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**Mental health promotion among community-  
dwelling seniors with multimorbidity  
- perspectives of seniors, district nurses and home  
care assistants**

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# Mental health promotion among community-dwelling seniors with multimorbidity – perspectives of seniors, district nurses and home care assistants

## THESIS FOR DOCTORAL DEGREE (Ph.D.)

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“I’ll go anywhere as long as it’s forward”

*David Livingstone, Scottish explorer in Africa*



## PERSONAL INTRODUCTION

My interest for mental health among older people, started more than 30 years ago when I worked as a nursing aide at a psychogeriatric ward for "mentally disturbed" patients over 65 years of age. After some years as a registered nurse I underwent a specialist training in psychiatric nursing. After that I primarily worked in advanced home healthcare with mainly senior patients with multiple chronic conditions. These patients often lived alone and they often had physical disabilities and mental health problems such as depression and anxiety.

After a master's degree in health education and specialisation as a district nurse, I started to work as a teacher in public health. As a teacher I had often reflected upon the responsibility of nurses, and especially district nurses, for the organisation of home healthcare and what were the facilitators and barriers relating to disease prevention and health promotion work.

My interest in scientific research started during my master's education, which became stronger during my work as an investigator at the Swedish National Board of Health and Welfare. These "lex Maria" investigations mostly focused on healthcare providers' administration of medical treatment among elderly people and reported suicide in elderly care as well as primary care settings. My conclusion was that homebound older persons, with several diseases and health problems, were often provided a fragmented care with poor collaboration between social services, geriatric wards and primary healthcare.

Since seniors with multimorbidity may suffer from mental health problems it seemed crucial to gain a deeper understanding of how multiple chronic conditions may affect community-dwelling seniors' mental health. After becoming a PhD student it became more important to study how mental health problems may be detected and mental health promoted among seniors with multiple chronic conditions. Since there is a political intention that older persons in Sweden should remain in ordinary housing, the focus of present thesis is on community-dwelling older persons with multimorbidity and these seniors' care, together with healthcare providers' perspectives on mental health promotion among the population under discussion.





The prevalence of mental illness is increasing among the older population in Sweden. One of the most vulnerable groups for mental health problems is older persons with multimorbidity, i.e. seniors with multiple chronic conditions. Many of them remain in their own homes with a comprehensive and complex need of support and healthcare, mainly provided by home care assistants (HCAs) and district nurses (DNs). However, the detection of mental health problems for adequate treatment or to promote mental health among community-dwelling seniors with multimorbidity, calls for skills and competences in this area.

This thesis aimed to gain a deeper understanding of how mental health may be promoted among community-dwelling seniors with multiple chronic conditions. Four studies have been included in this thesis (I-IV). All studies had a qualitative descriptive design with either a phenomenographic approach or latent and manifest qualitative content analysis technique. The aim of **study I** was to describe the variations in how community-dwelling seniors with multimorbidity perceived the concept of mental health and what may influence it. The findings showed the participants conceptualised mental health as having both positive and negative facets. The participants further conceived that social contact, physical activity and optimism may improve mental health, while social isolation, ageing, and chronic pain may worsen it. **Study II** aimed to describe the experience of health-promoting dialogues from the perspective of community-dwelling seniors with multimorbidity, and what these seniors believed to be important for achieving a dialogue that may promote their mental health. The main finding was the necessity of being seen as a unique individual by an accessible and competent person. Further, the participants missed having friends and relatives to talk to and they especially lacked healthcare or social service providers for health-promoting dialogues that may promote mental health. The aim of **study III** was to describe DNs' perspectives on detecting mental health problems and promoting mental health among community-dwelling seniors with multimorbidity. Findings revealed that the DNs' focus was on assessment, collaboration and social support as a way of detecting mental health problems and promoting mental health. **Study IV** described HCAs' perspectives on detecting mental health problems and promoting mental health among the seniors in focus. The findings revealed that continuity of care and the seniors' own thoughts and perceptions were regarded as essential for the detection of mental health problems. Further, observation, collaboration, and social support emerged as important means of detecting mental health problems and promoting mental health.

**Conclusions:** The results of this thesis are based on interviews and show that:

1) Seniors with multimorbidity should have an opportunity to describe how multiple chronic conditions may affect their life situation; 2) An optimal level of care can be achieved through continuity, involvement, and by providing a health-promoting dialogue based on the person's wishes and needs; 3) Even if DNs seemed engaged in primary mental healthcare, there were no expressed goals set in the improvement of mental health, and it seemed that these DNs could not bear the primary responsibility for early detection of mental health problems and early interventions to improve mental health; 4) HCAs had knowledge about risk factors for mental health problems and it appears that they were dependent on care managers' decision-making in granted support, as well as supervision from DNs in the detection of mental health problems and to promote mental health.

In summary, the finding in the present thesis demonstrates that managing mental health problems is still an ongoing challenge for those organisations providing continuity in home care and home healthcare for homebound elderly persons with complex chronic conditions. The finding in the thesis also shows that DNs and HCAs seem to be dependent on each other in this area. Mental health promotion was expressed as an important assignment among DNs and HCAs, even though they describe different prerequisites and factors which could be seen as barriers in the detection of common mental health problems such as depression, anxiety and sleep problems. These personnel further described difficulties in collaboration and transmission of information between care- and healthcare providers from the community and primary care context. Social and physical interventions - as well as social contacts and social support to break social isolation - seemed important according to all the informants, with their different perspectives of how mental health may be promoted.

**Key words:** Ageing, Care of older people, District nurse, Home care assistants, Mental health, Mental health promotion, Municipal care, Nursing, Older people, Primary healthcare, Sweden

Förekomsten av psykisk sjukdom ökar bland en åldrande befolkning i Sverige. En av de mest sårbara grupperna för psykiska hälsoproblem är multisjuka äldre personer, d.v.s. äldre med flera kroniska sjukdomar. Flertalet av dessa äldre personer bor kvar i ordinärt boende med omfattande och komplexa behov av stöd samt hälso- och sjukvård, mestadels tillhandahållen av hemtjänstpersonal och distriktssköterskor. Att upptäcka psykiska hälsoproblem för adekvat behandling eller för främjande av den psykiska hälsan bland multisjuka äldre, fordrar färdigheter och kompetenser inom detta område.

Syftet med denna avhandling var att få en fördjupad kunskap om hur den psykiska hälsan kan främjas hos multisjuka äldre personer som bor i ordinärt boende. Fyra delstudier har genomförts i denna avhandling (I-IV). Samtliga delstudier hade en kvalitativ deskriptiv design med antingen en fenomenografisk ansats eller kvalitativ innehållsanalys med latent och manifest ansats. Syftet med **studie I** var att beskriva variationerna i hur multisjuka äldre personer uppfattade begreppet psykisk hälsa, samt vad som kunde påverka den. Resultatet visade att informanterna definierade begreppet psykisk hälsa utifrån både positiva och negativa aspekter. Informanterna uppfattade vidare att sociala kontakter, fysisk aktivitet och optimism kunde förbättra den psykiska hälsan medan social isolering, åldrande och långvarig smärta kunde försämra den. **Studie II** syftade till att beskriva multisjuka äldre personers erfarenheter av hälsofrämjande samtal, samt vad dessa äldre personer upplevde som betydelsefullt för att uppnå ett samtal som kunde främja deras psykiska hälsa. Det huvudsakliga resultatet var vikten av att bli sedd som en unik individ av en tillgänglig och kompetent person. Vidare saknade informanterna vänner och anhöriga att samtala med, och de saknade speciellt hälsofrämjande dialoger som kunde främja psykisk hälsa och då med utförare från hälso- och sjukvård samt social service. Syftet med **studie III** var att beskriva distriktssköterskors perspektiv på upptäckten av psykiska hälsoproblem samt främjande av psykisk hälsa bland multisjuka äldre i ordinärt boende. Distriktssköterskorna beskrev att de vanligtvis fokuserade på mer praktiska arbetsuppgifter än psykiatrisk vård i hemsjukvården. Resultatet avslöjade att distriktssköterskornas fokus var på bedömning, samarbete och socialt stöd som möjligheter att upptäcka psykiska hälsoproblem och främja psykisk hälsa. **Studie IV** beskrev hemtjänstpersonalens perspektiv på upptäckten av psykiska hälsoproblem och främjande av psykiska hälsoproblem bland de äldre som var i fokus. Resultatet avslöjade att kontinuitet i vården och de äldres egna tankar och uppfattningar betraktades som viktigt för upptäckten av psykiska hälsoproblem. Vidare framstod observation, samarbete och socialt stöd som viktiga medel i upptäckten av psykiska hälsoproblem och främjande av psykisk hälsa.

**Slutsatser:** Denna avhandlings resultat är baserad på intervjuer och visar att:

1) Multisjuka äldre personer bör ges möjlighet att få beskriva hur flertalet kroniska sjukdomar påverkar deras livssituation; 2) En optimal nivå av vård kan uppnås genom kontinuitet och engagemang, samt genom att erbjuda en hälsofrämjande dialog baserad på individens önskemål och behov; 3) Även om distriktssköterskorna verkade engagerade i psykiatrisk vård inom primärvården, saknades en uttryckt målsättning för främjandet av psykisk hälsa. Det verkade vidare som att de inte kunde ta det övergripande ansvaret för tidig upptäckt av psykiska hälsoproblem och initiera tidiga interventioner för att främja den psykiska hälsan; 4) Hemtjänstpersonalen verkade ha kunskap om riskfaktorer för psykiska hälsoproblem, och det föreföll som att de var beroende av biståndsbedömarens biståndsbeslut samt av distriktssköterskors handledning. Detta kunde påverka hemtjänstpersonalens arbetsuppgifter som relaterade till att upptäcka psykiska hälsoproblem och främja psykisk hälsa.

Sammanfattningsvis visar fynden i denna avhandling att hanteringen av psykiska hälsoproblem är fortsatt en pågående utmaning för organisationer som erbjuder kontinuitet i hemvård och hemsjukvård för multisjuka äldre personer i ordinärt boende. Fynden i avhandlingen visar även att distriktssköterskorna och hemtjänstpersonalen verkar vara beroende av varandra inom detta område. Främjande av psykisk hälsa beskrevs vara en viktig uppgift bland distriktssköterskorna och hemtjänstpersonalen, även om de beskrev olika förutsättningar och faktorer som utgjorde barriärer mot att upptäcka vanliga psykiska hälsoproblem som depression, ångest och sömnproblem. Personalen beskrev vidare svårigheter i samarbetet och överföring av information mellan utförare av vård och hälso- och sjukvård från kommunen respektive primärvården. Sociala och fysiska insatser - liksom sociala kontakter och socialt stöd för att bryta social isolering - verkade viktigt enligt samtliga informanter, med deras olika perspektiv på hur psykisk hälsa kan främjas.

**Nyckelord:** Distriktssköterskor, Främjande av psykisk hälsa, Hemtjänstpersonal, Kommunal vård, Omvårdnad, Primärvård, Psykisk hälsa, Sverige, Vård av äldre personer, Åldrande, Äldre personer

## LIST OF SCIENTIFIC PAPERS

This thesis is based on following original articles, referred to in the text by their Roman numerals:

- I. Grundberg, Å.,** Ebbeskog, B., Abrandt Dahlgren, M., Religa, D. (2012).  
How community-dwelling seniors with multimorbidity conceive the concept of mental health and factors that may influence it: A phenomenographic study. *International Journal of Qualitative Studies on Health and Well-being*; 7: 19716 DOI: 10.3402/qhw.v7i0.19716
  
- II. Grundberg, Å.,** Ebbeskog, B., Gustafsson, S.A., Religa, D. (2014).  
Mental health-promoting dialogues from the perspective of community-dwelling seniors with multimorbidity. *Journal of Multidisciplinary Healthcare*;28;7:189-99. DOI: 10.2147/JMDH.S59307
  
- III. Grundberg, Å.,** Hansson, A., Hillerås, P., Religa, D.  
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Home care assistants´ perspectives on detecting mental health problems and promoting mental health among community-dwelling seniors with multimorbidity.  
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## **LIST OF ABBREVIATIONS**

ADL	Activities of Daily Living
CM	Care Manager
DN	District Nurse
GAD	Generalised Anxiety Disorder
GDS	Geriatric Depression Scale
GP	General Practitioner
HCA	Home Care Assistant
HCO	Home care Officer
ICD	International Classification of Diseases
MRN	Medically Responsible Nurse
NA	Nursing Aide
NBHW	National Board of Health and Welfare
OM	Operations Manager
PHQ	Patient Health Questionnaire
WHO	World Health Organisation



# INTRODUCTION

The prevalence of chronic conditions and health problems increases with advancing age and with an impact of the healthcare utilisation (1, 2, 3). Mental illness has become a growing problem among an aged population in Sweden (4, 5) and in other high-income countries (6). The term multimorbidity has often been used when public health institutions and researchers have described older people with multiple chronic conditions having complex and comprehensive need of support and care. Multimorbidity, “the presence of several chronic coexisting medical conditions” (7), is associated with mental health issues among seniors and frequent visits within primary care settings (8). Multimorbidity also gives an increased risk of worsen health-related quality of life (7) with greater health care utilisation (9), further higher healthcare costs (10) and even death (11). Despite the fact that aged people is a heterogeneous group of individuals in the population we have to consider that ageing means an added risk of developing chronic conditions and mental illnesses. This includes new challenges for home care assistants (HCAs) and district nurses (DNs) since there is an ongoing trend where the care is moving out from hospitals into the home environment (12). Since the average life expectancy continue to increases in Sweden (13), and older adults are expected to continue to live in the community (3), further research is needed with a focus on mental health promotion among community-dwelling older persons’ with multimorbidity. In this thesis, community-dwelling seniors means older persons that still live in ordinary housing and these seniors are further also referred to as homebound or housebound seniors.

# BACKGROUND

## AGEING AND OLD AGE

The ageing process is a natural part of our lives but it is uncertain at what specific time ageing starts and when a person is seen as an “older” individual. Even if chronological and biological age is used as a measurement of the ageing, it says nothing about current diseases, perceived health or the functional ability of a person. According to international measures, human beings are often divided into young or old, with a line at 65 years. However, persons over 65 years of age and older are a heterogeneous group, with big differences in age, gender, health status and education (14, 15). Hence, there is a further sub-division into the young- old (65-74 years of age), the old-old (75-84 years of age), and the oldest-old (85 years or older) (16). Ageing is further a natural process which involves biological, psychological and social changes (17). Almost all diseases increase in numbers the older we get, and ageing changes facilitate the emergence of diseases by worsening the resilience of the human body (14). It is not unusual that with increasing age there is a greater risk of developing several chronic conditions that may lead to long-lasting needs of care and healthcare (18).

## An ageing population

The proportion of aged people in the population is estimated to increase in Sweden as in rest of Europe (13, 19). This ageing population began several decades ago and is described as a global phenomenon (20). An explanation for this global demographic change could be lower birth rates and increased life expectancy, which is further expected to continue (21). Sweden is a country that has one of the oldest populations in the whole world. Today, 19.6% of the Swedish population is older than 65 years of age (22) and those 65 years and above will increase by approximately 314,000 people in the next ten years (13). In Sweden, there are rising numbers of homebound seniors of increasing age, and sheltered housing places for seniors have reduced by 1,500 per year (3). According to population statistics, there are 663,192 seniors of 65 years and above living alone in Sweden (23). Further, approximately 250,000 of the Swedish population receive home healthcare and about 87% of those are over 65 years of age (12). As the average life expectancy has been rising for more than a century in Sweden (13) it is unlikely that, ultimately, different care professions will not be confronted with an aged population (24) with several chronic diseases, which will result in many

encounters in primary care settings (25) as well as frequent hospital admissions (26). These experiences have highlighted the demand of optimizing interpersonal continuity of care for homebound seniors with multiple chronic conditions (26). Without a doubt, with an extended number of homebound seniors with a broad and complex spectrum of comprehensive needs over time, providing care will become a future challenge among DNs and HCAs (12).

## **Definitions of ageing**

Getting older and ageing is often described as a complex process which involves many different meanings and definitions. Some claim that ageing means a reduction in different abilities, i.e. the ageing starts when different abilities diminish (14). Ageing may also be described from different aspects, such as chronological, social, psychological and biological age (14). Chronological age is about how old a person is in number of years (15). Social age is about how individuals at different ages function within family life and how their social roles change the older they get. The psychological perspective focuses on internal behaviour like emotions and thoughts, and external changes in behaviour or activities, and how these changes affect the person's capacity to adapt (15). Psychological age may also describe how well a person may adapt to the environments in respect of the age-related changes (14). Biological age is about a person's physiological functional ability and current position related to their possible longevity (14, 15).

## **The third and fourth age**

In this thesis old age is defined by the periods known as third and fourth age. The third age represents an active period of time after retirement which is characterised by mostly good physical and mental health, where the senior is independent and still able to manage on her or his own (27). In contrast, the fourth age represents a period of life when ailments and diseases lead to functional disabilities and one is dependent on others to cope with activities of daily living (ADL) (28). Rates of multimorbidity, frailty and disability definitely tend to increase with age, there is a large variation in health, and healthcare needs characterise different groups of seniors in old age. As the population ages, it is likely that the healthcare system will see more of the oldest-old, who probably have both comorbid medical and psychiatric illnesses (29, 30). Treating this heterogeneous group of patients is rather a complex process which demands a more integrative care between medical and psychiatric care, in order to

maximise these patients' quality of life (29, 30). The persons in focus in this thesis are further named elderly, old, older adults, older seniors, persons or people as well as seniors when referring to the old-old and the oldest-old persons.

## **Ageing and mental illness**

Studies have shown that mental illness is prevalent among the oldest seniors in Sweden (4) as well as other high income countries (6, 31). The prevalence varies according to previous studies, due to definitions of the illness and differing measurement methods (32). According to a Canadian study, depression, anxiety disorders, mania or benzodiazepine dependency was prevalent among 12.7 % of community-dwelling older adults and most of those elderly visited a general practitioner (GP) in primary care (33). One Swedish study showed that 52% of the frail elderly in ordinary housing were at risk of late-life depression (32). Another study showed that 15% of Swedish elderly primary care patients considered themselves as depressed in accordance within the Montgomery Åsberg Depression Rating Scale (MADRS) (34). Mental disorders have, in a register-based study, shown to affect every fifteenth older person in Sweden (35) and mental health has further become a large public health problem among older adults in Sweden (4, 5). Even if mental illness could be seen among 30 percent of the old population in a region in Sweden, there are many conditions that are never detected and therefore not treated adequately (36). Psychiatric disorders are often seen among patients in primary care (37, 38) but detecting psychiatric symptoms is quite a challenge among seniors with other psychogeriatric problems (39). Depression and bipolar disorders are especially difficult to diagnose among patients with cognitive and multiple somatic symptoms (40). However, if GPs would deepen their knowledge and skills in the use of diagnostic screening instruments, the identification of psychogeriatric problems would increase (39).

According to the Swedish National Board of Health and Welfare, anxiety disorders usually debut for the first time after 65 years of age while more severe disorders like psychosis debut before 65 years of age (41). There is also an increased risk of developing depression and anxiety conditions with increasing age (2, 39, 42). Some researchers have explained that mental illnesses are related to the ageing process, which increase the risk of developing mental illness according to psychological, biological and social factors (39, 42). However, the increased risk of depression is related to changes in the ageing process and not to ageing itself (39, 43). Risk factors for mental health problems among seniors are, in particular, having

several chronic (2, 8, 39, 44, 45) and other stressful physical conditions (2), painful physical symptoms (46) and perceived loneliness (47).

Even if many homebound seniors in Europe live alone, there are further differences in prevalence of self-reported loneliness among old seniors, in comparisons between countries (48). In addition, research has shown that perceived loneliness increases in old age (49) and loneliness has become a significant public health concern (50) especially among homebound older women (51). Homebound elderly people in particular are a population that has a high rate of symptoms from mental illnesses such as depression compared to other homebound people, who still participate in activities outside the home (52). Depression is also more common among women than among men (53). Late-life depression seems to be the most common mental problem but previous research shows a large variation in prevalence of depressive symptoms among elderly people in Europe (54, 55, 56). A Swedish study, with a randomised sample of participants (60-80 years of age), found that 10% of the participants suffered from depressive symptoms and approximately a quarter of those also reported feelings of loneliness (57).

Important risk factors for depression among an aged population, as well as age, female gender, and comorbid somatic disorder, are lower educational status, mild cognitive and functional impairment, smoking and abstinence from alcohol (58). Depression is particularly pronounced within coronary heart disease, where mortality may increase threefold (59). In contrast, the burden of disease is greater among senior adults, their poorer mental health resulting in more anxiety and depressive symptoms (45). These senior adults also have a worsening medical prognosis which is related to less adherence to medical treatment (40) and an increased risk of suicide (60). However, the exact nature of the relationship between somatic and mental disorders is a further unsolved problem. Different factors such as inadequate medical and psychotropic medication and unhealthy lifestyle habits are suggested by some researchers (61). Other researchers have highlighted the coexistence of depressive symptoms and cognitive impairment, which is especially of interest when differentiating depression from dementia among the elderly (62). Further, cerebrovascular changes are often seen in an aged population and these biological changes may also affect the development of depression among elderly people (63). Still, mental health problems among seniors with several chronic conditions may further lead to negative consequences such as stigma and shame (64), poor health-related quality of life (65), worsening mental health (45) and greater healthcare utilisation (9). In addition, it is often the stigma associated with

depression, that prevents seniors looking for help, together with an impaired social participation and isolation in their homes (66). Anxiety and depression may also lead to negative outcomes such as decreased physical capabilities and less social contacts (67) which may also lead to increased social isolation and a suicidal behaviour (2). In addition, depressive symptoms increase the risk of restrictions in activity, which may lead to functional limitations and further increase the risk of depression (68).

Mental illness can be applied to a wide range of mental health conditions and disorders that may affect mood, behaviour and thoughts. Mental health problems are often used to describe a wider range, from (subjective) worries in everyday life to different symptoms and diagnosable serious long-term conditions. The term mental health problem is therefore used in this thesis to also include the experience of the seniors in focus' different symptoms and subjective worries or perceived mental health problems.

### **Treatment of mental health problems in the elderly**

Older adults with mental disorders are disadvantaged and don't always receive a good and equal care since a lot of those patients have their treatment supplied within the somatic care system or in a context which can't deal with patients with mental disorders (41). Treatment of mental disorders such as affective, anxiety and psychotic disorders in aged patients is described as a complex task and may be dependent on a variety of factors such as pharmacodynamic and pharmacokinetic changes related to a patient's age, comorbidity and individual drug reactions (69). Treatment of late-life depression is especially difficult since it may occur in conjunction with multiple physical illnesses, which may mask and overshadow depressive symptoms that are different in comparison with younger people (63). Further, late-life depression often follows a recurring, relapsing and chronic course (70). Older patients with chronic conditions are usually subjected to polypharmacy or inappropriate drug use (71) with the possibility of drug interactions (63, 69, 72) and hospitalisations may also be a consequence of drug related problems (73). Multimorbidity among frail elderly may therefore be seen as a barrier in detecting and, in turn, the GPs choice of treatment for late-life depression (74). However, multiple illnesses and age should not cause sub-optimal treatment of the population in focus (32). Despite an older population having a large need of care and treatment, Swedish seniors with mental disorders don't receive the same degree of care as other older adults, and these seniors may be diagnosed sub-optimally and under treated or provided inappropriate treatments (41, 63). An

important problem to be dealt with is the physicians' choice of medication among elderly people (63). The problem is related to the complex pathology and physiology, the complexity of psychopharmacology in elderly people as well as interactions with other prescribed pharmaceuticals to elderly with different somatic conditions (63). Even though depression may be treated successfully (75) with antidepressant medication (76, 77) - with or without a complement of psychotherapy (77, 78) - few depressed senior adults receive such successful treatments in primary care (79, 80, 81) even if the effectiveness is well documented (57). One explanation may be that both the patient and the physician may think that depressive symptoms are normal and expected consequences of the aging process (63). Although depression is the most common mental illness among elderly people seen in primary care (82), seniors with late life-depression are more likely to follow a chronic course in comparison with the population that still works (64). These aged individuals often have medical treatments for somatic disorders such as heart diseases and chronic airway diseases (41). In addition, antidepressants are frequently prescribed among elderly people with both depression and anxiety (63). Further, a prevailing treatment of psychotropic drugs increases the risk of interactions and medical side effects and accidents such as falling, gastrointestinal bleedings and death (41). Despite all knowledge about late-life depression, there has been a lack of consensus about treatments such as antidepressants, complementary treatment or psychiatric hospitalisation (83). However, some have formed consensus-based recommendations such as individual cognitive behavioural therapy (CBT) for treatment of community-dwelling adults with depression (84). However, the availability of CBT is limited for a Swedish population with late-life depression (32). Further, interventions not recommended as primary treatments included comprehensive geriatric health evaluation programmes, skills training and education, exercise, occupational therapy or physical rehabilitation (84). Other researchers highlight the importance of increasing the activity level among seniors with a major depressive disorder (67). Further, that physical activity such as aerobic-exercise training and resistance-exercise training may improve overall psychological well-being among adults with mobility impairments (85, 86). According to a review, several studies have found that physical activity interventions may not always improve mood or decrease late-life depression (87). Psychological treatment in cases of problem-solving therapy may decrease symptoms of depression within persons over 65 years of age, but the access to such treatment is limited in Sweden (88). There is, conclusively, a need for further research relating to effects of physical activity within depression in late-life (88).

Even if community-dwelling senior adults are seen to be reduced to patients with current physical illnesses and psycho-social issues to primary care professionals (64) Swedish primary care still remains the first point of access for the treatment of late-life depression and multiple chronic conditions. GPs and DNs have regular contact with the senior population at risk of depression and these professionals may be well placed to observe changes in these seniors' mood and behaviours (64). However, little time may be spent on discussions about mental healthcare for aged patients visiting primary care - despite heavy disease burden (89). According to a Swedish study of older adults with depressive symptoms, only one in four used antidepressant medication and very few of the study sample had visited a welfare officer (social worker) or a psychologist (57). In addition, GPs in primary care are prescribing more psychotropic drugs - like benzodiazepines and tricyclic antidepressant - to patients with mental disorders in late-life than other physicians (41, 69). These patients showing a risk for late-life depression are especially treated with sedatives (32). Despite a well-known undetected and under-treatment of late-life depression (90, 91), GPs continue to manage common mental health problems (such as depression and anxiety) in solo practice in primary care (92, 93, 94). In these matters, GPs may feel insecure about their responsibility in respect of current drug lists and GPs may experience a lack of communication with other specialists about a patient's different medical treatments (95), which may have negative consequences for the treatment and care within senior adults with mental disorders.

Conclusively, primary care is currently organised to care for other acute and chronic medical problems but less equipped to manage late-life depression (96). The National Board of Health and Welfare in Sweden (97) have concluded that education in geriatrics and gerontology is significant for a good and equal care of senior adults in areas such as primary care. Further, general practitioners may need personalised support and collaborative care, since they deal with different organisational barriers between primary care and mental healthcare - which may contribute to current levels of under-treatment and under-detection of late-life depression (77). To improve the quality of mental healthcare, it is important to consider different strategies for the management of mental disorders and educate mental health professionals, such as nurses (83) or other professionals, that have to deal with detecting late-life depression and the management of it in primary care settings (98). These issues about competencies also highlight questions about whether the involvement of psychiatric and geriatric specialists may improve the treatment of older patients with mental disorders (69). Further, serious mental illnesses among community-



dwelling seniors also highlights areas that primary care must address: problems such as a higher access to psychological therapies as well as an improved knowledge about social services and what support the community may provide in these matters (98).

### **Multimorbidity and frailty**

The terms multimorbidity and frailty are often mentioned in research and elderly care. With advanced age there is an increased risk of developing several co-occurring chronic diseases and health problems in one person (99), which is described in terms of “multimorbidity” (100). Older people have an increased risk of developing chronic diseases such as dementia, heart failure, instable angina pectoris (heart chest pain), osteoporosis with hip fractures and other fractures, diabetes (type 2) with complications, stroke, Parkinson’s disease and mental disorders (101). A lot of those chronic diseases, cause functional disabilities, both in mobility and the heart- and lung function, cause decreased energy and fitness (100). As a result of advancing age and a growing elderly population, the prevalence of chronic conditions with polypharmacy is expecting to rise further. Since the term multimorbidity embraces several different diseases and health conditions, it is complicated when one wants to measure multimorbidity in a population. A lot of specific criteria have been used depending on which perspective one has had in research or clinical work (100). In epidemiology, multimorbidity has been defined as the “coexistence of two or more chronic diseases” (101), “two or more diseases at the same time (102) or described as “several concurrent medical conditions” in an individual (7). Swedish researchers and authorities have often used an operational definition of multimorbidity based on the International Statistical Classification of Diseases (ICD-10) (103). This definition had specific criteria that a patient with multimorbidity should fulfil: 75 years of age, hospitalised at least three times in the past 12 months and meeting the criteria for three or more diagnoses (104, 105). Despite the prevalence of multimorbidity depending on methodological variability among studies, two patterns have been identified in a systematic review about the prevalence of multimorbidity (100). When multimorbidity was defined as the coexistence of two or more chronic diseases, the prevalence was 60-70% among seniors over 75 years of age. Further, when multimorbidity was defined as either more than two chronic diseases at the same time, or more than one current disease with functional disability, the prevalence was 25-26% (100). Hence, if we choose to describe multimorbidity in terms of several concurrent chronic conditions, we can conclude that multimorbidity is common in several Western countries, especially with an increasing age and among women (11, 106), and patients seen

in primary care settings (7). Multimorbidity is particularly a major concern in primary care, since there is a high prevalence of depression (107, 108, 109, 110) together with generally poor quality of life (7, 65) and psychological distress among these patients (7). An older population with multiple chronic conditions often also have a poor daily function (111) and are further prescribed high levels of multiple drug therapy (72), i.e. polypharmacy. The presence of mental and physical conditions is further related to the number of emergency department visits and hospital stays among this population (112).

According to problems in counting, measuring and classifying several diseases, frailty is another term used among researchers when they want to describe vulnerable older adults and their need for care and their mortality. Further, an increasing age also implies increasing frailty, and the oldest persons are therefore often regarded as a frail group (113, 114, 115). Frailty could be described as a physical or psychological condition where the senior is in a vulnerable position and at increased risk of worsening health outcomes or risk of dying when he or she is exposed to stressors in life (113). Frailty has also been described as a syndrome related to the multi-system deterioration of an old adult's own capacity of reserves (114). Frailty could be defined as a state of vulnerability which is related to psychosocial, somatic and environmental conditions (115). It seems that there is no consensus in defining the concept of frailty, which may be described as a complex biological phenomenon. However, there seems to be two approaches to defining physical frailty. The first model contains the summary of an individual's number of different conditions and impairment to generate a "Frailty Index" (116). The second model has defined a specific phenotype consisting of a configuration of five potential components (exhaustion, weight loss, reduced physical activity, slowness and weakness) which reflect an underlying psychological decline in multiple systems and energy dysregulation (114). The prevalence of frailty in community-dwelling seniors over 65 years of age may have a large ranging area from 4% to 59% (117). Even if frailty is common in late-life, there are a widely differing prevalence of the condition, according to different operational definitions, specific age groups and designs between studies (117). Despite different definitions of frailty, frail seniors are at high risk of developing single chronic diseases or multimorbidity (118). That means that frail elderly people often receive treatment that demands a daily intake of a high level of prescribed medicines (119).

Multimorbidity and frailty are terms frequently mentioned in research among older adults, but there seems to be no consensus on how these conditions should be defined or even measured.

The two clinical conditions multimorbidity and frailty may be defined in different ways, even if those conditions seem common among the oldest persons, and therefore have a wide-ranging prevalence. These previous definitions of the concept of multimorbidity seem to have one thing in common: that measuring for multimorbidity is about counting the numbers (two or more) of co-current chronic diseases in one person. Counting diseases is also the most popular way to measure multimorbidity and to predict mortality (120) even though the number of drugs and diseases does not seem crucial when planning for service and care for community-dwelling seniors (121). Still, the mentioned definitions of multimorbidity reflect explicitly how those diseases may affect a person's subjective health according to polypharmacy, primary care visits and hospital stays. The previous definitions of frailty seem to be quite complex since they are about counting several conditions, referable to different factors such as, for example, stress. Frailty reflects a decreased physical reserve – and not only disability – or specific disease burden (118). Further, identifying frailty seems dependent on evaluation and the assessment of functional ability and vulnerability with either screening tools or measures of frailty. Frailty also tends to increase with age and it seems like there is a large variation in health, disability and health care needs among different groups of elders. With such conceptual disagreements regarding the operationalisation of frailty, a substantial number of people over 65 could be considered as frail (118). That means that a person with multimorbidity may also be frail and vice versa. Without a doubt, frail elderly people suffer from multiple illnesses (32). The Swedish National Board of Health and Welfare (122) have tried to define and identify these most sick seniors who have a comprehensive need of care and healthcare. One of their suggestions is that seniors with multimorbidity should be described as: a person who over a twelve month period, has experienced three or more hospital admissions and had diagnoses from different diagnosis groups according to the ICD-10 (122).

In this thesis, the focus is on multimorbidity, i.e. older seniors with documented multiple chronic conditions who required intermittent hospital admissions and formal and informal care from DNs and HCAs. Having multiple chronic conditions is a known risk factor for mental illness such as depression (8). These homebound seniors often visit primary care settings (8) and are prescribed psychotropic drugs for mental disorders by GPs (69). It is not unusual that seniors with multiple chronic conditions also receive home healthcare from DNs and with support from HCAs since seniors with multimorbidity may need help with the administration of several prescribed drugs (123).

## **HEALTHCARE SYSTEM**

According to WHO, a health system consists “of all organisations, people and actions whose primary interest is to promote, restore or maintain health” (124). As a consequence of an increasing number of older people with changing healthcare needs, several healthcare systems will meet challenges to improve mental health among aged citizens as regards the professionals’ collaboration and care (125). The organisations providing service and care to the very old vary between countries, depending on each country’s internal finances and structure of its healthcare system. One of the major criticisms of the healthcare system for an aged population in Sweden is that the healthcare system often provides fragmented care for seniors with multiple chronic diseases and severe physical and mental health problems. From an international perspective, the mental health system has been shown to fail when it comes to alleviation of suffering and detection of individual needs among patients with mental disorders (126). The conclusion is that an enhanced collaboration is needed between the patient’s informal network and the mental care system with the purpose of minimising the gap between subjective needs and received help (126).

### **Concepts of home care and home healthcare**

According to demographic changes in many countries, there are growing numbers of patients with significant care and healthcare needs being treated in the patient’s own home - which has challenged the quality of care (127, 128, 129, 130). In Sweden, there is a guiding principle that homebound seniors should be supported so that these elderly people can remain in their homes for as long as possible (131, 132), with more and more consumption of qualified home healthcare (12) or involvement of family members (131). In addition, if seniors with multimorbidity have relatives, their relatives may feel that they have to become informal caregivers and be responsible for coordinating the care and healthcare activities in ordinary housing (133). There is also a tendency that medical and health policies in the Western world lead to shorter hospitalisation, and that older patients with multiple medical conditions are being discharged to their home even if they still need qualified care (26, 104, 132, 134). Being discharged from hospital may further be experienced as a fragile process, among patients who wish to receive safe and good care in their own homes (135, 136).

To go deeper, what is the meaning of a “home”? According to the World Health Organisation, a home could be described as “a place of emotional and physical associations, memories and comfort “ (137). In this sentence, the meaning of home care is further that the

care is delivered in the persons own home instead of being an inpatient at a hospital. The increasing needs for home care of the most severely ill patients has been described as challenging in Sweden (12) and more older citizens will consequently be dependent on healthcare and support in their homes in the near future. However, home care is not only a solution for optimising quality of life among older patients with social or chronic healthcare needs, home care is also considered to be more cost-effective than institutionalised care in Europe (138).

A European project, described in a systematic review about home care, has defined home care as "professional care provided at home to adult people with formally assessed needs" (139. p. 2). This home care includes domestic help, personal care and supportive, rehabilitative and technical nursing care, as well as to respite care provided to informal caregivers (139). According to what the home may stand for in a general sense, it seems difficult to find a national definition of home care that explains what home care may include with regards to finance, organisation and responsibility. The Swedish National Board of Health and Welfare (140) describes in their glossary of terms that home care is defined as: care and social service delivered in the individual's own residence or equivalent housing. Furthermore, home health care is defined as: healthcare delivered in the patient's own residence or equivalent housing and which is coherent over time (140). The complexity of both concepts seems to be that home care may range from care for older adults who only need support once in a while with domestic help to frail seniors with more severe and continuous care needs. Within these different definitions of home and home healthcare, the differentiation is made between the municipalities' responsibility for home assistance, and the county councils' responsibility for home healthcare. Home assistance is provided through home help service with tasks related to daily living such as practical help with hygiene, cleaning, cooking, shopping or personal assistance with the aim to increase socialisation and mobilisation among the seniors. Further, home healthcare is healthcare provided in the patient's own home by healthcare professionals from mainly primary care settings or in some county councils, around-the-clock advanced home healthcare, which may provide a more medically and technically advanced home healthcare with multiprofessional team-work. These advanced home healthcare units mostly have a high accessibility of care during daytime, evenings (and sometimes) all nights during the week.

## **Swedish healthcare organisation**

In Sweden, the healthcare system is organised into local, regional and national levels (141). The Swedish government bears the responsibility for lawmaking, while the 21 county councils/regions are responsible for healthcare and the 290 municipalities for other care efforts such as social services (142). The Swedish healthcare system is a socially responsible system, involving the commitment to ensure the health of the whole population and abides by the principles of need, solidarity, human dignity and cost-effectiveness (141). Healthcare expenditure is mostly tax-funded in Sweden and the state is responsible for the overall health policy. Further, almost all hospitals and the majority of primary care centres are owned by the county councils. The provision of services and funding is the county councils'/regions' responsibility, while the municipalities are responsible for the care of disabled and older people. The county councils are also responsible for ensuring that the population receives care facilities in their own home, healthcare in special housing and when it's needed, provide healthcare in hospitals. Even if the county councils and municipality have different responsibility and tasks, these two authorities are expected to interact with each other to optimize and provide a safe and person-centred home care and healthcare (141).

## **Swedish legislation and reforms**

Home healthcare is regulated by the Swedish Health and Medical Services Act (1982:763) [HSL] (143) and the Social Services Act (SFS 2001:453) [SoL] (144), which involve 24-hour nursing for the Swedish population in need of long or short-term care. The Health and Medical Services Act (143) determines the responsibility of county councils and municipalities. This legislation aimed to ensure that everyone that lives in Sweden has access to good healthcare in respect of each responsible authority organising and providing free-of-charge health services. The Health and Medical Services Act (143) also stipulates that the inhabitants should be provided a permanent contact with a physician in primary care and that the inhabitants may choose which primary care provider (public or private) they want to register within. Further, when an inhabitant needs contributions from both healthcare and social services the county council should draw up an individual plan together with the municipality. This is stipulated in the Health and Medical Services Act (143) and the Social Services Act (144), with the intention to coordinate the contributions so that the inhabitant's individual needs may be met. The Social Services Act (144) declares that the municipalities have the utmost responsibility to provide the population with publicly help

and service in their everyday life - so that they can live safely and independently in their home - despite chronological age and care or health needs. The charges for the public help and services provided are regulated and based upon the receiver's ability to pay. Further in this area, the Law on Support and Service to Persons with Disabilities (SFS 1993:387) [LSS] (145), focuses on people with mental disorders or other disabilities, who may receive daily assistance in their life. However, if a person's disorder is diagnosed after becoming 65 years of age, the person is mostly granted social services within the Social Services Act (144). There are further differences between these two laws. The Law on Support and Service to Persons with Disabilities (145) focuses on the person's individuality and personal needs of support to maintain living in their own home, whereas the Social Services Act (144) focuses on the individual's needs but mainly on support that provides "a reasonable standard of living" for an older person. In addition, this overarching formulation of a person's individual needs under the Social Services Act (144), outlines room for personal preferences and structural interpretations according to economic status in the community. However, these deficits and this vagueness in respect of elderly people's support in the wording of the act, may have been what led to a supplementary act, entitled Changes in Social Services Act (SFS 2010:427) (146). This supplement's main focus is on elderly people: their needs, freedom of choice, security, dignity and well-being in respect of their living conditions, social activities, support and service in their homes. Another law in this area is the Act on System of Choice (SFS 2008:962) [LOV] (147), which refers to when a contracting authority decides to practice a system of choice regarding social and healthcare services. In brief, this means that an individual, the senior in this context, has a legal right to choose the provider of home – and healthcare services. The authority should also support the individual in this process of choosing and inform them what providers are available and where.

There are further important reforms in respect to mental healthcare and accessibility to social services as well as individual choices among people in need of elderly care. In 1992 the Swedish government resolved that persons with mental disorders were not cared for in a proper way and this was the foundation to implementing the psychiatric care reform in 1995, known as "Psykiatrireformen" in Sweden (148). This reform aimed to transfer the responsibility for psychiatric care from county councils to municipalities and further to stimulate the expansion of ordinary housing and to develop social activities for people with mental disorders (148). This reform highlighted the importance of co-operation between the psychiatric care organisations and social services, which led to the starting process of

deinstitutionalisation. Even though the psychiatric reform of 1995 may have improved the life situation for some people with psychiatric disorders, this reform also had negative consequences for those with other diagnoses and with very different needs of care than the target group, i.e. people with schizophrenia (149). In 1992, another major change was introduced when the Swedish Parliament took the decision about a new care policy for an elderly population, known as the “Ädelreform” (150). This reform transferred the responsibility for long-term medical care for an elderly population from the county councils to the municipalities. In this reform the municipalities were given the responsibility for providing adequate care for elderly individuals, as well as the financial and organisational obligation to promote integrity, security and autonomy in both social services and healthcare. This care involves daily activity centres, home help services and adaptations in ordinary housing as well as providing special housing such as nursing homes. The aim of the “Ädel reform” was to place all public care - except attendance by physicians - for these seniors under one authority, i.e. the municipalities (150). The “Ädelreform” is more widely connected to the Municipal Financial Liability (Certain Forms of Health and Medical Care) Act (SFS 1990:1404) (151) which aimed to enable the senior population to remain in their homes. The Municipal Financial Liability (Certain Forms of Health and Medical Care) Act (151) further regulates the municipalities’ organisational and financial prerequisites in respect of the responsibility when a patient is ready for discharge from the hospital and is no longer assessed to need care from a physician, and can be provided social and healthcare from the municipality. Another piece of legislation is the Information and Secrecy Act (SFS 2009:400) (152) which, among other things, contains information concerning public access to information and secrecy legislation between government, authorities, county councils and municipalities. This last legislation is especially important in sharing information about a senior’s mental health since it may be seen as a barrier when it comes to transferring information between healthcare providers in the county councils and municipalities providing home health services for homebound seniors. In summary, the aim of the above - described legislations and reforms - seems to be different strategic efforts to enable elderly people to remain in their homes if they so wish. This, regardless of age, diseases, health conditions or personal needs of social services.



## **PERSONNEL IN HOME CARE AND HOME HEALTHCARE**

Community-dwelling seniors with multiple medical chronic conditions have frequent visits within primary care (8), greater health care utilisation (9) as well as more frequent emergency department visits and further hospital stays (112). These homebound seniors with multiple chronic conditions have shown to be dependent on an integrated delivery system with greater continuity of care from different professionals within specialty care and primary care (153). Since older persons with severe health problems and disabilities, show a risk of depression, they often need help with medication and receive municipal care (32). Additionally, these seniors with comprehensive need of care and support often become dependent on personnel from the municipality and county council after discharge from hospital. In addition, senior adults over 75 years of ages may have difficulties practising their right to affect the decision-making process when asking for home help services (154).

The Swedish National Board of Health and Welfare (155) have concluded that there is a lack of competence as regards needs assessment and evaluation of provided support in social elderly care, and also that older adults' mental and social needs are rarely investigated or met. Despite the older population in Sweden increasing – including increasing numbers of people with mental illnesses - there are still no increasing numbers of HCAs in municipal home help services (156). The prognosis is therefore that there is a need for more HCAs in the municipal home help services (157). Another problem may be nursing aides (NAs) resigning from their jobs, because they experience that caring for an older population is related to feelings of insecurity and lack of encouragement, trust and development (158).

Even if the municipalities and county councils may transfer the free choice of social service and healthcare providers (159) to homebound seniors, their own housing becomes an important and public arena for several home- and healthcare personnel from different organisations and with different competencies and responsibility under current legislation. In Sweden, many providers of home care and home healthcare believe that cooperation between personnel from social services as well as primary care is essential in order to prevent non-integrated care with poor quality of life for home-bound seniors. The Swedish Association of Local Authorities and Regions [SALAR] have also concluded that there are several difficulties in providing care to seniors with the coordination of home care and healthcare (157). In addition, good collaboration may give a better outcome when it comes to psychiatric disorders among seniors with multiple chronic conditions (37). A healthcare

system which provides fragmented care that only focuses on one issue at time, both hinders early detection of risk factors for health problems as well as preventive actions targeting frail community-dwelling seniors (160, 161). Those seniors are often prescribed multiple medications and they often presents a complexity of conditions that lead to more complex needs in primary care (25). Community-dwelling seniors' homes have become a primary site for healthcare professionals (162) and HCAs in supporting seniors with administration of medication (163). With this description in mind, we now know that there are several and different competencies involved in decision-making and responsibilities when older adults with multimorbidity are provided healthcare and social service in their own housing.

### **General practitioners**

In Sweden, primary care has been described as “the front line of psychiatry” and is also responsible for handling all other general health problems of a homebound population who makes use of their services. All citizens may choose a primary care centre and also be placed on a named physicians (GP) list, paid for via taxes and health insurance. GPs are licensed physicians with specialist education in general medicine and they represent almost 19% of all physicians in Sweden (164). Patients visiting primary care centres mostly meet GPs when they initially seek help for different disorders or health problems. The GP should identify and treat new health problems and diseases together with prescribing pharmacological treatments or technical aids to adapt the patients home to the patient's current limitations and needs (165). A patient's GP decides whether referrals to specialists or hospitals are necessary, and role of these physicians is to offer treatment in primary healthcare no matter the age, disorders or health problems of their patients. On-going contacts over a long period of time makes it possible for GPs to deepen their knowledge about the patients, their families, homes and mental health problems like depression. A GP also works with other professionals such as DNs in primary care, especially in matters of home care medical treatment (165). Even if most GPs seldom meet patients receiving home nursing, GPs may play an active role in assisting nurses in matters of medication and the assessment of symptoms (166) and have a shared responsibility for health promotion activities among all age groups (167). GPs may also expect that practice nurses such as DNs should play a greater part in the process when managing depression among patients in primary care settings (64).

## **District nurses**

As described earlier, Swedish DNs collaborate with GPs as well as other personnel in primary care settings (168). These licensed nurses are specialised registered nurses with almost one year of training [75 European Transfer System (ECTS)] – with or without a bachelor's or master's degree in nursing (167). DNs represent approximately 25% of all nurses in Sweden (169). Their specialised education includes areas in competencies from different fields of sciences: caring-, public health- and medical sciences as well as leadership and health education (170). Registered DNs workplaces can be in different contexts such as well-baby clinics, school nursing - and healthcare in ordinary housing and palliative care settings (170). DNs in primary care settings work with health promotion and disease prevention among community-dwelling patients regardless of age, medical diagnoses or health problems (167). These nurses' tasks involves preventive home visits to people over 75 years of age, home nursing or prescribing technical equipment and materials for patients with chronic conditions (168). DNs in primary care also prescribe a limited amount of medicines (168) and delegate the administration of medicine to HCAs providing social service to homebound older adults (123).

## **Care managers**

Care managers (CMs) – or home care officers (HCOs) – are involved in the process of needs assessments of older people in Sweden. Before a homebound senior can be granted support, provided by home care services, an assessment of the senior's individual requirements is made by a HCO in the municipality (171). A public HCO mostly has a degree in social work with a specialisation in legal regulations and specific assessment (172). The Swedish National Board of Health and Welfare have given general advices about preferable skill areas among these community-based personnel (173, 174). HCOs have an administrative role and these personnel mostly deal with applications for assistance and needs assessment (171) which is regulated by The Social Services Act (144). The procedure for assessment of older adults' needs often starts with a request and application from the senior adult that needs help or from relatives or health care providers who have met the senior (171). It is also important that the senior agrees to an application for social assistance (171). After that, the HCO begins the assessment for decision-making and determination as to whether to deny or grant the application. Chapter 4, § 4 in The Social Services Act (144) stipulates that: The individual should through the assessment be ensured a *reasonable standard of living* and the assessment should be performed so that its

strengthens the individuals resources to live an independent life with a sense of autonomy (144). However, the concept of *reasonable standard of living* is not clearly defined, which gives each HCO the opportunity to interpret what the concept means in their own way (175) which may result in inappropriate assessment (154).

### **Home care assistants**

Home care assistants (HCAs) - or nursing aides (NAs) - are unlicensed assistive personnel in municipal home help services or home care services. Older adults with mental disorders are described as a vulnerable group, and in Sweden they often remain in their own homes with care and support from NAs (176) which they have chosen from different providers of home help services. Homebound elderly may be granted support from the municipal home help service in accordance with the Social Services Act (144) and HCOs decision-making: tailored according to personal needs such as purchasing groceries, personal care and cleaning in ordinary housing (177). HCAs mostly work alone and independently in the care-user's home, where they provide service, personal care and housekeeping, as well as administration of prescribed medication (163, 177). The Social Services Act (144) also stipulates the demand for appropriate training and experiences among personnel performing tasks within social services. The Swedish National Board of Health and Welfare (175) have described general advices and recommendations in terms of basic knowledge among staff working in social services care for older adults. Even if the majority of the HCAs have completed training in caring at a high school level (156) they may still need increased knowledge based on mental disorders among older adults (176). Caring for these seniors may be a complex situation since NAs may face a struggle between their altruistic and egoistic actions in their care of senior adults with mental disorders (176). HCAs also relieve DNs in administering medications to a growing number of elderly home care recipients with different health conditions (163).

## **THEORETICAL FRAMEWORK AND CONCEPTS**

The thesis has its theoretical framework in gerontological and caring sciences as well as a holistic view of the concepts of health, disease and mental health promotion. This framework is complemented with elements from the medical, nursing, philosophical and social work field to understand consequences of how multiple chronic conditions may influence homebound older adults' mental health and how mental health may be promoted among the seniors. In order to improve mental health among community-dwelling seniors with

multimorbidity, it is important to describe the seniors' perceptions of mental health and what they perceive may promote it. The views of homebound older adults with multimorbidity are in the foreground together with the healthcare situation in their homes. To illuminate the complexity of their life situation, different perspectives are described from personnel who provide care and healthcare to community-dwelling seniors. The gerontological perspective will be introduced together with the definitions of important concepts and their internal relations to the overarching framework in this thesis.

## **Gerontological sciences**

Ageing is a dynamic process that is often described in terms of gerontology, i.e. the scientific study of the sociological, biological and psychological phenomena associated with ageing and old age (15). The domain for gerontology is of a multidisciplinary nature and focuses on how to provide seniors with adequate conditions of life in old age and to maintain a healthy ageing (178). However, healthy ageing doesn't always mean the absence of diseases or symptoms (179, 180). Despite that, healthy older adults may be suffering of different diseases and be dependent on care and healthcare. In this context, geriatrics (the science dealing with the diseases, debilities, and care of aged persons) is sometimes mentioned, but here it seems way too limited with a medical or disease-oriented perspective on the ageing process (179, 181). The distinction between gerontology and geriatrics has its foundation in the desire for emancipation from the medical and disease-oriented paradigm to focus on health instead of diseases. However, the distinction is no longer useful since the example of gerontological nursing has become a recognised concept nowadays (179). Gerontology can be described as a cross- and multiprofessional area - as well as a multidisciplinary subject - where its main point rests on different aspects of the ageing process dependent on scientific perspectives and the aim of the research (15). Gerontology is built on different disciplines such as biology, psychology and sociology and here the research needs to define concepts like age, ageing and elderly (182). Promoting health among older adults demands competencies in gerontology among multiprofessionals who provides care to older adults (183). Further, multidisciplinary actions need cooperation between different disciplines and multidisciplinary research is recommended to increase knowledge in this area (182). This is especially important since there is an increased need of care and healthcare and a demand for competencies in gerontology among care and healthcare personnel who may encounter an elderly population in the future (184).

## **Mental health, mental illness and subjective well-being**

Mental health is a concept of different positions and in a never-ending continuum. Mental health is also important when it comes to measurement of mental suffering (“distress”) in respect of well-being among a larger population (185). WHO has formulated an overarching definition of mental health which is highly focused on people of able-bodied age and not senior citizens: “Mental health is defined as a state of well-being in which every individual realises his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community” (186). Historically, there has been an intense debate among sociologists, philosophers, psychiatrists and others about whether or not there is such a thing as mental illness and how mental health may be defined. The psychiatrist Tomas Szasz claimed that the talk about mental illness was metaphorical and that much of what was called mental illness was in fact not illness at all (187). He further claimed that mental illness was “problems in living” and such problems should therefore not be treated by psychiatrists or physicians (187). The psychiatrist Ronald David Laing was also a critic of psychiatry and he saw schizophrenia as an intelligible and rational reaction to an intolerable life or family situation (188). The sociologist Thomas Scheff claims that mental illness is a social construction, meaning that a person is mentally ill only after having been classified as ill (189). What is noticeable from a retrospective perspective is that even though mental illness seemed rigorously discussed, it took some time before the concept of “positive mental health” had the equivalent discussion among philosophers, psychologists and psychiatrists. However, the social psychologist Marie Jahoda made some early efforts when she described the criteria of positive mental health and that we cannot define positive mental health as the absence of mental disease (190). The concept of subjective well-being is often mentioned in terms of positive mental health. Subjective well-being is viewed as a fundamental facet of the quality of life and the quality of a person’s life may be assessed internally and subjectively or externally and objectively (191). Mental health, on the other hand, is “conceived of and diagnosed as a syndrome of positive feelings and functioning in life that is measured by subjective emotional well-being (i.e., hedonia) and subjective psychological and social well-being (i.e., positive functioning)” (191. p. 7). Per-Anders Tengland (192) has analysed the concept of positive mental health, as it was according to Nordenfelt’s holistic theory of health (193). According to Tengland a has person acceptable mental health if he or she “has the mental ability to reach basic vital goals, given acceptable circumstances” (192. p. 248). Health, including mental health, is further viewed as a dimension(s) since all a person’s abilities are dimensional categories (194). In this thesis,

mental health is understood from the seniors' view of the concept of mental health as well as the DNs and HCAs perspectives of mental health problems among community-dwelling seniors with multimorbidity.

### **Health promotion, mental health promotion and prevention**

A healthy ageing that focuses on positive aspects of the ageing process is a thought that has been developed over the last decades in Sweden. Promoting health is cost-effective and healthy ageing may improve and extend life itself (195). In the Swedish health care system, there is an increased demand that health promoting initiatives have to be integrated within the healthcare and be a natural part of all treatments. This has led to an increased focus on the concept of health promotion, both as guidelines and practical work in healthcare as well as in research. Despite this, there is a lack of consensus about the definition of the concept of health promotion (196). However, the concept of mental health promotion is described by the WHO and here “mental health promotion involves actions to create living conditions and environments that support mental health and allow people to adopt and maintain healthy lifestyles” (197). Health promotion is further described as an umbrella term among professionals, where disease prevention and health promoting activities are included as well as a concept with a salutogenic approach. According to Medin and Alexandersson (198) health, holistic view, empowerment, coping, collaboration, supportive environments and prevention are concepts that often appeared in association when health promoting activities were described. Empowerment has been described as a legitimate goal and an approach or process in health promotion (199). This approach or process should involve the participants in the formulation of the problem, decision-making and actions, which also means that the experts have to release some of their power and control (199). Promoting mental health is often compared with positive mental health and both physical and mental health are interrelated with the same determinants to achieve an optimal health (200). Foster (201) has concluded that most evidence suggests that mental health also diverges from a physical aspect of health, and that Coping, Adaptation and Resilience (CAR) functions are mainly well-preserved during the life span. Coping has been described as the person's (complex) response to a challenging or stressful situation (201). Adaptation, on the other hand, is a broader term than coping and it goes beyond a protective or defensive response to those dealing with the improvement of the environment. Resilience is associated with positive changes in the management of latent or active adaptation and coping capacities through different mechanisms that may be evident over a period of time (201).

The concept of health promotion also deals with knowledge about risk factors and protective factors for health problems (200). In these matters, Per-Anders Tengland argues that the concepts of health promotion and disease prevention are conceptually related through a causal connection (202). Tengland further explains that “it is possible to promote health without preventing disease”, “but it is not possible to prevent disease without promoting health” (202. p. 323). Without a doubt, having knowledge about risk factors for mental illness means that health care providers may detect mental health problems at an early stage – and further provide mental health promoting activities in primary care (203). In this thesis, mental health promotion is related to the old persons’ subjective view of what may influence mental health as well as DNs and HCAs perspective of what may promote mental health among the population in focus.

### **Disease, illness and sickness**

The terms disease, illness and sickness are often mentioned when researchers describe older adults’ lives and unhealthy situations. These terms may reflect personal health, but from different perspectives such as sociological, psychological and biomedical, which shows that health cannot be considered strictly from one single perspective. However, it is a challenge to establish the relationship between a psychological, biological and social dimension of disease (204). Several social, medical and behavioural studies use the concepts of stress try to make this link, even though stress is not a very explanatory concept. An earlier and predominant overarching idea was that disease was seen as being the result of disharmony and imbalance between an individual and its environment (204). Further, three different modes of “unhealth” have historically been confronted by medical doctors (205). The first mode is disease, which could be described as a pathological process, mostly physical, as in throat infection, related to a biological norm. The next mode is illness, which is described as a personal feeling and experience often without a coexisting disease. Finally, the third mode is sickness, which could be related to a personal mode, a condition for the patient and also a social role as a sick person (205). Others claim that illness is related to suffering, while disease means living with current symptoms of a disease (204). Irrespective of the direction of causality, there is firm evidence in research of a dependable association between chronic psychological distress and illness – and this argues for the importance of psychological research on the prevention and treatment of different diseases (206). However, there seems to be ambiguity about the meaning of the concept of disease (207). For instance, GPs may accept disease in terms of non-infectious conditions while laymen



may accept disease as a living agency that causes a person illness (207). The concept of disease may also be heuristically useful and has been readily used by medical students during their studying process (208). Historically, concepts of disease have been produced in the context of disputes between philosophical perspectives (204). The Swedish philosopher Nordenfelt made some contributions to the philosophy of medicine when he distinguishes disease from illness and argued that “illness” refers to aggregating a number of disabilities into a cluster or syndrome (209). Further, the concept of disease is described as: a person has a disease even if there is only one organ of a person which has a subnormal function, together with a statistically normal environment (193). Nordenfelt also provides a disability-based concept of illness, in which illness is the opposite of health, i.e., ill-health (209). Further, a holistic view of the concept of disease means that diseases are regarded as injuries or faults which causes illness (209). In this thesis, the understanding of disease is related to older adults diagnosed with multiple chronic conditions which may cause mental illness or subjective poor mental health.

## RATIONALE

There is an increasing interest in older adults' mental health, both in healthcare and research. Plenty of indicators suggest that there is a lack in detecting mental health problems among older persons and those detected aren't always provided adequate support or treatment. The literature to date has described that multimorbidity is a well-known risk factor for mental health problems such as late-life depression, which is often seen among seniors with multimorbidity visiting primary care settings. The research to date seems to focus on the prevalence of chronic conditions and mental health problems, the correlation between multimorbidity and mental health problems, medical treatments or GPs and DNs management on mental disorders. The research also focuses on the management of disease prevention and health problems on a group level and a societal level. With the future rapid changes in the Swedish demographic, and the prevalence of mental disorders and medical treatments, older persons with multimorbidity will remain in their ordinary housing with support from home help services and home healthcare. Further research should focus on a health promoting perspective since older persons are a heterogeneous population and mental health problems are about individual experiences of care, healthcare and treatments. Developing knowledge about older adults' perceptions about what may affect their mental health may guide care and healthcare providers in how to approach the subject of mental health and how to initiate dialogues about how mental health may be promoted. With the increased use of home help services and home healthcare, HCAs and DNs will care for seniors with multiple chronic conditions and mental health problems. When relating the knowledge on how older adults with multimorbidity experience what may promote mental health to the experiences of the HCAs and DNs, there may be areas where the seniors' needs might be at odds with the care and healthcare providers' experiences of their duties and responsibilities. A deeper understanding of the seniors as well as care and healthcare providers' perspectives about mental health may also present some ideas about how the resources in care and healthcare may be organised to provide an integrated and safe home care as well as home healthcare that may promote mental health among homebound seniors with multimorbidity.

# AIMS

## GENERAL AIMS

The overall aim of this thesis was to gain a deeper understanding about how mental health may be promoted among community-dwelling older persons with multimorbidity, including the seniors and their home care and home healthcare providers perspectives. In order to fulfil the overall aim, four separate studies (I-IV) were conducted.

## SPECIFIC AIMS

The specific aims of the four studies (Paper I-IV) included in the thesis:

- I. To describe the variations in how community-dwelling seniors with multimorbidity perceive the concept of mental health and what may influence it.
- II. To describe the experiences of health-promoting dialogues from the perspective of community-dwelling seniors with multimorbidity, and what these seniors believe to be important for achieving a dialogue that may promote their mental health.
- III. To describe district nurses` perspectives on detecting mental health problems and promoting mental health among community-dwelling seniors with multimorbidity.
- IV. To describe home care assistants` perspectives on detecting mental health problems and promoting mental health among community-dwelling seniors with multimorbidity.

## DESIGN AND METHODS

This research project consisting of four studies with qualitative descriptive approaches (Paper I-IV). A qualitative descriptive design was chosen since it provides an “well-considered combination of sampling, and data collection, analysis, and re-presentational techniques” (210. p. 337). This design is particularly suitable for receiving large amount of straight unadorned answers to issues of exceptional relevance to policy makers and practitioners or for when researchers wants straight descriptions of phenomena (210). An overview of all four studies is presented in Table 1.

**Table 1.** An overview of the four studies in the thesis.

Study	Title	Participants	Data collection	Data analysis
(I)	How community-dwelling seniors with multimorbidity conceive the concept of mental health and factors that may influence it: A phenomenographic study	Thirteen former inpatients with multimorbidity, aged 79-96, living in ordinary housing in an urban area in Sweden.  Purposive sampling.	Semi-structured individual interviews.	Phenomenographic approach.
(II)	Mental health-promoting dialogues from the perspective of community-dwelling seniors with multimorbidity	Follow up study with seven of 13 participants from study I.  Convenience and purposive sampling.	Semi-structured individual interviews.	Qualitative manifest and latent content analysis.
(III)	DNs' perspectives on detecting mental health problems and promoting mental health among community-dwelling seniors with multimorbidity.	Twenty-five DNs from different primary health care centres in the Stockholm region.  Snowball sampling.	Semi-structured individual interviews and focus group interviews.	Qualitative manifest and latent content analysis.
(IV)	HCA's perspectives on detecting mental health problems and promoting mental health among community-dwelling seniors with multimorbidity.	Twenty-six HCAs from municipal home help services in one urban district in Sweden.  Convenience sampling.	Focus group interviews.	Qualitative manifest and latent content analysis.

## **PARTICIPANTS AND SETTINGS**

All participants gave oral and written consent to participate in following studies:

### **Study I: seniors with multimorbidity**

This study took place in 13 participants' homes in an urban area in Sweden. A purposive sampling technique (211) was used since the research team wanted to recruit homebound seniors with complex and comprehensive need of support and care from home care and home health care providers. The participants were recruited from a geriatric clinic specialised in elderly patients with multimorbidity, between January and August 2009. The clinical manager of the geriatric clinic gave permission for the recruitment of participants and my personal access to "TakeCare", a computer-based health records system which contained the in-patients' medical records. Inclusion criteria were multimorbidity, average hearing and the ability to speak Swedish as well as to be living in ordinary housing. The operative definition of multimorbidity was that the participants should be at least 75 years of age and have been hospitalised at last three times in the last year as well as meeting the criteria of at least three diagnoses (104, 105) based on the ICD-10 (103). Criteria for exclusion were acute confusion or diagnosed dementia that might cause conflicts on the subject of mental health. Data on medical diagnoses, cognitive status, hospitalisation, as well as required care and support from DNs and HCAs, was collected by me from medical records at the clinic. Seventy-three in-patients who met the inclusion criteria were given verbal and written information about the study, which also involved a planned follow-up study (II). Twenty-one of those in-patients agreed to participate; five of those had died and three declined to participate by the time of the data collection. The final sample consisted of 13 participants; i.e. homebound seniors with multimorbidity, ranging in age from 79-96 years, of whom 11 were women and two men. All women lived alone and the men with a wife or child.

### **Study II: seniors with multimorbidity**

After about approximately 18 months, seniors from the earlier study (I) were scheduled to participate in a follow-up study which they had agreed to earlier. This study had a purposive and convenience sample technique (211). Criteria for exclusion were as in study (I). When planning for this study, two earlier participants had moved to a nursing home and three had died. Eight of the 13 former participants met the criteria for inclusion and were contacted. One woman refused to participate and seven agreed to participate in a study that

took place in the participants' homes. The total sample consisted of six women (aged 83-96 years old) and one man (85 years old). All seven participants were widowed and six of these were living alone.

### **Study III: district nurses**

The criteria for inclusion for the trained DNs were any experience of caring for community-dwelling seniors with multiple chronic conditions. The DNs were selected according to the chain sampling technique known as snowballing (212). First, contact was made with a local network in the Stockholm region, which was a politically neutral professional association for DNs. This network distributed written information about the study to trained DNs. After contact with DNs at healthcare centres, the research group was offered suggestions of DNs (at other healthcare centres) who might want to participate in the study. The final study sample consisted of 25 DNs from different primary healthcare centres. All participants had a postgraduate diploma in Primary Health care Nursing and most of those had a formal education in Motivational Interviewing (MI). Two DNs also had a postgraduate diploma in Mental Health Nursing. The 25 participants were all women between 31-83 years of age. Their work experience as DNs ranged between four months and 34 years. Most DNs worked full-time at a primary healthcare centre and one retired DN, 83-years-old, had an intermittent employment during holidays etc. All interviews took place at the DNs' workplaces, i.e. ten primary healthcare centres.

### **Study IV: home care assistants**

The total sample consisted of 26 HCAs from four different urban municipalities in Sweden. This study had a convenience sampling technique (211) and criteria for inclusion in the study were any experiences of caring for homebound seniors with multiple chronic conditions. The participants were recruited through medically responsible nurses (MRNs) in 13 municipalities. These MRNs distributed written information about the study. Four MRNs responded and they further referred five operations managers (OMs) who were contacted to confirm the voluntary participation at the HCAs' workplaces. The sample of HCAs consisted of 23 women and three men between 21-65 years of age. The HCAs were all unlicensed assistive personnel, working part or full-time, and with different backgrounds and earlier training. The participants work experiences as HCAs ranged between six months

and 32 years and they all had experiences of providing home help services to the seniors in focus.

## **DATA COLLECTION**

As data collection, qualitative interviews were used in study I, II and III. In study III and IV focus group interviews were performed as data collection. Qualitative interviews give an opportunity for the researcher to understand participant's life situations from their point of view and perspective (213). Focus group interviews were chosen since this data collection gives an opportunity to understand several participants' differing points of view - on a subject that may be discussed and further developed through interactions in the group (213). All interviews were audio-recorded and transcribed verbatim in the following studies:

### **Study I**

Semi-structured individual interviews were used to achieve the aim of this study. An interview guide was developed in the research group and tested in two individual interviews before a revision of the two open-ended questions. The final interview guide included the two open-ended questions: "How do you perceive the concept of mental health?" and "What do you consider might influence mental health?" Follow-up and probing questions were used to clarify and develop the participants' perceptions about the topic. As the interviewer, I summarised the content after each interview and asked if the intended meaning was captured, i.e. member-checking (214). Sociodemographic characteristics such as age, gender, family structure and education were collected during the interviews. The individual interviews lasted from 30 to 50 minutes and were performed in the participant's home, which all participants chose. All data was collected between April and September 2009.

### **Study II**

For data collection this follow-up study used semi-structured individual interviews which were carried out in the participant's home. The research team developed an interview guide in accordance with the findings in previous interviews (study I). One test interview was performed and minor changes were revised in the interview guide. The interviews started

with open-ended questions about the participant's experience of health-promoting dialogues and what was perceived as important in a dialogue that might promote mental health. Follow-up and probing questions were used to clarify the senior's experience of the topic. The interviewer used a member-check technique (214) after each individual interview to confirm if the intended meaning was captured. The interviews lasted between 45 to 65 minutes. All data was collected by the first author between February and June 2011.

### **Study III**

The written information about this study explained how participation could be by individual or focus groups interviews. Those DNs who were interested contacted me and decided whether they wanted to participate in an individual or focus group interview, and when and where this should take place. Eighteen DNs preferred focus group interviews which were divided into three focus groups with five, six or seven participants. Seven DNs preferred individual interviews. An interview guide with open-ended questions was developed by the research team and tested in one individual and one focus group interview, with no changes since the guide seemed suitable for the aim of the study. Each interview took place in a separate room at the healthcare centres of the DNs. The DNs in focus groups sat around a table to enable eye contact and increase interaction between the group members. All interviews started with the question how mental health problems may be detected among elderly people with multiple chronic conditions, followed by how mental health may be promoted among those seniors. Follow-up and probing questions were used to clarify and develop the participants' experiences. The content in all individual interviews was summarised, and at the end, the first author asked if the expressed meaning was comprehended, i.e. member-checking (214). At the end of a focus group interview, the first author repeated the two open-ended questions and asked if they had anything further to add. A member from the research team assisted and kept notes to ensure the identification of the members' names and citations during my data transcription. The focus groups interviews lasted from 44 to 65 minutes and the individual interviews from 31 to 52 minutes. All data was collected from November 2013 to April 2014.

### **Study IV**

The total sample of 26 participating HCAs was divided into five focus groups with four, five, five, six and six participants in each focus group. All interviews took place in a location at the respective unit at the HCAs' workplaces which the participants had chosen.



The informants were instructed to sit around a table to give an opportunity for eye contact and promote group interaction. The research team decided to use the same interview guide which was tested in the previous study with a similar aim but other participants' perspective of the topic. This guide included two open-ended questions about how mental health problems may be detected among clients (over 65 years of age) with multiple chronic conditions and how mental health may be promoted among these clients. After those open-ended questions were asked, follow-up and probing questions were sometimes used to clarify their experiences of the topic and to promote interaction and dialogue in the group. At the end of all interviews, the interviewer repeated the two open-ended questions and asked if they had anything further to add. The interviews lasted between 44 to 64 minutes. All data was collected by the first author from May to December 2014.

## **DATA ANALYSIS**

All four studies had a qualitative descriptive design with either a phenomenographic approach or latent and manifest qualitative content analysis technique.

In study I, a phenomenographic approach was used in the analysis. Phenomenography is described as a qualitative research methodology, within the interpretive paradigm, that has been developed to describe people's qualitatively different experiences of how they perceive the world in terms of descriptive categories (215). Phenomenography has been defined as "a research method for mapping the qualitatively different ways in which people experience, conceptualise, perceive and understand various aspects of, phenomena in, the world around them" (215. p. 31). In phenomenography, semi-structured interviews in particular have become the basis for data collection (216). The purpose of phenomenographic studies is to describe critical aspects of a participant's way of experiencing the world (phenomenon) that may enable them to handle it maybe more effectively. In this research method, a distinction is made between the first order perspective which is related to facts, and the second order perspective which refers to the participant's perception of a phenomena (216).The different ways of understanding in phenomenography have both a "what" and "how" aspect which tell us what is in the participant's focus and further how meaning is created in the person's world. These different ways of conceiving, understanding and perceiving are represented in the form of

descriptive categories (217, 218). These descriptive categories refer to a collective level and describe the different ways a phenomenon can be understood. All categories of description, described as the “outcome space”, are often related to each other in a hierarchical way (216).

In study II, III and IV, qualitative manifest and latent content analysis was used to handle and understand the qualitative data. This method is an analysis strategy of choice in qualitative descriptive studies when the researcher has used data collection techniques such as focus group interviews and/or open-ended individual interviews (210). Content analysis is a method that facilitates description of the content in communication, by measuring the frequency and intensity of the occurrence of words, phrases or sentences (219). Over the years content analysis has been applied to a variety of areas and with different philosophical and theoretical approaches. The theoretical approach in this thesis can be attributed to Krippendorff’s (219) description of content analysis which has its origin in hermeneutics, i.e. a theory and methodology of text interpretation. The qualitative content analysis method is stated as being able to capture the meaning in the communication in narrative data that has been transcribed verbatim (220). Qualitative content analysis could be used in an inductive or deductive way, depending on the aim of the study. Inductive approaches have mostly been used in nursing research and when there is no previous knowledge about a phenomenon. Deductive approaches are used when the structure of data analysis is based on previous knowledge such as earlier models and theories (220).

The researcher may choose between analysing manifest (describing) or/and latent (interpreting) content in the data material depending on the purpose, extent and quality of the analysed data (219). Latent content refers to the underlying meaning (what the text is talking about) and manifest content refers to what is visible and obvious for the reader (what the text really says) (219, 221). The manifest content is about being close to the text, i.e. the obvious content, which is expressed in a descriptive form and in terms of categories (221). The term category refers to a descriptive level of the content of the text which may answer the question “What?” and the term theme refers to the latent content of the text which may answer the question “How?” in the research (221). The difference between latent and manifest content refers to the depth and level of abstraction since the interpretation of the data material can be done in various ways (219, 221). Since there are several methods in content analysis, depending on the aim of the study and the narrative data, the researcher

has to describe how the analysis was performed (219, 221). In this thesis, an inductive content analysis of the qualitative data was used in accordance with to the aims of study II, III and IV. An inductive analysis was chosen in accordance with the aims of the studies and because there are to our knowledge no previous studies - or theories - that deal with the phenomenon mental health from the perspective of older people with multimorbidity, DNs, and HCAs. These three performed studies also used a manifest and latent qualitative content analysis technique which was inspired by Krippendorff's (219) and Graneheim and Lundman's (221) descriptions of the meaning of the concepts manifest/describing and latent/interpreting. The process of qualitative content analysis involved back and forth movements between the whole unit of analysis, as well as between suggested codes or emerged categories and themes. The research team discussed the emerged categories and theme(s) until consensus was reached in study II-IV.

### **Study I: phenomenographic approach**

A phenomenographic research approach was used in this study which focuses on the phenomenon mental health. This approach was chosen to describe variations of how the participants perceived the concept of mental health as well as their perceptions about what may influence mental health. The "what" aspect in this study refers to the conceptualisation of the phenomenon mental health, and the "how" aspect refers to how the participants perceived that mental health may be promoted. The data analysis was conducted in seven steps in accordance with Dahlgren and Fallsberg (211). These steps in the data analysis may sound simple, but in practice the analysis moved back and forth resulting in revisions of previous steps. The first step consisted of me reading the transcripts several times. In the second step, I tried to detect the most crucial statements that answered the two overarching questions in the interview guide. These statements were then condensed into shorter but representative versions of the dialogue about the concept of mental health as well as what may influence it. The third step of the analysis consisted of my comparisons between the identified statements in order to find agreements of variations between them. In the fourth step, the research team grouped the conceptions into categories, based on differences and similarities, and then suggested preliminary descriptive categories. The fifth step consisted of me attempting to describe the essence of the similarities of understanding the phenomenon in focus. In the sixth step, I labelled the categories with support from one of the members of the research team. It was crucial that the terms used for labelling were relevant descriptions of the variations that were revealed by the participants. The seventh step involved all four members

of the research team. In this final step we compared all descriptive categories in the outcome space in terms of similarities and differences. Our purpose with that contrasting analysis was to clarify the internal relationships between all categories and the structure of the different variations in the ways the participants conceived the concept of mental health and what also may influence mental health.

### **Study II, III and IV: qualitative content analysis**

A qualitative manifest and latent content analysis technique was used in study II-IV, which was inspired by Graneheim and Lundman's (2011) descriptions regarding meaning and use of concepts as well as interpretation in the research procedure. In the second study, I started to read all verbatim-transcribed texts several times to get an overall picture of the material. The texts were then divided into two domains, based on the two aims of the study. The texts were then divided into meaning units, words and statements that referred to the same central meaning. These condensed meaning units were shortened in length, but still close to the text. I labelled these units with a code and further categorised the content of the material inductively, before the whole text was condensed and coded further. The two domains were then put together as one unit of analysis, since the participants expressed that they had no experience of mental health-promoting dialogues with healthcare providers. That meant that the unit of analysis focused on what the participants expressed were important for a general dialogue that may improve mental health. All codes were then compared and divided into categories based on their similarities. These categories referred to the manifest content. The whole research team then discussed the suggested categories before we revised one category which had "dialogue" added, which was also mentioned in all sub-categories. The emerged categories were discussed and compared on a more interpretative level by the team, with the purpose of finding the underlying meaning. The team finally formulated an overarching theme that reflected the latent content. This emerged theme reflected the participant's experiences of dialogues that may improve their mental health and what they believed were important for achieving such dialogues.

In study III, a similar procedure was performed in the qualitative manifest and latent content analysis as that described in study II, which was inspired by Graneheim and Lundman (2011). I started to re-read the transcribed verbatim texts to get an overall picture of the whole material. In the beginning we separated the material from the individual interviews and focus group interviews. Myself and another member from the research team read the texts

separately several times, referring to the aim of this study and qualitative manifest content analysis. I identified units of the text which seemed to answer the two research questions. The data material was then divided by me into two domains, and in accordance with 1) the DNs' perspective of detecting mental health problems and 2) to the DNs' perspective of promoting mental health among the patients in focus. These selected meaning units were then condensed into a description of their manifest content and labelled with codes – without a deeper level of abstraction and interpretation. After a discussion with one member of the research team, I presented the codes to the rest of the research team. Since similar codes had emerged in both the individual as well as the focus group interviews, I compared all codes based on their differences and similarities and further organised these codes into three categories and eight sub-categories, which constituted the manifest content of the material. All categories were then compared with the purpose of finding an underlying meaning which also reflected an interpretative level of the data. After that I formulated an overarching theme - that reflected the latent content of the material - which embraced all the emerged categories in this study. The theme was finally discussed with all members of the research team which lead to a minor revision of the theme.

Study IV also followed a similar procedure as study II and III, which was inspired by Granheim and Lundman (221). The final step began with me re-reading the transcribed material. The other members of the research team also re-read all transcriptions to ensure consistency with the aim of the study as well as in accordance with qualitative content analysis. I divided all focus groups interviews into one domain before selecting meaning units which reflected the HCAs' 1) perspective of detecting mental health problems as well as 2) HCAs' perspective of improving mental health among the clients in focus. These meaning units were then condensed into a description of their manifest content and labelled with codes which were close to the participants' expressions and without a deeper level of abstraction and interpretation. These codes were then compared based on their similarities and differences. Then I divided all codes into three categories, each with two sub-categories, i.e. the manifest content. These categories and sub-categories were then discussed in the team until consensus was reached. As in study II-III, I chose to go further to a more interpretative level, and therefore compared all categories to find the underlying meaning in the material. As a final step, an overarching theme was formulated, reflecting the latent content. The theme was finally presented to the other members in the research team and that lead to no further revision.

## ETHICAL CONSIDERATIONS

When a research team conducts studies involving human beings it is crucial to proceed with well thought out ethical considerations and an awareness of ethical challenges and issues (222) as well as study risks in the recruitment of participants (223). Conducting research among homebound older people especially presents practical and ethical challenges which have to be considered when planning a study (224). The planning of a project may influence every stage of the research process: design of the studies, choice of methods as well as interpretation and presentation of the data. This was especially important when the project involved homebound elderly seniors with multiple chronic conditions who may be dependent on care and support from different care and healthcare providers. This population is suffering from different chronic conditions which may lead to decreased autonomy and an increased need for home care and home healthcare from HCAs and DNs. Loss of autonomy may also lead to being dependent on different care providers and more or less uncritically devoted to those who provide care and healthcare in their home. Present research shows that patients are often placed in what may be described as vulnerable situations and positions where they are consumers of healthcare (222). This may be a conflict of indebtedness versus dissatisfaction towards the healthcare system, and further influence their desire to participate in a project involving their own and the care provider's experiences of the topic in focus. It is important that the study information clarifies that the patient's clinical care will not be affected by dissent, since patients may feel obligated to participate in a study where a nurse researcher has a practical and direct role in the patient's care (223). The recruitment of homebound older people is further described as a challenging process, which could be facilitated if the researcher became more innovative and developed a meaningful partnership with homebound elderly people who are mostly isolated from traditional resources and frequent participation in research (225). The DNs and HCAs may have also found themselves being in a vulnerable position during the interview. Their reflections on their work performance may have led to feelings of personal shortcomings as well as the development of a feeling of insufficiency and that they were being judged by their colleagues or by me as the moderator of the interview. Hopefully, an interview may also have contributed to individual insights about these participants' personal strengths and a professional and future development by sharing other colleagues' positive and negative experiences of the topic in focus. These insights may also involve what prerequisites the DNs and HCAs need in order to handle their workload and, further, how to develop their work environment.

Ethical considerations were also discussed continually throughout the whole project in order to raise our awareness of the possible impact of the work in this process. Oral and written information was given to all participants about each study. This information included the aim of the study and estimated time for data collection as well as that participation was voluntary and could be withdrawn without explanation. Explaining that participation is voluntary, and has no effect on provided care, is especially important if the nurse researcher may have dual roles (223). They were also informed that an audio recorder would be used in the interview. All participants were guaranteed confidentiality and they were further guaranteed that their anonymity would be preserved when the findings were presented. An informed consent was achieved in all studies and this seemed especially important among the seniors in focus, who must be protected and therefore deserve special attention in the process of informed consent (226). The informed consent process should include overarching principles such as respect for the person, justice and beneficence (223). In addition, a clear dialogue during the consent process is crucial when the researcher is recruiting homebound older seniors for participation in a study (224). The researcher should also use methods to ensure that the participants have understood given information about a study, including the aim of the study, potential benefits or risks and the procedure of the study (223). Finally, when data was collected and transcribed, all personal and detailed information was replaced with codes and the appurtenant transcripts are kept in locked cabinets at the geriatric clinic.

Study I involved individual interviews conducted with vulnerable homebound older persons with multimorbidity. This process of data collection may constitute a threat to these participants' confidentiality as it involves recounting different situations from their daily lives and their encounters with their care- and healthcare providers – whom they may be more or less dependent on and devoted to. In order to reduce any possible risk that the inpatients would perceive participation in the study as compulsory, short verbal information about the study was forwarded by a responsible nurse or NA at the geriatric ward. If the patient was interested and wanted to know more about the study, I was invited and presented to the patient by the caregiver. The patients were then given verbal and written information about the study. After that I asked if I could come back after two or three days to ask them if they were interested in this voluntary participation in a study which included a follow-up study in about approximately one year. Both verbal and written consent were obtained when I came back to the patient before they were discharged from the geriatric ward. Other reflections about ethical considerations were formulated after the recruitment

and before the data collection. The participants could decide when and where the interview should be performed - at the geriatric clinic or in the participant's home. On further reflection it can be seen that the questions about mental health may be perceived as intimate and private, and the topic may further evoke prejudicial negative thoughts and feelings among participants. In order to minimise the unfolding of such issues, I performed an off-the-record dialogue after each individual interview. It was important to evaluate the participant's current state of mind so that, when needed, I might offer my support in contacting their responsible healthcare provider at the primary healthcare centre. It should also be highlighted that being able to be narrative about positive and negative experiences - from individual life situations - could benefit these seniors as well. Previous narrative research has shown that giving vulnerable people an opportunity to share their lived experiences may result in the story bringing meaning and order to the participant's experiences (227), and further regain control over the individual's life situation (228). The interviews, which took the form of a conversation, gave the participants necessary time to reflect upon their own experiences of mental health and verbalise their thoughts and emotions about the topic. These interviews also gave the seniors an opportunity to be heard and actively listened to by a professional outside their daily lives and without being dependent on, or devoted to, the person moderating the interview.

In study II, the former participants in study I were contacted via phone by myself. Those living in ordinary housing were asked if they still would participate in this follow-up study which was voluntary and from which they could withdraw whenever they wanted. The participants were given oral and written information about the study and an informed oral consent was obtained from the participants at the time of the interview. All participants could decide where and when the interviews should be performed, and all interviews were moderated by me.

In study III, the written information about the study was distributed by e-mail and via a local network of trained DNs. Those DNs who were interested in participating could choose between an individual or focus group interview with their colleagues. The participants had an opportunity to decide when the data collection should be performed and if they preferred to be located at their work. The informed consent was obtained at the time of the interview, which started by me asking if they had read the written information about the study, and then I presented a short oral summary of this information to clarify the aim of the study and



that participation was voluntary. They were also reminded of their confidentiality in the participation of this study.

In study IV, the written information about the study was distributed by OMs who also became the link to the participants and informed me when and where the focus group interview should be performed at the participants' workplaces. The informed consent was received from the participants at the same time as the interview was planned. In order to clarify the aim and estimated time for the data collection, oral information was provided and the participants were asked if they recognised this earlier given written information. The participants were also reminded that they were guaranteed confidentiality in this study.

All studies in this thesis were performed in accordance with the Helsinki Declaration (229) and ethical approval was obtained from the Regional Ethical Committee in Stockholm, Sweden:

Study I: Diarienummer (Dnr) 2008/149-31.

Study II: Dnr 2008/149-31; Dnr 2015/45-31.

Study III: Dnr 2008/149-31; Dnr 2015/45-31.

Study IV: Dnr 2008/149-31; Dnr 2015/45-31.

## RESULTS

The findings of the data analysis in the four studies are summarised and presented chronologically under the following headings below:

### STUDY I

In this study, the research team identified six qualitatively different ways of how the seniors understood the concept of mental health and factors that could influence it. These six discerned categories were: *Mental health is dependent on: 1) desirable feelings and social contacts; 2) undesirable feelings and social isolation; 3) power of the mind and ability to control thoughts; 4) powerlessness of the mind and inability to control thoughts; 5) active behaviour and a healthy lifestyle and 6) passive behaviour and physical inactivity.*

When the research team compared the six categories in the outcome space, we noted that a common characteristic of all six categories was that mental health was portrayed as a relational concept, which seemed dependent on factors (emotions, thought and actions) that might influence mental health in either a negative or positive sense.

An important finding was that mental health was mostly perceived in terms of mental health illnesses such as dementia and depression. When the informants mentioned depression it was mostly related to their own signs of depression or their fear of being depressed. The informants also mentioned perceptions that could either have a positive or negative impact on mental health. Another finding was these older adults, mostly living alone, frequently perceived that social isolation might worsen mental health and social contacts might improve mental health. Other perceptions were that physical activity and optimism could improve mental health while ageing and chronic pain could worsen it.

### STUDY II

The analysis of the data from seniors with multimorbidity resulted in nine sub-categories, three categories and one overarching theme: *Perceived and well-managed as a unique individual*, which embraced the emerged categories. The category *Accessibility for dialogue* contained aspects of time, forum and a person for preferred and perceived dialogues with relatives, friends, neighbours, and healthcare and care professionals that might improve the

informants' mental health. The category *Meeting a competent person* contained social, professional and personal aspects which included desirable and perceived competencies among those persons the informants' experienced could improve or had improved the informants' health. The category *Getting social support* contained emotional, instrumental and informative aspects which included desirable and perceived social support from relatives, neighbours, priests, counsellors, HCAs and different professionals such as DNs.

The main finding, and the underlying meaning of the material, was the importance of being seen as a unique individual by a competent and accessible person. The participants in this study missed someone to talk to about their own mental health and they further needed dialogue partners who could be accessible for health dialogues that might improve mental health among the participants. The informants missed having relatives and friends to talk with and they especially missed dialogues with social services providers or healthcare professionals for health promotion – or more general dialogues – that could improve mental health. The participants also described how dialogues and social support could improve mental health, by breaking social isolation.

### **STUDY III**

Most DNs stated that detecting mental health problems and improving mental health were seen as important tasks, even though they mostly used to focus on more practical tasks. In the analysis, there were no obvious differences between the findings from the individual and the focus group interviews. One overarching theme; *Being competent and accessible for continuous assessment and individual support in the home environment*, emerged from the analysis of the DNs' perspective on detecting mental health problems and promoting mental health among the seniors in focus. This theme, or underlying meaning of the material, embraced three main categories; *Assessment, Collaboration and Social Support*. According to the informants the most common health problems among those seniors in home healthcare were depression, anxiety, sleep problems and phobias. The DNs stated further that as healthcare professional they had to be accessible for assessment of the seniors' emotional and behavioural changes in the seniors' home. An increased personal knowledge about the senior patient was viewed as crucial in these matters. Collaboration with other healthcare professionals and HCAs was also important and sometimes insufficient if they needed to be able to assess these senior patients' states of mind or how

to improve mental health in a specific patient. The DNs used to discuss their patients in home care with available healthcare professionals in their own organisation but they were lacking an opportunity to consult physicians who specialised in psychiatry or geriatrics. Social support further appeared to be important among the seniors in focus, since these senior patients were mostly living alone and used to express that they felt alone, according to most DNs. The DNs further expressed that being and feeling lonely was the reason why seniors living alone were feeling low or developed late-life depression. Providing informational support about positive effects of social and physical activities was mentioned as being important in order to improve mental health.

#### **STUDY IV**

The HCAs stated that they had experience from the care of clients with mental health problems such as depression, anxiety, high alcohol consumption and sleep problems. The analysis of the data material revealed one overarching theme; *Continuity provided by an accessible and competent team may increase social and physical activity*, which described how mental health problems may be identified and mental health improved. The emerged theme, or underlying meaning of the material, embraced the following three main categories; *Observation, Collaboration and Social Support*.

The HCAs mentioned causes, or risk factors, for mental health problems such as multiple chronic conditions, social isolation and feelings of loneliness. Observing and evaluating a client's emotions and behaviour were seen as crucial sources of the seniors' state of mind and further how the HCAs should act to improve mental health. A good personal knowledge about a client and continual home visits were essential for the identification of mental health problems. The findings revealed that continuity of care and the clients own perceptions and thoughts were essential to detection of mental health problems. Collaboration with other colleagues and healthcare professionals was stated as important since they felt insecure about how to identify mental health issues or how to promote mental health. In these matters, collaboration involved transmission of information about a client as well as cooperation with primary healthcare professionals such as DNs. Different kinds of social support seemed crucial among most HCAs, since most of the clients in focus were cited as living alone and the reason why the clients used to develop depression.

# DISCUSSION

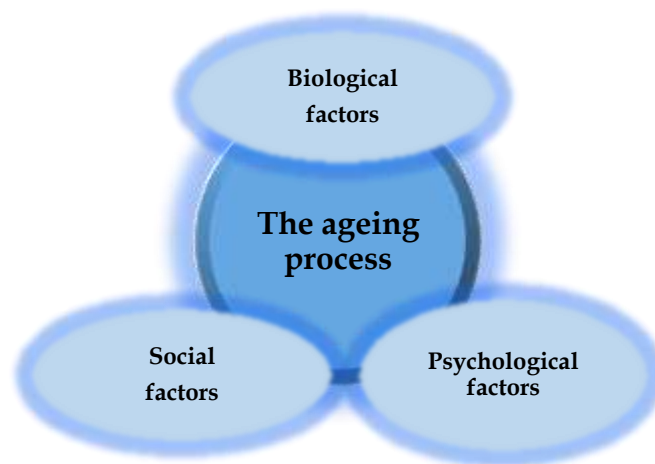
## MENTAL HEALTH PROMOTION

The results from the four studies are discussed in terms of their combined contribution to a new and broadened understanding of how mental health may be promoted – and mental health problems may be identified - among community-dwelling seniors with multimorbidity. The findings are further discussed from the community-dwelling seniors, DNs and HCAs perspectives in study I to IV. The following discussion about promoting mental health is about the prevention of mental health problems by finding a population at risk in order to reduce available risks for mental disorders, as well as the detection and identification of mental health problems for early diagnosis and interventions by finding populations with symptoms of poor mental health. In summary, mental health promotion, and the detection of mental health problems, is discussed from the standpoint before the seniors in focus become a population with diagnosed mental disorders and in need of a physicians prescriptions of different treatments.

### Finding a population at risk

Health promotion is the knowledge about risk factors as well as protective factors for health problems (203) and this area demands competencies in gerontology (183). Multimorbidity is a well-known risk factor for developing poor mental health such as late-life depression (8, 107, 108, 110). Identifying risk factors for mental illness is therefore crucial for healthcare professionals' ability to provide mental health promoting activities (203). In addition, research has shown that what may promote general health may also promote mental health (230) and it is further not conceivable to prevent disease without promoting health within a person (202). When seniors with multimorbidity talked about their perceptions of mental health (study I), it was portrayed as a relational concept which seemed dependent on factors such as emotions, thoughts and actions that might influence mental health in either a positive or negative sense. Furthermore, mental health was mainly perceived in terms of depression or dementia. One explanation of mental illness among elderly people has been related to the ageing process and not to ageing itself. The ageing process may have a negative impact on mental health and an increased risk of developing poor mental health in respect of biological, psychological and social factors (8, 39, 42). Figure 1 describes the ageing process and its relations to mental health problems in accordance to biological, psychological and social

factors. Thus, biological and social factors as causes or risk factors for mental health problems are in line with the findings in study I, III and IV. In study III the DNs expressed that feeling and being lonely were the causes why single-living older persons showed symptoms of depression while the HCAs in study IV expressed that multiple chronic conditions, feelings of loneliness, and social isolation were causes or risk factors for common mental health problems. The informants in study I expressed that ageing itself and chronic pain could worsen mental health. This meant that pain could be seen as a biological factor and further associated with an aspect of the ageing process. These finding in study I are in line with other researchers who have explained that painful physical symptoms (46), painful conditions (231) or chronic pain (232) are associated with – and may be the cause of – late-life depression. Since pain may be described in terms of being a risk factor for late-life depression, elderly patients’ perceived pain seems crucial to evaluate when healthcare professionals meet and treat elderly patients with multimorbidity. This is crucial when very few elderly patients with depressive symptoms are undertreated and have not visited either a psychologist or physician for the use of antidepressant medication (57).



**Figure 1.** Risk factors for mental health problems in the ageing process. © Grundberg, (2015).

### **Observation and assessment of mental health**

Detection and identification of symptoms of mental health problems is of importance for early diagnosis and different interventions for mental health promotion from a population’s perspective (233). When it came to the DNs’ (study III) and HCAs’ (IV) experiences of the detection of mental health problems, both participant groups expressed that the detection of

mental health problems was seen as an important task. The DNs mostly experienced depression, anxiety, sleep problems and phobias as the most common mental health problems while the HCAs experienced depression, anxiety, sleep problems and high alcohol consumption as the most common problems among the seniors in focus. The assessment of seniors' emotional and behavioural changes were seen as important among the DNs, while observing and evaluating seniors' emotions and behaviour were crucial among the HCAs. Both DNs and HCAs expressed that assessment or observations of the seniors' home were vital in order to detect mental health problems. The detection of mental illness among seniors seems challenging and different symptoms are related to a variety of mental health problems among elderly people. Thus, detecting psychogeriatric problems involves comprehensive geriatric assessment which includes functional, social, physical, and psychological assessments (39). Even so, training in psychogeriatric assessment is crucial in the healthcare system (39) as the findings also showed in study III and IV. When recognising different symptoms, an effective communication and emphatic psychological support can make the patient feel safe and can be the time when he or she shares any emotional struggles or symptoms, especially given that stigma could still surround mental illness (234). By listening to the patient's description, different symptoms could be recognised such as trouble with sleeping, fatigue, withdrawal from physical and social activities, or feelings of hopelessness and sadness – which could be a help for the detection of mental health problems or mental illnesses (234) which also the DNs and HCAs seemed to be longing for in this thesis. In addition, if one suspects a patient of having developed depression, the following two short and simple questions can be asked to open up an initial dialogue for recognising depression among adults (235, 236, 237, 238):

- Has the patient often been bothered by feeling depressed, feeling down or had feelings of hopelessness in the last month?
- Has the patient often been bothered by having little pleasure and interest in doing things the past month?

If the patient should answer “yes” to either of these two questions, he or she should be referred for a suitable and more in-depth psychiatric assessment (237, 238). This assessment should be performed by a professional competent in mental health assessment and involve a review of the patient's mental state and associated functioning as well as social and interpersonal difficulties (239). Even if the symptoms of various mental health illnesses vary widely among single-living elderly people, it is important to quickly and correctly diagnose any symptoms (234) such as mild cognitive impairment, which is frequent in persons with late-life depression (240). The DNs in study III reported that they wished to increase their

knowledge about different instruments for assessment. However, in order to simplify the assessment of mental health, there are several psychometric tests which are available for nurses when assessing if an older patient may need a referral for a more in-depth psychiatric assessment. To identify seniors with different health problems, the "Göteborg quality of life instrument" (GQL-instrument) may be used since it may provide a stable and reliable assessment of symptoms and well-being among elderly patients (241). Tests such as the Clock Drawing Test – Modified and Integrated Approach (CDT-MIA) (242), Geriatric Depression Scale (243) and Addenbrooke's Cognitive Examination Revised (ACE-R) (244) can help a DN to assess cognition and mood among elderly patients. The EQ-5D questionnaire, which is a generic instrument for subjectively describing and evaluating health status (245), could also be used since it is related to the concept of health-related quality of life and records mental, social and physical aspects of health (246). The EQ-5D comprises 5 questions (items) which are related to current problems in the dimensions of "Self-care", "Mobility", "Usual activities" as well as "Pain/Discomfort" and "Anxiety/Depression" (245).

Gerontological sciences seem to highlight the importance of a multidisciplinary approach on the dynamic ageing process and the care for elderly people (183). Even if DNs seems ideally placed to detect individuals with undiagnosed mental health issues (247), homebound seniors with multimorbidity also have encounters other than with DNs and HCAs. The medical care of elderly patients receiving home nursing starts at the primary care centres where responsible GPs are involved in the care and treatment of patients receiving home nursing (166). Olivera et al. (39) stated that if GPs were to be trained in the use of diagnostic screening instruments, the detection of psychopathology in elderly patients would increase. It is also helpful to use validated measures and instrument that will assist in determining different mental health problems. There are several validated instruments for screening for depressive symptoms among elderly patients within a primary care context (248) such as the PRIME-MD (236), the Patients' Health Questionnaire (PHQ) (249), the PHQ-9 depression scale (250) and GAD-7 (251). The PHQ-15 is a scale used to assess the severity of somatic symptoms and the presence of somatisation and somatoform disorders (252). According to a systematic review the GAD-7, PHQ-9 and PHQ-15 are short and well-validated measures for detecting and monitoring anxiety, depression and somatisation within primary care (250). Screening for anxiety, depression and somatisation is crucial since these conditions may overlap each other and have individual effects on different areas of functional impairment (253). The Geriatric Depression Scale (GDS) has been used within hospitals and psychiatric care (254) while a shorter version of GDS was



developed with 15 items, more suitable for primary care (255). However, because of the low sensitivity and deficiency of typical depressive symptoms among elderly patients, five more items were added to GDS (256). Furthermore, a possible diagnosis has to be confirmed as meeting the criteria of depression (32). The SF-36 Survey (SF-36), which is a health-related quality of life instrument (257), is organised into two overarching dimensions of health: the Mental component summary and the Physical component summary. These two dimensions comprise eight sub-scales which represent eight aspects of health: Mental Health, Bodily Pain, Physical Functioning, Social Functioning, Role-Physical, General Health, Vitality and Role-Emotional. The clinician can further use Folstein Mini-Mental State Examination (MMSE) for screening of the cognitive state of the patient (258) or the Geriatric Mental State Schedule to detect hallucinations, delusions or obsessive and hypochondriacal ideas (259).

DNs are seen to have a key role in the holistic care and the observation of their patients' behaviour or mood as well as the assessment of their patients' physical and mental health (247). Detecting mental health problems is further crucial, when such problems may be the reason behind a patient's non-adherence to medical treatments for other conditions (260). For instance, if a senior has been prescribed medical treatment for a pain condition and mental health illness, it seems important to evaluate the adherence to prescribed and self-management of medications among elderly patients with polypharmacy. To succeed with that, it is crucial that physicians and nurses create and maintain an empathic relationship with elderly patients with multimorbidity (261). The DNs may, through the preventive home visits to 75-year-olds, identify factors which may be related to unsafe medication management (262). In these matters, the DNs could use the Safe Medication Assessment (SMA), a tool developed to identify factors highly associated to unsafe medication among senior patients in primary care (263), which could maybe also improve DNs' detection of patients' pain problems (264) or maybe even mental health problems.

### **Continuity of care and healthcare**

The main finding in study II showed the importance for the old seniors to be seen as a unique individual by an accessible and competent person. Seeing elderly persons in their home environment over time was also viewed as important among the DNs (study II) and the HCAs (study IV) in the assessment and observation of a senior's mental health status. In order to do so the DNs and HCAs (study III and IV) reported that continuity in home

visits was important in gaining deeper knowledge about the senior. The importance of continuity among the personal home visits was further highlighted among both DNs (study III) and HCAs (study IV) in order to either assess or observe a senior's state of mind and changed behaviour or emotions, abuse of alcohol or individual actions in the senior's own home environment. But what is continuity in home visits? The term continuity of care is commonly described in the literature, according to the three dimensions; interpersonal -, informational - and management continuity (265, 266, 267). The interpersonal dimension refers to current therapeutic relationships between patient and providers. The informational dimension of continuity refers to the bond of information between the time of care as well as the transition of information between care providers and communication between patient and the provider of care. The management dimension refers to the planning and coordination of the care as well as the personnel and resource management. So, even if continuity in care is considered as a prerequisite for quality of care (268) and further associated with patient satisfaction (265), continuity of care in home-healthcare should be considered as a natural and pronounced goal in matters of detecting and managing mental health problems. Continuity of home care, with all three dimensions (265, 266, 267) seems important in matters of detecting psychogeriatric problems in primary care. Due to DNs frequently knowing their patients for a long period of time, DNs are likely to observe changes in patients' behaviour and mood so that they gain a comprehensive assessment of mental health and can, where necessary, make a further referral to other appropriate services (247).

### **Social and physical interventions**

Previous research has shown that social isolation and the low impact of social activities among single-living homebound elderly people is a known risk factor for late-life depression (52) and especially among women (53). Loneliness among older people is associated with more use of outpatient care, which has also been associated with a depressed mood (269). In study I, III and IV the informants reported that social contacts may have positive effects on mental health, and the informants in study II expressed that dialogues and social support could improve mental health, by breaking social isolation. These findings should be compared with other research even though there seems to be a lack of consensus in the effectiveness of interventions being contested and, further, of how preventing loneliness and social isolation may improve mental health among housebound older people. Mojtabai et al.

(270) claimed that loneliness and social isolation have adverse negative consequences on physical and mental health and that there are data that support that the use of social network interventions may reduce social isolation among people with grave mental illness. In a systematic review studies involved health promotion intended to remedy loneliness and social isolation among elderly people (271). The review concluded that only a few interventions were effective for community-dwelling elderly people to remedy social isolation. For instance, social activities that targeted different groups of people such as elderly people and group activities that involved training and educational input, both seemed to be effective. Furthermore, an observation was that interpersonal resources such as self-esteem, coping or psychosocial health were also important factors for both loneliness and perceived isolation. The conclusion was further that programmes that enables elderly people to be involved in preparation, developing and delivering activities are also most likely to be effective in matters of preventing loneliness and social loneliness (271).

Preventive home visits have often been mentioned as one example of a health promotion activity (272), including health promotion dialogues to every homebound senior aged 75 (168). Home visits may, on the other hand, be seen as one way to assess mental health before providing interventions for positive mental health promotion. However, there seems to be a lack of consensus on the effectiveness of preventive home visit to community-dwelling seniors. Two earlier systematic reviews which examined the effectiveness of preventive home-based support for housebound elderly people reached opposite conclusions (271, 273, 274). According to the conclusions in one of those, home visits may reduce admission to long-term institutional care as well as reduce mortality among older people (273). Other researchers found that there was no obvious evidence of any effects from preventive home visits to older people living in the community (274). Furthermore, an earlier controlled trial demonstrated a substantial reduction in loneliness and social isolation even though the study provided no further evidence for finding activities of daily living or better resolution of physical problems (275). In addition, health promotion provided in group meetings, may promote mental health by focusing on positive and educational elements of importance to the group members, who also may perform social activities together (276). Rantakokko et al. (277) found in a randomised controlled trial that a volunteer-assisted out-of home activity intervention could decrease depressive symptoms among homebound elderly people who are unable to access the outdoors independently. However, seniors with multimorbidity may have difficulties to leave their homes for out-of home interventions with the purpose of breaking social isolation due to physical disabilities or other functional limitations. In addition, the findings in study III showed that phobia was reported as a common mental health problem,

according to the DNs. This is important to be aware of when providing and planning for out-of-home interventions such as group meetings, since phobia may be a barrier for some persons with late-life depression. A previous thesis examined social phobia in the elderly population and the findings showed that there was a correlation between a “high prevalence” of social phobia and comorbidity between depression and other anxiety disorders (278). Since social phobia may lead to difficulties in leaving the home environment, one could argue if the occurrence of late-life depression and social phobia may be the reason why depressed older persons don’t want to participate in provided social interventions. Conclusively, detecting different phobias seems to be of importance for adequate treatment – before planning for social interventions which the senior refuses to attend outside the home.

The findings in this thesis also showed that physical activity may improve mental health, according to both the seniors (study I), the DNs (study III) and the HCAs (study IV). This mutual perspective on the effects of physical activity in the improvement of mental health would be of great importance for those providing activities for the purpose of promoting mental health. But for other seniors physical activity may be seen as unimportant and be unaware of its positive effects on health and especially mental health. To inspire an elderly person's readiness to engage in physical activity, the professionals could provide individualised feedback based on individual physical assessment of the functional capacity and through highlighting the profits for different health problems (279). Moreover, earlier research has shown that physical activity such as certain exercise training may be efficient in decreasing depressive symptoms and clinical depression among an elderly population (280), or among adults with mobility (86). Despite all this research, a previous study showed that multimorbidity was related to increases in activity limitations and different diseases as well as related to either increases or decreases in social networks, when the researcher performed a psychometric examination of both multimorbidity and mental health in older adults (281). Moreover, the research about the effects of physical activity among elderly people with physical limitations and different mental health problems has been inconsistent and doesn’t always improve the elderly person’s mood or decrease late-life depression (87).

### **Providing social support**

The literature has commonly described social support as different types of behaviours and social support is further viewed as an important function in social relationships, where the intent of the provider is to be helpful. The findings in all studies (I-IV) gave a clear picture

that social support seemed important, since both the seniors with multimorbidity and the DNs and HCAs voiced that different types of provided social support may promote mental health. The DNs in study III also mentioned informational support as another aspect of social support. According to Svedberg et al. empowerment is the substance of mental health promotion, together with practical and educational support, provided by means of good alliances with healthcare professionals (282). It is further recognised that patients with different chronic diseases must know how they should handle their unique situation and that social support and patient education can improve the patients' health outcomes (283). The substance of support can be interpreted as a sense of having control over the body and situation as well as an increased feeling of security by the receiver of support (284). Edmonds et al. (285) stressed that emotional support may help people to deal with those changes and losses that result from a chronic disease as well as to help them cope with other consequences of the disease.

The DNs in study III also recognised that mental health promotion was important, but they usually focused on more practical assignments. Even if professionals such as DNs may believe that their role is to focus on a patient's physical health needs, DNs are the health professionals who have a growing role in supporting vulnerable housebound people with mental health issues (247). Lee and Knight (286) claim that DNs have a key role in the prevention of mental illness since they have a high awareness of psychosocial interventions for mental health and close contacts with social workers. They further concluded that the DNs were mostly influenced by the medical model in the treatment of mental health issues (286). Despite that, DNs are the professionals who meet a wide range of mental health problems (287) and these professionals are often viewed by elderly people as someone with whom one can discuss concerns and issues within the home environment (288). Caring for patients in their own home gives DNs a unique position of meeting a person in his or hers home environment (247). Caring for people in their own homes may facilitate the development of a trusting and close relationship that further facilitates the delivery of person-centred care (289). The support DNs may provide for patients and their relatives could be related to their knowledge about what voluntary and statutory services are available for elderly people in the community. Furthermore, these healthcare professionals could encourage elderly people to become more involved in community activities with the purpose of reducing isolation (247). DNs and HCAs may also provide information about the importance of supportive social networks composed of friends or family members.

According to the multidimensional nature of mental health problems, patients need to be informed about the importance of involving family members in the recovery process (290). However, providing social support may make the senior become more dependent and have less autonomy. A more purposeful autonomy support may have a positive impact on the old senior's ratings of both physical and mental health (291). Moreover, when providing social support it is important that the recipient of the support is able to perform and choose actions on the recipient's own terms (292). It is also important that the senior with multimorbidity perceive social support as an action that is provided from the individual's unique needs and without creating dependence or threatening the autonomy (292). From this point of view, it seemed advisable that support-givers provide their patients and clients with choices, acknowledgement as well as information and exert low pressure on them to behave in a specific way – that is, providing support that confirms the recipient's self-responsibility and autonomy throughout the helping process. Consequently, care providers need to learn how to interact to recipients that they will be supported in whatever activities they chose – and that freedom of choice remains with the recipient (291).

### **Coordination and interprofessional collaboration in care**

Previous research has highlighted the importance of coordination and interprofessional collaboration to maximise the improvement of outcomes in the care of homebound older people (293) and that DNs would be ideally placed to be involved in such collaboration (247). This finding is in line with study III and IV and this may further be seen as in line with gerontological science's view on the ageing process and the importance of a multidisciplinary approach for a healthy ageing (183). The conclusion of the findings in this thesis was that collaboration between DNs (study III) and HCAs (IV) seemed crucial in matters connected to detecting mental health problems as well as promoting mental health among homebound elderly persons with multimorbidity and at risk of developing poor mental health. However, even if DNs and HCAs are the personnel who have the most frequent contacts with these homebound seniors with comprehensive need of care and support, it is still unclear why the DNs and HCAs didn't have routines for collaboration and for the transmission of information about older persons' mental health conditions.

According to some researchers, the collaborative care model is a method which was developed to integrate and link physical and mental health in primary care contexts by managing mental disorders as a chronic disease rather than treating different acute symptoms

(294, 295). The collaborative care model has, for instance, been implemented in other countries to improve anxiety and depression care (296, 297, 298). This systematic care approach may support collaboration of primary care providers and specialists in mental health care in order to develop and adjust individual treatment plans based upon the measurement of different symptom-related outcomes (294). However, the value of clearly defined goals has been highlighted as crucial in the process of implementing the collaborative care model in primary care (299). Furthermore, it is also important to continuously involve - and to collaborate with - the patient and relatives in the interprofessional care process, since it would improve the client-centredness (300).

A team that focuses on care for patients with multimorbidity, including both community team members and healthcare providers requires explicit opportunities, from such things as feedback, supervision and consultation (301). Moreover, DNs and other members in primary care teams also need to create a closer relationship with specialists in mental healthcare in the management of mental health issues (286). Having a multidisciplinary approach is especially vital in care and healthcare since physical conditions and mental disorders may be linked together among those who have mental health problems which have not always been detected and had adequate treatment provided for (41). Thus, if the care recipient has limited ability to describe his or her emotions - or give adequate information about current physical and mental health - staff such as CMs and healthcare professionals like DNs or GPs ought to collaborate with the patient's relatives or responsible HCA since they may add some further information about emotions, behaviours, cognition and personal needs. This with the purpose of gaining a better understanding of the seniors' state of mind and a person's individual needs before providing different treatments or actions that may promote mental health. So, a well-developed communication within the collaboration in a multi-professional team may also provide better quality of care and service for older persons (302) which is in line with the findings in study III and IV. It seems necessary and important that the DNs collaborate with the HCAs for an opportunity to take part in the HCAs' observations and personal knowledge about a senior's changed emotions and behaviours. This information seems especially crucial since the findings in study IV indicated that the HCAs had knowledge about risk factors for mental health problems - but seemed unsecure about which professionals they should contact or had the primary responsibility for homebound seniors' mental health.

## **Barriers in legislation and organisations**

The Act on System of Choice (147) seems to have made it possible for the establishment of more actors in primary care and home help services in Sweden. The consequences of this legislation seem to have made it more difficult for DNs to collaborate with HCAs since DNs have to identify an increasing number of home care groups for the transmission of information about homebound elderly persons whom are both provided home healthcare and home help service. Other consequences of current legislation are that the HCAs may have to collaborate with several primary care centres and to identify which DN is responsible for the home healthcare of a specific client. This difficulty in collaboration between DNs and HCAs is in line with the findings in study III and IV. The DNs (study III) stated that it was quite difficult to be responsible for patients' mental health and these professionals seemed especially dependent on HCAs to both detect mental health problems and promote mental health. The DNs further requested improved collaboration with HCAs and vice versa. A barrier in collaboration between these actors may have also made it difficult for the DNs to provide supervision to HCAs, as the HCAs also expressed they were longing for in study IV. Craftman et al. (123) confirmed that the DNs, in their study, requested improved collaboration with HCAs in the matters of delegating administration of medication to HCA, and the researchers further concluded that the collaboration between DNs and HCAs could be facilitated if they were governed by the same authority. So, an increasing number of home care units and primary care centres have become a challenge for both HCAs and DNs when they are striving to collaborate and exchange information about mental health status among the seniors in focus. Moreover, ensuring continuity for patients in home healthcare does not seem feasible since there are conflicts with ideals or professional standards, i.e. the patients' well-being or the well-being among the staff in home healthcare (303).

Furthermore, the HCAs in study IV didn't seem to contact the responsible GP or DN for information about a senior's increased alcohol consumption, which may be explained by the fact that the HCAs interpreted the Information and Secrecy Act (152) as a barrier in transferring information about a clients' health condition to healthcare professionals. The HCAs further seemed to think that they were not entitled to contact responsible professionals in the healthcare system without permission from the client. In addition, the intention with this legislation included the protection of clients' confidentiality in social services. According to chapter 26 and 9 § of the Information and Secrecy Act (152) it is possible to break the confidentiality and there is nothing that hinders individual information



being transferred from one authority in social services to another authority in healthcare if it is needed in order to provide the individual with the necessary care, treatment or other support and if the individual is, for example, continuously abusing alcohol. The conclusion is that it is possible for the HCAs to transform information about a client's alcohol abuse to responsible healthcare professionals in primary care after accurate assessment of what harm the alcohol abuse may lead to without care, treatment and support. However, that further leads to the importance of the HCAs being provided support and supervision about law enforcement as well as in managing clients with alcohol abuse or dependency, since these clients may suffer from an undetected and untreated late-life depression. It should also be noted that many seniors with multimorbidity are prescribed several drugs that may interact with alcohol, so recognised alcohol abuse should therefore be a matter for the responsible GP and DN in home healthcare. An evaluation of medical treatment seems especially crucial among GPs since they are the main prescribers of psychotropic drugs to older people (69).

Mental health problems have become a great challenge for health professionals and the public sector and caregivers need training and education in order to detect and manage depression among older adults with depression (304). If mental illness continues to be a growing but neglected health problem for an older population in Sweden, there is a continual need for more adequate national strategies to meet this challenge so society may contribute to a healthy ageing among the population (57). One national strategy may offer some reflection about current organisations that provide home care and home healthcare for the seniors in focus. Previous studies have shown that homebound elderly people with extensive needs and problems (multimorbidity) within care and healthcare are vast and scattered among many different actors (133). Moreover, changes in how the healthcare is organised have led to more specialisation, differentiation and fragmentation of the healthcare on several levels (305). Even so, the roles and division of responsibilities may be ambiguous between GPs and DNs in primary care and in the care of elderly with multimorbidity and comprehensive need of healthcare (166). In addition, one barrier is that there are rarely any collaborative care models in primary care in Sweden, where DNs and GPs meet HCAs or CMs for a more holistic view and mutual planning of a person-centred care for those elderly persons with comprehensive need of home care and home healthcare. Another barrier may be that there seems to be no forum for planned personal meetings between home care and home healthcare providers, which also DNs (study III) and HCAs (study IV) expressed they called for. Moreover, barriers in interprofessional care models may be that team members are often placed in different organisations far from each other and without an opportunity for personal meetings. Nevertheless, even if the professionals and personnel are from different organisations, the

staff involved in the collaborative care model may communicate through the use of phone calls, e-mail, electronic health records system messaging and brief in-person meetings (296).

The seniors in study II expressed that they needed partners that were accessible for health dialogues and time appeared to be one important aspect of accessibility. In addition, factors such as personnel resources appeared to be important prerequisites for both DNs and HCAs (study III-IV) since they stated that they lacked time for assignments that included detection of mental health problems and to promote mental health within this population. Even if interprofessional teamwork may provide a holistic view of the patients' problems members of collaborative teams may perceive that they don't have the support of the organisation and that they can't provide service and patient care in the way that the team members would like (306). Another barrier was that the HCAs in study IV claimed that they seemed dependent on CMs' decision-making for the granted support so that they had limited time for the planned assignments and especially for the detection of mental health problems or promoting mental health, neither of which seemed to be part of the content of HCAs' scheduled assignments. HCAs may, for instance, experience that the hours within which the home care is delivered have gone down and that most assignments are associated with administration of prescribed medication (307). The term "moral distress" is often used by health professionals when they refer to their own experiences of failures arising and frustration when they are trying to fulfil their moral obligations to those people they provide care to (308, 309). Moral distress has also been used to relate to situations wherein heavy workload and lack of time become factors that make it impossible to take on the moral responsibility for those patients they are caring for (310). One may discuss how institutional factors such as heavy workload, lack of time and personnel resources may affect DNs and HCAs in a longer perspective for the continuity of care and the detection of mental health issues among their clients. In addition, moral distress among staff may in a longer perspective reinforce negative perceptions and beliefs about ageing and dying (310) and stressed care providers might not consider older persons as unique individuals (311) which is the essence of person-centred care. Further, institutional factors may cause the HCAs to leave their work since organisational work pressure with unmet expectations has shown to be the explanation why care providers leave their work in care of older people (158). The reason for the discussion of moral distress (and its possible consequences) is relevant in this thesis, since if staff decide to leave their work as HCAs it may also have consequences for continuity of care and loss of unique competence about a client's life situation from one day to another. This competence may include knowledge about behaviours and emotions which could reflect a

process of worsening mental health over time. Instead, since these home care workers are posed to serve an even more important role in the future healthcare team, they should be provided tools and skills to support older clients to remain in the community (312). Efforts such as supervision to improve support to the employees, and the improvement of an organisational culture that is based on mutual appreciation and respect, are stressed to improve job satisfaction in this field of work (313). It therefore seems crucial that assignments in matters of mental health promotion are integrated in DNs and HCAs' work field and organisations, and also that both DNs and HCAs are given the right prerequisites such as resources for performance, collaboration, supervision to improve support and competencies in the assignments of promoting mental health over time.

Nevertheless, promoting positive mental health is not just an assignment on an individual and group level, mental health problems among elderly people is also an overall social problem in society so even politicians and legislators need to take more serious actions to meet an elderly population's need for care and healthcare. Furthermore, mental health promotion should therefore be seen as a strategic and policy priority in Sweden since we are getting older and older with the development of several chronic conditions. Formulating and planning strategies for the management of mental health care is especially of importance since the political intention has been that elderly persons should remain in their ordinary housing with care and healthcare from different providers and several organisations – which is regulated in accordance with different legislations which may be in contrast to each other and their intentions.

## **METHODOLOGICAL CONSIDERATIONS**

### **Overarching evaluation of research**

In present thesis the research team chose a qualitative descriptive design with different data collections: a phenomenographic approach in one study and qualitative content analysis in three studies – inspired by Graneheim and Lundman (221). This qualitative design was chosen due to the fact that “qualitative research is designed to describe, interpret and, understand human experiences and to elaborate the meaning that this experience has to the participants” (314. p. 353).

The concepts of dependability, credibility, transferability and confirmability are often used to describe different aspects of trustworthiness, which is important to evaluate in qualitative research (315). Dependability is about whether the researcher shows that the findings are consistent and could be repeated by other researchers. The credibility criterion involves establishing that the findings are believable or credible from the participants’ own perspective. The concept of transferability refers to the level to which the findings may be transferred or generalised to other contexts. Finally, confirmability refers to the degree of neutrality or to the extent which the results have been created by the participants in the study and not by the researchers’ motivation, interest or bias (315). Further, other strategies have also been used to enhance validity in qualitative research. External validity is related to the extension of the findings in a qualitative study while internal validity is affected by the design of the qualitative research (316).

Initially, it was quite difficult to recruit respondents to the four studies in present thesis. This fact could have different reasons such as stigma about mental health, severe illness, the view of ageing and diseases, lack of personal and professional interest in the topic and lack of time for the interviews. However, the explanation for the difficulties in recruitment could not be answered here since it is only speculation. In addition, the recruitment process gave me an opportunity for several meetings with the participants in study I and II. This may be highlighted as a strength in study I and II, since it is important to establish a “prolonged engagement” with the purpose of creating a sense of security and confidence with the participant (314). By following the respondents from the first study we showed that these elderly may be seen as a vulnerable population to study over time in longitudinal studies. Not least, that assumption was proved in study I where several died before the implementation of the interview. The same applied when we followed them up and there was a loss of six out of

13 participants. Nevertheless, despite that, we gained rich data material with various perceptions and experiences of the research area. Even though the research questions was in focus when planning the research design of this thesis, it could be seen as a limitation that the research design only included qualitative interviews and focus groups interviews as method for data collection. When designing the project, the research team discussed whether we could choose questionnaires for data collection, but then we would not have been able to capture the participants' unique experiences and ask probing questions about the topic in focus. Certainly, our choices of data collection seem reasonable since qualitative interviews gives the respondents the opportunity to express themselves with their own words in order to convey their situation from their own unique perspectives and experiences (213). The different mixed methods for data collection in the research design may further be seen as a strategy to enhance the external validity in our research. To enhance the credibility of the research I used member-checking in the semi-structured individual interviews (314) and repeated the two overarching questions in the focus group interviews. This strategy seems appropriate since the participants either confirmed my summary of the content or further explored their answers about the topic in focus. The degree of trustworthiness may even be enhanced by the fact that the same person (myself) performed all interviews and transcribed all data material, which all members in the research team took an active part in. On the other hand the internal validity may be seen as low though, as data collection was not collected by all four members of the research team. Using an audio recorder for data collection may be seen as strategy to further enhance the internal validity of the research design.

Sandelowski (210) has stated that qualitative content analysis is appropriate for data collection techniques such as open-ended individual interviews as well as focus group interviews, which the research team also experienced in three studies. To enhance the level of external validity we had a strategy to describe the analysis processes in each study. This strategy also gave the opportunity to compare differences and similarities between the meanings of emerged concepts in study II-IV. The argument for this strategy in data analysis seems especially important since one potential weakness of qualitative content analysis can be said to be that it requires the researcher to interpret his or her own material (317). A strength on the other hand, could be that all members discussed all findings until consensus was reached. In the matters of confirmability and external validity, it may be seen as a strength that all actors in our research team were involved in the process of the data analysis in current studies. This involvement of the whole research team may also have reduced the risk of subjectivity and enhanced the credibility of the findings in previous research.

The choice to provide short quotations from all interviews may also enhance the degree of dependability, credibility and internal validity. Further, showing the relationship between the data material and descriptive categories in a table with an outcome space may further have enhanced the credibility and external validity in study I. To further enhance the credibility of the findings in study II-IV, we provided examples of emerged codes - or meaning units - and sub-categories, categories, and theme in a table in study II-IV.

The degree of transferability is more complex to evaluate since our research questions involved the participants own unique experiences. Further, the purpose was not to demonstrate generalisability nor any causal explanations for mental health problems among this population. That means that the degree of transferability may be seen as low since the findings in this thesis could not be transferred to all seniors with multimorbidity and also by the fact that several elderly people with multimorbidity never develop mental health problems. Furthermore, the research team have tried to discuss the findings in each study and compared the similarities and differences with other studies, which is a strategy that may enhance trustworthiness in qualitative research (318).

## **Study I**

*Strengths.* The sampling technique seemed to be well suited since this study included participants with variations in age and number of diseases. The operational definition of multimorbidity provided participants with severe illnesses - as well as complex and overlapping health problems - who required care from DNs and HCAs and had also undergone intermittent acute hospital admissions. Semi-structured interviews, with accordance to Marton and Booth (216), were found to be an appropriate method for data collection in this phenomenographic approach. Two test interviews were performed which led to revision of the interview guide, which is recommendable (319).

*Limitations.* The operational definition of multimorbidity also made it difficult for a purposive sampling technique (211) in the recruitment of more participants and from both sexes. These difficulties in recruitment led to a small number of participants and mostly women. One other limitation could be that the study only included participants that seemed to think that the topic was interesting and that they further lacked personal experiences of mental health problems such as depression and anxiety.

## **Study II**

*Strengths.* The research team found that the sample technique was well suited to reach the aim of this study and this may further have enhanced the external validity, which is a goal in content analysis according to Downe-Wamboldt (320). It was further suitable to follow-up the participants from our previous study since these participants seemed to remember me and my previous questions about the concept of mental health and what promotes it. This strategy, to follow-up with further questions about what may promote mental health, gained rich and deep data material and they did have the same difficulties to talk about the mental health topic as in previous study. This could maybe be because these seniors had an earlier opportunity to reflect upon the concept of mental health and their experiences of what may promote it, such as dialogues with different partners. Our experiences from the design of this study is in line with Graneheim and Lundman (221), which stated that credibility may arise when the researcher makes a decision on focusing the design of the study and data collection.

*Limitations.* Data was only derived from seven participants and of those only one participant was a man. However, trustworthiness in qualitative studies is rather gained by the richness of each individual interview than by the sample size (321). That six of seven participants lived alone may also be seen as a limitation and may have affected the main findings, since living alone has been shown to affect elderly people's experiences of loneliness (322).

## **Study III**

*Strengths.* The strategy to choose snowball sampling, with accordance to Polit and Beck (212), seemed well suited and become a strength when I finally had a wide variation in the participants ages and professional experiences as DNs. This strategy for sampling technique was especially suitable since it was initially difficult to recruit DNs for semi-structured individual interviews or focus group interviews. The strategy to choose two methods of data collection may also be seen as a strength since combining focus groups and individual interviews could enhance the richness of data and further the trustworthiness of the findings in research (323).

*Limitations.* Two limitations may be that the data material derived from only seven individual interviews and with no variation in gender since the participants were all women. Snowball sampling as a sampling technique, with accordance to Polit and Beck (212), may also be viewed as a risk in a study (324) since this study may also have included participants

who have similar views and experiences of the topic in focus of this study. This may further be seen as sampling bias and the findings in this study must therefore be interpreted with caution (324).

## **Study IV**

*Strengths.* The convenience sampling technique (211) seemed to be a suitable strategy since this study included HCAs with various levels, ages, experiences of caring for the seniors in focus and from home help services. This, since I had initially challenges in recruiting enough numbers of HCAs who had time for a focus group interview. Focus group interviews – and the interview guide – were designed specifically to give participants the opportunity to discuss and share both negative and positive experiences with their colleagues. The use of focus groups is in accordance with Krueger and Casey (325) which was considered as a suitable method for data collection since the participants seemed to show a fair amount of variation in experiences of the seniors in focus, which further may enhance the generalisability in the findings in this study.

*Limitations.* The choice of convenience sampling technique may also be seen as a limitation since more women than men were recruited. However, this gender variation reflects this area of work. This study may also have included the most experienced HCAs in this area, which may be a limitation since the participation was voluntary (324). It could also be seen as a limitation that no other member of the research team assisted the first author and kept notes to identify the participants' quotes during my data transcription. However, the first author kept short notes from the participants' comments and their positions around the table.

## **Personal progress in the research**

It seems important that I could describe my personal achievements or contributions in each study for the purpose clarifying the progress of my learning process as a doctoral student. My contributions have further been described more specifically in each study and manuscript. To fully understand how a respondent views a phenomenon the researcher must block out his or hers own experiences – as far as is possible (314). To start with, I was aware of my pre-understanding about caring for seniors with multimorbidity and how my experiences of their mental health status could affect my objectivity as well as the position and exploration of the



findings in the research. For more information about my experiences in this area, see the heading “Personal introduction”. My personal experiences of caring for this heterogeneous population could both be described as a strength and a limitation during the research process, so the research team continually discussed my point of view during the design and the findings in each study. The design of our studies hopefully reflects the research questions that were formulated by me and further agreed and developed as specific aims by the rest of the research team. This idea was viewed as an important start since there should be a clear link between the purpose of the research and the research question (326).

## CONCLUSIONS

The results of the interviews and the main conclusion from each study show that:

- 1) Seniors with multimorbidity should have an opportunity to describe how multiple chronic conditions may affect their life situation;
- 2) An optimal level of care can be achieved through continuity, involvement, and by providing a health-promoting dialogue based on the person's wishes and needs;
- 3) Even if DNs seemed engaged in primary mental healthcare, there were no expressed goals set in the improvement of mental health, and it seemed that these DNs could not bear the primary responsibility for early detection of mental health problems and early interventions to improve mental health;
- 4) HCAs had knowledge about risk factors for mental health problems and it appears that they were dependent on CMs' decision-making in granted support, as well as supervision from DNs in the detection of mental health problems and to promote mental health.

In summary, the finding in the present thesis demonstrates that managing mental health problems is still an ongoing challenge for those organisations providing continuity in home care and home healthcare for homebound elderly persons with complex chronic conditions. The finding in the thesis also shows that DNs and HCAs seem to be dependent on each other in this area. Mental health promotion was expressed as an important assignment among DNs and HCAs, even though they describe different prerequisites and factors which could be seen as barriers in the detection of common mental health problems such as depression, anxiety and sleep problems. These personnel further described difficulties in collaboration and transmission of information between care- and healthcare providers from the community and primary care context. Social and physical interventions - as well as social contacts and social support to break social isolation - seemed important according to all the informants, with their different perspectives of how mental health may be promoted.

## IMPLICATIONS

The ageing process often has negative effects, such as the development of chronic diseases, physical and cognitive impairments and different disabilities. This also means further physical limitations that may have negative consequences on a person's health resources, health barriers and prerequisites for the ability to promote health. However, it can be difficult to affect the health if the individual has limited mobility and functional capacity due to different diseases. Losses of functional abilities ultimately lead to decreased well-being, quality of life as well as mental health problems such as late-life depression. Furthermore, functional disabilities may be taken into consideration when care and healthcare providers suggest social and physical interventions with the aim to promote mental health. The prominent question is how care and healthcare may be integrated to improve mental health among the population under discussion. The results from the present thesis may hopefully contribute to a better understanding of how the resources in care and healthcare may be organised to provide an integrated home care and home healthcare that may promote mental health among community-dwelling older persons with multimorbidity.

As regards current healthcare organisation, and the responsibilities of professionals in primary care, it is important that DNs are available for the assessment of older people's behavioural and cognitive functions, in order to detect mental health problems such as late-life depression. As mentioned before in the discussion part, DNs may use two overarching questions to detect depression. DNs may also use available decision aids such as validated psychometric tests before referring the patient for a more suitable and more in-depth psychiatric assessment performed by the GP - before any treatment decisions and suggestions for interventions to promote mental health. Furthermore, DNs need to have knowledge about risk factors for mental health problems and be competent to perform risk assessments for suicide. It seems especially important that DNs collaborate with social care providers such as HCAs in the detection of mental health problems, abuse of alcohol and the development of pain problems as well as suicidal thoughts or plans. The HCAs provide assistance with household and personal care tasks and these personnel often provide a link between the client and the outside world. These staff often becomes responsible for administration of medication to a senior with polypharmacy, after being delegated these assignments from DNs in primary care. These medical assignments result in scheduled home visits on a regular basis from HCAs in home help services. Even though HCAs are not responsible for mental health work they often meet clients with mental health issues as well as pain problems in need of care, treatment and support. The findings in this thesis

suggest that an organised collaboration between DNs and CMs seems crucial for HCAs' skills in matters of early detection of mental health problems and early interventions to promote health. Taking advantage of - and not underestimating - HCAs' awareness about a client's behaviour and emotions could be of importance since HCAs' observations of their clients and their home environment may reflect worsening mental health, pain, functional disabilities and social isolation over time. Knowledge about current legislation seems to be important so that the HCAs feel secure about what information they can transmit to healthcare professionals – while still protecting clients' confidentiality. Investments should be made to provide HCAs with knowledge about current legislation, support networks, tools and skills to support clients with mental health problems to remain in the community. Supervision from DNs, in conjunction with the delegation of the administration of medication, may be one way to improve skills in mental healthcare.

Furthermore, due to the fact that elderly people are remaining in their own homes, with several chronic diseases, disabilities and health problems, it is necessary that the financed healthcare organisations also collaborate with both formal and informal care providers with the purpose of detecting mental health problems within this population. Older persons should get the access to different health promoting actions as well as social contacts that may cater for their unique need of help and support - that further may break social isolation and promote mental health - without threatening the old person's autonomy.

When it comes to suggestions about mental health promotion, DNs may provide informational support about the ageing process and how it affects elderly people from a biological, social and psychological perspective. This information would be in the frame of health-promoting dialogues that should aim to detect risk factors for health problems, assessment of mental health and the empowerment of the seniors' health resources. The empowerment - or goal in physical and mental health promotion - could be to get an overall picture of personal losses and disabilities before providing social support. The support could be about facilitating contacts with social networks and if possible resumption of personal interests, to break social isolation and self-perceived loneliness. DNs may also provide information about how living conditions may affect diseases and health according to social support as well as social and physical activities. DNs may also refer the senior to a responsible CM for further needs assessment in matters of providing social support through the municipal home help services. This with the aims of breaking social isolation or increasing social and physical activities in respect of the homebound seniors' functional abilities and personal interests.

## **FUTURE PERSPECTIVES**

The practice of care and healthcare should be based on science and proven experience. The findings in the present thesis have raised several issues in need of further research regarding how mental health may be promoted. Further studies about the content and effect of health-promoting dialogues, with the aim to even strengthen mental health, are suggested. There is also a need of the evaluation of the content and effects of structured and planned home visits performed by DNs. Previous research, included quantitative outcome studies, seems to have evaluated the efficiency of health promotion interventions to tackle loneliness, social isolation and increasing physical activity among elderly people. However, there seems to be a lack of evidence and consensus regarding the effectiveness of social and physical activity and this highlights the importance that different interventions have to be adjusted for the elderly person's chronic conditions and (dis)abilities. These functional limitations would probably affect what interventions for physical or social activity or activity level a senior could be provided with, with the aim to promote mental health. For example, an out-of-home activity intervention, implemented by social service providers or older volunteers to improve mood among seniors with severe mobility problems, could provide justification for further studies and programmes developed with a person-centred approach. Future research in this area may also include outcome studies, to evaluate the effectiveness of physical activity among those elderly persons with multimorbidity, physical limitations, disabilities and late-life depression. Intervention studies with interprofessional collaboration in care may also reveal if different professions and personnel may strengthen the chain of care and whether a team with different competencies may promote mental health. Other intervention studies could be projects with the aim to strengthen various care and healthcare providers' competencies in mental healthcare. Future research should focus on GPs and CMs' perspectives on mental health and mental health promotion. Thus, GPs should evaluate their prescribed treatments such as medication for chronic conditions and psychotropic drugs within elderly people with multimorbidity. The focus could be on how GPs reason when they prescribe treatments for mental health problems such as late-life depression. The CMs, on the other hand, are key persons involved in the process of needs assessments and in the decision-making for granted support that the HCAs provide and perform for homebound seniors. The focus could be on how CMs reason when they are conducting needs assessment for homebound seniors with multimorbidity and whether CMs may grant support to promote mental health among a population at risk of developing poor mental health.

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