set of alternatives or real opportunities that a person has (Anand et al., 2005).

The research field of social exclusion is related to the capability approach. Social exclusion research is concerned with people's inability to participate in several important areas in society, such as the economic, political and social spheres (Muffels & Tsakloglou, 2002). Social exclusion is often referred to as a process in which the individual gradually becomes detached from societal functions, and the study of social exclusion emphasises people's ability to act (Barnes, Blom, Cox, Lessof, & Walker, 2006; Muffels & Tsakloglou, 2002). The operationalisation of the concept varies between studies, but one example is the use of indicators such as low income, unemployment, low social support and being a non-voter (Burchardt, Le Grand, & Piachaud, 2002).

Similarly, studies that spring from the Nordic welfare research tradition have taken on a wide framework and incorporate various different life domains in which people may be disadvantaged. As previously pointed out by researchers such as Robert Erikson (1993), this approach, often referred to as the command over resources perspective, also lies close to Sen's theory of capabilities.

The analyses in this thesis are rooted in the Nordic welfare research, which is described in more detail in Chapter 2. The aim was to examine coexisting disadvantages in older people in Sweden, as older people are a part of the population that has only been analysed in such studies to a limited extent. To this end, the studies in the thesis compared coexisting disadvantages in older people and people in younger age groups and in demographic and socio-economic groups within the older population. Moreover, patterns over time of coexisting disadvantages in older people were examined at the individual and population levels.

2. The Nordic welfare research tradition

"Welfare is a concept with different meanings in different contexts; nevertheless it essentially refers to a good, or at least decent, life" (Fritzell & Lundberg, 2007:4).

In Sweden, as in several other Nordic countries, there has been a long tradition of measuring welfare in terms of living conditions in several different life domains. The first Swedish survey that was designed to assess people's living conditions – the Level of Living Survey – was conducted in 1968. By this time, the common use of the gross national product as a measure of welfare had been increasingly questioned. An alternative way of measuring welfare was presented in 1954 by the United Nations (UN): the term 'level of living', defined as the 'actual living conditions' of the population (Johansson, 1970:20) and empirically operationalised as a number of components. The UN approach had considerable influence on the design of the Swedish Level of Living Survey (LNU).

In the Swedish survey, level of living was defined as command over resources, a decision inspired by the work of the British sociologist Richard Titmuss. More specifically, level of living was seen as 'the individual's command over resources in the form of money, possessions, knowledge, mental and physical energy, social relations, security, and so on, through which the individual can control and consciously direct his living conditions' (Erikson & Åberg, 1987:3; Johansson, 1970:25). This definition is based on a view of people as active agents and stands in contrast to a view of people as passive consumers of goods and services through which their needs are satisfied (Johansson, 1970:24).

On the basis of this understanding of level of living, welfare was defined as 'a summarisation of the individuals' level of living within the areas that are sought to be influenced by citizens through collective and political decisions' (Johansson, 1979:138). It is notable that welfare was defined only indirectly. Inherent in this concept of welfare is the idea that if people's access to resources is ensured, they will be able to form a good life in accordance with their own preferences (Fritzell & Lundberg, 2000).

Level of living components and criteria for measurement

The Swedish LNU survey includes a broad variety of components that are associated with existing societal institutions and can thus be regulated politically (Johansson, 1970), albeit to varying extents. The following components have often been referred to as central in the assessment of people's level of living: 1) health and access to care, 2) employment and working conditions, 3) financial resources, 4) knowledge and educational opportunities, 5) family and social integration, 6) housing and neighbourhood facilities, 7) recreation and culture, 8) security of life and property, and 9) political resources (Erikson & Åberg, 1987; Fritzell & Lundberg, 2000; Johansson, 1979).

A central goal of the survey was to try to capture people's actual living conditions rather than how well their needs were satisfied. Johansson (1970) argued that assessing needs satisfaction would require either the use of a universal set of fundamental needs or a subjective evaluation by each individual of the degree to which her needs were satisfied. In the first case, the problem would be to find such a universal frame. It is very difficult to determine the amount of a certain resource – beyond a fundamental level of adequate nourishment, housing, or clothing – that yields a greater satisfaction of needs. In the case of subjective evaluations, assessments made by different people would be difficult to compare. Since people tend to adapt their preferences to their situations and opportunities, a description of level of living based on subjective assessments of satisfaction of needs may reflect 'the modesty of the poor and the dissatisfaction of the rich' (Johansson, 1979:51). Additionally, Sociologist Robert Erikson (1993) has argued that measurements of people's command of resources come closer to assessing how well-equipped people are to direct their own lives than measurements of life satisfaction. In line with this argument, researchers working in the Swedish welfare tradition have generally used descriptive rather than evaluative indicators to assess level of living.

Another principal standpoint of the LNU was to focus on people's level of living in terms of negative conditions. It was argued that a 'good life' – such as the ideal occupation or the ideal housing – is difficult to define. The idea of what is good or ideal varies greatly between individuals. It would thus be almost impossible for people to agree upon a general definition of 'the good life', and a definition general enough for people to agree upon would be so vague that almost anything could fit into it (Johansson, 1970). A description of negative conditions would be less controversial. Thus, it was maintained that the level of living survey should focus on describing the occurrence of problems among individuals. The included components should be problems that could be regulated through social policy (Ibid).

The nine resource components listed above can be seen as means to achieving an end, both in relation to each other (one resource can be used to achieve another resource) and in relation to an overarching level of living. They can also be viewed separately, as means in themselves. Still, Johansson (1970) stressed the importance of considering several components of living conditions simultaneously. If negative conditions are studied one by one, they will be isolated from each other, Johansson maintained, which is problematic if one wants a comprehensive picture of the individuals' living situation that can be used as a basis for intervention. Indeed, Esping-Andersen has argued that a central feature of the 'command-over-resources perspective' is a multidimensional approach, which emphasizes how resources 'overlap, interact and cumulate' (2000:6–7).

Criticism of the command over resources perspective

Johansson's approach to defining level of living and welfare has been criticized as too materialistic. A well-noted criticism was put forward by Allardt (1980), who widened the framework to take into account both level of living and quality of life. Allardt proposed three dimensions that would measure welfare: 'having', 'loving' and 'being'. 'Having' refers to resources such as money and education, 'loving' refers to social integration and fellowship, and 'being' refers to personal development or 'self-actualisation'.

In a similar vein, several researchers have noted that because Johansson's definition of welfare and level of living is restricted to resources that can be modified through social policy, factors such as talent, self-esteem and personality are not included, although they also affect people's ability to control their lives (Erikson & Åberg, 1987; Fritzell & Lundberg, 2000).

Critics have also put forward that the definition of level of living should take into consideration the context in which the resources are to be used (Erikson & Åberg, 1987). To be beneficial, a resource is dependent on a relevant arena in which it may be used. For example, the usefulness of a certain kind of education may be limited without a labour market in which there is a demand for that particular education (Erikson & Åberg, 1987). However, even if a certain kind of education is of limited usefulness in a specific context, it may still be useful in other contexts, such as enhancing individual's health literacy. Health literacy essentially refers to the ability to maintain one's health. The term health literacy was initially operationalised as literacy skills (Nutbeam, 2008) but the operationalisation may now also include the ability to act upon written health information, to communicate one's needs to health professionals, and to understand health instructions (Sørensen et al., 2012). Low health literacy

is associated with a number of negative health outcomes, such as mortality in older people (Baker et al., 2007). Health literacy is thought to be improved by educational interventions (Nutbeam, 2008). Hence, just as reading ability is associated with years of schooling, the capacity to seek information, make decisions, solve problems, and think critically – all of which are important to health literacy (Sørensen et al., 2012) – are likely facilitated by formal education (Baker et al., 2007).

Amartya Sen's capability approach underscores the idea that the freedom to choose and achieve different kinds of 'well-beings' is itself a fundamental element of well-being. For example, if we compare the welfare of two people who are starving, but one of them is starving because she has no access to food and the other because she has chosen to do so (e.g. for religious or political reasons), it is reasonable to take the second person's freedom of choice into consideration (Sen, 1993). In such a case it may be argued that that the second person's freedom of choice gives her fundamentally better well-being than the first person. Fritzell and Lundberg (2000) note that the command over resources perspective does not take people's freedom to choose into consideration, although it is theoretically reasonable to take individual choice into account. The reason that this is not done, they argue, is because it is easier to assess the lives that people actually lead than the lives they could have led.

Despite the above objections, the command over resources perspective remains a solid foundation on which to base studies of people's welfare. Sen argues that functionings constitute a central part of his capability approach since functionings are the actual components of a person's being. Moreover, he argues that the well-being of a person depends on her being – on the functionings she has achieved (Sen, 1992, 1993). As previously noted by Erikson (1993), the definition of functionings lies close to the definition of level of living in the command over resources perspective: Sen (1992) refers to the resource components in the Level of Living Survey as empirical examples of functionings. Because the concept of level of living and functionings are so closely related, one may perhaps interpret Sen's argument as meaning that the well-being of a person depends, at least in part, on the resources she commands.

Applying a welfare approach to studies of older people

In general, labour market attachment is a central component of research on social exclusion and of Nordic welfare research. However, labour market attachment is often not relevant in studies of older people. Although the proportion of older people participating in the Swedish labour force has increased, less than 6% of people aged 70 to 74 were active in the Swedish labour market

in 2010 (Statistics Sweden, 2012). Working conditions are thus less relevant to studies of older than studies of younger people's living conditions.

Health is a central component of several fields of research that focus on individual welfare, well-being or capabilities (Nussbaum, 2003; Stiglitz, Sen, & Fitoussi, 2009; Whelan & Maître, 2008). In the field of Nordic welfare research, one reason for this focus on health is that it is more difficult to use alternative resources to compensate for health problems than to use alternative resources to compensate for other resource weaknesses (Johansson, 1979). Moreover, according to at least one school of thought, health and autonomy are the most basic human needs (Doyal & Gough, 1991).

Health problems are generally more prevalent in older than younger people. Health problems may therefore play a crucial part in studies of living conditions among older people. Moreover, the range of aspects of health that are relevant to study is typically wider in studies of older than younger people. For example, cognitive function and physical ability are rarely important issues in studies younger age groups but are highly relevant in studies of older people (Lundberg & Thorslund, 1996).

The descriptions of coexisting disadvantages in the oldest population that are found in this thesis use data from The Swedish Panel Study of Living Conditions of the Oldest Old (SWEOLD). This survey is based on the design and topics of the LNU, but includes only people 77 and older. The survey developers considered it particularly important to focus on physical and mental health, functional abilities, sources of help with daily activities, and social contacts when studying older people's living conditions (Lundberg & Thorslund, 1996).

3. Coexisting disadvantages: Health and beyond

Ageing, multimorbidity, and complex health problems

Increasing age is associated with a growing probability of physical health problems and functional limitations. As people age, both multimorbidity (multiple chronic diseases) (Marengoni et al., 2011) and complex health problems (coexisting health problems and functional limitations) (Meinow et al., 2006) become more common.

Age matters even in the older population; there is no threshold after which age is no longer important. That is, multiple health problems continue to become more common as older adults increase in age. For instance, researchers have found that in people aged 77 and older in Sweden, older age is associated with an increased probability of experiencing multimorbidity (Marengoni, Winblad, Karp, & Fratiglioni, 2008) and complex health problems (Meinow et al., 2006).

The increase in life expectancy and growth in the proportion of older people in numerous societies worldwide in recent decades have given rise to the question of whether the prevalence of health problems has increased or decreased in the older population over time. The results of studies of time trends in health (i.e. studies of whether the prevalence of health problems has increased or decreased in a population over time) differ, in part because researchers use different health indicators. In general, findings show that the prevalence of chronic diseases has increased since the 1990s, whereas findings on disability and limitations in physical function have been mixed (Crimmins & Beltrán-Sánchez, 2011; Galenkamp et al., 2013; Martin et al., 2012; Parker & Thorslund, 2007). In one Swedish study, some indicators showed that health had improved and others that it had grown worse. In the general older population, performance on lung function tests worsened between 1992 and 2011, and the prevalence of pain, psychological health problems and mobility limitations increased. However, during the same period, the prevalence of ADL limitations decreased (Fors, Lennartsson, Agahi, Parker, & Thorslund, 2013).

Studies of multiple health problems seem to indicate that the prevalence of multiple health problems in the older population has increased. For example, in a US sample of community-dwelling people aged 65 and older, the prevalence of multimorbidity increased between 1999/2000 and 2009/2010 (Fried, Bernstein, & Bush, 2012). In people aged 77 and older in Sweden, the prevalence of complex health problems rose between 1992 and 2011 (Meinow, Kåreholt, Thorslund, & Parker, 2015).

The probability of experiencing multiple health problems varies by population subgroup. Patterns of socio-economic and demographic differences that are apparent in several single indicators of health have also been found in composite health measures. Studies have shown that low levels of education are associated with an increased probability of both multimorbidity (Agborsangaya, Lau, Lahtinen, Cooke, & Johnson, 2012; Taylor et al., 2010) and complex health problems (Meinow et al., 2015). Moreover, people with lower incomes who live in more deprived areas have higher prevalence rates of multimorbidity than people with higher incomes who live in more affluent areas (Agborsangaya et al., 2012; Barnett et al., 2012). Results on gender differences in the prevalence of multiple health problems seem to vary somewhat, but several studies suggest that both multimorbidity and complex health problems are more probable in women than men (Agborsangaya et al., 2012; Barnett et al., 2012; Meinow et al., 2015).

In addition to being highly prevalent in old age, physical health problems are associated with disadvantages in other life domains. In older people, physical health problems are associated with psychological health problems (Alexopoulos, 2005; Blazer, 2003; Wolitzky-Taylor, Castriotta, Lenze, Stanley, & Craske, 2010), limited financial resources (Grundy & Slogett, 2003; Kahn & Pearlin, 2006), and limited social contacts and support (Wong & Waite, 2015).

Coexisting disadvantages by demographic and socio-economic subgroups

Several studies¹ on coexisting disadvantages in different age groups found that younger adults are more exposed to coexisting disadvantages than others (Halleröd & Larsson, 2008; Korpi, Nelson, & Stenberg, 2007; Muffels & Fouarge,

¹ The following section describes studies that include a range of disadvantages similar to those commonly investigated in Nordic welfare research. The studies come from different fields of research that focus on multiple negative outcomes and use various conceptualisations of the outcome, such as social exclusion, multiple deprivation or welfare problems. However, I would argue that the empirical results are comparable despite the somewhat differing theoretical approaches, and I therefore use the term coexisting disadvantages throughout to facilitate reading.

2004). However, these studies often exclude people of advanced old age. Studies focusing on the older segment of the population suggest that the oldest old people are more likely to experience coexisting disadvantages than young old people (Barnes et al., 2006; Halleröd, 2009; Tsakloglou & Papadopoulos, 2002), although at least one study has found the opposite (Bask, 2015), possibly because it focused on psychosocial indicators. Age-related patterns of coexisting disadvantages across whole adult age span are less well-studied.

Apart from varying by age group, coexisting disadvantages may also vary by gender and socio-economic group. In people of working age, patterns of gender differences vary between studies (Bask, 2010; Ferrarini, Nelson, & Sjöberg, 2010; Halleröd & Larsson, 2008; Korpi et al., 2007). However, studies of older people find that women have a higher probability than men of experiencing coexisting disadvantages (Halleröd, 2009) and of experiencing multiple psychosocial problems (Bask, 2015). Patterns of socio-economic differences seem to be more consistent in both younger and older people. Manual workers tend to have a higher probability of experiencing coexisting disadvantages than non-manual workers (Fritzell & Lundberg, 2000; Halleröd, 2009; Halleröd & Larsson, 2008; Korpi et al., 2007). Moreover, studies that emphasise limited material and financial resources have found that people with lower levels of education were more likely to experience coexisting disadvantages than people with higher levels of education (Hick, 2016; Muffels & Fouarge, 2004; Whelan & Maître, 2007). Differences have also been found by marital status and household composition. Multiple studies show that people living in single-headed households have a higher probability of experiencing coexisting disadvantages than married or cohabiting people (Barnes et al., 2006; Bask, 2010; Halleröd, 2009; Halleröd & Larsson, 2008; Muffels & Fouarge, 2004; Whelan & Maître, 2007).

It is notable that the association between certain demographic or socio-economic groups and coexisting disadvantages may depend on which disadvantages are considered (Hick, 2016). Different demographic and socio-economic groups may be associated with different kinds of disadvantages. For example, older women are more likely than older men to experience psychological health problems (Halleröd, 2009; Wolitzky-Taylor et al., 2010; Zunzunegui et al., 2007) and limited financial resources (Arber & Ginn, 2004; Barnes et al., 2006; Halleröd, 2009; Lennartsson & Lundberg, 2007), but it is unclear whether patterns of social contact differ by gender in the older population (Ajrouch, Blandon, & Antonucci, 2005; Antonucci et al., 2002; Scheepers, Te Grotenhuis, & Gelissen, 2002). Furthermore, the composition of disadvantages that coexist varies between groups, such as younger and older people. For example, one study showed that when coexisting disadvantages included material deprivation, people aged 65 and older had a lower level of

coexisting disadvantages than those aged 0 to 64. However, when the disadvantages included physical health problems, people age 65 and older had a higher risk of coexisting disadvantages than those aged 0 to 64 (Whelan & Maître, 2008).

Coexisting disadvantages in Sweden over time

The prevalence of coexisting disadvantages has remained relatively stable in the general Swedish population between the 1970s/1980s and early 2000s (Bask, 2010; Korpi et al., 2007), but fluctuations have been found in studies that examine shorter periods of time (Ferrarini et al., 2010; Fritzell, Gähler, & Nermo, 2007; Fritzell & Lundberg, 2000). Less is known about time trends in the prevalence of coexisting disadvantages in older people. As noted above, studies suggest that the prevalence of multiple health problems increased in the older population between the early 1990s and early 2010s (Fried et al., 2012; Meinow et al., 2015). It is uncertain whether this also may suggest that the coexistence of disadvantages across several life domains is increasing among oldest old people, who constitute the fastest growing segment of the population.

Limited financial resources are often associated with several other disadvantages in people of working age (Fritzell & Lundberg, 2000; Halleröd & Bask, 2008; Korpi et al., 2007), a pattern that has been relatively stable over time in Swedish studies (Bask, 2016; Fritzell & Lundberg, 2000). Changes in the associations between disadvantages in the older population over time have been less well-studied.

Persistence and accumulation of disadvantages in older people

It is unclear whether coexisting disadvantages persist over the life span. Although some studies have found that specific disadvantages, such as limited financial resources, seem to be relatively persisting (Bask, 2016; Burchardt et al., 2002), others have shown that most people who experienced coexisting disadvantage did so for a limited period (Korpi et al., 2007; Tham, 1994). Our understanding of how coexisting disadvantages develop over time in older adults is also limited. Although studies of older people suggest that the probability of moving out of coexisting disadvantages varies on the basis of which disadvantages are experienced (Becker & Boreham, 2009), more general patterns of the durability of coexisting disadvantages in old age are less well-studied. Theory suggests, however, that disadvantages tend to accumulate

over time. Cumulative disadvantage theory and cumulative inequality theory posit that a disadvantage in one life domain increases the probability of additional disadvantages in the same domain (Dannefer, 1987, 2003; O'Rand, 1996). In addition, a disadvantage in one life domain may lead to disadvantages in other domains (Ferraro, Pylypiv Shippee, & Schafer, 2009). Empirical studies have shown that disadvantage can accumulate both within one life domain and from one life domain to another during adulthood (Ferraro & Kelley-Moore, 2003; Halleröd & Bask, 2008) and that disadvantageous living conditions in childhood, such as poverty, can lead to coexisting disadvantages in adulthood (Almquist, 2016; Peruzzi, 2015). However, coexisting disadvantages may not solely be the result of an accumulation of problems over time. Moisio (2002) suggests that disadvantages that coexist could be qualitatively different phenomena and need not be related as part of a cumulative process.

4. The Swedish welfare state

In most welfare states, the task of providing welfare to citizens is divided between the state, market and family. In Sweden and the other Nordic countries, the state's commitment to ensuring welfare is greater than in many other countries. A feature that is unique to Sweden and the other Nordic welfare states is the extent of public involvement in all phases of citizens' lives, often referred to as a commitment from the cradle to the grave. Another defining feature of Nordic welfare states is universalism. In a universal welfare state, all citizens are entitled to a number of publicly financed and provided welfare services and benefits regardless of their ability to pay or their labour market affiliation (Kautto, Heikkilä, Hvinden, Marklund, & Ploug, 1999). Consequently, in the Nordic model, public social expenditure amounts to a relatively high proportion of the country's GDP. From this follows a high taxation level. Other main characteristics of the Nordic model are commitment to full employment, active labour market policies, relatively generous benefit levels and high-quality public care services for children and older people (Fritzell & Lundberg, 2007).

An underlying idea is to offer public services that less economically privileged people can afford but are still attractive to those who are well off (Szebehely, 2005). Ideally, a Nordic model should result in low poverty rates and small inequalities in income and levels of living across groups, such as social classes and genders (Kautto, Fritzell, Hvinden, Kvist, & Uusitalo, 2001).

The way welfare services are shaped affects multiple groups of people, particularly those who are dependent on the services (Gunnarsson & Szebehely, 2009). Pensions, health care and social care are components of the welfare system that are especially relevant to older people.

Pensions and financial resources in old age

Researchers have described the development of welfare states as being closely connected with older people; public pension systems were among the first institutions in the development of welfare states (Walker & Maltby, 2012). In Sweden a general pension was introduced in 1913. The Swedish pension scheme has been reformed several times since then. The most recent reform

took place in the 1990s but did not cover people born in 1937 and earlier, the cohorts that are the main focus of this thesis.

Like other features of the Swedish welfare state, the pension system is universal. The pension system has been described as having four main ‘layers’ (Halleröd, 2015). The first layer is the guarantee pension. This is distributed to people with no or a very low accumulated labour market income and its main purpose is to ensure everyone basic financial security in old age. The second layer is the income (previously called supplementary) pension, which is based on accumulated labour market income. These two first layers make up the national retirement pension to which all Swedish citizens are entitled when they retire. The third layer is the occupational pension. Occupational pensions are negotiated by the unions and the employer federation and differ between sections of the labour market. The fourth layer comprises private pensions and savings.

In the income pension system, people who have been more active in the labour market (and/or have had higher incomes) receive higher pensions. Many women in today’s cohorts of older people participated less in the labour market than the men in the same cohorts. As a consequence, more women than men receive a guarantee pension. In 2013, guarantee pensions made up part of the pension income of 60% of the women and 16 percent of the men who were retired (Swedish Pensions Agency, 2015a). The system of multiple layers also contributes to differences in pension incomes. In 2012, women’s pensions were 70% of men’s pensions, primarily because men had considerably higher occupational pensions than women (Swedish Pensions Agency, 2015b).

Pensions are the main source of income for people 65 and older and thus have a major influence on older people’s incomes (Gustafsson, Johansson, & Palmer, 2009). In addition, the welfare system provides means-tested housing benefits for people with low incomes or pensions, which contributes to decent living standards.

For many years, poverty in older adults was less common and economic inequalities smaller in Sweden than in much of the rest of the world (Fritzell & Ritakallio, 2004). However, between 2005 and 2013, the ‘risk of poverty or social exclusion’ rate in people aged 75 increased in Sweden, whereas it decreased in most other EU states (European Commission, 2015). Moreover, economic inequality in older people in Sweden has increased since the late 1990s (Gustafsson et al., 2009). In 2013, gender differences in the risk of poverty or social exclusion among people 75 and older were higher in Sweden than in many other EU states (European Commission, 2015).

Health care and social care services for older people

Responsibility for health and social care for those 65 and older in Sweden is divided between three levels of government. At the national level, parliament and the government set policy aims and directives through legislation. At the regional level, the 21 county councils and regions are responsible for providing health and medical care. At the local level, the 290 municipalities are required to provide home health care, housing, and social care services, including home-help services and institutional care which are regulated by needs assessments.

The Swedish health care system is based on the principle of ensuring good health and health care on equal terms for the entire population (Health and Medical Services Act, 1982:763). Eldercare policy is also based on the principle of universality: services should be widely available and used in accordance with need. The social services system is obliged to promote people's financial and social security, equality of living conditions and active participation in community life. People who have significant problems in daily living because of physical or mental functional impairments or for other reasons have the right to assistance that enables them to live in a way that corresponds to the way others live (Social Services Act, 2001:453).

In recent decades, considerable changes have taken place in care for older people in Sweden. For example, in the coverage ratio of care service recipients, the amount and type of help provided, and the number of people receiving home-based or institutional care has changed. Three general and interacting processes can be distinguished: deinstitutionalisation, re-familialisation and marketisation.

Deinstitutionalisation

Policy and practice in the care of older people in Sweden have been guided by the principle of 'ageing in place', in other words, in the community instead of in institutions. Between the early 1990s and early 2010s, the number of hospital beds decreased by half (National Board of Health and Welfare, 2015). The reduced number of hospital beds has resulted in shorter care periods, which in turn means that people are discharged from hospital with a greater need for medical care and rehabilitation than previously (Ibid).

Moreover, number of places in municipal institutional care has been reduced. Between 1993 and 2014, the proportion of people 80 and older who lived in institutional settings decreased from around 22 to 13% (National Board of Health and Welfare, 2016). This development has led to an increasing proportion of older people with comprehensive health problems who live in their

own homes (National Board of Health and Welfare, 2014, 2015). The downsizing of institutional care has not been compensated for by an increase in the coverage of home-help services, even though the amount spent on home-help services has increased. The proportion of people 80 and older who receive home-help services was similar in 1993 and 2014 – around 23% (National Board of Health and Welfare, 2016). In sum, a shift has taken place from a previously generous to a more restrictive allocation of public eldercare services. Resources have been directed to people with greater needs who receive more comprehensive care (SKL, 2014).

Re-familialisation

Another trend in recent decades is an increase in the use of informal care. Among community-dwelling older people who needed help managing activities of daily living, the proportion that managed solely with home-help services decreased by half, and the proportion that received care from both home-help services and family members increased substantially during the early 2000s (Ulmanen & Szebehely, 2015).

Marketisation

Since the 1990s, several central welfare services, such as education, health care and eldercare have been subject to marketisation, and customer-choice models have been implemented. The availability and utilisation of privately provided eldercare services have increased in Sweden since the 1990s. Services remain publicly financed but can be either publicly or privately provided. Users pay the same fee regardless of which provider they choose. However, unlike municipal providers, private providers of home-help services are allowed to offer ‘topping up services’ at an extra cost to the user; these services are not needs assessed (National Board of Health and Welfare, 2007). Moreover, in 2007, a tax deduction for privately purchased household services and personal care that are not needs tested was introduced, and the number of older people who used the tax deduction increased during the years that followed (National Board of Health and Welfare, 2014). The increase in the use of privately purchased services and informal care varies by socio-economic status of older people. People of lower socio-economic status are more likely to receive help from family or friends, whereas people of higher socio-economic status are more likely to purchase help on the private market (Erlands-son, Storm, Stranz, Szebehely, & Trydegård, 2013; Szebehely & Trydegård, 2012).

It is in this context – that of the Swedish welfare state – that I will study older people with coexisting disadvantages.

5. Aims

The overall topic of this thesis is the analysis of coexisting disadvantages in the older population living in the Swedish welfare state. The approach is broad and includes disadvantages in several life domains. A number of central components of living conditions are studied: physical health, psychological health, financial resources, political resources (the ability to represent oneself in political matters), and social resources.

Specific objectives

- To analyse and compare coexisting disadvantages in older people and in people in younger age groups (Study I).
- To explore the stability of disadvantages over the older part of the life course (Study II).
- To examine patterns of accumulation of disadvantages in old age; specifically, whether certain disadvantages in young old age are associated with coexisting disadvantages in advanced old age (Study II).
- To identify demographic and socio-economic groups in the oldest part of the population that have an increased probability of experiencing coexisting disadvantages and investigate whether the pattern is similar for different combinations of disadvantage (Study III).
- To analyse patterns of disadvantages in the oldest part of the population between 1992 and 2011; specifically, to examine the occurrence of individual disadvantages, the occurrence of coexisting disadvantages, and the correlations between disadvantages (Study IV).

6. Material and variables

Data

The Level of living survey

The Level of Living Survey (LNU) is a panel study that has been carried out on a regular basis since 1968. It consists of a nationally representative sample of people aged 18 through 75 (15 through 75 in some early waves). In addition to the participants in the panel sample, new participants have been recruited at every new wave to ensure representativity (Fritzell & Lundberg, 2007). LNU contains a wide thematic range of questions, including the nine components (listed in section 3) central to people's level of living. Data from LNU were used in two of the studies included in this thesis. Data from LNU 2000 was used in Study 1 and data from LNU 1991 in Study 2. The response rate was 79% in 1991 (n=5306) and 73% in 2000 (n=5 142).

The Swedish Panel Study of Living Conditions of the Oldest Old

Data from the Swedish Panel Study of Living Conditions of the Oldest Old (SWEOLD) were used in all four studies. The SWEOLD sample consists of people who were previously included in LNU but had passed LNU's upper age limit. Thus, certain individuals have participated in several waves of both LNU and SWEOLD. Data from three survey years were used: 1992, 2002 and 2011.

SWEOLD consists of nationally representative samples of people aged 77 and older in 1992 and 2002 and 76 and older in 2011. In SWEOLD 2011, an additional nationally representative sample of people aged 85 and older was drawn. In the analyses in article 4, which used data from the 1992, 2002 and 2011 waves of SWEOLD, sample weights were used to adjust for the over-sampling. Weights were also used to correct for an underrepresentation of 77-year-old people in the 1992 survey.

The response rate was 90.4% in 1992 (n=537), 87.3% in 2002 (n=621) and 86.2% in 2011 (n=931). In these survey waves, most interviews were conducted face to face. When such an interview could not be carried out, telephone interviews or postal questionnaires were used. If a person was unable to answer the questions herself, an indirect (proxy) interview was conducted

with a relative or other person close to the participant. Both community-dwelling people and people living in institutions (mostly nursing homes) were included in the SWEOLD sample.

Like LNU, SWEOLD includes a wide thematic range of questions that cover several crucial components of living conditions. Since SWEOLD is a continuation of LNU, many questions are the same in the two surveys. For more information about SWEOLD, please see Lennartsson et al. (2014).

Selection of components of living conditions

Components must always be selected on the basis of an underlying assumption; thus, as Sen writes, ‘there is no escape from the problem of evaluation in selecting a class of functionings’ (Sen, 1992). This is true in studies of resources as well. The availability of data in the LNU and SWEOLD influenced the selection of components in the studies described in this thesis. Additionally, components were chosen on the basis of the underlying assumption that people’s ability to act is crucial to their welfare. Esping-Andersen (2000) points out that the people’s access to resources that they can use to manage their living situation is often viewed as an issue of independence, a view that was adopted in the studies described in this thesis. Hence, the studies use components that reflect limitations in people’s independence. This choice seems to resonate with older people’s own thoughts about independence, since components that are central in the Nordic welfare research tradition also are fundamental in people’s own discourses on independence. Qualitative studies have found that physical and mental capacity, financial resources, and social contacts (having family and friends) were themes that recurred in different groups of older people when they were asked what independence means to them (Hillcoat-Nallétamby, 2014; Plath, 2008). Moreover, in line with one of the underlying ideas of the Nordic welfare research tradition, the components chosen for use in the studies described here can be – at least to some extent – regulated through social policy. The components included in this thesis are listed and discussed below.

Physical health, mobility and Activities of Daily Living

Johansson (1979) viewed health as a primary aspect of living conditions, at least from an individual’s perspective. Poor health, he assumed, would always lower people’s level of living regardless of their age and access to other resources. People’s physical capacity may indeed be crucial to their ability to manage their lives. For example, losing the ability to walk or to see limits people’s capacity to engage in various activities. A study showed that older people viewed physical capacity as a factor that had a major influence on their

ability to do what they wanted, and in turn, their sense of independence (Plath, 2008).

To capture the wide and varying spectrum of poor health in older people, several different indicators were used to measure physical health problems in the studies described in this thesis. The indicators, which were chosen to reflect limitations in independence, included life-threatening conditions (such as cancer), physical symptoms and diseases that constrained the way people lived (such as circulatory problems or severe diabetes), and/or physical conditions that hampered autonomy (e.g. mobility limitations or severe problems with vision).

Mobility limitations were operationalised as ability to move about (e.g. walking), and ADL limitations were measured as the ability to perform various tasks that are required in daily life, such as visiting the toilet and being able to dress. In the studies included in the thesis, mobility and ADL limitations were sometimes treated as aspects of physical health problems and as sometimes as independent components of disadvantages.

Psychological health

Psychological well-being is an important aspect of health and a fundamental part of people's ability to manage everyday life. Psychological health problems may reduce people's energy and motivation to perform tasks and activities. Moreover, psychological health problems can also affect people's functional capacity. In older people, depression is associated with several kinds of cognitive deficits (Pantzar et al., 2014). In the studies included in this thesis, psychological health problems were measured as self-reported depression, anxiety/nervousness, anguish and mental illness.

In this thesis, psychological health was treated as separate from physical health although the two may be intertwined. For example, emotions play an important role in the development of myocardial infarction or hypertension, and bodily changes such as fatigue or weight loss are frequent in people with psychiatric disorders. Researchers have argued that making a distinction between psychological and physical health problems may preserve a general understanding of psychological, or mental, health problems as less 'real' than physical health problems (Kendell, 2001). However, including separate indicators of psychological and physical health problems in a study rather than one indicator of both (e.g. including depression and circulatory problems in a broad index of health problems) may shed more light on the relationship between them. Moreover, the treatment of physical and psychological health problems is partly carried out by different specialists. From a social policy perspective, it may thus be of interest to broadly distinguish between these two aspects of health. Moreover, barriers to managing everyday life may be

qualitatively different between people who have psychological health problems, such as depression, and people who have physical health problems such as visual impairment, diabetes or ADL limitations. Thus, interventions need to be designed differently depending on which kind of health problem a person experiences.

Financial resources

Throughout the studies, financial resources were operationalised as a cash margin, an indicator that mirrors a degree of financial security. We did not include income, which is often used to measure people's financial resources. Income may capture people's opportunities, consumption patterns and everyday behaviour. As people retire, their wages are replaced with pensions, and their incomes commonly drop. Since older people have had longer time than younger people to accumulate resources, older people may be able to use savings to offset lower retirement incomes. Thus, capturing the absence or presence of a financial buffer can be viewed as an adequate measure of older people's financial security. A financial buffer may not influence people's consumption patterns and everyday behaviour in the way that income does, but it provides a means of coping with unexpected problems. A financial buffer may also, to some extent, indicate independence – people who have their own savings may be able to deal with unexpected expenses without depending on others.

Difficulty managing everyday expenses is a common indicator of financial hardship but was not included in the studies described in this thesis. Swedish data show that older people tend to have lower incomes but time tend to report fewer problems with managing daily expenses than middle-aged people. In 2014, the prevalence rate of being at risk for poverty (a disposable income of less than 60% of the median equivalised income) was 9.3% in people 45 to 54 years, 8.6% in people 55 to 64 years, 18.8% in people 75 to 84 years and 36.5% in people 85 years and above. The proportion that reported difficulty managing their daily expenses was 4.8% in those 45 to 54 years, 3.7% in those 55 to 64 years, 0.5% in those 75 to 84 years 1.3% in those and 85 years and above (Statistics Sweden, 2014b).

Reports about difficulty managing daily expenses may be affected by expectations and aspiration levels. Studies have suggested that people adapt their consumption preferences to their financial circumstances (Halleröd, 2006). Such adaptation may lead people to cut their expenses and change certain aspects of their lifestyle to manage their financial situation. Thus, indicators of the ability to manage everyday expenses may be related to more than actual financial limitations and were therefore not included as indicators of financial resources in this thesis.

Political resources

Political resources, operationalised as the ability to appeal a political decision, are an aspect of a person's relation to society and the social system. People who have limited political resources may have a limited political voice, and in turn, less opportunity to influence their living conditions. Moreover, inability to appeal a political decision may also partly reflect an inability to navigate societal systems and as such may be related to health literacy (discussed in more detail in section 3). People's health literacy influences, amongst other things, their ability to access care services.

Social resources

Social resources were operationalised as social contacts and social support. Although social contacts and social support may be more 'external' to the individual than other resources included in the studies described in this thesis, they are central to people's ability to manage their everyday lives and achieve goals that they themselves define as important. For example, studies have found that insufficient support from friends and family was a major obstacle to the ability to perform the task of paying bills and the ability to participate in various activities (Dahlberg, Bruhn, Marusarz, McKee, & Turunen, 2012).

Components not included in the thesis

A number of components that may be important to people's level of living were not been included in the studies described here. For instance, *leisure time activities* were included in Johansson's 1979 list of resources central to people's welfare. In the studies included in this thesis, however, indicators of participation have been excluded because they may also reflect individual choice and culture (such as class culture in the proneness to perform certain leisure activities or to join political parties). The kind of activities people engage in may also reflect their physical and psychological health, their financial resources and their social network. As such, leisure time activities may an outcome of several central resources; something people choose to do if they have the necessary resources. Since physical health problems and mobility limitations tend to increase with age, the kind of activities that people engage in and the extent to which they do so may be difficult to disentangle from older people's health status.

Access to health care is another central component of individual welfare. Johansson (1979) described access to health care if one falls ill and to preserve one's health as a social right. Older people in general have more need for health care than younger people. However, access to health care was not included in this thesis because of limited availability of appropriate variables in the data used in the current studies. In the LNU and SWEOLD, there exist

questions about, for example, whether the respondent had been hospitalised or sought medical and care. These questions reflect the respondents' actual utilisation of care. Several factors affect health care utilisation. Examples include health status, knowledge and attitudes about health and health care services, demographic factors (such as gender and marital status) financial resources and social support (Andersen, 1995). However, in line with Shengelia, Tandon, Adams and Murray (2005), I view access to care as the supply of services. Thus, I would argue that the abovementioned questions do not capture the actual access to health care (which should exist irrespective of people's needs) but rather the respondents' health care utilisation.

Similarly, *access to social care services* is important to individual welfare, but such indicators have not been included either. Again, this is because limited availability of appropriate variables. Questions about home-help services are included in SWEOLD but not in LNU. However, similar to the questions about health care utilisation discussed above, the questions in SWEOLD reflect the utilisation of, rather than the access to, home-help services.

Housing and neighbourhood facilities is another component central to people's level of living. However, this component was excluded because the SWEOLD 1992 and 2002 surveys lacked indicators that measured housing standards or neighbourhood characteristics and facilities.

Furthermore, personal abilities or traits such as personality or sense of coherence may influence people's ability to act and hence their level of living (Fritzell & Lundberg, 2000) but were not included in the studies.

Although *cognitive functioning* is central to the health of older people (Lundberg & Thorslund, 1996), cognitive impairment was not included in measures of physical health problems in the studies described in thesis. The reason is technical: the SWEOLD survey includes a test of respondents' cognitive performance, but such a test does not exist in the LNU survey. In studies I and II, LNU data was used in addition to SWEOLD data to compare older and younger adults (Study I) and to follow individuals over time (Study II). Cognitive impairment was therefore excluded.

Variables

Disadvantages

The following section provides a description of the variables created to measure the disadvantages listed above. All disadvantages were included as dependent variables in each of the studies in this thesis, except in Study III,

which did not include limited political resources. Table 1 gives an overview of the variables in the different studies and how they were coded.

The indices of disadvantages described below were all given an ‘absolute’ cutoff; that is, the cutoff was fixed at a certain level. The alternative would have been to use a ‘relative’ cutoff; that is, a cutoff determined by the distribution, such as categorising the 25% with the lowest level of a certain resource as disadvantaged in that particular domain. Absolute cutoffs were chosen to make it easier to understand which people were categorised as experiencing a certain kind of disadvantage. Moreover, in establishing an absolute cutoff, the researcher decides the transition point that marks the presence of disadvantage – a point that is easy for the reader to evaluate. However, absolute cutoffs should not be interpreted as universal or objective. As pointed out by Townsend (1985), absolute measures of standards of living are actually social notions. Measures of living conditions take their starting point in human needs, which are socially determined: ‘human needs are essentially social’ (Townsend, 1985: 667).

Physical health problems, mobility limitations and ADL-limitations

As described in Section 3, the underlying assumption when I created variables of disadvantages was that they suggest reflect a limitation of independence. Hence, indicators of physical health problems were chosen that reflected life-threatening conditions, physical symptoms and diseases that constrained the way people lived, and/or physical conditions that impeded autonomy. Several different indicators were used to measure physical health problems since poor health may encompass a wide range of conditions.

In both SWEOLD and LNU, participants were asked ‘Have you had any of the following illnesses or ailments during the past 12 months?’ The question was followed by a list of specific diseases and symptoms. For each disease/symptom, response alternatives were ‘no’, ‘yes, slight’ and ‘yes, severe’, referring to the perceived discomfort caused by the disease or symptom. In all studies, indicators from this list were used to create an index of diseases and symptoms.

To measure diseases and symptoms, all four studies included a sub-index of circulatory problems and single items denoting severe breathlessness, severe diabetes, severe problems with vision/eye disease, and slight or severe cancer. Other indicators of diseases or symptoms were only included in certain studies because of varying availability of data in the different surveys that were used. Stroke was included in Studies III and IV, and rheumatism and slight or severe Parkinson’s disease were included in Study III.

In Study I, the index of symptoms and diseases included a sub-index of pain that contained information on pain in the shoulders; pain in the back or hips; and pain in the hands, elbows, legs or knees. The sub-index on pain was included because pain was assumed to constrain everyday life or even hamper people's mobility and thus their autonomy. The items on pain were, however, excluded in the subsequent studies. This was done because it is unclear whether pain is a physical condition. On the one hand, pain is related to disability, and studies of the pathways from pain to disability suggest that pain can lead to disability in older people independently of physical impairments such as reductions in muscle strength (Leveille, Bean, Ngo, McMullen, & Guralnik, 2007). On the other hand, pain is also related to psychological health problems. Longitudinal associations have been found between pain and anxiety and between pain and depression, which suggests a reciprocal relationship in which psychological health problems may lead to pain and pain may lead to depression and/or anxiety (Arola, Nicholls, Mallen, & Thomas, 2010). Some researchers have even described pain as 'a purely psychological phenomenon' (Kendell, 2001: 491). In this thesis, physical health problems are treated as separate from psychological health problems (although such a distinction is not entirely straightforward). Hence, because pain seems to be related to both physical and psychological health, items about pain were excluded from the index of physical health problems.

Mobility limitations were measured with items on participants' self-reported ability to walk 100 metres without difficulty and to walk up and down stairs without difficulty. ADL limitations were measured with an index of five questions on the participant's ability to perform different tasks without any help from another person. The tasks were eating, toilet visits, dressing and undressing, getting into and out of bed, and hair washing. Needing help was classified as inability to perform the task.

Mobility limitations were included in the index of physical health problems in Study I. One rationale for including this variable in an overall physical health index was that mobility limitations may be seen as physical conditions that impede people's autonomy. Thus, they fit the definitions I used when creating the index of physical health problems. Including mobility limitations also helped capture as wide a range of physical health problems as possible in one index. In Study II, mobility limitations were treated separately from physical health problems. The average age of onset may differ for different health problems. In this longitudinal study, distinguishing between mobility limitations and physical health problems made it easier to assess determine whether one normally preceded the other. In Studies III and IV, ADL limitations and physical health problems were included as separate disadvantages. This was done because there is a policy-related distinction between those two aspects of physical health: ADL limitations entitle people to eldercare, whereas diseases

or ailments generally do not. Indicators of mobility instead of ADL were used in Studies I and II because LNU, which was used in these studies, lacks ADL indicators. The mobility limitation variable may, however, cover some of the loss in physical function that is measured by ADL limitations.

Psychological health problems

Items in the index of psychological health problems were drawn from the list of symptoms and diseases mentioned above, which also included psychological ailments. Participants were asked if they had experienced certain diseases or symptoms during the past 12 months. For each disease/symptom, response alternatives were 'no', 'yes, slight' and 'yes, severe'. Questions on 'nervous problems' (i.e., nervousness, anxiety and anguish), depression or deep sadness, and mental illness were used in all studies.

In Study I, fatigue and sleeping problems were also included in the index of psychological health problems. The index of psychological health problems used in Study I has previously been used in several studies, both of younger (e.g. Hemström, Krantz, & Roos, 2007) and older people (e.g. Fors, Lennartsson, & Lundberg, 2008). However, fatigue and sleeping problems were excluded from the index of psychological health problems in the subsequent studies, since these problems may also be associated with physical health problems in older people. For example, studies have shown that fatigue is related to functional decline in the older population (Avlund, 2010), and sleeping problems in older adults have been associated with Parkinson's disease (Crowley, 2011). Moreover, in older people, sleeping problems may be a consequence of physiological changes associated with ageing (Crowley, 2011).

Limited financial resources

Limited financial resources were operationalised as the absence of a financial buffer. Participants were asked if they could come up with a certain sum of money in a week's time. The sum was adjusted to have the same purchase value in all survey years and corresponded to 10,000 SEK in 1991 and 1992, 12,000 SEK in 2000 and 2002, and 14,000 SEK in 2011. People were considered to have limited financial resources if they were unable to come up with the money through a withdrawal from their own bank account or selling stocks and shares.

Limited political resources

Participants were asked if they would be able to write a letter, on their own, to appeal a decision made by a public authority. Response alternatives were 'yes' and 'no'. Those who responded no were asked if they knew anyone who could help them to write such a letter. People were considered to have limited political resources if they responded no to both questions; that is, if they were

unable to write a letter of appeal themselves and did not know anyone who could help them to do so.

Limited social resources

The operationalisation of limited social resources, and the indicators included in the indices, varied by the information available in the survey(s) used in each study. Limited social resources were operationalised as frequency of social contacts in Study I and IV and as both frequency of social contact and presence of social support in Studies II and III. Moreover, in Study IV, frequency of social contacts was measured differently than in the other studies.

In Studies I to III, frequency of social contacts was measured with four questions about social visits. Participants were asked if they usually visited relatives, usually had relatives over for visits, usually visited friends/acquaintances, and usually had friends/acquaintances over for visits. Response alternatives were 'no', 'yes, sometimes' and 'yes, often'. The threshold for being classified as having limited social contacts was higher in Study I than in Studies II and III. The threshold was lowered because my opinion on what the index should measure had been revised. In Study I, the index measured a level of social contacts that may be considered low. However, the subjective dimension of the response alternatives 'yes, sometimes' and 'yes, often' led me to change the threshold and classify only those with no social contact at all – a situation that may be regarded as quite critical – as having limited social contacts.

In Study IV, frequency of social contacts was measured with the above-mentioned questions on social visits with friends and with questions on how often the participant spent time with children and grandchildren/great grandchildren. Response alternatives were 'daily', 'several times a week', 'a few times a week', 'a few times a month', 'a few times a quarter' and 'seldom or never'. If participants did not have children or grandchildren, this was noted. For details on how the index was constructed, see Table 1.

Social support was measured with a sub-index of three questions, each of which measured a different dimension of social support: 1) 'Do you have a relative or close friend who is willing to help if you are ill?' 2) 'Do you have a relative or close friend who can help you if you need someone to talk to about personal problems?' and 3) 'Do you have a relative or close friend who is willing to help if you want company?' Response alternatives were 'yes' and 'no'.

Coexisting disadvantages

The term coexisting disadvantages was used to denote the simultaneous presence of several disadvantages. A summed index was created in each study by adding all the disadvantages included in the analysis to indicate the number of disadvantages people had reported. People with missing values for one or more variables in the index of coexisting disadvantages were excluded from the analyses to avoid bias that could emerge if the variable was given imputed values in some way.

In Study III, coexisting disadvantages were also analysed as specific combinations of disadvantages: physical health problems and ADL limitations, physical health problems and psychological health problems, physical health problems and limited financial resources, and physical health problems and limited social resources.

Demographic and socio-economic indicators

Age, gender, marital status, social class and education were used as demographic and socio-economic indicators in the four studies.

Age

In Studies I, III and IV, age was included in the analyses as a categorical variable; categories were 77 to 84 and 85 and older. In Study I, the categories 65 to 76 and 77 and older were also used.

The distinction between people 77 to 84 and those 85 and older touches upon the concepts of the ‘third age’ and the ‘fourth age’. The third age refers to the period in life when people are retired from the workforce but still independent, and the fourth age denotes a period of frailty and dependence (Baltes & Smith, 2003). Any definition that uses chronological age to distinguish the third from the fourth age is arbitrary; the onset of the fourth age may vary not only by individual but also between different parts of the world because the ageing process varies from context to context. Still, research suggests that in developed countries, the fourth age begins, on average, at 85 (Baltes & Smith, 2003).

Gender and marital status were included in Studies I to IV. Marital status was self-reported and the variable was divided into ‘married or cohabiting’, ‘never married’, ‘divorced or separated’ and ‘widowed’.

Social class was included in Studies I and III. It is an indicator of socio-economic position based on occupation and was measured with The Swedish Socio-economic Index (SEI). The SEI schema categorises occupational groups by the typical educational requirements for each occupation, whether the person is employed or self-employed, the person’s position in the organisation

and the size of the organisation (Andersson, Erikson, & Wärneryd, 1981). In Study I, participants were categorised by their individual social class, and in Study III, by their household social class. I used a dominance scheme developed by Robert Erikson (1984) to determine household social class. The scheme is based on the argument that when people in one household occupy different social classes, one of them will ‘dominate’; that is, will have a stronger influence on the household’s attitudes, behaviours and consumption. For example, if two people in a household are employed, the influence of the person whose position requires higher qualifications will be greater than that of the other person.

Education, another indicator of socio-economic position, was included in Studies I and II. In both studies, it was included as a dichotomous variable; the categories were lower and higher levels of education. Those with a compulsory school education or less than a compulsory school education were categorised as having a low level of education. Those with education beyond compulsory school, which could include formal vocational training as well as a university degree, were categorised as having a high level of education.

Table 1. Overview of dependent variables in Studies I–III.

	Study I	Study II	Study III	Study IV
Physical health problems	<ul style="list-style-type: none"> • Circulatory problems - chest pain (no=0, slight=1, severe=3) - heart problems (no=0, slight=1, severe=3) - high blood pressure (no=0, slight=1, severe=3) - dizziness (no=0, slight=1, severe=3) - coronary heart disease (no=0, slight=3, severe=3) 	<ul style="list-style-type: none"> • Circulatory problems - chest pain (no=0, slight=1, severe=3) - heart problems (no=0, slight=1, severe=3) - high blood pressure (no=0, slight=1, severe=3) - dizziness (no=0, slight=1, severe=3) - coronary heart disease (no=0, slight=3, severe=3) 	<ul style="list-style-type: none"> • Circulatory problems - chest pain (no=0, slight=1, severe=3) - heart problems (no=0, slight=1, severe=3) - high blood pressure (no=0, slight=1, severe=3) - dizziness (no=0, slight=1, severe=3) - coronary heart disease (no=0, slight=3, severe=3) 	<ul style="list-style-type: none"> • Circulatory problems - chest pain (no=0, slight=1, severe=3) - heart problems (no=0, slight=1, severe=3) - high blood pressure (no=0, slight=1, severe=3) - dizziness (no=0, slight=1, severe=3) - coronary heart disease (no=0, slight=3, severe=3)
	score: 3+ = circulatory problems	score: 3+ = circ. problems	score: 3+ = circ. problems	score: 3+ = circ. problems
	<ul style="list-style-type: none"> • Pain - shoulders (no=0, slight=1, severe=3) - back/hips (no=0, slight=1, severe=3) - hands/elbows/legs/feet (no=0, slight=1, severe=3) 	<ul style="list-style-type: none"> • Severe breathlessness • Severe diabetes 	<ul style="list-style-type: none"> • Severe breathlessness • Severe diabetes 	<ul style="list-style-type: none"> • Severe breathlessness • Severe diabetes
	score: 3+ = pain problems	score: 3+ = circ. problems	score: 3+ = circ. problems	score: 3+ = circ. problems
	<ul style="list-style-type: none"> • Severe cancer • Severe breathlessness • Severe diabetes 	<ul style="list-style-type: none"> • Severe problems with vision or eye disease • Slight or severe cancer 	<ul style="list-style-type: none"> • Severe problems with vision or eye disease • Severe rheumatism • Slight or severe cancer • Slight or severe stroke 	<ul style="list-style-type: none"> • Severe problems with vision or eye disease • Slight or severe cancer • Slight or severe stroke
	score: 1+ = mobility limitations	Physical health problems index score: 1+ domains = physical health problems	Physical health problems index score: 1+ domains = physical health problems	Physical health problems index score: 1+ domains = physical health problems

Table 1, continued. Overview of dependent variables in Studies I–III.

	Study I	Study II	Study III	Study IV
Mobility/ADL Limitations	<p>Study I</p> <ul style="list-style-type: none"> - mobility limitations included in physical health index 	<p>Study II</p> <ul style="list-style-type: none"> - able to walk up and down stairs (yes=0, no=1) - able to walk 100 metres (yes=0, no=1) <p>Mobility limitations index score:</p> <p>1+ = mobility limitations</p>	<p>Study III</p> <ul style="list-style-type: none"> - able to eat (yes=0, no=1) - able to make toilet visits (yes=0, no=1) - able to dress / undress (yes=0, no=1) - able to get in and out of bed (yes=0, no=1) - able to wash hair (yes=0, no=1) <p>ADL limitations index score:</p> <p>1+ = ADL limitations</p>	<p>Study IV</p> <ul style="list-style-type: none"> - able to eat (yes=0, no=1) - able to make toilet visits (yes=0, no=1) - able to dress / undress (yes=0, no=1) - able to get in and out of bed (yes=0, no=1) - able to wash hair (yes=0, no=1) <p>ADL limitations index score:</p> <p>1+ = ADL limitations</p>
Psychological Health problems	<ul style="list-style-type: none"> - fatigue (no=0, slight=1, severe=3) - sleeping problems (no=0, slight=1, severe=3) - nervous problems (no=0, slight=1, severe=3) - depression/deep sadness (no=0, slight=1, severe=3) - mental illness (no=0, slight=1, severe=3) <p>Psychological health problems index score:</p> <p>3+ = psychological health problems</p>	<ul style="list-style-type: none"> - nervous problems (no=0, slight=1, severe=3) - depression/deep sadness (no=0, slight=1, severe=3) - mental illness (no=0, slight=3, severe=3) <p>Psychological health problems index score:</p> <p>3+ = psychological health problems</p>	<ul style="list-style-type: none"> - nervous problems (no=0, slight=1, severe=3) - depression/deep sadness (no=0, slight=1, severe=3) - mental illness (no=0, slight=3, severe=3) <p>Psychological health problems index score:</p> <p>3+ = psychological health problems</p>	<ul style="list-style-type: none"> - nervous problems (no=0, slight=1, severe=3) - depression/deep sadness (no=0, slight=1, severe=3) - mental illness (no=0, slight=3, severe=3) <p>Psychological health problems index score:</p> <p>3+ = psychological health problems</p>
Limited financial resources	<ul style="list-style-type: none"> - get 12.000 SEK in a week (yes=0, no=1) <p>if 0, able to get money from:</p> <ul style="list-style-type: none"> - from own account / selling stocks (=0) - loan from family member (=1) - loan from other relatives or friends (=1) - bank loan (=1) - other way (=1) <p>Limited financial resources index score:</p> <p>1+ = limited financial resources</p>	<ul style="list-style-type: none"> - get 10.000 (1991), 14.000 (2011) SEK in a week (yes=0, no=1) <p>if 0, able to get money from:</p> <ul style="list-style-type: none"> - from own account / selling stocks (=0) - loan from family member (=1) - loan from other relatives or friends (=1) - bank loan (=1) - other way (=1) <p>Limited financial resources index score:</p> <p>1+ = limited financial resources</p>	<ul style="list-style-type: none"> - get 14.000 SEK in a week (yes=0, no=1) <p>if 0, able to get money from:</p> <ul style="list-style-type: none"> - from own account / selling stocks (=0) - loan from family member (=1) - loan from other relatives or friends (=1) - bank loan (=1) - other way (=1) <p>Limited financial resources index score:</p> <p>1+ = limited financial resources</p>	<ul style="list-style-type: none"> - get 10.000 (1991), 12.000 (2002), 14.000 (2011) SEK in a week (yes=0, no=1) <p>if 0, able to get money from:</p> <ul style="list-style-type: none"> - from own account / selling stocks (=0) - loan from family member (=1) - loan from other relatives or friends (=1) - bank loan (=1) - other way (=1) <p>Limited financial resources index score:</p> <p>1+ = limited financial resources</p>

Table 1, continued. Overview of dependent variables in Studies I–III.

	Study I	Study II	Study III	Study IV
Limited Political resources	<p>- able to write a letter of appeal by oneself (yes=0, no=1)</p> <p>if 1: - know someone who can help write letter (yes=0, no=1)</p> <p>Limited political resources index score: 2 = limited political resources</p>	<p>- able to write a letter of appeal by oneself (yes=0, no=1)</p> <p>if 1: - know someone who can help write letter (yes=0, no=1)</p> <p>Limited political resources index score: 2 = limited political resources</p>	<p>[Limited political resources not included in the analyses]</p>	<p>- able to write a letter of appeal by oneself (yes=0, no=1)</p> <p>if 1: - know someone who can help write letter (yes=0, no=1)</p> <p>Limited political resources index score: 2 = limited political resources</p>
Limited social resources	<p>• Limited social contacts</p> <ul style="list-style-type: none"> - visit/friends (no=0, sometimes=1, often=3) - having/friends for visits (no=0, sometimes=1, visit/relatives (no=0, sometimes=1, often=3) - having/relatives for visits (no=0, sometimes=1, often=3) <p>Limited social resources index score: 0–2 = limited social resources</p>	<p>• Limited social contacts</p> <ul style="list-style-type: none"> - visit/friends (no=0, sometimes=1, often=3) - having/friends for visits (no=0, sometimes=1, visit/relatives (no=0, sometimes=1, often=3) - having/relatives for visits (no=0, sometimes=1, often=3) <p>score: 0 = limited social contacts</p> <p>• Limited social support</p> <p>Help if ill (yes=0, no=1) Someone to talk to (yes=0, no=1) Have company if wanted (yes=0, no=1)</p> <p>score: 1+ = limited social support</p> <p>Limited social resources index score: 1+ domains = limited social resources</p>	<p>• Limited social contacts</p> <ul style="list-style-type: none"> - visit/friends (no=0, sometimes=1, often=3) - having/friends for visits (no=0, sometimes=1, visit/relatives (no=0, sometimes=1, often=3) - having/relatives for visits (no=0, sometimes=1, often=3) <p>score: 0 = limited social contacts</p> <p>• Limited social support</p> <p>Help if ill (yes=0, no=1) Someone to talk to (yes=0, no=1) Have company if wanted (yes=0, no=1)</p> <p>score: 1+ = limited social support</p> <p>Limited social resources index score: 1+ domains = limited social resources</p>	<p>• Limited social contacts</p> <ul style="list-style-type: none"> - visit/friends (no=0, sometimes=1, often=3) - having/friends for visits (no=0, sometimes=1, visit/relatives (no=0, sometimes=1, often=3) - having/relatives for visits (no=0, sometimes=1, often=3) <p>score: 0 = limited social contacts</p> <p>• Limited social support</p> <p>Help if ill (yes=0, no=1) Someone to talk to (yes=0, no=1) Have company if wanted (yes=0, no=1)</p> <p>score: 1+ = limited social support</p> <p>Limited social resources index score: 1+ domains = limited social resources</p>

7. Results

Study I: Coexisting disadvantages across the adult age span: A comparison of older and younger age groups in the Swedish welfare state

The aim of this study was to analyse and compare coexisting disadvantages in older people and in people in younger age groups. First, we calculated the number of disadvantages in the different age groups. Second, we analysed which combinations of disadvantages were most common in each age group. Third, we determined the age group(s) in which coexisting disadvantages (2 or more) were most common. Gender comparisons were made in all analyses.

Data were drawn from the 2000 LNU Survey and the 2002 wave of the SWEOLD study. The study sample consisted of 5392 individuals. The following disadvantages were analysed: limited social contacts, limited political resources, limited financial resources, psychological health problems, and physical health problems (symptoms/diseases and mobility limitations). Logistic regression analysis and chi-square analyses were performed. The following age groups were examined in the first and second analyses: 19-29, 30-65, 66-76 and 77 and older. In the third analytical step, the following age groups were examined: 19-25, 26-35, 36-45, 46-55, 56-65, 66-75, 76-85 and 86 and older.

The highest prevalence rates of two or more coexisting disadvantages were found in people 77 and older. In all age groups, coexisting disadvantages were more common in women than men. The most common number of coexisting disadvantages in all age groups and in both men and women was two.

In all age groups and in both genders, several of the most common combinations of disadvantages included psychological health problems. Psychological health problems were especially frequent in women. Moreover, physical health problems were predominant in men and women 77 and older but were not as frequent in younger age groups.

Third, logistic regression analyses revealed that the probability of reporting coexisting disadvantages was highest in people 76 and older. This result was found in a crude model and after controlling for gender, occupation, education

and marital status – characteristics that may vary between cohorts and that are associated with coexisting disadvantages. The differences in coexisting disadvantages by age were partly driven by the high prevalence of physical health problems in the older population. When physical health problems were excluded from the analysis, the probability of reporting coexisting disadvantages was highest in people older than 85.

Study II: Duration and accumulation of disadvantages in old age

This study had two main aims. The first was to analyse whether disadvantages are stable over the older part of the life course, and the second was to explore whether there are patterns of accumulation of disadvantages in old age.

We used longitudinal data on people born between 1916 and 1934. Data were drawn from the 1991 LNU survey (n=1 110) and the 2011 SWEOLD survey (n=394). Limited social resources, limited political resources, limited financial resources, psychological health problems, physical health problems, and mobility limitations were analysed.

Logistic regression analyses were used to in various ways test for associations between specific disadvantages and coexisting disadvantages in 1991 (when respondents were aged 57-75) and in 2011 (when respondents were aged 77-95).

The probability of experiencing a certain disadvantage in 2011 increased if a person had reported that disadvantage in 1991. The strongest such association over time was found for physical health problems and mobility limitations. Still, we found no indication that any disadvantage was entirely stable over time. Reporting coexisting disadvantages in 1991 increased the probability of reporting coexisting disadvantages in 2011, but the correlation was moderate. This indicates that coexisting disadvantages in old age are persistent in some people but temporary in others.

Moreover, those who reported limited social resources, limited financial resources, psychological health problems, physical health problems, or mobility limitations in 1991 were more likely to report coexisting disadvantages in 2011, which suggests a pattern of accumulating disadvantages. The association between psychological health problems in 1991 and coexisting disadvantages in 2011 was remarkably strong. Further investigation indicated that the association was, at least partly, explained by two findings: 1) there were

strong associations between psychological health problems in 1991 and physical health problems and mobility limitations in 2011, and 2) physical health problems and mobility limitations were present in almost all cases of coexisting disadvantages in 2011. Thus, to a considerable extent the observed accumulation of disadvantages in old age seemed to be driven by health related disadvantages.

Study III: Disadvantages across life domains: Demographic and socio-economic inequalities among oldest old people

The aim of this study was to identify demographic and socio-economic groups in the oldest part of the population that have an increased probability of experiencing coexisting disadvantages and investigate whether the pattern is similar for different combinations of disadvantage. The analyses included physical health problems, ADL limitations, psychological health problems, limited financial resources, and limited social resources.

We used data from the 2011 wave of the SWEOLD study. The study sample consisted of 765 individuals. We compared analyses of coexisting disadvantages (two or more simultaneous disadvantages) with analyses of single disadvantages and specific combinations of disadvantages. Multinomial regression and binary logistic regression were used.

The results showed that coexisting disadvantages were associated with certain demographic and socio-economic groups. Older age was associated probability of experiencing coexisting disadvantages. Women were more likely than men to report coexisting disadvantages, this gender difference was attributable to differences in marital status. Moreover, social class inequalities previously found in people of working age were also visible in our sample of older people in Sweden. We found that unskilled manual workers had a higher probability of experiencing coexisting disadvantages than intermediate/higher non-manual workers. The probability of experiencing coexisting disadvantages also varied by marital status. People who were divorced/separated and people who were widowed were more likely to report coexisting disadvantages than married or cohabiting people. The differences between the demographic and socio-economic groups were only found in those who reported coexisting disadvantages, not in those who reported only one disadvantage.

Analyses of each specific disadvantage showed that although certain demographic and socio-economic groups were associated with coexisting disadvantages, no such groups were disadvantaged in all of the life domains we

analysed. Moreover, in line with previous findings, physical health problems were present in almost all combinations of two or more disadvantages. On the basis of this finding, we analysed pairwise combinations of disadvantages, all of which included physical health problems. The results showed that the groups that were associated with coexisting disadvantages tended to report different combinations of disadvantage. For example, older age was associated with an increased probability of experiencing physical health problems plus ADL limitations and of experiencing physical health problems plus limited social resources. Unskilled manual workers and divorced people had an increased probability of reporting a combination of physical health problems and limited financial resources.

Study IV: Associations between and coexistence of disadvantages in the oldest old people in Sweden: Patterns of change between 1992 and 2011

The aim of this study was to analyse patterns of disadvantages in the oldest old people in Sweden between 1992 and 2011; specifically, to examine the occurrence of individual disadvantages, the occurrence of coexisting disadvantages, and the correlations between disadvantages. Cross-sectional data were drawn from the 1992, 2002 and 2011 waves of SWEOLD. The total study sample consisted of 2062 individuals. Logistic regression analysis and gamma correlations were performed. Limited social resources, limited political resources, limited financial resources, psychological health problems, physical health problems, and functional limitations (ADL) were analysed.

The results showed that the probability of reporting no disadvantages decreased slightly during the studied period and was particularly low in 2002. The probability of reporting coexisting disadvantages tended to increase and was especially elevated in 2002. Analyses stratified by age, gender and marital status showed that the patterns were visible in most of the subgroups included in the analyses.

Physical health problems became more common over time, whereas ADL limitations, limited financial resources and limited political resources became less common. Stratified analyses showed that the increased reporting of physical health problems in 2011 was considerably greater among people who were not married/cohabiting than people who were married or cohabiting. The decreased probability of reporting ADL limitations was apparent in women and those not married/cohabiting but not in men and those who were married/cohabiting. The decreased probability of reporting limited financial resources

over time was visible in all subgroups but was stronger in the younger age group, in women and in people who were not married/cohabiting.

Moreover, stable and strong associations were found over time between physical health problems, ADL limitations and psychological health problems. Health-related disadvantages were also associated with limited financial resources, but some of these associations changed over time. Limited financial resources were associated with psychological health problems ADL limitations in all survey years, but the association between limited financial resources and ADL limitations decreased over time. Associations between physical health problems and limited financial resources increased over time from no association in 1992 to a moderately strong one in 2011. Furthermore, we found a moderately strong association between psychological health problems and limited social contacts in 1992 but no such association in 2011.

In the stratified analyses, the majority of the changes in correlations described above were observed in most of the subgroups included in the analyses. The changes in the associations suggest that in general, the composition of coexisting disadvantages may have altered over time.

Summary of results

Key disadvantages

Physical health problems and disability/mobility-related disadvantages are fundamental components of coexisting disadvantages in older people in Sweden. These disadvantages were frequently present in cases of coexisting disadvantages. Cross-sectional correlation analyses revealed that in 1992, 2002 and 2011, physical health problems and ADL limitations tended to be associated with several other disadvantages, such as psychological health problems, limited social resources and limited financial resources (Study IV). Longitudinal analyses of associations in Study II showed that physical health problems in 1991 were associated with mobility limitations in 2011. Furthermore, mobility limitations in 1991 were associated with several other single disadvantages and with coexisting disadvantages in 2011. However, the strongest association between mobility limitations in 1991 and other single disadvantages in 2011 was with physical health problems. Given that coexisting disadvantages in 2011 to a large extent consisted of physical health problems and mobility limitations, it can be assumed that these two disadvantages reinforce each other, but may not necessarily drive an accumulation of other kinds of disadvantages.

Psychological health problems also appeared to be central to coexisting disadvantages in older people, although the prevalence rate of this disadvantage was lower than that of physical health problems and disability/mobility related disadvantages. Study II showed that the majority of those who reported psychological health problems in advanced old age often reported other disadvantages as well. Correlation analyses revealed that psychological health problems were statistically significantly associated with physical health problems, ADL limitations and limited financial resources in 1991, 2002 and 2011 (Study IV). Moreover, psychological health problems in young old age considerably increased the probability of coexisting disadvantages in advanced old age (Study II), a finding at least partly explained by a strong association between psychological health problems in young old age and physical health problems and mobility limitations in old age.

The findings reported in the two paragraphs above lead to the conclusion that health-related disadvantages play a key role in the coexistence and accumulation of disadvantages in the older population. However, other disadvantages are also important. Previous studies of people of working age in Sweden have found that limited financial resources are a crucial component of coexisting disadvantages (Bask, 2016; Fritzell & Lundberg, 2000; Halleröd & Bask, 2008; Korpi et al., 2007) and play an important role in the accumulation of disadvantage (Bask, 2016; Erikson & Tåhlin, 1987). In the studies in this thesis, we found that limited financial resources also play an important part in coexisting disadvantages in the older population. The majority of those who reported limited financial resources in advanced old age also reported other disadvantages (Study II). In the general older population, limited financial resources were associated with several health-related disadvantages in 1992, 2002 and 2011. Although the prevalence of limited financial resources decreased over time, certain associations became stronger: in 2011, limited financial resources were associated with physical health problems – an association that was not present in 1992 (Study IV).

Vulnerable groups

Older age was associated with an increased probability of reporting coexisting disadvantages, both when we analysed all adults (18 and older) and when we analysed older people (77 and older) separately. In Study I, we found that people aged 76-85 and people 86 and older were the only age groups more likely than people aged 19-25 to report coexisting disadvantages. In people 77 and above, older age was associated with an increased probability of experiencing coexisting disadvantages and was particularly associated with reporting a combination of physical health problems and limited social resources (Study III). Moreover, longitudinal analyses showed that being older at baseline increased the likelihood of reporting coexisting disadvantages 20 years later (Study II). In addition, Study I showed that younger old people and older

old people experienced a different frequency of coexisting disadvantages and different combinations of disadvantages. This finding underscores the importance of distinguishing between different age groups in studies of the oldest segment of the population.

In people aged 77 and older, women were more likely than men to report two or more coexisting disadvantages. This was found both in Study I and III, which used data from two different survey years (2002 and 2011) and operationalised some disadvantages differently. Study III showed that this gender difference could be explained by the fact that women were more often divorced or widowed than men. In other words, certain living situations that are more often experienced by women contribute to the higher prevalence of coexisting disadvantages among women.

In contrast, no gender differences were found in the probability of reporting coexisting disadvantages in the longitudinal sample analysed in Study II. These contradictory findings may be explained by a difference in study design. In contrast to the other studies, which used cross-sectional analyses and comparisons, Study II had a longitudinal design. Samples in longitudinal studies are affected by selective attrition. Analyses of attrition in Study II revealed that being male, being older and being widowed in 1991 increased the likelihood that the person would not participate in 2011. In 1991, women made up 81% of the 'widowed' group. Thus, in the longitudinal sample, selection in both men and women may have influenced the representativity of the sample and, in turn, the results on gender differences in coexisting disadvantages.

Significant social class differences in the probability of experiencing coexisting disadvantages have previously been found in studies of people of working age (Fritzell & Lundberg, 2000; Halleröd, 2009; Halleröd & Larsson, 2008; Korpi et al., 2007). These patterns seem to persist into old age: manual workers tend to be more likely to experience coexisting disadvantages than non-manual workers (Studies I and III). Moreover, the results of several studies in this thesis also suggest that in older people, marital status plays an important role in the probability of experiencing coexisting disadvantages. People who were never married, divorced/separated, or widowed were more likely to report coexisting disadvantages than married/cohabiting people. The findings of Study I suggest that in men, marital status may be more important in older than in younger age groups.

8. Discussion

This thesis focuses on coexisting disadvantages in the older population in Sweden. The term coexisting disadvantages refers to the simultaneous occurrence of disadvantages in different life domains. Examples of such disadvantages include health problems, limited financial resources and limited social resources. The majority of people analysed in the studies included in the thesis experienced none or one of the studied disadvantages. Thus, focusing on coexisting disadvantages is not a way of providing a representative picture of the living situation of older people. Rather, this approach spotlights a group of vulnerable people in the older population.

Coexisting disadvantages and Walzer's theory of distributive justice

In most societies, resources and opportunities are unequally distributed across socio-economic and demographic groups. The command over resources perspective emphasises access to resources that people can use to steer their everyday lives. To promote people's command over such resources, Esping-Anderson suggests that it is important to 'create a system in which anyone affected by crisis has the means to provide an appropriate remedy' (Esping-Andersen, 2000: 5–6). In a broader sense, this implies that people should be enabled to maximize their human potential. He concludes that a focus on resources 'puts the stress on equity' (Esping-Andersen, 2000:6).

However, it may be difficult to argue for the equal distribution of a range of resources. Economist and philosopher Amartya Sen problematizes the question of distributive equality and suggests that equal distribution of one capability or resource – equality in one sphere – will often lead to inequality in another sphere (Sen, 1992). In a similar vein, political philosopher Michael Walzer (1983) argues that it is very difficult, perhaps even impossible (or undesirable) to ensure the equal distribution of every resource or even only a few important resources. In short, Walzer argues that 'social goods' such as power, knowledge, security, work and leisure, food, shelter, clothes, and access to health care are already distributed in different spheres and by different proce-

dures. In most societies, one social good has gained special importance: people who possess this particular social good can, simply because they possess it, command a wide range of other goods. An example is the importance of financial resources in many societies.

One of several ways to oppose such a situation is to demand distributive equality; that is, to demand that the most important social good (e.g. money) is equally or at least more generally distributed. However, like Sen (1992), Walzer argues that this would not reduce inequality, only change its character. To equalise the distribution of one social good will decrease the importance of that particular social good. In turn, the importance of other social goods (which are differently distributed in the population) will increase.

As an alternative to distributive equality, Walzer proposes ‘complex equality’, equality in which the distribution of social goods in one domain of life is independent of the distribution of social goods in other domains of life. He describes a society in which the possession of a social good does not automatically lead to the possession of a range of other social goods. Thus, although there may be several small inequalities, the inequality is not compounded. A person’s position in one sphere, or the amount of a social good she possesses, cannot be undermined by her position in another sphere or by the amount of another social good she possesses. For example, the amount of monetary resources we command should not determine our access to health care or education.

The results of the analyses of associations between disadvantages in this thesis can be interpreted in light of Walzer’s theory. An association between two disadvantages, such as limited financial resources and psychological health problems, may suggest that the distributive principles in these life domains are to some extent interdependent. This thesis has shown that disadvantages tend to be interdependent in the older population. That is, certain disadvantages had cross-sectional associations in different cohorts of older people. Moreover, several disadvantages were associated with each other longitudinally, over the life course of an individual. Such associations could indicate that Walzer’s complex equality is generally not quite fulfilled in the older population.

It may however be questioned whether Walzer’s theory is applicable to all the disadvantages that are analysed in this thesis project. Some disadvantages investigated here can be seen as natural consequences of other others. An example is ADL limitations (limitations in the ability to perform daily activities such as getting in and out of bed and maintaining personal hygiene), which can be seen as a natural consequence of physical limitations. It can thus be difficult to argue that these are separate spheres in which different distributive principles should apply. Still, ADL limitations can be mitigated with various

kinds of equipment and adaptations to the physical home environment. Hence, interventions can to some extent prevent poor physical health status from leading to ADL limitations.

One could also question the plausibility of applying Walzer's (1983) theory on a more practical level, since complex equality may seem difficult to implement. Still, as previously noted by others, such as Fritzell and Lundberg (2000), the idea of separating the distribution of resources in different domains of life is inherent in the welfare state. According to the principles underpinning the Swedish welfare state, it is acceptable that 'a successful businessman gets rich' but not that 'his voice therefore should be given more weight in a political election' (Fritzell & Lundberg, 2000:138). The reverse assumption also applies: one disadvantage should not lead to another.

Coexisting disadvantages and the Swedish welfare state

The Swedish welfare state is universalistic; its broad welfare system is intended to ensure at least a basic level of financial security and universal access to health and social care services. It may not be possible for a welfare state to eliminate all problems and disadvantages; however, interventions may prevent one disadvantage from leading to another (Halleröd & Seldén, 2013). For example, sickness insurance was created to prevent illness from leading to poverty.

The welfare state's institutions can be expected to influence the prevalence of disadvantages in the population. Thus, changes to these institutions may also influence the prevalence of disadvantages. One example of this is changes to welfare state's institutions in response to recession. As discussed by Ferrarini et al. (2010), during economic recessions, more people become unemployed, but many countries also reduce public transfers and services. Such measures could impact incomes and may also cause problems in other domains; for instance, they may increase health problems.

Empirical studies have shown that the design and the generosity of social policies have considerable influence on the presence or absence of resources (such as different health outcomes) in the population. For example, a study of 18 countries found that generosity in basic security types of pensions was associated with lower excess mortality in old age, but the generosity of earnings-related income security pensions was not associated with mortality (Lundberg et al., 2008).

A comparative study of coexisting disadvantages in several European countries found considerable differences between welfare states and clear regional

patterns. The proportion of people who experienced two coexisting disadvantages was lowest in the Nordic countries, followed by Central Europe, Great Britain and Ireland, and Southern Europe, and was highest in Eastern Europe (Ferrarini et al., 2010). Moreover, researchers have found that levels of financial vulnerability vary systematically with the comprehensiveness and generosity of different welfare regimes (Whelan & Maître, 2010).

This thesis showed that in the general older population, the probability of reporting coexisting disadvantages increased between 1992 and 2011. The analyses included in this thesis found that a crucial component of coexisting disadvantages in older people was health-related disadvantages, in other words, multiple health problems. This finding can be related to previous research from Sweden that has shown that complex health problems (illnesses and ailments, mobility limitations and cognitive impairment) grew more prevalent between 1992 and 2011 (Meinow et al., 2015).

The policy and practice of ageing in place have resulted in a greater number of older people live at home, even people with multiple health problems. The proportion of older people (65 and older) who had multiple health problems and were living at home increased from 66 to 72% between 2007 and 2012 (National Board of Health and Welfare, 2014). If the current developments in eldercare persist, we may expect an even greater increase in the proportion of people with multiple health problems who live in the community.

One consequence of narrowing the scope of home-help services and providing them only to people with the greatest care needs is that people with moderate needs increasingly turn to relatives for help or to the market to buy private services (Larsson, 2007). Such assistance seems to differ between social groups – older people of lower socio-economic position tend to receive help from family and relatives, and older people of higher socio-economic position tend to buy help from the private market (Erlandsson et al., 2013; Szebehely & Trydegård, 2012). Moreover, the abovementioned changes in eldercare (described in more detail in Chapter 4) may affect the consequences of coexisting disadvantages in people's everyday lives. Certain combinations of disadvantages may have different implications at different points in time. For example, the combination of limited financial resources and a limited ability to manage everyday activities may put more constraints on people today than two decades ago, because of the increased reliance on privately purchased help to meet the need for care and support.

As a result of the marketisation of the welfare system, older people can now choose from a variety of care and social services providers. However, research suggests that those older people who are most dependent on care services may

not be able to act as rational consumers, since increasing health problems imply decreasing physical and cognitive capacities (Meinow, Parker, & Thor-slund, 2011). The concept of coexisting disadvantages is also applicable in this context. People with coexisting disadvantages may need support from various service providers, but the presence of different kinds of disadvantages may impede their ability to navigate a fragmented welfare system and make it more difficult to choose service providers.

Together, these trends suggest that responsibility placed on individuals has been increasing. To make an informed decision when faced with multiple choices, a person requires sufficient physical and cognitive capacities, or a social network from which she can get help to make informed choices. Moreover, a person needs either social or financial resources to bridge the gap between her need for help and the needs-assessed care services (e.g. to get help with tasks that may not be provided by home-help services). People who lack such capacities and resources may be particularly vulnerable when the emphasis on people's own responsibility is increasing.

Despite Sweden's universal pension system, there are older people in the country who lack a financial buffer. People's financial situation in old age is often directly linked to their pension, and as mentioned in Chapter 4, women have lower pensions than men. Women also rely on the guarantee pension more often than men. In 2016, the guarantee pension was 7014 SEK (approx. 690 €) per month for married people and 7863 SEK (approx. 780 €) for unmarried people. The results of Study III, which showed that women are more likely than men to report a lack of cash margin, here termed limited financial resources, may reflect consequences of the gender difference in pensions. In the general older population, the proportion of people who reported limited financial resources decreased from around 18% in 1992 to around 13% in 2011 (Study IV). This decrease was more pronounced in women than men, perhaps because of higher labour market participation – and thus higher pensions – in more recent cohorts of older women than in previous cohorts.

In people of working age, limited financial resources were found to be central to coexisting disadvantages (Bask, 2016; Fritzell & Lundberg, 2000; Halleröd & Bask, 2008; Korpi et al., 2007). The studies in this thesis show that even though it is not the most frequently occurring disadvantage, limited financial resources play a role in the coexistence of disadvantages in the older population as well. A recurring finding in this thesis project was that limited financial resources were associated with psychological health problems and functional limitations. Associations between limited financial resources and mental health problems have also been found in previous research (Laaksonen et al., 2007; Virtanen et al., 2015; Szebehely et al., 2001). A qualitative study has described how women living under very constrained financial circumstances

became depressed because of strong feelings of shame over being dependent on social assistance (Gunnarsson, 2002). Moreover, this thesis project showed that limited financial resources also tended to grow more closely associated with physical health problems over time in the older population. A similar pattern has been found in previous Swedish studies (Bask, 2011).

Another noteworthy finding of this thesis project was the central role of psychological health problems. Among older people in Sweden, the presence of psychological health problems more often than not meant exposure to some other disadvantage as well. Both cross-sectional and longitudinal associations were found between psychological health problems and other disadvantages: mainly health-related disadvantages, but also limited financial resources. These results resonate with findings from previous research on both younger and older people that showed that psychological health problems tend to co-exist with other disadvantages. Examples include limited financial resources, social isolation, and physical health problems such as cardiovascular disease and diabetes (e.g. Alexopoulos, 2005; Blazer, 2003; Szebehely, Fritzell, & Lundberg, 2001; Wolitzky-Taylor et al., 2010).

Thus, psychological health problems constitute another central component in coexisting disadvantages. Like those with functional limitations and/or physical health problems, people experiencing psychological health problems may require support.

Psychological health problems can be difficult to detect in older people (National Board of Health and Welfare, 2008; Yasamy, Dua, Harper, & Saxena, 2013). One reason is that in older people, such problems often manifest as physical ailments (Hegeman, Kok, van der Mast, & Giltay, 2012). The literature is ambiguous as to whether the prevalence of problems such as psychological distress and depression is higher or lower in older people than younger age groups (Kessler & Bromet, 2013). A recent report from the Swedish National Board of Health and Welfare estimated that about 12 to 15% of people 65 and older have depression, whereas the prevalence in the total population is between 4 and 10% (National Board of Health and Welfare, 2014).

Although the prevalence of depressive symptoms may be higher in the older than the younger population, people over 65 in Sweden have a lower admission rate to psychiatric clinics than people aged 18 to 64. Older people with psychological health problems are treated in somatic clinics more often than younger people, which implies that older people are more often treated in places where the staff is not specialised in handling psychiatric problems (National Board of Health and Welfare, 2014). One consequence of being treated in a non-psychiatric clinic is lower follow-up rates. In addition, older people with psychological health problems who are treated in somatic clinics have a

higher risk of mortality than older people treated in psychiatric clinics (National Board of Health and Welfare, 2014).

Moreover, psychological health problems may be a particular challenge to the welfare system, since people experiencing such problems may be less likely to seek care. For example, symptoms of depression such as decreased activity level and lack of energy may impede a depressed person's ability to seek help (Larsson, 2004).

Improved screening for psychological health problems and adequate psychiatric treatment are measures that could be taken to improve psychological health among older people. Intervening early to help older people with psychological health problems may limit other disadvantages and negative health consequences that can follow poor psychological health. However, the suggested interventions depend on the causal direction of the association between disadvantages.

Causality

Analyses of associations between disadvantages are relevant to social policy since certain social policy approaches are required if disadvantages are associated, whereas other approaches may be more viable if disadvantages are uncorrelated (Erikson & Tåhlin, 1987; Esping-Andersen, 2000). If disadvantages tend to be associated, policy should be directed towards helping individuals out of more generally disadvantageous circumstances. If, on the contrary, disadvantages do not seem to be associated, policy actions may be targeted at specific problems. Studies that take several aspects of living conditions into account provide an understanding people's overall living conditions and may thus serve as a basis for policy planning. Moreover, certain disadvantages, referred to as 'drivers', may more often than other disadvantages lead to further problematic conditions. Policy actions to target such drivers may thus also mitigate other disadvantages (Erikson & Tåhlin, 1987). Before drivers can be identified, however, causal associations between disadvantages must be established.

Although associations between disadvantages are a central focus of this thesis, the analyses performed do not make it possible to infer causality. When two disadvantages are associated, causation can go in either direction or be bidirectional. For example, limited financial resources (e.g. poverty) may negatively affect physical health, but physical health problems may also lead to diminished incomes. Social contacts and social support may benefit people's physical and/or psychological health, but ill health may also impede social

interaction. Moreover, several factors may be at play simultaneously. An association between two variables can be caused by a third factor that is associated with the two variables in question. For example, the finding that marriage protects against depression is potentially related both to social support and financial resources – resources that are often enhanced by marriage (Kamiya, Doyle, Henretta, & Timonen, 2013).

The results of the longitudinal analyses in Study II, which showed that psychological health problems are likely to precede coexisting disadvantages, could possibly indicate causality. Still, because of the long follow-up time and restricted number of control variables, other factors may have influenced this association. Thus, one cannot conclude that psychological health problems in young old age cause coexisting disadvantages in advanced old age.

Associations may also be interpreted as representing relationships that are not causal. For example, Study IV showed that although the prevalence of limited financial resources decreased over time in the general older population, it became more closely related to physical health problems between 1992 and 2010. These disadvantages were not associated in 1992, but the association between them in 2010 was comparatively strong. This result could be interpreted as the consequence of increased negative selection. That is, because the prevalence of limited financial resources has diminished, the people who experienced such problems in 2010 may be more disadvantaged than those who reported limited financial resources in 1992. Previous studies have shown that in general, the older Swedish population has become financially better off during recent decades, but financial inequality has increased (Gustafsson et al., 2009).

One aim of this thesis was to identify socio-economic and demographic groups that are more likely than others to experience coexisting disadvantages. The studies in the thesis showed that patterns of social class inequalities previously identified in people of working age were also present in old age. Moreover, marital status was associated with the presence or absence of coexisting disadvantages in old age. A larger proportion of men than women are married in old age. Thus, those vulnerable to disadvantage because of marital status are often women.

Social class and marital status reflect a person's current position in the social sphere. In old age, they also reflect previous living conditions and life events. Resources are associated with social class and also with marital status. People's social position may determine their access to resources, but the reverse may also be true: access to resources may determine social position. Thus, the experience of coexisting disadvantages in old age need not only be a result of social class or marital status. However, the analyses described in this thesis

were not conducted to ascertain causal direction; rather, they were intended to identify vulnerable social and demographic groups. Nevertheless, living conditions in old age are at least partly the result of previous circumstances.

Studying disadvantages in later life

The older population consists of people who are privileged in that they have survived to old age. Not all groups in society have the same chance of becoming old. For example, across the world, women live longer than men (Barford, Dorling, Smith & Shaw, 2006; Leon, 2011). Moreover, people with higher levels of education and those with higher incomes tend to live longer than people with lower levels of education and lower incomes (e.g. Chetty et al., 2016; Mackenbach, 2006; Sasson, 2016; Torssander & Erikson, 2010). Furthermore, married people tend to live longer than those who are not married (Manzoli, Villari, Pirone, & Boccia, 2007; Statistics Sweden, 2016; Valkonen, Martikainen, & Blomgren, 2004).

It is plausible that the people who were the most disadvantaged in adulthood did not reach old age. Therefore, in life-course studies of coexisting disadvantages, results such as patterns of duration and accumulation of disadvantage over time are influenced by selective mortality. Moreover, descriptions of coexisting disadvantages in the older population at a given point in time reflect the prevalence of coexisting disadvantages in a group of survivors. Ferraro and colleagues write that ‘. . . the older adult population that survives may also be described as an elite – at least in comparison to those members of its cohort who died earlier’ (Ferraro et al., 2009: 428).

Another concern in survey studies of the older population is that not all people are able to participate. Selective non-participation reduces the representativeness of a survey and the ability to generalise findings to the population under study, in this case the older segment of the population in Sweden. One reason for non-participation is that certain people may not be included in the record of those who can be sampled (the sampling frame). If samples are drawn correctly, they are representative of the population of interest in the study (the target population), and researchers are thus able to investigate a certain population without surveying everyone in it. However, if certain groups in the target population are not included in the sampling frame, there is coverage error: the sample will not be representative (de Leeuw, Hox, & Dillman, 2008). For example, in surveys of older people, those living in institution are sometimes excluded from the sampling frame (Lafortune & Balestat, 2007). Older people living in an institution differ from community-dwelling older people in several ways. For example, people living in an institution are likely to have poorer

health and to be older than those living in the community (Crimmins, Zhang, & Saito, 2016; Kelfve, Thorslund, & Lennartsson, 2013; Schram et al., 2008).

Non-participation may also be the result of non-response, which occurs when people who are included in the sample do not participate in the survey. Non-response can be random, but non-participants may also differ from participants in a characteristic that is related to the outcome under study or with regard to the outcome itself. Such non-response is called non-response error. Among older people, non-response is often related to poor health (Chatfield, Brayne, & Matthews, 2005). That is, people in poor health are less likely to participate in surveys than people in better health.

In the SWEOLD study, efforts have been made to reduce coverage error by including people who live in an institution in the sampling frame, and to reduce non-response error by minimizing non-response (Lennartsson et al., 2014; Lundberg & Thorslund, 1996). Non-response is minimized via proxy interviews. When a person has difficulty participating; for example, because of health problems or cognitive impairment, the interview is conducted with a relative or other close person. Nevertheless, a study such as SWEOLD, with low coverage error and low non-response error, may still be biased. If non-respondents are more disadvantaged than the respondents, the occurrence of coexisting disadvantages in the older population may be underestimated, and if they are less disadvantaged than the respondents, the outcome may be overestimated. However, previous research has shown that excluding people living in an institution and proxy interviews in the SWEOLD survey would lead to an underestimation of health problems in the older population in Sweden (Kelfve et al., 2013).

Operationalising disadvantages

Several research fields focus on multidimensional measures of disadvantageous living conditions. As mentioned previously, the concepts multidimensional deprivation, social exclusion, and empirical approaches to the concept of capabilities are examples of such research orientations. However, the disadvantages included may differ by research field and between studies in the same field, which lessens the comparability of results. Therefore, in this thesis, the reviews of previous research in this thesis focus on studies that examined disadvantages similar to the ones included in Studies I-IV.

Moreover, even if the same disadvantages are included in different studies, they may be operationalised differently, which also can make it difficult to compare the results. In the studies included in this thesis, there was some var-

iation in the operationalisation of disadvantages. The most apparent differences were between Study I and the other studies. After Study I, we changed the way physical and psychological health problem were operationalised. The threshold for limited social resources also differed between Study I and subsequent studies. The different operationalisations and reasons for these change are described in greater detail in Chapter 6. The different operationalisations are reflected, for example, in divergent prevalence rates for some of these disadvantages in 2002 between Study I and IV. In women and men aged 77 and older, the prevalence of psychological health problems was 29.4% in Study I and 11.4% in Study IV, and the prevalence for limited social resources was 25% in Study I and 7.9% in Study IV. However, despite changes in the operationalisation of physical health problems, the prevalence rate was similar: 50.4% in Study I and 48.8% in Study IV. Moreover, the prevalence rates of coexisting disadvantages were also similar; the rate summed to 40% in Study I and 36.7% in Study IV.

Thus, minor changes in operationalisation may lead to different prevalence rates. It may therefore be favourable to direct less attention to prevalence rates and put more emphasis on alternative estimates. For example, Burchardt et al. (2002) argue that since different thresholds affect the prevalence rates of disadvantages, it may be more fruitful to study the associations between disadvantages in different life domains than to study the prevalence of coexisting disadvantages. This approach was adopted in Studies II and IV.

Apart from generating diverging prevalence rates, variations in the operationalisation of disadvantages may also mean that different people are classified as disadvantaged. Nevertheless, the studies in this thesis generated similar results regarding which groups experienced coexisting disadvantages. Being older, being a woman, being a manual worker and not being married were all associated with an increased probability of reporting coexisting disadvantages in all studies. One exception was that no gender differences were found in Study II, but this difference was likely the result of using a different sample (for a more thorough discussion, see Chapter 7).

Concluding remarks

Disadvantages in different life domains are not strictly comparable since they are often qualitatively different kinds of problems. However, a person who simultaneously experiences several disadvantages may be particularly vulnerable and less well-equipped to manage daily life. Moreover, each combination of disadvantages may bring with it a qualitatively different experience of hardship.

In political discussions on reforms and planning that affect groups of older people, it is important to consider that reforms to certain parts of the welfare system may not always generate the expected results, since parts of the target group may have several, coexisting disadvantages. Thus, there seem to be a need for concerted actions for older people who not only experience physical health problems and functional limitations, but also other problems. Examples include limited financial resources that reduce their ability to pay for certain welfare services (such as dental care or additional social care services) or limited social networks or limited political resources that impede their ability to navigate the health and social care systems and hamper their ability to choose service providers.

Health and physical function are central components of living conditions, but since many factors affect our ability to manage everyday life, analyses that include factors in addition to health are required to achieve a broader understanding of older people's general living situations. More research encompassing a wide range of living conditions would provide a broader basis for setting political priorities and making political decisions.

As in other countries, the proportion and number of older people is increasing in Sweden. It is thus necessary to prepare for the prospect that the proportion and number of people with complex health problems and/or coexisting disadvantages also will increase. To understand the potential challenges that stem from this demographic change, further research on older people's living conditions – and maybe in particular the living conditions of the most disadvantaged groups of older people – is needed.

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10. References

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