

# Older People, Sense of Coherence and Community

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## Introduction

Population ageing is a global trend. For example, in the EU-27 population, the share of the older population (65 and above) increased from 13.9% in 1991 to 19.7% in 2018 (Eurostat, 2018). It is expected that by 2060, the share of those 65 years and over will account for 29.5% of the EU-27 population (Eurostat, 2013). Moreover, we can observe a worldwide increase in very old people, aged 85 and over. The ageing of the population results from decreasing fertility rates, but also from increasing life expectancy rates and the progressive ageing of the ageing population itself. These latter trends are partially attributable to improved quality of nutrition, and advances in medicine, especially knowledge about diseases and their control, and to developments such as early detection of colorectal and breast cancer in screening programmes which increase the chances of survival. Improvements in housing, nutrition and sanitation standards have also contributed to improved life expectancy (Staehelin, 2005).

In middle- and high-income countries, years added to life are generally lived in good health. However, because more people live into old age and because chronic diseases – such as cancers, diabetes, heart disease, Alzheimer disease and related dementias – more frequently occur in the older population, the burden of disease will also increase. The ageing of the population will have an impact on health care,

housing and community facilities, consumption patterns and also on social security costs. In response, health professionals, researchers and policymakers are increasingly concerned with healthy ageing, where ageing in place is used as a key concept. In this chapter, we first discuss the meaning of the concept of healthy ageing, and how sense of coherence contributes to this process. Next, we discuss the characteristics of the community in which older people live their lives and how the community can contribute to healthy ageing in place.

## From Healthy Ageing to Salutogenic Ageing

The simple question, ‘when is someone old?’ is not easily answered. Up to now, the question is mainly answered from an exogenous, administrative and political perspective (Koelen, 2011). In many countries, ‘becoming old’ is defined by retirement (in countries where retirement exists) or chronological age (Cattan, 2009). Retirement age can however vary, from 55 to 75 years of age, depending on country and/or profession. Occasionally, people of ages 45 or 50 years are included under the label ‘older’ for policy or research purposes. At the same time, several countries seek to increase the paid work participation and to increase state-pension-age. Hence, defining ‘old age’ simply as chronological age can be rather misleading, particularly if we accept the social construct of old age. It is not possible, in this chapter, to explore the extensive debates, theories and research paradigms linked to ageing and old age, but suffice to say that the concept will continue to be redefined and refined as our perceptions and understanding of old age evolve. This is also true for the concept of healthy ageing. There are many definitions for ‘healthy ageing’, and the concept is often used alongside related concepts such as ‘effective ageing’, ‘positive ageing’, ‘successful ageing’ and ‘ageing well’. Hanson-Kyle (2005, p. 52) summarized different definitions and, based on commonalities, defines healthy ageing as ‘the process of slowing down, physically and cognitively, while

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resiliently adapting and compensating in order to optimally function and participate in all areas of one's life (physical, cognitive, social and spiritual)'. The World Health Organization previously proposed to use the concept of 'active ageing', defined as 'the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age' (WHO, 2002; p. 12). In their 2015 World Report on Ageing and Health, WHO replaced the concept of active ageing by healthy ageing, defined as 'the process of developing and maintaining the functional ability that enables wellbeing in older age'. Functional ability is about having the capabilities that enable people to be and do what they have reason to value. It is made up of the intrinsic capacity of the individual, relevant environmental characteristic and the interaction between them (WHO, 2015). Intrinsic capacity is defined as the composite of all the physical and mental (including psychosocial) capacities that an individual can draw on at any point in time (Beard et al., 2016; Sadana and Michel, 2019).

The meaning attached to healthy ageing also depends on whether it is defined by professionals or by older people. Research reveals that older people have a different view from that of professionals, research scientists and policymakers. Older people may report that they experience good health and well-being, regardless of their clinical condition, impairment or disability (Young et al., 2009; Sadana and Michel, 2019). Professionals frequently focus on negatively phrased topics such as disability, disease, loneliness, overweight and falls, thereby emphasizing the problems and limitations that occur due to ageing. Older people focus more on supportive social environments, the ability to use resources, the ability to manage restrictions (Naaldenberg et al., 2011), the ability to make one's own decisions (Stephens et al., 2015) and on adaptation, meaningfulness and connectedness (Jeste et al., 2010). This perception relates to the increasingly accepted definition of health as 'the ability to adapt and self-manage' (Huber et al., 2011). Kennaugh (2016) explored how older Australian women experienced ageing. Using a salutogenic approach to ageing the focus in her doctoral thesis in philosophy, 'It's not how old we are; it's how we are old', was to understand the main issues that were reported by older women to be important, how they coped as they aged and how they adjusted following changes to their marital status. The women used multiple resources for strengthening SOC, which in turn enabled women to feel their life as comprehensible, manageable and meaningful. Despite the challenges of ageing, they found ways to manage the circumstances of life, and reported that they were indeed ageing well. In a systematic review on health assets in older age ( $n = 78,422$  from more than 13 different countries), Hornby-Turner et al. (2017) evaluated an extensive range of health assets, highlighting the evidence for factors that positively influence health in older age. They

found that higher scores of self-rated health, psychological well-being and life satisfaction were associated with better health in older age. Social network and contact with family and friends and engagement in leisure and social activities were important support mechanisms.

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## Life Course Perspective

Healthy ageing is a lifelong process, and it evolves through the lifespan from (pre-)conception, infancy, adolescence and young adulthood into old age. Lifespan is usually understood as the duration of a person's life history from conception to the end life. Genetic endowment, exposures to health enhancing or deteriorating occurrences in the physical and social environment at any moment in time influence health development across the lifespan (cf. Kuh and Ben Shlomo, 2004; Westendorp and Kirkwood, 2007; Kuh, 2019).

Older people are often seen as passive and frail, even though in reality a substantial number are quite resilient and active in managing the challenges they face as part of the ageing process. It should be recognized that older people do not constitute a heterogeneous group. People in their 60s and 70s are typically healthy and most continue to live independently. The dependency of those in their 80s and above is typically prone to increasing frailty and susceptibility to illness and disability (Stones and Gullifer, 2016, p. 450), but also the older old increasingly prefer to live independently. Indeed, individual diversity increases with age across the life course (Marcoen et al., 2007). Or, as Aldwin et al. (2006) put it, 'some individuals become severely disabled in midlife, whereas others are running marathons in their 70s and even 80s' (p. 85).

From a life course perspective, old age (65+) may be considered as the 'last season', or the third age, but reaching the age of 65 years is not the last transition. Increasingly, we also talk about 'the fourth age' or 'the oldest old', meaning people of ages 85 years and over. Life course in this context is taken to mean the social aspect of the lifespan which involves biological, social and psychological processes leading to planned or unplanned life transitions and/or events. Importantly, a life course approach recognizes that ageing experiences are influenced by factors relating to cohort effects (Hubley and Copeman, 2008; Phillipson and Baars, 2007). Some issues related to this are unique for later life; others are of greater relevance in later life.

With increasing age, many changes occur in the social environment, as a result of retirement (loss of role), death of a spouse, death of family members and friends and the onset of age-related sensory loss and mobility problems. It has sometimes been said that old age is an accumulation of losses forcing older people to adapt and adjust to constantly changing physical and social environments. For most part,

older people demonstrate great ability to find a range of different strategies to deal with these changes. Over time, however, the available options become fewer as a result of declining resources and ability. This can have an impact on the older person's mental health and increase the risk of social isolation and loneliness (Dykstra, 2009). Research has shown that the availability of social contacts and the ability to engage in social interaction are important in maintaining healthy ageing and alleviating loneliness (Forte, 2009; Nyqvist et al., 2013). In adapting to changing circumstances, older people may use a range of 'tools' available to them to facilitate engagement. Results from a systematic review and meta-analysis suggest a significant relationship between the Internet use (through, for example, social media, email, Skype) and mental well-being in older people (Forsman and Nordmyr, 2015). Research on the facilitation of social participation and the stimulation of social interaction is ongoing, but there are still gaps in our knowledge and understanding of the processes involved. However, research in associated areas has shown that there is an accumulation of socioeconomic disadvantage with regard to disability over the life course, leading to morbidity and mortality inequalities in later life (Kingston et al., 2015) and also that high levels of physical capability is associated with mental well-being in older people (Cooper et al., 2014). Such findings suggest that investigations of the role of social interaction in maintaining health over the life course may need to consider the wider constructs of health in old age, including socioeconomic factors and physical capability.

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### **Sense of Coherence and Its Three Dimensions**

Sense of coherence (SOC) reflects a person's view of life and capacity to respond to stressful situations. It is a global orientation to view the life as structured, manageable and meaningful or coherent. It is a personal way of thinking, being and acting, with an inner trust, which leads people to identify, benefit, use and reuse the resources at their disposal (Antonovsky, 1987; Lindström and Eriksson, 2005; Eriksson, 2017). SOC consists of three elements: comprehensibility, manageability and meaningfulness. The original definition is as follows: 'a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that: (1) the stimuli from one's internal and external environments in the course of living are structured, predictable, and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges, worthy of investment and engagement' (Antonovsky, 1987, p. 19).

Comprehensibility refers to the extent to which a person perceives the stimuli confronted with, deriving from the internal and external environments, as making sense as information that is ordered, consistent, structured and clear. The person scoring high on the sense of comprehensibility expects that stimuli they encounter in the future will be predictable, ordered and explicit. This is the cognitive component of the SOC. Manageability is the extent to which a person perceives that resources are at their disposal that are adequate to meet the demands posed by the stimuli that bombards them. 'At a person's disposal' refers to resources under the person's own control or to resources controlled by legitimate others. This is the instrumental/behavioural component of the SOC. Meaningfulness refers to the extent to which a person feels that life makes sense emotionally, that problems and demands are worth investing energy in, are worthy of commitment and engagement, seen as challenges rather than burdens. This is the motivational component of the SOC. The original name of the instrument to measure sense of coherence is 'the life orientation questionnaire'. The original SOC scales consist either of 29 items, or a shortened form of 13 items. There are also modified translations of the instrument with varying number of questions and scoring alternatives. Up to date it has been used in at least 51 different languages in at least 51 different countries around the world. For more details of the SOC questionnaire, see Chaps. 11 and 12 in this book.

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### **Development of the SOC in the Life Course.**

A person's SOC affects and is affected at each stage across the lifespan by the surrounding environment and people in the local environment. In the mid-1980s, Antonovsky wrote an article about the importance of the sense of coherence for mental health and related this to a life course perspective (Antonovsky, 1985). In a lecture he gave in Berkeley, he discussed the transition from adolescence to adulthood and ageing, and argued for the usefulness of the salutogenic perspective (Antonovsky, 1993). He positioned ageing persons in a context of a health continuum, the ease/dis-ease continuum, and argued that people are all constantly moving in this continuum. People, dependent on age, are in different positions in this continuum. In Antonovsky's words: 'I propose that all living human beings, at any point in time, are somewhere on a continuum between the two extreme poles. An elderly person with a thick medical folder is no less on the continuum than an active, hungry, screaming, and smiling infant or than a strapping adolescent. They are at different points on the continuum; the dynamic prognoses are different.'

Antonovsky considered ageing as a process of human development instead of just a biological and mental

degradation of the body: ‘Is it not possible that the 10 billion neurons in the human cortex can come up with some replacement for what has senesced? Whatever the case may be for the biological development of salutary factors till the very end of life ... I can surely see the possibility of the growth of social-psychological salutary factors as one gets older’ (Antonovsky, 1993). These thoughts can be related to Erikson’s theory of human identity development and the need for full awareness of context, especially as one gets older (Erikson and Erikson, 1998).

According to Antonovsky (1987), the SOC is assumed to develop until the age of 30 years, to remain stable until retirement, and thereafter to decrease. However, this assumption has not been empirically supported in previous research. The SOC seems to be relatively stable over time, but not as stable as initially assumed (Eriksson and Lindström, 2011). Research findings show that the SOC develops over the entire lifespan; in other words, it increases with age (Wiesmann and Hannich, 2019; Lövheim et al., 2012; Feldt et al., 2007, 2011; Nilsson et al., 2010). Wiesmann and Hannich (2019) investigated the stability of SOC over a time span of four years in active older German individuals ( $n = 125$ ) and long-term effects of this life orientation on three different indicators of positive ageing – subjective well-being, psychological health and physical health. This is the first study to explore associations between gain in sense of coherence and future positive ageing. They found that SOC increased over four years, disclosing a small effect size. The baseline SOC had a substantial predictive value for future subjective well-being and psychological health, but not for physical health. Analyses showed that both the baseline SOC and gain in SOC predicted future subjective well-being and psychological health.

Findings from additional longitudinal research ( $n = 19,629$ , response rate 80.2%) sheds light over how the development of the SOC from different age groups can be understood. Feldt et al. (2011) found that the strongest development (46–58%) was amongst those participants whose SOC was strong at baseline. A class of strong SOC with a decreasing trend and that of a weak SOC with an increasing trend was also found. Nilsson et al. (2010) were able to demonstrate on a sample of Swedes, aged 18–85 years ( $n = 43,598$ ), that SOC increases with age in both men and women. In a longitudinal study amongst Japanese volunteers aged 65 and over, Murayama et al. (2014) investigated the effect of intergenerational programmes on the mental health amongst older adults. They found that the meaningfulness component of the SOC significantly increased for members of the intervention group at all terms, with no changes in the control group over time. Participation in the intergenerational programme was associated with a sense of manageability which was also significantly related to depressive mood.

## SOC Contributes to Ageing Well

Research amongst older people shows, as during other periods of the life cycle, that a strong sense of coherence is related to good perceived health and quality of life (Tan et al., 2013; Eriksson and Lindström, 2005, 2006) and mediate the association between perceived stress and depression (Guo et al., 2018; Boeckxstaens et al., 2016). In the longitudinal Aichi Gerontological Evaluation Study (AGES), the relationships between social factors and depression amongst older Japanese were investigated (Misawa and Kondo, 2019). They found that of the study participants without mental illness or depression at Wave 1, 14% had become depressed by Wave 2 (3-year follow-up). In both men and women, life events predicted increased odds of depression, whilst SOC predicted reduced odds. In a German study amongst older people ( $n = 387$ , mean age 73.8 years), the role that the SOC and generalized resistance resources have for older people’s experience of life satisfaction was investigated (Dezutter et al., 2013; Wiesmann et al., 2014). The results showed that the SOC – as the ability to cope in everyday life – social support and self-esteem were factors that contributed to older people’s satisfaction with life. In a population-based prospective cohort study in 29 primary care practices throughout Belgium ( $n = 567$ , ages  $\geq 80$ ), subjects with strong SOC scores showed a higher cumulative survival than others (Log rank = 0.004) independent of other prognostic characteristics (adjusted hazard ratio 0.62 (95% CI, 0.38–1.00)). Even very elderly persons with strong SOC scores were shown to have lower mortality rates and less functional decline. These effects were independent of multimorbidity, depression, cognition, disability and socio-demographic characteristics (Boeckxstaens et al., 2016). A selection of studies using SOC amongst older people is shown in Table 19.1.

A Singaporean qualitative study amongst 27 older adults, using focus group interviews, was conducted and appreciative inquiry was adopted as a strengths-based interviewing approach (Seah et al., 2020). Four themes emerged: (1) contending evolving vulnerabilities, (2) intrinsic value of health, (3) taking care of oneself is a personal responsibility and (4) taking one day at a time: outlook towards later part of life (ibid, p. 3). The authors suggest that SOC towards the pursuit of healthy ageing can be addressed by reducing the unpredictability of ageing-related processes and vulnerabilities (comprehensibility), supporting active adoption of actions which promotes physical, mental and social health (manageability) and individual reflection in making sense of old age to seek motivation in living each day purposefully (meaningfulness). In another review study, Tan et al. (2013, p. 497) found that a strong SOC amongst older people was correlated with better physical, social and mental health.

**Table 19.1** A selection of studies using SOC amongst older people

Country	Sample	Variables	Study design and measures	Results and conclusions	First author
Singapore	Older adults ≥65 years	Perceptions of healthy ageing through SOC	Qualitative, focus groups, appreciative inquiry (AI)	The four emerging themes were: (1) contending evolving vulnerabilities, (2) intrinsic value of health, (3) taking care of oneself is a personal responsibility and (4) taking 1 day at a time: outlook towards later part of life. Older adults' underlying pathogenic orientation towards health contributed to their perceived unpredictable confrontations with vicissitudes including illness and death. This played a part to their short outlook towards old age. Consequently, this could limit their will and abilities to seek meaningful pursuits or valued aspirations and movement towards the salutogenic health pole. By reframing the definition of health to pursuing and fulfilling valued accomplishments, optimal health can be achieved regardless of physical health state. This study suggested that sense of coherence towards the pursuit of healthy ageing can be addressed by reducing the unpredictability of ageing-related processes and vulnerabilities (comprehensibility), supporting active adoption of actions which promotes physical, mental and social health (manageability) and individual reflection in making sense of old age to seek motivation in living each day purposefully (meaningfulness)	Seah (2020)
Republic of Korea	Literature review	Analysis of what works for whom, in what circumstances, focus on strategies/interventions, contexts, mechanisms and outcomes	Realist review methodology	Four key themes emerged: (1) maintaining personal identity, (2) maintaining social identity, (3) keeping a familiar environment and (4) sustaining daily activities. It is hypothesized that these four factors combine and interact to maintain continuity and ultimately lead to psychosocial benefits. Maintenance of identity, environment and activities is central to continuity for persons with dementia. The resulting model and programme theories respond to the need for a coherent approach to continuity maintenance	Lim (2020)
Germany	Elderly (mean age 71)	SOC, subjective well-being, subjective health	Longitudinal SOC-29, The Philadelphia Geriatric Centre Morale Scale, SF-36 Health Survey	The sense of coherence increased over 4 years, disclosing a small effect size. The baseline sense of coherence had a substantial predictive value for future subjective well-being and psychological health, but not for physical health. Stepwise hierarchical regression analyses showed that both the baseline sense of coherence and gain in sense of coherence predicted future subjective well-being and psychological health. With respect to future physical health, only gain in sense of coherence was significant. Consistent with gero-salutogenic theory, the baseline sense of coherence is an effective predictor of future positive ageing, and growth in sense of coherence within a time span of 4 years is reflected in improved positive ageing. It is important to encourage experiences in older age that cultivate the three components of the sense of coherence – feelings of comprehensibility, manageability and meaningfulness	Wiesmann (2019)

(continued)

Table 19.1 (continued)

Country	Sample	Variables	Study design and measures	Results and conclusions	First author
Japan	Elderly persons ≥65 years	Depression, social Factors, SOC, social support	Longitudinal Geriatric Depression Scale SRH, IADL, SOC-13	Of the subjects without mental illness or depression at Wave 1, 14% had become depressed by Wave 2. In both men and women, life events predicted increased odds of depression, whilst sense of coherence predicted reduced odds. The frequency of meeting with friends, hobbies and self-rated health predicted reduced odds of depression in men whilst age predicted increased odds in women. Social interaction is important for preventing depression in Japan, and that the establishment of a system capable of promoting social interaction and providing care to the elderly during life events may be a useful social policy approach to preventing depression	Misawa (2019)
China	Older stroke patients ≥60 years	SOC, perceived stress, depression	Cross-sectional Perceived Stress Scale (PSS), the Sense of Coherence Scale (SOC-13) and the Center for Epidemiologic Studies Depression Scale (CES-D)	The total score of the SOC and perceived stress showed a negative correlation ( $r = -0.80, P < 0.01$ ), the total SOC and depression also resulted in a negative correlation ( $r = -0.77, P < 0.01$ ) and the total score of the perceived stress and depression resulted in a positive correlation ( $r = 0.82, P < 0.01$ ). The results of multiple regression analyses indicated that SOC mediated the association between perceived stress and depression, and the influence of perceived stress on depression was decreased by 16.0% within the sense of being out of control dimension and sense of coherence was added to the model. The structural equation model was decreased by 12.3% within the feeling of tension dimension when confirmed that the sense of coherence had a partial mediation effect between perceived stress and depression. SOC is the mediating variable between perceived stress and depression and can reduce the influence of perceived stress on depression	Guo (2018)

Belgium	Caregivers of frail older patients (mean age 79.4)	Self-esteem, lack of family support, health problems, caregiver burden, SOC, depression	Cross-sectional	Caregivers with a high SOC and an older age reported a lower burden (odds ratio (OR) 0.18, 95% confidence interval (CI) 0.04–0.65 and OR 0.87, 95% CI 0.76–0.98, respectively). A higher burden was associated with patient functional limitations (OR 8.69, 95% CI 2.28–40.46). Having a high sense of coherence seems to be a protective factor against the burden. To support caregivers, health providers should recognize the expertise of the caregivers and the meaningfulness of this care situation	Potier (2018)
Iran	Elderly with chronic diseases (mean age 63)	Depressive symptoms, cognitive dysfunction, mortality, hospitalization, ADL decline, SOC	Zarit Burden Inventory, SOC-13, Geriatric Depression Scale, Caregiver Reaction Assessment, Global Deterioration Scale, Neuropsychiatric Inventory	The mean change of the self-efficacy score in the intervention and control groups was $9.48 \pm 5.32$ and $1.68 \pm 6.04$ , respectively ( $t[56] = 5.20$ , $P < 0.001$ ). The mean change of the SOC score in the intervention and control groups was $24.17 \pm 12.05$ and $10 \pm 13.42$ , respectively, ( $t[56] = 7.18$ , $P < 0.001$ ). The applied empowering self-management model led to an improved self-efficacy and SOC amongst the retired elderly with chronic diseases. This model can be used to empower the elderly to achieve comprehensibility, manageability and meaningfulness in their lives	Hourzad (2018)
Sweden	Older immigrants (mean age 74)	Religiousness, SOC, coping	The Sherer's Self-efficacy Questionnaire, SOC-29	There was a significant improvement in total SOC scores for the intervention group at 6-month follow-up. Also, the ORs for the SOC components were higher in the person-centred intervention group. However, we found no significant between-group differences nor did the effect last until the 12-month follow-up. Persons who have lived a long time in a host country after migration seem to have an SOC similar to native-born persons. Interventions with a person-centred approach could support the SOC by capturing individual life situations. Such interventions could support older persons by making everyday life more comprehensible and manageable and helping them to cope with challenges in daily life	Arola (2018)
Belgium	Elderly $\geq 80$ (mean age 84.7)	Religiousness, SOC, coping	Longitudinal Geriatric Depression Scale (GDS-15), Mini-Mental State Examination [MMSE], SOC-13	Intervention groups were $24.17 \pm 12.05$ and $10 \pm 13.42$ , respectively, ( $t[56] = 7.18$ , $P < 0.001$ ). The applied empowering self-management model led to an improved self-efficacy and SOC amongst the retired elderly with chronic diseases. This model can be used to empower the elderly to achieve comprehensibility, manageability and meaningfulness in their lives	Boeckxstaens et al. (2016)
Poland	Older adults (mean age 71.04)	Religiousness, SOC, coping	SOC-29	There was a significant improvement in total SOC scores for the intervention group at 6-month follow-up. Also, the ORs for the SOC components were higher in the person-centred intervention group. However, we found no significant between-group differences nor did the effect last until the 12-month follow-up. Persons who have lived a long time in a host country after migration seem to have an SOC similar to native-born persons. Interventions with a person-centred approach could support the SOC by capturing individual life situations. Such interventions could support older persons by making everyday life more comprehensible and manageable and helping them to cope with challenges in daily life	Krok (2015)
<p>Religious Meaning System Questionnaire, SOC-29, Coping Inventory for Stressful Situations</p>				<p>Subjects with high SOC scores showed a higher cumulative survival than others (Log rank = 0.004) independent of other prognostic characteristics (adjusted hazard ratio 0.62 (95% CI, 0.38–1.00), <math>P = 0.049</math>). For ADL decline, a high SOC was shown to be protective, and this effect tended to be independent from the covariates under study (adjusted odds ratio 0.56 (95% CI, 0.31–1.0), <math>P = 0.05</math>). Even very elderly persons with high SOC scores were shown to have lower mortality rates and less functional decline. These effects were independent of multi-morbidity, depression, cognition, disability and socio-demographic characteristics</p> <p>Findings showed that the religious meaning system had significant relationships with SOC and three coping styles: emotion-oriented coping, avoidance-oriented coping and social diversion. In addition, SOC mediated the relations between the religious meaning system and three coping styles: the emotion-oriented, avoidance-oriented and social diversion. The positive associations between meaning-oriented religiousness, SOC and coping styles imply that their underlying mechanisms are based on the structures of significance and comprehension. The character of mediational relations (i.e. mediator vs. suppressor) depended on the emotional and social coping strategies used by older adults</p>	<p>(continued)</p>

Table 19.1 (continued)

Country	Sample	Variables	Study design and measures	Results and conclusions	First author
Norway	Cognitively intact nursing home residents	SOC	Cross-sectional SOC-13	In accordance with the salutogenic theory of sense of coherence, the three-factor model revealed the best fit to our data. In particular, item OLQ2, defined as 'concerns the experience of being surprised by the behaviour of people whom you know well', seemed troublesome. Removing this item resulted in good fit to the present data. Rewording or deleting item OLQ2 seems needed to get a reliable instrument measuring sense of coherence amongst nursing home residents	Drageset and Haugan (2015)
Norway	Nursing home residents	SOC, social support	Longitudinal SOC-13, Social Provisions Scale	SOC increased statistically significantly from baseline to follow-up. The social support sub-dimension reassurance of worth predicted change in SOC after adjustment for socio-demographic factors. When controlled for baseline SOC, attachment was associated with change in SOC, but reassurance of worth was not. The study indicates that the change in SOC over time during the 5 years of follow-up and the social support dimension attachment appear to be important components of change in SOC	Drageset et al. (2014)
Spain	Older adults (mean age 74.8)	SOC, posttraumatic stress disorder symptoms, daily life functioning, religious beliefs and practices and social support	Cross-sectional SOC-13, Severity of Posttraumatic Stress Disorder Symptom Scale, Daily Life Functioning Scale, Systems of Beliefs Inventory, Posttraumatic Growth Inventory	Older people may experience psychological growth following a life major event. The objective of this study was to analyse the degree of posttraumatic growth (PTG) developed by widowed and non-widowed older adults ( $n = 103$ ) as well as the impact of possible predicting variables such as socio-demographic characteristics, experienced or witnessed life major events, religiosity and sense of coherence. The findings suggest that, in spite of widowhood, elder people develop PTG in the same way as non-widowed elder people. Therefore, the support of a religious community, age, life major events experienced and the subjective meaning given to them correlated with PTG	López et al. (2014)
Japan	Volunteers >65 years old (mean age 69.1)	SOC, depressive mood	Longitudinal SOC-13, Geriatric Depression Scale-Short Version-Japanese (GDS-S-J)	Analyses of the simple main effects showed that sense of meaningfulness significantly increased for members of the intervention group at all terms, with no changes in the control group over time. Multiple mediation analysis revealed that participation in the intergenerational programme was associated with a sense of manageability which was also significantly related to depressive mood. However, given our limited sample size, generalizability was restricted and studies with larger cohorts are required to further validate our findings	Murayama et al. (2014)
Norway	Elderly caregivers (mean age 79)	SOC, cognitive decline (persons with dementia), caregiver burden, social support	Cross-sectional SOC-13, Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE), Relative Stress Scale (RSS), Social Provision Scale (SPS)	With adjustments for socio-demographic variables, the association with burden of care was statistically significant for the sub-dimension attachment ( $p < 0.01$ ) and for sense of coherence ( $p < 0.001$ ). The burden of care was associated with attachment and with sense of coherence. Community nurses and other health professionals should take necessary action to strengthen attachment and sense of coherence among the caregivers of people with dementia	Stensletten et al. (2014)



Germany	Older persons (mean age 73.8)	SOC, self-esteem, generalized self-efficacy, optimism, social support, morbidity, bodily pain	Cross-sectional Bodily Pain subscale of the SF-36 Health Survey, SOC-29, Rosenberg Self-Esteem Scale, Life Orientation Test, Generalized Self-Efficacy Scale, Expected Social Support Scale	We found that morbidity and sense of coherence were the only significant predictors of pain, with morbidity showing the strongest effect. Using path analysis, the sense of coherence was a mediator of the relationship between resistance resources/deficits and pain. With respect to our analytical model, in which pain experience was the criterion variable, morbidity and the sense of coherence are important predictors of pain. Moreover, we found evidence for the salutogenic idea that the sense of coherence represents a mediator variable as it pools resistance/deficits influences on pain	Wiesmann et al. (2014)
Belgium	Flemish elderly (mean age 76.5)	Depressive symptoms, life satisfaction, SOC, ego-integrity, despair	Cross-sectional Centre for Epidemiological Studies Depression Scale (CES-D), The Satisfaction with Life Scale (SWLS), SOC-13, Ego-integrity and despair (Van Hiel & Vaansteenkiste)	A positive relationship between SOC and well-being was found. Elderly individuals with a strong SOC experienced less depressive symptoms and higher levels of satisfaction with their life. In addition, mediation analysis indicated that the relationship between SOC and depressive symptoms was partially mediated by the positive resolution of the integrity-despair crisis, whereas the relationship between SOC and life satisfaction was fully mediated by integrity and despair. Our findings indicate that SOC might be a resource for greater well-being in the elderly. Furthermore, our study offers a partial explanation for the relations found and points to the importance of finding integrity and resolving despair in this stage of life	Dezutter et al. (2013)
Sweden	Older Swedes (mean age 91.2)	Sense of coherence Negative life events	Longitudinal SOC-13, Barthel's index of activities in daily living (ADL), the mini-mental state examination (MMSE), Geriatric Depression Scale (GDS), The Philadelphia Geriatric Center Morale Scale (PGCMS), medical diagnosis, index of negative life events	For the whole group of subjects ( $n = 56$ ), the SOC scores was higher (70.1 vs. 73.7, $p = 0.029$ ) at the second point measure. The most common negative life events at follow-up were loss of independence in activities in daily living and decrease in cognitive function. A significant correlation between the index of negative life events and changes in SOC over 5 years was found ( $p = 0.025$ ). The more negative life events, the more decrease in SOC. We concluded that there is a risk of decreased SOC and thereby quality of life when negative life events accumulate among very old people. Nursing interventions might play an important role for maintaining and perhaps strengthening SOC among old people exposed to negative life events	Lövheim et al. (2012)
Sweden	75-year-old Swedes	General health, health behaviour, health problems, socio-demographic status, SOC	Cross-sectional SOC-3, VIPS-Well-being, Integrity, Prevention and Safety, The Health Index Questionnaire	Most 75-year-old persons reported their health as good or very good, but they also reported health problems such as pain, sleeping problems, memory failure, fatigue, poor understanding of their own health and illnesses, problems with elimination patterns and underweight and overweight. 75-year-old persons living alone, those with elementary school education and women reported worse health and well-being than other groups. This study contributes to the knowledge about health issues that concern persons of 75 years of age. It gives a suggestion as to what the district nurses should be aware of when performing preventive home visits	Sherman et al. (2012)

Gender differences are reported in terms of SOC and perceived health amongst older people. In a Norwegian study amongst 242 older people (mean age 84.6 years), examining how the SOC affected the perception of health (Saevareid et al., 2007), it was found that both men and women had health problems directly related to perceived health, whilst psychological symptoms were directly related to perceived health only in men. The gender difference reduced the effect of SOC on perceived health.

As pointed out earlier, ageing is a process, and concepts such as successful ageing and healthy ageing are frequently used (Lezwijn et al., 2011). Salutogenic research also uses the term ‘resilient ageing’ (Hicks and Conner, 2014) and ‘ageing well’ (Kennaugh, 2016). As a basis for an EU conference ‘Salutogenesis and the promotion of positive mental health in older people’ (19–20 April 2010, Madrid, Spain), Billings and Hashem (2010) conducted a review of studies amongst older people using a salutogenic approach to ageing. The review included concepts and theories closely related to SOC, such as resilience, hardiness and religiosity (religious beliefs). The authors highlighted different models for healthy ageing, including factors such as self-reliance, sense of control over life and a positive attitude to life, all to be important determinants of good ageing. They also noted that although the salutogenic approach provides a valuable contribution to maintain and develop health amongst older people, research and application in practice had not achieved the expected attention and impact. In a qualitative study on Irish healthy and active older people, Walsh (2014) examined the salutogenic theory within the context of later life and considered the value of salutogenesis as an analytical perspective applicable to understanding older people’s health and well-being as they age in place. The analysis and the results demonstrated the potential value of the qualitative application of the SOC and incorporate context and place as central positions of analysis. This method contributes to a deeper understanding of the health-place relationship.

For a long time, research on SOC has been focused on testing the validity and reliability of the SOC questionnaire in a variety of samples, for example, older people. Thus, we have a good knowledge of how a strong SOC mediates and moderates perceived stress in different samples (Guo et al., 2018; Potier, 2018; Eriksson and Lindström, 2005, 2006). A new trend in salutogenic research is emerging, that is the development of salutogenically designed healthy ageing programmes, such as the AGES project in Japan (Misawa and Kondo, 2019), the SHAPE programme in Singapore (Seah et al., 2018), a health promotion intervention amongst ageing migrants (Arola et al., 2018) and finally an empowering self-management model on the self-efficacy and SOC in Iranian elderly (Hourzad et al., 2018). This is encouraging because research has moved from testing to implementation in practice.

## GRRs and SRRs for Older People

Two important concepts in the salutogenic theory are *generalized resistance resources* (GRRs) and *specific resistance resources* (SRRs). *Generalized resistance resources* (GRRs) are those resources that help a person to avoid or to combat a wide variety of stressors (Antonovsky, 1979). GRRs arise from the cultural, social and environmental living conditions and early childhood upbringing and socialization experiences (see Chap. 7). GRRs can be found not only within people as resources bound to their person and capacity, but also within their immediate and distant environment and can be both material and non-material (Lindström and Eriksson, 2005). Examples of GRRs are genetic and constitutional qualities, knowledge, intelligence, ego-strength, control, social support, commitment, cultural stability and also material resources such as money. Importantly, it is not just that such resources are available, but that the individual has the capacity to recognize, use and reuse the resources for the intended purpose, which helps to increase health and well-being. GRRs are applicable in a wide variety of situations. SRRs on the other hand are particular resources, useful in specific situations. Or, as Mittelmark et al. put it, a GRR is a generality, an SRR is a particularity (Mittelmark et al., 2017, p. 75). In their words, ‘... SRRs ... are optimized by societal action in which public health has a contributing role, for example, the provision of ... health and social and protective (welfare) services, and supportive social and physical environments’.

## The Community

Many of the ‘prerequisites’ to strengthen GRRs, SRRs and SOC are provided by or mediated through the community. But what constitutes a community? Even though the concept is used often in health promotion literature, there is no general understanding of the concept. However, two broad lines can be distinguished, that is, definitions in terms of geographical area and definitions in terms of shared characteristics (Koelen and van den Ban, 2004, p. 136). For the sake of simplicity, here we mean groups of people living in a certain geographical area, often sharing a common culture, values and norms, and who are placed in a social structure according to relationships which the community has developed over a period of time (based on Nutbeam, 1998).

At the centre of the community is the house, which is considered to be the primary setting for ageing in place (Felix et al., 2015; Orrell et al., 2013; Oswald and Wahl, 2005; Sixsmith and Sixsmith, 1991). Older people spend on average 80% of their time inside the house (Oswald et al., 2006; Windle et al., 2006). Studies by, for example, Felix et al. (2015), Oswald et al. (2006), Percival (2002), Rowles (1983), Sixsmith

(1986) and Smith (1994) show a variety of conditions that turn a house into a meaningful place in which to live. In the broader sense, ‘home’ refers to the constellation of both the built and social community within which the individual resides (Stones and Gullifer, 2016). The physical structure of the house functions as a stage for daily activities. Basic qualities of the house, like daylight, the level of thermal and sound insulation, and the ease of maintenance are valued for their physical comfort, as well as for providing feelings of privacy, safety, freedom and independence. A meaningful house enhances feelings of personal control, autonomy and responsibility, which seem to be pivotal to health development (Koelen and Lindström, 2005) and hence to healthy ageing. People who have a responsibility for day-to-day events, even seemingly small things such as watering plants, or caring for a little bird or dog, have more favourable psychological well-being and show higher health and activity patterns than people without such responsibilities (e.g. Rodin and Langer, 1977). In addition, the house provides a place for personal belongings, which are used to set priorities in life, to create a personal atmosphere and to keep memories of the past alive. As Rowles and Bernard (2013) argue, one’s own home provides security, it holds memories and it provides the possibility to stay in proximity with friends, neighbours, kin and local services. As such, one’s own home contributes to each of the SOC components: meaningfulness, comprehensibility and manageability.

The social dimension of the house is shaped through interaction with the surrounding community environment, which first of all includes the near social environment (family, friends, and neighbours). Social contacts are seen as an enrichment of life for all age groups: it is fun to do things together. It seems that, especially when people become older, social contacts become more and more important (Oswald and Wahl, 2005; Puts et al., 2007).

A key finding in a qualitative study by Felix et al. (2015), which focused on the experience of the house as a home, was that all participants mentioned the importance of the neighbourhood for feeling at home. Having contact with neighbours, the provision of help and care and the availability of facilities locally seem to be essential for people’s sense of ‘home’. Research shows that, irrespective of physical decline during older age, most older people prefer to continue living in their own homes amongst their own communities (Stones and Gullifer, 2016). Indeed, many aspects of the community environment are important for older people. This includes the social environment, which provides a feeling of belonging and social inclusion; features of the built environment, including services such as shops, restaurants, schools, churches and community centres, formal and informal health services and infrastructure and transportation; and features of the natural environment, such as availability of urban green space and recreation areas (Felix et al., 2015; Stephens et al., 2015). A study of Yu et al. (2019) showed that perceived neighbourhood environments were positively associated

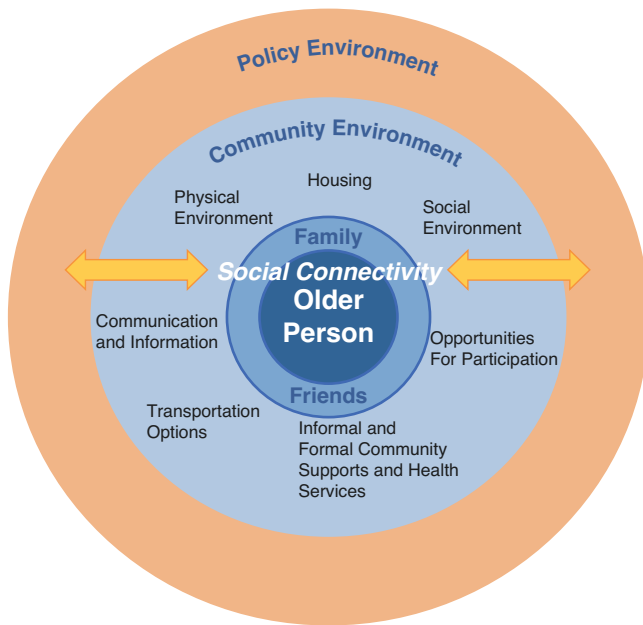
with sense of community and self-rated health. Especially ‘transportation’ and ‘respect and social inclusion’ were the physical and the social environmental domains most strongly associated with sense of community. Clearly, the physical and social environments interact. Spatial design of housing, proximity of shops, church and other services and infrastructure largely influence the mobility, self-reliance and social participation in the neighbourhood and larger community. A lack of facilities in each of these domains may negatively affect quality of life. Hence, the neighbourhood can provide important GRRs for older people. In their review study, Khoon-Kiat et al. (2013, p. 497) concluded that older people who have access to GRRs are more likely to have a strong SOC, relatively good health and quality of life.

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## Ageing in the Community

Important for healthy ageing is that people have the possibility to age in place. Ageing in place can be defined as ‘the ability to live in one’s own home and community safely, independently, and comfortably, regardless of age, income or ability level’ (Centers for Disease Control & Prevention, 2009, p. 1). It enables older people to not only maintain autonomy and independence, but also connection to social support, family and friends. Assisting people to age in place implies that older people receive adequate support whilst they continue to live and be involved in the community. Attention needs to be given to housing options, health and care services, transportation, recreational opportunities and facilities for social interaction and cultural engagement. Over the past decade, the concept of ‘age-friendly communities’ has emerged. According to the WHO, ‘in an age-friendly community, policies, services and structures related to the physical and social environment are designed to support and enable older people to “age actively”, that is, to live in security, enjoy good health and continue to participate fully in society. Public and commercial settings and services are made accessible to accommodate varying levels of ability’ (WHO, 2002). In line with this, in 2010 WHO established the Global Network for Age-friendly Cities and Communities (AFCC). The mission of the network is to stimulate and enable cities and communities around the world to become increasingly age-friendly. Currently, over 1000 cities and communities in 41 countries, covering over 240 million people worldwide, are connected to the network (WHO, n.d.) which shows the relevance that is assigned to facilitate healthy ageing. AFCC builds on the notion that the physical and social environment contribute to physical health, mental health and well-being (Menec and Brown, 2018), hence to quality of life. Menec et al. (2011) provided an interesting conceptualization of age-friendly communities (see Fig. 19.1).

According to the authors, age-friendly communities create connections between the older persons and the environ-



**Fig. 19.1** Conceptualizing age-friendly communities. (Reprinted with permission from Cambridge University Press. Menec et al., 2011. This Figure cannot be reproduced, shared, altered or exploited commercially in any way without the permission of Cambridge University Press, as it is copyrighted material and therefore not subject to the allowances permitted by a CC licence)

ment in which they live and vice versa (p. 484). Without an extensive description of the seven identified community dimensions, we wish to emphasize the importance that is attached to conditions in both the physical and social environment contributing (or not) to healthy ageing. Housing is in fact a part of the physical environment but is considered in its own right. This relates to what we have mentioned before about housing and feelings of home. Also opportunities for participation are considered important. This includes social participation and employment, but also other forms of participation such as physical activity, spiritual activity and volunteer options.

From a life course perspective, perhaps an even more interesting concept is that of ‘intergenerational communities’. In the age-friendly communities approach, the focus is foremost on how older people can be supported in the context of their environment. However, older people do not live in isolation but are part of the ‘whole-life-cycle environment’, which includes newborns, children, youth, young and older adults. Intergenerational communities address quality of life and physical and psychological needs for all age groups, with an additional consideration of how different generations interact and form relationships (Kaplan et al., 2016, p. 118). An intergenerational lens may also prevent communities to loose fit with its inhabitants. Communities are no static entities, but change over time, both in terms of population demography (e.g. from mainly young families to a mostly ageing population), the level of maintenance and quality of

housing and the surroundings. In fact, communities with features which are important for older people might also be beneficial for children and young adults. For example, the quality of side-walks is important for both older people needing walking aids and young parents using a baby buggy. Moreover, intergenerational contacts are beneficial for all age groups, and, as pointed out before, healthy ageing is a lifelong process, evolving throughout the lifespan.

Intergenerational communities are age-friendly communities, creating connections between the older persons and the environment in which they live and vice versa. This very much relates to the SOC dimension of meaningfulness. The maintenance of social relationships and having the possibility to be physically and socially active is closely related to having a purpose in life (Takkinen and Ruoppila, 2001; Stones and Gullifer, 2016). It enables older people to recognize and use GRRs to strengthen one or more of the three dimensions of SOC – meaningfulness, manageability and comprehensibility – which in turn enables them to recognize, pick up and use SRRs as needed in specific encounters with stressors (see Chap. 8). The home and neighbourhood provide a basis for consistency (coherence) and GRRs, enhancing meaningfulness, comprehensibility and manageability. Intergenerational communities provide supportive environments for people whilst ageing. They provide resources for health in the social and physical environment which – combined with their personal resources – enable people to live their lives despite possible limitations. The model of intergenerational communities may provide a useful framework for future research and practice, towards the facilitation of independence, participation and well-being of older people.

## Discussion and Implications for Salutogenic Research

Older people’s perceptions of healthy ageing, that is, being independent, being connected, being able to use resources, being able to make one’s own decisions (see the relation with the three dimensions of SOC), are related to the notion of ageing in place. Especially the availability of social contacts, the ability to engage in social interaction and the availability and accessibility of social and material resources (GRRs and SRRs) are important. The community, with home as a central place, offers many opportunities for maintaining or enhancing well-being and quality of life of older people.

Developing age-friendly, or preferably intergenerational communities, is more easily said than done. It requires input from a variety of disciplines, from the health, care and social sector, to architecture, city design and environmental planning. The fact that there is a difference in the perception of what constitutes healthy ageing and what is needed for ageing healthy by older people, professionals, researchers and policymakers emphasize the importance of active participation

of older people in research and policy-making for healthy ageing, and also for environmental design. It can be expected that such differences in perceptions also exist between different age groups and between age groups and professionals. An intergenerational approach, hence, also requires input from the other age groups. Participation in decision-making and planning enhances feelings of control and empowerment, which, in turn, may contribute to a strong(er) SOC.

Societies are changing at a rapid pace, and ICTs are increasingly applied in all areas of society. The ability to use them is also increasingly essential for everyday life activities. The digitization of various activities in society can mean that new opportunities open up for older people to live an active life but can also be marginalizing for people who do not master the technology. Therefore, it becomes important when designing technological solutions for older people to take this notion into account. Another new innovation is that of artificial intelligence (AI), commonly known as robots with built-in human characteristics such as speech. So far, research of what the consequences of AI are for elderly is still scarce.

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