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OUTI KILJUNEN

CARE HOME NURSING PROFESSIONALS' COMPETENCE IN OLDER PEOPLE NURSING

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ABSTRACT

Reforms in aged care have influence on nursing practice. Therefore, it is important to be aware of the current competence requirements and of the preparedness of nursing staff to meet these competence demands in older people nursing. The purpose of this study was to identify and describe competence requirements in older people nursing in care homes and to describe and predict care home nursing professionals' self-assessed competence. In addition, the purpose was to develop a self-assessment instrument that can be used to measure care home nursing professionals' competence in older people nursing.

The main focus of the study was on competence of nursing professionals who take care of older people in Finnish care homes that provide intensive service housing. In phase one, a Delphi study and an interview study were conducted to identify the required competence. An expert panel of professionals (n=38) was recruited for the Delphi study, which involved two rounds and was preceded by an integrative literature review (n=10). In total, 18 care home residents' family members were involved in the interview study. In phase two, a web-based survey that explored care home nursing professionals' (n=781) self-assessed competence was conducted. Survey participants worked either as licensed practical nurses (n=680), as registered nurse and/or in managerial positions (n=101). The psychometric properties of the instrument were tested after collecting the survey data. Inductive qualitative content analysis, descriptive statistics and multivariate methods were used in data analysis.

According to this study there are several aspects of competence in older people nursing in care home. These include ethical, interactional, cooperation, clinical, guidance, leadership and development competence, as well as competence in promoting the well-being of older people. While most participants described their competence as good or adequate, the measurement of these aspects revealed several gaps in care home nursing professionals' self-assessed competence. Older age and further training were predictors of higher self-assessed competence of the participants working in licensed practical nurse positions, while longer work experience in intensive service housing was a predictor of higher self-assessed competence for registered nurses/managers. A new competence self-assessment instrument, the Nurse Competence in Care Home Scale, was developed, which contains 84 statements under seven subscales.

In conclusion, multifaceted competence is required for older people nursing in care homes. Not all care home nursing professionals' competence is adequate, and it is recommended that nurses, managers, educators and those responsible for development of nursing curricula strive to promote competence in older people nursing. The Nurse Competence in Care Home Scale can be used to assess care home nursing professionals' competence in older people nursing. The instrument should be further developed in the future.

National Library of Medicine Classification: WY 152
Medical Subject Headings: Geriatric Nursing; Nurses; Nursing Staff; Professional competence; Nursing Homes; Homes for the Aged; Residential Facilities

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TIIVISTELMÄ

Uudistukset iäkkäiden hoidossa vaikuttavat hoitotyöhön, joten on tärkeää tiedostaa nykyiset osaamisvaatimukset sekä hoitohenkilökunnan valmiudet vastata iäkkäiden hoidon osaamisvaatimuksiin. Tämän tutkimuksen tarkoituksena oli tunnistaa ja kuvata iäkkäiden hoidossa hoitokodeissa tarvittavaa osaamista sekä kuvata ja ennustaa hoitokodeissa työskentelevien hoitotyön ammattilaisten itsearvioitua osaamista. Lisäksi tarkoituksena oli kehittää osaamisen itsearviointimittari, jolla voidaan mitata hoitokodeissa työskentelevien hoitotyön ammattilaisten iäkkäiden hoitoon liittyvää osaamista.

Tutkimuksessa keskityttiin erityisesti Suomessa tehostettua palveluasumista tarjoavissa hoitokodeissa työskentelevien hoitoalan ammattilaisten osaamiseen. Ensimmäisessä vaiheessa suoritettiin Delphi-tutkimus sekä haastattelututkimus, joilla pyrittiin tunnistamaan tarvittava osaaminen. Ammattilaisista koostuva asiantuntijapaneeli (n=38) rekrytoitiin Delphi-tutkimukseen, joka sisälsi kaksi kierrosta ja jota edelsi integroitu kirjallisuuskatsaus (n=10). Haastatteluihin osallistui yhteensä 18 hoitokotien asukkaiden omaista. Toisessa vaiheessa tehtiin elektroninen kysely (n=781), jossa selvitettiin hoitotyön ammattilaisten itsearvioitua osaamista. Kyselytutkimukseen osallistuneet työskentelivät hoitokodeissa joko lähihoitajana (n=680) tai sairaanhoitajana ja/tai johtamistehtävässä (n=101). Mittarin psykometrisiä ominaisuuksia testattiin kyselyaineiston keruun jälkeen. Aineiston analysoinnissa käytettiin induktiivista sisällön analyysiä sekä kuvailevia tilastollisia menetelmiä ja monimuuttujamenetelmiä.

Tutkimuksen mukaan iäkkäiden hoito hoitokodissa sisältää useita osaamisen osa-alueita. Näihin kuuluvat eettinen osaaminen, vuorovaikutusosaaminen, yhteistyöosaaminen, kliininen osaaminen, iäkkäiden hyvinvoinnin edistämisen osaaminen, ohjausosaaminen sekä johtamis- ja kehittämisosaaminen. Vaikka suurin osa osallistujista kuvaili osaamistaan hyväksi tai riittäväksi, osa-alueiden mittaaminen osoitti useita osaamisvajeita hoitokodeissa työskentelevien hoitotyön ammattilaisten itsearvioidussa osaamisessa. Korkeampi ikä ja lisäkoulutus ennustivat lähihoitajana työskentelevien parempaa itsearvioitua osaamista, ja sairaanhoitajien/johtajien parempaa osaamista ennusti pidempi työkokemus tehostetussa palveluasumisessa. Uusi osaamisen itsearviointi mittari (Nurse Competence in Care Home Scale) sisältää 84 väittämää ja seitsemän osa-aluetta.

Yhteenvetona voidaan todeta, että iäkkäiden hoidossa hoitokodeissa tarvitaan monipuolista osaamista. Kaikkien hoitotyön ammattilaisten osaaminen hoitokodeissa ei ole riittävää. Onkin suositeltavaa, että hoitajat, johtajat, kouluttajat ja hoitoalan opetussuunnitelmien kehittämisestä vastaavat pyrkivät edistämään osaamista iäkkäiden hoidossa. Kehitettyä mittaria voidaan hyödyntää arvioitaessa hoitokodeissa työskentelevien hoitoalan ammattilaisten osaamista iäkkäiden hoidossa. Mittaria tulee edelleen kehittää tulevaisuudessa.

Luokitus: WY 152
Yleinen Suomalainen asiasanasto: hoitohenkilöstö; vanhustyöntekijät; hoitotyö; vanhustyö; vanhustenhuolto; osaaminen; hoitokodit; tehostettu palveluasuminen

Kiitokset

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Outi Kiljunen

List of the original publications

This dissertation is based on the following original publications:

I Kiljunen O, Välimäki T, Kankkunen P, Partanen P. Competence for older people nursing in care and nursing homes: An integrative review. *International Journal of Older People Nursing 12: e12146, 2017.*

II Kiljunen O, Välimäki T, Partanen P, Kankkunen P. Multifaceted competence requirements in care homes: Ethical and interactional competence emphasized. *Nordic Journal of Nursing Research 38(1): 48-58, 2018*

III Kiljunen O, Kankkunen P, Partanen P, Välimäki T. Family members' expectations regarding nurses' competence in care homes: a qualitative interview study. *Scandinavian Journal of Caring Sciences 32(3): 1018-1026, 2018*

IV Kiljunen O, Partanen, P, Välimäki T, Kankkunen P. Older people nursing in care homes: An examination of nursing professionals' self-assessed competence and its predictive factors. Resubmitted, 2018.

Summary also includes previously unpublished material.

Contents

Abbreviations

AACN	American Association of Colleges of Nursing
AN	Assistant nurse
BRN	Baccalaureate-educated registered nurse
CI	Confidence Interval
ECCF	European Core Competence Framework
LTC	Long-term care
LPN	Licensed practical nurse
NCCHS	Nurse Competence in Care Home Scale
NCS	Nurse Competence Scale
NMC	Nursing and Midwifery Council
NOP-CET	Nursing Older People- Competence Evaluation Tool
OR	Odds Ratio
PCA	Principal component analysis
RN	Registered nurse
SD	Standard deviation
VET	Vocational education and training

1 Introduction

The use of long-term care (LTC) among old people is concentrated into the last years and months of life, and the use of LTC at the end of life is higher in later old age (Forma et al., 2009). As the last years of life are being lived at an older age than before, the need for LTC will grow (Murphy & Martikainen, 2013; Forma et al., 2017). In many countries, care for older people is primarily provided in older peoples' own homes and only the most highly dependent and frail older people enter round-the-clock care units, such as care and nursing homes (Rodrigues et al., 2012). Care and nursing home residents have a high prevalence of dependency, multi-morbidity, polypharmacy, cognitive impairment and behavioural symptoms (Onder et al., 2012; Gordon et al., 2014) resulting in complex care needs.

Providing high-quality care for older people is an international challenge for the care home sector (Corazzini et al., 2016). When developing the quality of care in care and nursing homes, the competence of nursing staff should be taken into consideration (Räsänen, 2011; Backhaus et al., 2016). Nursing staff competence, including knowledge, skills and attitudes (Fernandez et al., 2012), affects the well-being of care home residents. For instance, nurse's interactional competence influences residents' well-being and quality of life (Haugan et al., 2012; Haugan, 2014; Haugan et al., 2016). In addition, insufficient staff competence is a contributing factor in the occurrence of serious adverse events (Andersson et al., 2018) and a predisposing factor for older people abuse in round-the-clock care units (Sipiläinen, 2016). Nursing staff competence also influences resident transfers from nursing homes to emergence departments (Robinson et al., 2012; Trahan et al., 2016) and unnecessary transfers should be avoided. Additionally, nursing staff competence influences residents' and family members' ratings regarding the quality of care (Hasson & Arnetz, 2011) and deficiencies in care are sources of stress for family members (Givens et al., 2012; Johansson et al., 2014; Ryan & McKenna, 2015). Furthermore, nurses who supervise students and serve as professional role models in aged care have an impact on student nurses' attitudes towards older people nursing and future career choices (Duggan et al., 2013; Carlson & Idvall, 2015). Thus, it is important to ensure that competent personnel are working in care and nursing homes.

Care and nursing homes are special environments in the sense that many people with varying needs are living under the same roof and the rights and needs of all residents must be considered equally (Evans et al., 2018). In recent years a culture change has occurred in this context (Koren, 2010) which has led to moving from a task-oriented staff-directed model of care to a model that provides for and supports individualised resident-directed care (Mueller et al., 2013). There are challenges in implementing this cultural change and the process is still ongoing (van Stenis et al., 2017). However, the structural reforms in aged care, along with cultural changes influence nursing practice in care and nursing homes, mean it is essential to be aware of current nursing competence requirements in these facilities (van Stenis et al., 2017).

This study was conducted in Finland, where the life expectancy at birth was 78.4 years for boys and 84.1 years for girls in 2016 (Statistics Finland, 2017) and the number of very old people is growing rapidly (Statistics Finland, 2018). In Finland, a major structural reform of aged care has been carried out with the aim of cutting back on institutional LTC (Yeandle et al., 2012; Anttonen & Karsio 2016). Most older people continue to live in their homes until the final months of their lives (Aaltonen et al., 2017), which is in line with current national regulations and with a key government project in Finland that emphasises care provided in private homes and homelike environments (Act 980/2012 § 14a; Ministry of Social Affairs and Health, 2016). If home care is no longer possible intensive service housing (which is classified as non-institutional care) is favoured as opposed to care delivered in traditional

institutions. Both LTC and short-term care is provided in these facilities and nursing staff are available round-the-clock. Units offering intensive service housing for older people in Finland are known by different names and in this study the term 'care home' is used. However, it should be noted that care facilities for older people are known by a diverse range of terms globally (Sandford et al., 2015) and Finnish care home resident population may be comparable not only to care home resident populations, but also for instance, to nursing home resident populations in some countries.

A need to increase knowledge of competence requirements in older people nursing in care and nursing homes has been reported internationally (Tolson et al., 2011; McGilton et al., 2016). In addition, there is a disparency between the increasing need for older people nursing and the limited number of studies in this field in Finland (Stolt et al., 2017). There are several studies describing nurses' competence in different clinical fields in Finnish hospitals (e.g., Hamström et al., 2012; Koskinen et al., 2014; Numminen et al., 2013; 2014; Lakanmaa et al., 2015; Meretoja et al., 2015). However, research evidence on nursing staff competence in Finnish aged care facilities is scarce. There are a few studies related to nurses' work in Finnish round-the-clock aged care units focusing on different phenomena, such as elder abuse (Sipiläinen, 2016), recognition of older people's personhood (Pirhonen, 2017), quality of life of clients (Räsänen, 2011), socio-cultural aspect of work (Riekkinen-Tuovinen, 2018) and organisational culture in care homes (Komu, 2016). These studies provide important information related to nurses' work in aged care facilities, but there are no studies measuring the competence of nursing staff in Finnish care homes.

Interest in researching the role of a nursing home nurse has grown globally, with the emphasis on the work of registered nurses (RNs). RNs have a key responsibility in ensuring the well-being of the care home residents since they are often working without RN colleagues and physicians around. However, exploring the competencies of nursing staff other than RNs is also necessary. For example, in Finland, licensed practical nurses (LPNs) are the biggest professional group working in care homes and they may be the highest educated employees during night shifts and weekends. Therefore, exploring both RNs' and LPNs' competence is necessary to promote the quality of care in care homes.

The purpose of this study was to identify and describe the competence needed in older people nursing in care homes. In addition, the study aimed to describe and predict care home nursing professionals' self-assessed competence in older people nursing. Furthermore, the purpose was to develop a new competence self-assessment instrument that can be used to measure care home nursing professionals' competence in older people nursing.

2 Competence requirements and care home nursing professionals' competence in older people nursing

2.1 COMPETENCE IN NURSING

Both nursing and the definition of competent professional practice have evolved over the years and the concept of competence have been used in nursing with a variety of different conceptual interpretations (Watson et al., 2002; Valloze, 2009).

There is a lack of clear consensus on the definition of competence and there appears to be confusion over the distinction between competence and competency (Cowan et al., 2005; Yanhua & Watson, 2011; Garside & Nhemachena, 2013; Blažun et al., 2015). Competence have been viewed as both an asset and a process. In addition, competence can be seen as individual or organisational (Håland & Tjora, 2006.) Three main approaches to understand competence can be found in the literature: 1) behaviourist (a task and skill-based approach) 2) a general attributes approach (focusing on general, transferable attributes of a person) and 3) a holistic approach (seeing competence as combinations of knowledge, skills, attitudes and values) (Gonczi, 1994; Watson et al. 2002; Cowan et al. 2005; Fernandez et al., 2012; Garside & Nhemachena 2013).

It has been suggested that the dichotomy between the perception of nursing competence as either a behavioural objective or a psychological construct is redundant. Instead a holistic concept of competence is recommended (Cowan et al., 2005). Although, the concept of competence in nursing is not universally defined, progress towards consensus is emerging and a holistic concept of competence has gained popularity (Yanhua & Watson, 2011). Competence has been defined as, for example, "functional adequacy and capacity to integrate knowledge and skills to attitudes and values into specific contextual situations of practice" (Meretoja et al., 2004b). A holistic concept of competence, including knowledge, skills and attitudes, has been adopted in this study.

Clinical competence comprises an ontological and a contextual dimension (Lejonqvist et al., 2012). An ontological clinical competence is developed during training and comprises the foundations of practice common for all nurses, while a contextual clinical competence is developed in specific contexts. Students start developing contextual clinical competencies during education, resulting in graduating students with varying competence profiles depending on their clinical placements during education. Competence in nursing is an ongoing process rather than a fixed state (Benner, 1984; Lejonqvist, 2012).

According to a study by Lejonqvist et al., (2012) clinical competence in practice occurs through *encountering*, *knowing*, *performing*, *maturing* and *improving*. (Table 1.) *Encountering* forms the ethical foundation of clinical competence and is described as responsibility, doing good, and humility. *Knowing* involves being evident, current, evaluating knowledge critically, and using interdisciplinary knowledge for the benefit of the patient. *Performing* means combining skills, knowledge and the needs and wishes of the patient in order to care for individual patients in changing situations. *Maturing* is characterised by being pliant, committed, confident, connected, and growing in the profession. *Improving* is related to developing oneself and the care of the patient, and includes sharing, learning and teaching through a process of giving and receiving.

Table 1. Clinical competence in practice according to study by Lejonqvist et al., 2012

Clinical competence in practice
Encountering: preserving the dignity of the patient
Knowing: using best available knowledge in the care of the individual patient
Performing: confidence and experience to give total care to the patient
Maturing: becoming a professional in nursing
Improving: developing oneself and the care of the patient

Different regulatory bodies have defined the standards for nursing competence. In Europe, for example, the Nursing and Midwifery Council's (NMC) standards for competence for registered nurses include four main areas: professional values; communication and interpersonal skills; nursing practice and decision making; and leadership, management and team working (NMC, 2014). In Finland, the professional competence of a registered nurse responsible for general care was defined in 2015 (Eriksson et al., 2015). This definition includes nine competence areas, which are presented in Table 2.

Table 2. The professional competence of a registered nurse responsible for general care (Eriksson et al., 2015)

Competence area
1.Client-centredness
2.Ethics and professionality in nursing
3.Leadership and entrepreneurship
4.Clinical nursing
5.Evidence-based practice and decision making
6.Education and teaching competence
7.Promotion of health and functional ability
8.Social and health care environment
9. Quality and safety of social and health care services

Assessment of competence in nursing is necessary because nurses make a substantial contribution to health care systems and competence is a critical attribute for high-quality care. Various instruments have been developed to measure nursing students' (Ličen & Plazar, 2015) and practicing nurses' competence. Some of these instruments are generic (e.g. Meretoja et al., 2004a; Liu et al., 2007; Cowan et al., 2008; Takase & Teraoka, 2011; Nilsson et al., 2014; Finnbakk et al., 2015); they are intended to be used in various nursing contexts. In addition, specific instruments have been developed for particular fields (e.g. Bing-Jonsson et al., 2015b) or to measure certain competence area, such as cultural competence (Loftin et al., 2013) and competence in mobility care (Gattinger, 2017). The number of items, subscales, and response options varies between different instruments. In addition, evidence of validity and reliability of the instruments varies. In some cases, the information regarding the psychometric properties of the instrument is missing (Bing-Jonsson et al., 2013). International cooperation in instrument development has increased (Yanhua & Watson, 2011).

2.2 GENERAL FRAMEWORKS FOR OLDER PEOPLE NURSING

Nursing of older people have been known by various terms over the years, such as 'geriatric nursing', 'gerontological nursing' and 'older people nursing'. In this study, the term 'older people nursing' is used. Different frameworks describing core competencies for older people nursing have been developed to guide health and social service education. In Europe, the European Core Competence Framework (ECCF) for health and social care professionals working with older people was released in June 2016 (Dijkman et al. 2016). The framework describes the minimum level of competence that all graduating nursing students should have after education. ECCF is used in developing higher education in the field of social and health care and the ECCF competencies are formulated according to the European Qualifications Framework level 6 (Bachelor) and 7 (Master) (Dijkman et al., 2016, Arola et al., 2017). The CanMEDS framework, developed by the Royal College of Physicians and Surgeons of Canada, has been utilised in ECCF. The framework includes 18 competencies under seven CanMEDS roles: Expert, Communicator, Collaborator, Organizer, Health and Welfare Advocate, Scholar and Professional.

In addition, the American Association of Colleges of Nursing (AACN) developed recommended competencies and curricular guidelines for the nursing care of older adults in collaboration with the Hartford Institute for Geriatric Nursing, to ensure that nursing students will be able to provide the necessary care for the nation's aging population (AACN, 2010).

Furthermore, several health and social care service professional associations have developed their own gerontology competencies (Boscart et al., 2017). For example, in Finland, the Finnish Nurses Association's Gerontological nursing expert group have published 'competence in gerontological nursing' descriptions for all RNs who encounter older people in their work in different settings (Tiikkainen & Teeri, 2009). According to this description, the gerontological competence areas are: decision making, ethical, communication and interaction, cooperation, health promotion, guidance and coaching, clinical, geriatric, and development and influence.

Person-centred care has been identified as a priority for aged care services in the majority of developed countries (Corazzini et al., 2016; Koren, 2010; McGilton et al., 2012) and person-centred practice is a recurring theme in literature related to older people nursing (McCormack, 2004). The rights of individuals as persons is the driving force behind person-centred care (McCormack, 2003). It is an approach to nursing practice that is defined by respect for the person, individual right to self-determination, mutual respect, and an understanding of the importance of personhood (McGilton et al., 2012). Person-centred nursing is established through the formation and fostering of relationships among care providers, service users and significant others (McCormack & McCance, 2016). According to a study by Edvardsson et al. (2010) knowing the person, welcoming family, providing meaningful activities, offering a personalised environment, and providing flexibility and continuity are important components of person-centred aged care.

2.3 CARE HOMES FOR OLDER PEOPLE

2.3.1 Care homes for older people globally

Care facilities providing round-the-clock care for older people are known by a diverse range of terms globally. For example, both the terms 'care home' and 'nursing home' have been used (Sanford et al., 2015). A survey has been conducted to assist with an international consensus on the definition of 'nursing home' and the following definition has been presented:

"A nursing home is a facility with a domestic-styled environment that provides 24-hour functional support and care for persons who require assistance with activities of daily living (ADLs) and who often have complex health needs and increased vulnerability. Residency within a nursing home may be relatively brief for respite purposes, short term (rehabilitative), or long term, and may also provide palliative/hospice and end-of-life care. In general, most nursing homes also provide some degree of support from health professionals, but […] a small subset provide socialization activities and basic assistance with ADLs but have no trained health professionals on staff. Although post-acute rehabilitation may be provided in the nursing home (i.e., in the United States and The Netherlands), in many countries this is provided in separate facilities (i.e., geriatric or cottage hospitals) or in a geriatric unit of the acute hospital." (Sanford et al., 2015.)

The number of residents in these round-the-clock care units varies (Tolson et al., 2013; Hallberg et al., 2016). A high percentage of this population has dementia, not all of whom have a diagnosis (Alzheimer Europe, 2018). To estimate exactly which proportion of people living in care homes have dementia is challenging. There are different requirements for the physical environment of the facility. In some countries, clear rules exist about the size of the private and common spaces, access to outdoor spaces, and the right to choose whether or not to share a room with someone else, whereas in other countries these factors are not addressed (Alzheimer Europe, 2018). The countries vary in the extent of their privatisation and the use of for-profit care homes (Harrington et al., 2012). Funding source and access to services also varies (Katz, 2011).

Some countries have strict ratios for care home personnel, whereas others allow for more flexibility (Alzheimer Europe, 2018) and the availability of registered nursing staff in these facilities varies (Harrington et al., 2012; Tolson et al., 2013; Hallberg et al., 2016). In some countries physicians regularly visit nursing homes but this is not the case in all countries (Tolson et al., 2013). Direct nursing care staff form the largest group of employees in care homes. However, the educational background of care staff differs across countries. For instance, RNs, LPNs, licensed vocational nurses, nursing assistants, nursing aides and employees without social and health care education are all found working in care home contexts (Harrington et al. 2012). The regulation and guidance of LPN and RN scope of practice varies (Corazzini et al., 2013) and staff activities may vary across roles, sites and shifts (McCloskey et al., 2015). In some countries nurses carry out housekeeping activities in addition to nursing in care and nursing homes (Daly & Szebehely, 2011; Harrington et al., 2012; Riekkinen-Tuovinen, 2018).

Movements to transform the care and nursing home culture is occurring globally. Nursing homes are viewed not as health care institutions, but as person-centered homes offering LTC services (Koren, 2010). This means shifting from a task-oriented staff-directed model of care to a model that provides and supports individualised resident-directed care. The aim is that the residents' psychosocial, emotional, spiritual, physical, and clinical care needs are all addressed (Mueller et al., 2013).

2.3.2 Care homes for older people in Finland

Both short-term care (such as respite care) and LTC are provided in Finnish care homes providing intensive service housing (also known as 'intensive sheltered housing'). There were 42,161 clients in Finnish care homes for older people at the end of December 2016. Of these clients, 49% were in care homes owned by non-profit organisations or business enterprises, while 51% were in care homes owned by the municipality or joint municipal board. In total, 7.3% of people aged 75 and over were in intensive service housing at the end of 2016 (National Institute of Health and Welfare, 2017c). The number of care days and the age distribution of care home clients are presented in Table 3 (National Institute of Health and Welfare, 2017a).

Table 3. Number of care days (2016) and number of clients (31 Dec 2016) in intensive service housing for older people in Finland (National Institute for Health and Welfare, 2017a)

Age (years)	Care days	All clients	Long-term clients*
0-64	327 719	962	797
65-74	1 612 274	4 748	3 940
75-79	1 911 650	5 576	4 661
80-84	2 989 594	8 607	7 230
85 and over	8 189 671	22 268	18 928
In total	**15 030 908**	**42 161**	**35 556**

*long-term care refers to care given to a client with a decision on long-term care or when the client has received care for more than 90 days

The physical environment is supposed to be as homely as possible in Finnish care homes. There are common spaces in these facilities in addition to residents' rooms and the residents are allowed to bring their own furniture and wear their own clothes. It is required that all residents have their own room, unless residents want to share a room with someone else. Municipalities are responsible for housing services for older people and they can offer these in their own care facilities or make a contract with other care providers. Care home residents pay rent for their room in addition to other fees. Fees vary between municipalities and facilities (Forma et al., 2017). In many cases, the rent is partly covered by reimbursement from the Social Insurance Institution of Finland. In addition, the municipality covers most of service fees for less affluent people, meaning that the amount paid by the service users varies.

Care homes must comply with the regulatory requirements at the time of registration and are monitored on an ongoing basis after registration. All service providers are required to have a self-monitoring plan and must provide a yearly report to the regulatory body. The registered manager of each care home is required to have suitable higher education degree (e.g. in nursing or in social work). The legislative framework for care homes in Finland is presented in Table 4, which includes the key laws and recommendations for care homes.

Table 4. Regulatory framework for care homes in Finland

Key acts and recommendations
• Act on Supporting the Functional Capacity of the Older Population and on Social and Health Care Services for Older Persons (980/2012)
• Quality recommendation to guarantee a good quality of life and improved services for older persons 2017-2019
• Social Welfare Act 1301/2014
• Health Care Act 1326/2010
• Act on the Status and Rights of Social Welfare Clients (812/2000)
• Act on the Status and Rights of Patients (785/1992)
• Act on Private Social Services (922/2011)
• Private Health Care Act (152/1990)

Personnel in Finnish care homes

According to the 'Act on Care Services for the Elderly' (Act 2012/980 §20, full name: Act on Supporting the Functional Capacity of the Ageing Population and on Social and Health Care Services for Older People):

> *"Care units must have personnel whose number, educational qualifications and task structure correspond to the number of older persons obtaining services of the unit so as to be able to meet the service needs required by the older persons' functional capacity and to guarantee services of a high quality*."

In addition, according to 'Quality recommendation to guarantee a good quality of life and improved services for older persons 2017-2019', which aims to support the implementation of the 'Act on Care Services for the Elderly', there should be an adequate number of skilled personnel available to guarantee safe and high-quality services for older people (the Ministry of Social Affairs and Health and the Association of Finnish Local and Regional Authorities, 2017). The minimum ratio is 0.5 care staff to one resident. These staff members can be RNs and LPNs or other employees such as physiotherapists, occupational therapists, counsellors and nursing assistants. In addition, nursing students who are not in clinical practice but are employed and have sufficient competence can be counted in this staff-to-resident ratio. However, some of these groups (for instance nurse assistants) are not allowed to work alone in a care home and are not allowed to be responsible for medications. There is national guidance covering staff accountability, duties, and task allocation related to the provision of pharmacotherapy in social and health care units in Finland (Ministry of Social Affairs and Health, 2009.). Beyond these areas the legislation allows a great deal of freedom for care homes to define duties and task allocation on an individual basis. Nursing staff are available round-the-clock in Finnish care homes, but there are different practices covering contact with physicians and the frequency of visits to the care home by social and health care professionals (e.g. physiotherapists).

Approximately 21,000 employees work in care homes in Finland (National Institute for Health and Welfare, 2017b). About 80% of these personnel work in LPN or practical nurse positions, approximately 8% work in RN positions, and about 2% work in front-line manager position with varying titles (National Institute for Health and Welfare & National Supervisory Authority for Welfare and Health, 2017). There is no national aged care employee register in Finland that provides detailed information about care home personnel. However, it is known that major of aged care workers in Finland are female, have full-time jobs and are in permanent service relationships (Kröger et al., 2018).

In Finland, most of the nurses working in LPN positions have completed *The Vocational Qualification in Social and Health Care, Practical Nurse* programme. However, some nurses working in LPN positions have completed older vocational education programmes that no longer exist due to educational structures and education programmes evolving over the years. The legislation regulating vocational training has been reformed recently, coming into force 1 January 2018, and new qualification requirements for practical nurse training will come into force on 1 August 2018. These reforms stress students' individual study paths meaning that the length of education can vary dependent on the student. There are two ways to complete the degree, either as a curriculum-based or a competence-based qualification. The scope of the curriculum-based qualification is 180 competence points (Finnish National Agency for Education, 2018). The current education program for RNs (*Bachelor of Health Care, Nursing*) includes 210 European Credit Transfer and Accumulation System (ECTS) credits (3.5 years) and is offered in universities of applied sciences (polytechnic) (Studyinfo.fi). However, some nurses working in RN positions have completed older education programmes (post-secondary level) and some have a Master's degree. Some employees working as LPNs or RNs in care homes may have other educational backgrounds such as the *Bachelor of Social Services and Health Care (Elderly care),* which is a relatively new education programme that has increased in the 21st century in Finland.

2.4 CARE HOME NURSING PROFESSIONALS' COMPETENCE

The literature related to competence in older people nursing in care homes was searched and reviewed several times during the study process. This literature search was conducted on 18 March 2018. The aims were to review literature outlining necessary competencies in care home contexts and to review the evidence regarding care home nursing professionals' self-assessed competence and its predictive factors. Peer-reviewed literature published in English from 2008 to March 2018 was searched using CINAHL, Scopus, Ovid MEDLINE and SocINDEX databases. The research papers 1) identifying competence needed in older people nursing in care and/or in nursing homes, and/or 2) exploring care and/or nursing home nursing professionals' self-assessed competence and/or its predictive factors, were included in the review. The search terms were: "nursing home*" or "care home*" AND competenc* AND "ger* nursing" or "older peop* nursing" or "care of older people" or "older peop* care" or "elder* care" or "aged care" AND "registered nurse*" or "practical nurse*". Phases of the literature search are presented in Figure 1.

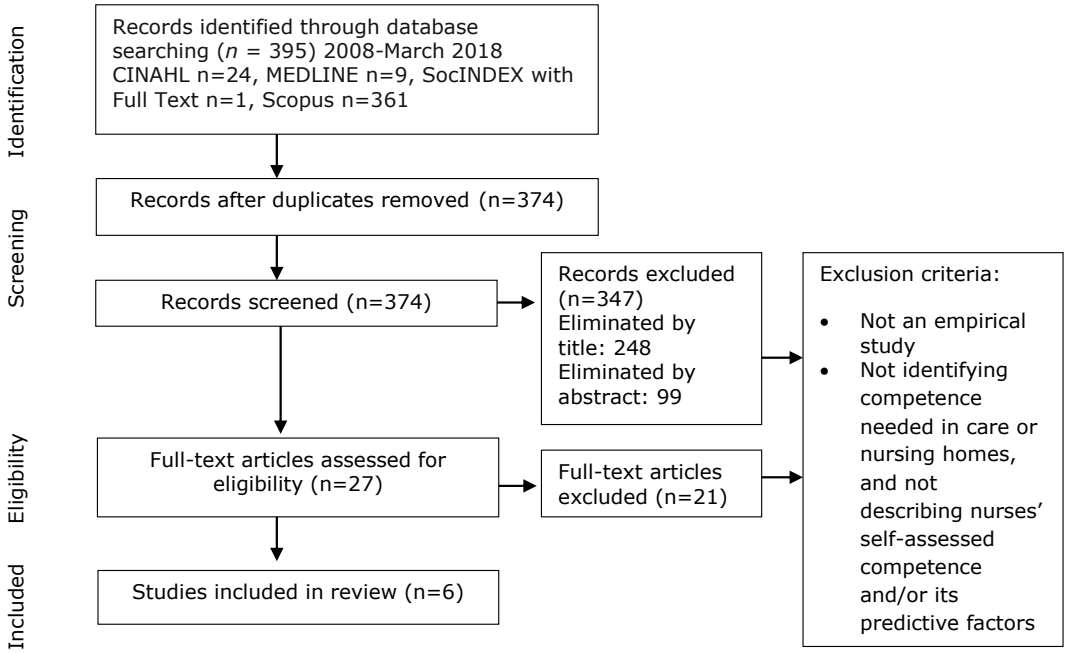

Figure 1. A flow diagram of the study selection process

There are a few studies where the aim is to identify competencies needed for older people nursing in care or nursing homes. (Table 5.) One of these studies was conducted in the Netherlands and the USA (Backhaus et al., 2015), while others have been conducted in Norway (Bing-Jonsson et al., 2015) and the UK (Stanyon et al., 2017). These studies focus on different professional groups. One of them presents competence requirements for the entire body of staff taking care of older people in home care and nursing homes (Bing-Jonsson et al., 2015a), one focuses on baccalaureate-educated registered nurses' (BRN) work in nursing homes (Backhaus et al., 2015), while another's focus is on RNs' work in care homes (Stanyon et al., 2017).

In an international expert consensus study identifying competencies which in the future would be desirable for BRNs in nursing homes, required competencies (n=16) were under

four categories: leadership and coaching; communication; evidence-based practice; client assessment and geriatric expertise (Backhaus et al., 2015).

According to a Delphi study conducted in Norway, the most relevant categories of competence needed to meet the needs of older people in nursing homes and home care services are: health promotion and disease prevention, treatment, palliative care, ethics and regulation, assessment and taking action, covering basic needs, communication and documentation, responsibility and activeness, cooperation, and attitudes towards older people (Bing-Jonsson et al, 2015a).

According to a Delphi study conducted in the UK, aspects of competence required for RNs included assessment and care planning, relationship-centred care, enhancing safety and well-being of the residents (considering both physical, mental, social, cultural, spiritual and sexual needs), Evidence Based Practice, basic care tasks (e.g. urinary continence and bowel care), mobility care, managing acute ill health, dementia care, pharmacology, pain management, end of life care, cooperation, self-reflection, quality improvement, policy and procedures (Stanyon et al., 2017).

Table 5. Summary of the studies identifying competencies needed in older people nursing in care home context

References	Aim	Sample characteristics and method	Key findings
Backhaus et al. (2015); The Netherlands and USA	To obtain insight into the competencies, which should in the future, distinguish BRNs from other nursing staff in nursing homes	Experts from 14 countries. An expert consensus study including three phases: phase I: survey (n=31), phase II: expert meeting (n=5), phase III: survey (n=28)	Future distinguishing competencies (n=16) of BRNs in nursing homes were under four categories: leadership and coaching; communication; evidence-based practice; client assessment and geriatric expertise.
Bing-Jonsson et al. (2015); Norway	To identify the nursing staff competence necessary to meet the needs of older people in community aged care	An expert panel: clinicians (n=14), leaders and administrative personnel (n=11), teachers in older people nursing (n=7), researchers (n=6) and representatives from patient organisations (n=4). A Delphi study	The most relevant categories of competence needed to meet the needs of older people in community care were: health promotion and disease prevention; treatment; palliative care; ethics and regulation; assessment and taking action; covering basic needs; communication and documentation; responsibility and activeness; cooperation; and attitudes towards older people.
Stanyon et al. (2017); UK	To define core competencies for RNs working in UK care homes	A multidisciplinary expert panel, three rounds (n=26, n=24, n=20) A modified Delphi study	In total, 22 competencies were agreed as essential for RNs working in care homes.

BRN = baccalaureate-educated registered nurse; RN = registered nurse

Evidence regarding care home nursing professionals' self-assessed competence in older people nursing and factors related to that competence is quite scarce. In fact, there is only one study that measures nursing home nurses' competence in different domains of older people nursing (Bing-Jonsson et al., 2016). Other studies measure RNs' satisfactory with their own competence at general level (1 item, 5-point scale) (Karlstedt et al., 2015), and nursing staff's self-rated knowledge regarding certain subjects (n=18) (Hasson & Arnetz, 2008). One of the studies was conducted in Norway (Bing-Jonsson et al., 2016), while others were conducted in Sweden (Hasson & Arnetz, 2008; Karlstedt et al., 2015). None of these studies focused solely on care or nursing home staff's competence; instead, study participants from other aged care settings were included. The details of these studies are presented in Table 6.

Table 6. Summary of the studies measuring nurses' self-assessed competence in older people nursing in care home context

References	Aim	Sample characteristics	Method, instrument, scales	Key findings
Bing-Jonsson et al., (2016); Norway	To measure competence of community-based nursing staff working with older people	RNs (n=354), ANs (n=528) and assistants (n=90) from nursing homes and home care services	A cross-sectional survey Nursing Older People-Competence Evaluation Tool (NOP-CET), which mainly includes multiple-choice items and items with Likert-type scales (all except one item use a four-point scale).	The level of competence varied between items, being lowest e.g. on nursing measures, new palliative measures, advanced procedures, nursing documentation and electronic communication. Younger age predicted higher self-assessed competence.
Hasson & Arnetz, (2008); Sweden	To compare nursing staff's perceptions of their competence, work strain and work satisfaction in nursing homes and home-based care, and to examine determinants of work satisfaction	RNs (n=42), practical nurses (n=468) and nurses' aides (n=353) in home care and nursing homes in two municipal organisations	A cross-sectional survey Quality-Work-Competence (QWC) questionnaire. Knowledge was measured in 18 work-related subject areas. Response options were 'sufficient', 'insufficient', and 'don't know'.	Nursing home nurses rated their knowledge as insufficient most commonly in following areas: psychiatric illnesses, computer skills, threats and violence, dementia, leadership, and laws regarding health care and social welfare.
Karlstedt et al., (2015); Sweden	To explore the educational and self-rated competence and duties of RNs within care of older people	RNs (n=344) working in municipal aged care settings	A cross-sectional survey Study specific questionnaire and Nurse Competence Scale (NCS). Self-rated satisfaction with professional competence was measured with one item; using 5-point scale, from 'not at all satisfied' to 'very satisfied'	Higher self-rated satisfaction with own professional competence was related to older age, more years after nursing education, and possessing at least one postgraduate qualification in specialist nursing.

AN = assistant nurse; RN = registered nurse

The 'Nursing Older People — Competence Evaluation Tool' (NOP-CET), aimed at measure nursing staff competence in community aged care, was used in a study that investigated the RNs' (n=354), assistant nurses' (n=528) and assistants' (n=90) competence in older people nursing in Norwegian nursing homes and home care services (Bing-Jonsson et al., 2016). The NOP-CET includes 65 items, which are mainly rated either using a Likert type scale or with multiple choice questions. The scale consists of 28 factors measuring knowledge (n=11), skills (n=9) and personal attributes (n=8) related to older people nursing (Bing-Jonsson et al., 2015b.) The study revealed several competence areas in need of improvement such as nursing measures, new palliative measures, advanced procedures, nursing documentation and electronic communication. Younger age predicted higher self-assessed competence and nursing staff in nursing homes scored higher than nursing staff in home care (Bing-Jonsson et al., 2016). The new competence assessment instrument was used for the first time in this study and, according to Bing-Jonsson et al. (2015b), the instrument should be further developed and tested on other samples of nursing staff to make further conclusions about generalizability.

While, study investigating nursing staff's self-rated knowledge in Swedish nursing homes, revealed several areas in need of improvement, such as psychiatric illnesses, computer skills, threats and violence, dementia, leadership, and laws regarding health care and social welfare (Hasson & Arnetz, 2008). Most of RNs, rated their level of competence as satisfactory or very satisfactory in study conducted in municipal aged care in Sweden (Karlstedt et al., 2015). Higher self-rated satisfaction with own competence was related to RNs' older age, more years after nursing education and possessing at least one post-graduate education in specialist nursing.

2.5 SUMMARY OF THE STUDY BACKGROUND

Nursing expertise in older people nursing in care homes has remained rather invisible, though the ageing population is rising globally with an increased demand for high-quality round-the-clock care. There are documents describing core competence in older people nursing aimed at ensuring graduating nursing students' competence in caring for older people. However, the research evidence regarding competence in older people nursing in care homes is scarce. The research in the field has grown, but the emphasis has been on the work of RNs and the research evidence regarding, for instance, LPNs' competence in older people nursing is scarce. Those few studies describing care home nursing staff competence and/or its predictors are cross-sectional surveys and only one of them actual measures nurse competence in older people nursing comprehensively, while others measure nurses' self-rated knowledge or satisfaction with their own professional competence.

There are some challenges in synthesising the research evidence regarding nurses' competence in older people nursing in care homes globally. Firstly, round-the-clock care units are known by different terms (Sanford et al., 2015). Care home nursing staff consisting of different professional groups in different countries, and nurses with the same professional title, may have differences in their education (Hallberg et al., 2016). In addition, different instruments have been used to measure the competence of nursing staff in care home contexts. However, according to earlier studies, it seems that not all nursing staff members working in care home contexts are adequately prepared to meet the needs of older people.

A valid and reliable instrument is needed when assessing nursing competence. One existing instrument (the NOP-CET) measures the competencies (knowledge, skills and personal attributes) required in older people nursing in nursing homes and home care services (Bing-Jonsson et al., 2015a, 2015b). However, the NOP-CET needs to be further developed and tested. It takes too long to fill the questionnaire (about an hour) and the instrument needs to be shortened (Bing-Jonsson et al., 2015b). The differences between the Norwegian and Finnish health and social care systems are reflected in this instrument. The NOP-CET measures several competencies that are not required of nurses in Finnish care homes, such as the ability to use specific measurement tools and the ability to perform certain advanced procedures. In addition, the conceptualisation of competence raises questions in measurement. The NOP-CET divides items into three categories: knowledge, skills and personal attributes. For instance, 'nursing documentation' items fall under the skills category, though documentation requires knowledge as well. Furthermore, it is unclear how each competence is measured, because seven types of response formats are used in this instrument. To be able to assess care home nursing professionals' self-assessed competence in older people nursing in Finland, an instrument suitable for Finnish care home contexts is needed. It is essential to ensure that the instrument truly reflects the necessary competence and measures what it is intended to measure. Competence requirements in older people nursing are not necessarily culture-specific, at least not in all respects. However, there are no such suitable instruments available that could be used to measure care home nursing professionals' competence in older people nursing in Finland.

3 *Purpose of the study*

The purpose of this study was to identify and describe the competence needed in older people nursing in care homes and to describe and predict care home nursing professionals' self-assessed competence in older people nursing. In addition, the purpose was to develop a competence self-assessment instrument that could be used to measure care home nursing professionals' competence in older people nursing. The aim was to produce information that can be utilised in competence management in care home context; information that is necessary in recruitment, in competence assessment and in competence development. This information can also be utilised at policy level when deciding what kind of education and competence is required of nursing staff working in care homes. In addition, this information is useful in the field of nursing education. The ultimate goal of this study was to provide information that will help to develop the quality of care in care homes for older people.

The specific objectives of the study were:

1. To identify competence needed for older people nursing in care homes (Article I-III)

2. To explore care home nursing professionals' self-rated competence in older people nursing (Article IV, summary)

3. To explore factors that predict care home nursing professionals' competence in older people nursing (Article IV)

4. To test the psychometric properties of a new competence self-assessment instrument, the Nurse Competence in Care Home Scale (summary)

4 Materials and methods

4.1 STUDY DESIGN

Descriptive and exploratory cross-sectional study designs were used in this research, which included a broad range of data collection sources and methods (Table 7). The competence needed for older people nursing in care homes was identified using the Delphi method. This was preceded by an integrative literature review. In addition, a qualitative interview study was conducted. These stages were followed by a survey that explored care home nursing professionals' self-assessed competence and predictors of this competence. Finally, the psychometric properties of the new competence self-assessment instrument were investigated.

Table 7. Study design

Article	Sample & setting	Design & time frame	Data analysis	Purpose
I	Databases: CINAHL, Ovid MEDLINE, PsycINFO, SocINDEX with Full Text and Scopus databases	An integrative literature review	Inductive qualitative content analysis	Identification of required competence
II	Purposive sampling RNs, LPNs, front-line managers and directors of care homes, Finland (38 were recruited)	Descriptive design A Delphi study, Round 1: October 2015, Round 2: December 2015 to January 2016	Descriptive statistics, inductive qualitative content analysis	
III	Purposive sampling Care home residents' family members (n=18), Finland	Descriptive design Semi-structured interviews, during March to September 2016	Inductive qualitative content analysis	
IV	Convenience sampling Care home nursing professionals (n=781), Finland	Cross-sectional design A web-based survey, during August to September 2017	Descriptive statistics, binary logistic regression, inductive qualitative content analysis	Assessment of competence
summary of the thesis	Care home nursing professionals' data (Article IV) was used in this psychometric testing	Cross-sectional methodological design	Principal component analysis, Cronbach's α	Psychometric testing of the Nurse Competence in Care Home Scale

RN = registered nurse; LPN = licensed practical nurse

4.2 SAMPLE, DATA COLLECTION AND ANALYSIS

4.2.1 Integrative literature review (Article I)

Method
An integrative literature review guided by Whittemore and Knafl's method was performed to identify the competence needed for older people nursing in LPNs' and RNs' work in care and nursing homes. An integrative literature review method was used due in order to bring together studies that apply different research designs. (Whittemore & Knafl, 2005). Two research questions were addressed: 1) What type of competence is required from RNs for older people nursing in care and nursing homes? 2) What type of competence is required from LPNs for older people nursing in care and nursing homes?

Data
A computerised search of peer-reviewed literature published in English from 2006 to April 2016 was performed. The search was limited to the past ten years because the aim was to focus on current competence demands and not to study changes in competence requirements over time. The CINAHL, PsycINFO, SocINDEX, Ovid MEDLINE and Scopus databases were used. The search terms were "nursing home*" or "care home*" AND competenc* AND "ger* nursing" or "older peop* nursing" or "care of older people" or "older peop* care" or "elder* care" or "aged care" AND "registered nurse*" or "licensed practical nurse*". The studies that were included in the review met the following inclusion criteria: papers that reported the results of an empirical study and focused on LPNs' or RNs' work in care or nursing homes reflecting the competence needed for older people nursing. The exclusion criteria were: papers that reported only theoretical or discussion-based issues (editorials, letters etc.); papers not related to nursing homes or the care home context; paper with results gained from nursing homes/care homes that were indistinguishable from other contexts; papers not related to RNs' or LPN's work; papers with results indistinguishable from others' professionals' data; and papers not reflecting the competence needed for older people nursing.

The initial search resulted in 347 titles. The title, abstract and content of articles were scrutinised based on the inclusion and exclusion criteria. An additional 23 articles from lists of references and citations of articles identified through database searching were retrieved and assessed using the inclusion and exclusion criteria. The quality of the selected studies was assessed using Joanna Briggs Institute critical appraisal tools. *The JBI critical appraisal tool for descriptive/case series studies* was used to assess the quality of quantitative studies and *JBI QARI critical appraisal checklist for interpretive and critical research* was used to assess qualitative studies (The Joanna Briggs Institute, 2014). One study was rejected because of quality flaws. The results of that study were clearly biased due to the use of an instrument that was not valid. In addition, the contents listed in the results were unclear, so it was impossible to utilize the study results.

Data analysis
The data analysis stage included data reduction, data display, data comparison and conclusion drawing and verification (Whittemore & Knafl, 2005). The papers were read to obtain an overview of the content and the primary sources that were included in the review were divided into subgroups according to the nurse group (RN, LPN) to which they were related (Whittemore & Knafl, 2005). The inductive analysis process was conducted by identifying meaning units that illustrated nurses' tasks, activities, skills, knowledge or attitudes needed in their work. The meaning units were sorted into subcategories, which were then abstracted into competence categories. In addition, the themes were verified with primary source data (Whittemore & Knafl, 2005).

4.2.2 Delphi study (Article II)

Method

The Delphi method was used to identify competencies RNs and LPNs need to care for older people in care homes. The Delphi technique was chosen since it is a useful method for achieving consensus on issues where none has previously existed (Powell, 2003; Keeney et al., 2006). Two Delphi rounds were undertaken. Round 1 was conducted in October 2015 and round 2 was conducted during December 2015 to January 2016.

A purposive sampling method was used to recruit expert panellists (Keeney et al., 2011). People working as LPNs, RNs, managers or directors in intensive service housing for older people and willing to participate the Delphi panel were invited to participate in the study. At least two years' work experience as a nurse, manager or director in intensive service housing was required. To recruit participants to the panel, information about the study was sent to administrators of aged care services and directors of care homes via e-mail. Professionals who were willing to participate either contacted the researcher directly or had their names put forward by the directors. The aim was to find participants from different parts of Finland and from both the public and private sector. Organisations were identified via internet searches and from the *Register of Institutions in Social Welfare and Health Care*, which is a public register maintained by the National Institute for Health and Welfare (Finland). The directors of aged care services of two cities and 59 service providers from the private sector were contacted. The number of units varied in these organisations. Permission to undertake the study was granted by these two cities and by 13 private care homes. Finally, 38 panel members were recruited.

Delphi rounds

There are different types of Delphi designs and a modified Delphi design was used in this study. In round 1 the panellists were provided with pre-selected items instead of an open qualitative first round (Hasson & Keeney, 2011). The round 1 questionnaire included background questions and 60 items (competencies), which were formulated as 'abilities to do something' reflecting the holistic conception of competence (Cowan et al., 2005). In addition, the questionnaire included open-ended questions concerning the understandability and comprehensiveness of the items, providing participants with the opportunity to raise new issues regarding the competence needed in older people nursing in care homes.

The items were drawn from an integrative literature review. Since the literature searches did not reveal information from Finnish care homes, the author's (author of this thesis) experience in clinical practice and management in care homes was also utilised in the formulation of items. In addition, the research team discussed the formulation of the items and the questionnaire. The questionnaire items (n=60) came under five categories: attitudinal and ethical competence (n=7), interactional competence (n=12), evidence-based care competence (n=28), pedagogical competence (n=5), and leadership and development competence (n=8). The panel members were asked to rate the importance of items using a five-point Likert scale.

The round 2 questionnaire consisted of items in which consensus was not reached during the first round, as well as new items that were formulated based on answers to the open-ended questions from the first round. The understandability of the new items was questioned and the feedback from the first round was provided. The cover letter and questionnaire were mailed to panel members. The paper-pencil format questionnaire was used to encourage participation (Shih & Fan, 2009; Geist, 2010).

Data analysis

Descriptive statistics and qualitative content analysis were used for data analysis. The cut-off for consensus was set in advance as >85 % agreement on scores ≥ 3 for each item (3 = Quite Important, 4 = Important, 5 = Very Important) (Keeney et al., 2006). Quantitative data were statistically analysed using IBM SPSS Statistics 21 software (IBMcorp., Armonk, N.Y., USA). Open-ended questions were analysed using qualitative content analysis (Graneheim & Lundman, 2004). Meaning units were expressed with words and sentences reflecting knowledge, skills and/or attitudes needed in the care of older people. These meaning units were condensed and then grouped together into sub-categories (Graneheim & Lundman, 2004). Subcategories were then compared with items represented in the first round's questionnaire to find if they already existed in the list. New items were placed under the appropriate competence category.

4.2.3 Interview study (Article III)

Method

A qualitative descriptive design was used to explore and describe the expectations of the care home residents' family members regarding the competence of nurses in care homes for older people. The data were collected using semi-structured interviews, allowing family members to talk about their views in their own words (Polit & Beck, 2010).

Family members were recruited with help from regional associations and member associations of The Central Association of Carers in Finland and from regional associations of The Alzheimer's Society of Finland. In addition, the snowball technique was used for recruitment. Family members whose loved ones were living in a care home or had had interval periods in care home were invited to participate in the study. A family member was defined as a person playing a significant role in an individual's life. It was decided that an adequate number of interviewees had been achieved when new categories no longer arose from the interviews (Trotter, 2012).

Data

One group interview (n=6) and 12 individual interviews were conducted between March and September 2016 by the author of this thesis in a place appointed by the interviewees. Individual interviews ranged in duration from 30 minutes to 1 hour and 23 minutes, and the duration of the focus group interview was 1 hour and 15 minutes. People who participated in the group interview were members of the Association of Carers. They had regular meetings and they wished to be interviewed together. The interview guide was pilot tested with two family members and there was no need to revise it, so pilot interviews were included in the data. The primary themes were family members' pre-expectations (expectations they had before their loved one moved into the care home) and current expectations. To assist participants to express their expectations, family members were asked, for example, to describe what makes a competent nurse and to describe situations in which their expectations had been met or had not been met. Interviews were audiotaped and transcribed verbatim.

Data analysis

The data were analysed manually using the inductive qualitative content analysis approach. The inductive content analysis method was used because there were no previous studies exploring family members expectations regarding nurses' competence in care homes (Elo & Kyngäs, 2008). The text of each interview was divided into meaning units based on the manifest content of the phenomena revealed (Graneheim & Lundman, 2004; Vaismoradi et al., 2013). Meaning units were words, sentences and portions of sentences containing aspects related to one another. Units were condensed, and these condensed meanings were grouped together into subcategories and then into upper categories and

primary categories. Data analyses were conducted concurrently with data collection and preliminary analysis began after three interviews (Elo et al., 2014). This was helpful in identifying when new categories no longer arose from the interviews and when the saturation appeared to have been achieved.

4.2.4 Cross-sectional survey (Article IV)

Method

A cross-sectional web-based survey was conducted to explore care home nursing professionals' self-rated competence and its predictive factors. Three nurse associations (The Finnish Nurses Association, The Finnish Union of Practical Nurses and Finnish Practical Nurses) assisted in the data collection phase by sharing the research invitation and information together with the link to the questionnaire via their social media channels. The information about the study was also shared via a nurses' forum (a public internet site for all nursing professionals) and via the forum's Facebook and Twitter accounts. In addition, the study information was shared and disseminated by individuals via Facebook and Twitter. The inclusion criterion for the participants was working in LPN or RN positions in a care home (intensive service housing). LPNs and RNs working in managerial roles and participating in daily nursing practice were also eligible to take part the study. The aim was that at least 430 professionals would participate in the study because it was necessary to test the psychometric properties of the instrument (which included 86 items) and generally a minimum of five respondents per item is recommended for factor analysis (DeVon et al., 2007; Rattray & Jones, 2007). The use of social media in the recruitment strategy meant that a wide selection of professionals who belonged to the target group had an opportunity to participate in the study; the possibility to participate was not dependent on the care home service provider's permission to conduct the study in their organisation.

Data

The data were collected over three weeks in August/September 2017 using an online questionnaire. The questionnaire included 12 questions about demographic details (with some clarifying question), 86 statements related to older people nursing, and one open-ended question. In the open-ended question, participants were asked to describe how they perceived their own competence in relation to the competence requirements of their current work. The respondents rated their level of competence using a four-point Likert type scale, with the response alternatives being: 1 = Totally disagree, 2 = Somewhat disagree, 3 = Somewhat agree, and 4 = Totally agree. The instrument was pre-tested with a convenience sample of nurses working in different care homes (n=11). The purpose was to evaluate the understandability of the items, the administration of the questionnaire, and the time spent completing it. According to the respondents, all items of the instrument were understandable and only one background variable required rewording after the pilot study. On average, it took about 10 minutes for the respondents to complete the questionnaire.

Data analysis

Frequencies, percentages, means and standard deviations were utilised in the description of the quantitative data. Binary logistic regression analysis was used in the analysis of predicting factors affecting the level of competence. A four-point Likert type scale was used to measure the level of care home professionals' competence. For the analysis, the mean values of the competence were categorised into two classes, which were labelled 'adequate competence' (> 3.50) and 'inadequate competence' (≤ 3.50). Prior to the logistic regression analysis, the cross tabulations with chi-square tests were used to test the relationship between the independent variable (respondent background factors) and the categorised dependent mean sum variable (the level of competence). Eight background variables were tested: respondent's age, the duration of work experience in social and health care, the

duration of work experience in intensive service housing, level of education, further training after graduation, employment (permanent or temporary), form of working hours, and sector of the organisation. Logistic regression models were then created using the backward stepwise procedure (Conditional). The final regression models were created through a forced (Enter) selection procedure, which included the independent background variables that proved relevant based on the regression models. The boundary for statistical significance was set at $p < .05$ for all tests. IBM SPSS Statistics for Windows (Version 24.0. Armonk, NY: IBM Corp.) was used in data analysis. The qualitative data from the open-ended question were analysed using inductive qualitative content analysis.

4.3 THE DEVELOPMENT OF THE NURSE COMPETENCE IN CARE HOME SCALE

The decision to develop a new competence assessment instrument was made after reviewing the existing nursing competence self-assessment instruments. One instrument (NOP-CET) reflecting current competence requirements in older people nursing within care homes was found. However, for several reasons (see section 2.5), it was deemed inappropriate for use in this study. It was thus necessary to develop a self-assessment instrument to measure care home nursing professionals' competence in older people nursing. This new instrument was developed in two phases. In the first phase, the Nurse Competence in Care Home Scale (NCCHS) was constructed; in the second, the instrument's psychometric properties were empirically evaluated. All stages of research were conducted in Finnish. The instrument development process, including the construction and psychometric testing of the NCCHS, is presented in Figure 2.

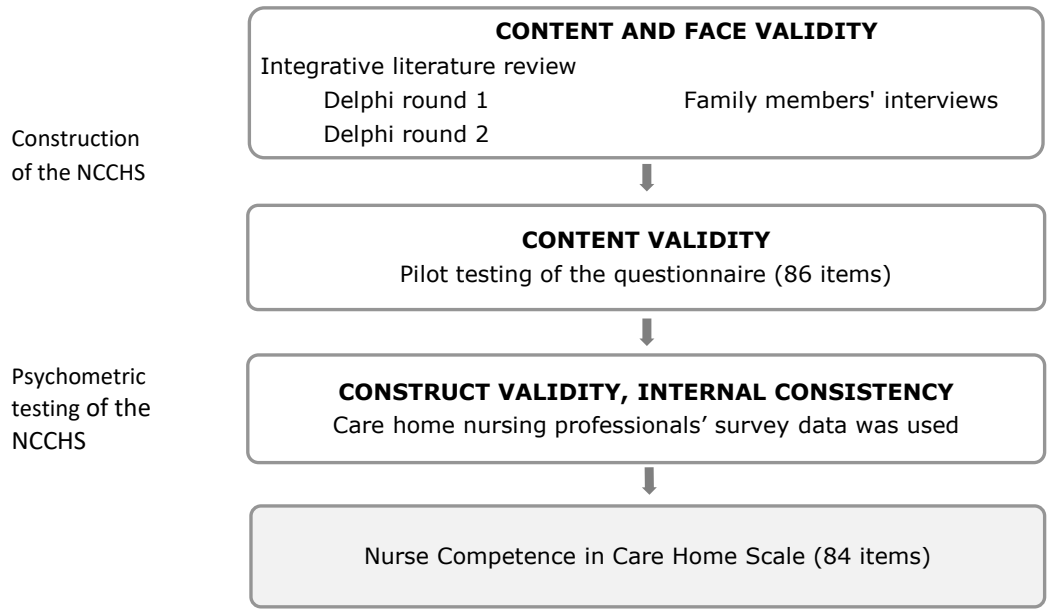

Figure 2. Development process of the Nurse Competence in Care Home Scale (NCCHS)

Construction of the NCCHS

Validity refers to the degree to which an instrument measures what it is intended to measure (Polit & Beck, 2010, p. 571). The face and content validity of the NCCHS was established by many different measures during the construction of the instrument. The first version of the instrument was developed after conducting the Delphi study and an interview study, which guided the item selection for the instrument. An integrative literature review was conducted before the first Delphi round. The literature review was used in the formulation of the items included in the first round Delphi questionnaire. In addition, the author's experience in older people nursing was utilised in the formulation of items.

The required competencies for older people nursing in care homes proved to be very similar in LPNs and RNs work, and therefore only one instrument was developed to measure both LPNs' and RNs' competence. The first version of the instrument included 86 items. Holistic concept of competence was used in this study. Competence was considered to include knowledge, skills and attitudes, and this was reflected in the formulation of the items. A Likert type scale asking for the level of agreement was chosen for the response scale because older people nursing in care homes requires competencies that are impossible to assess with a rating scale requiring strict numerical assessment.

The instrument was pre-tested before conducting a survey to evaluate the comprehensibility of the questions, the administration of the questionnaire, and the time required to complete it. Participants had also the opportunity to freely comment on the questionnaire via an open-ended question.

Psychometric testing of the NCCHS

The psychometric properties of the scale were investigated after collecting care home nursing professionals' (n=781) survey data. The psychometric testing process included an evaluation of the construct validity and internal consistency of the NCCHS.

Principal component analysis (PCA) was conducted with oblique rotation (Promax) to investigate the construct of the scale. The PCA is a multivariate technique for identifying the linear components of a set of variables (Field, 2018, p. 1031). An oblique rotation method was chosen because correlations between the components existed (Field, 2018). Prior to performing PCA, the suitability of the data for the analysis was assessed using the Kaiser-Meyer-Olkin test and Bartlett's test of Sphericity (Rattray & Jones, 2007; Field, 2018). Two items were removed from the scale before conducting the final PCA. Internal consistency refers to the degree to which the subparts of an instrument are measuring the same attribute or dimension (Polit & Beck, 2010, p. 557). Internal consistency reliability was evaluated using Cronbach's alpha on total scale and subscale levels. IBM SPSS Statistics for Windows (Version 24.0. Armonk, NY: IBM Corp.) was used in testing the instrument.

4.4 VALIDITY AND RELIABILITY OF THE STUDY

Integrative literature review

The integrative literature review followed a predetermined review protocol to ensure the rigor of the process. During the problem identification stage, research problems were clearly identified by the research team after preliminary literature searches. The university library information specialist assisted in planning the searches. Five different databases were used to find studies. The quality of the studies was assessed using Joanna Briggs Institute critical appraisal tools with the intention of excluding methodologically weak studies (The Joanna Briggs Institute, 2014). The inclusion and exclusion criteria and the quality of the articles were discussed together with the research team. At the end of the data analysis process, the themes were further verified with primary source data to avoid premature analytic closure or exclusion of pertinent evidence (Whittemore & Knafl, 2005).

In order to increase transparency of the review process, the PRISMA flow diagram was used in the presentation stage (Moher et al., 2009).

Delphi study
To increase the validity of the Delphi study, an attempt was made to recruit a diverse expert panel composed of professionals with knowledge of the subject under investigation (Keeney et al., 2011). In accordance with the nature of this research method, face to face discussions were not conducted and the panel members did not know who belonged to the group. Therefore, the possibility that certain individuals would dictate the direction of the discussion was avoided (Powell, 2003). This was important since there were nurses, nurse managers and directors in the same Delphi panel. During the first round, the panellists were asked to rate the importance of pre-selected items. However, participants were also provided with the opportunity to raise new issues regarding the competence needed in older people nursing.

Qualitative interview study
Trustworthiness of the qualitative interview study was considered in the preparation, organisation and reporting phases. The interview guide was pre-tested and designed in a way that did not overly steer the interviewee's answers. Study participants were recruited from different sections of Finland to increase the credibility of the interview study results. The data were collected and analysed at the same time as this helped identify when saturation was achieved. The author of this thesis was responsible for the analysis and other members of the team carefully followed up the whole analysis process and checked its adequacy (Elo et al., 2014). After analysis, the categories were compared with the original data to ensure that the data represented the information that the interviewees provided. The transferability of the results was facilitated by clearly describing the context, selection and characteristics of the participants, the data collection and the analytic process (Graneheim & Lundman, 2004).

Cross-sectional survey study
A new nurse competence self-assessment instrument was used to collect the survey data because a suitable instrument for Finnish care home contexts was not found. Face validity and content validity of the NCCHS was assured by creating the items based on the literature review, expert opinions, and family members' interviews. In addition, the respondents were asked to comment the questionnaire during the pre-test of the questionnaire. Construct validity analysis using PCA was conducted. In addition, a reliability analysis using Cronbach's alpha was performed to measure internal consistency of the NCCHS. Statistician assisted in the analysis stage and the scale was forward and backward translated with qualified translators. First, it was translated from Finnish to English, and then back to the original language by different translators and the versions were checked for their accuracy.

All stages of the research included qualitative data and the importance of critical self-reflection was considered. The author of the thesis had worked in care homes as RN, front-line manager and director before conducting the research, and she tried to be aware of her own prejudices and perspectives during the whole study process using techniques such as making reflective notes.

4.5 ETHICAL CONSIDERATIONS

The responsible conduct of research was confirmed by following the ethical principles of the Finnish Advisory Board on Research Integrity (2012) and the World Medical Association Declaration of Helsinki (2013) during the whole study process. The study was reviewed and approved by the University of Eastern Finland Committee on Research Ethics (statement no. 8/2015). In addition, research permits were sought from the participating organisations before conducting the Delphi study.

All potential participants were given detailed information about the study. The voluntary nature of the participation and the right to withdraw from the study without explanation or consequence were emphasised. The participants were informed that their identity would not be revealed at any stage and that the researcher would treat the information as confidential. In addition, participants were given the contact details of the researcher and supervisors of the study. In order to take part in the interview study, participants were asked to sign an informed consent form. Returning a completed questionnaire was considered as giving informed consent during the Delphi and survey study phases.

There were no physical or social risks determined for the study participants. However, a potential psychological risk related to discussing sensitive topics during the care home residents' family members interviews was identified. To decrease that risk the researcher used a variety of strategies, such as observing and reacting to the interviewees' signs of distress. There were no financial advantages to participating in this study (World Medical Association, 2013). The researcher worked openly, conscientiously and honestly during the entire study process to the best of her ability (Finnish Advisory Board on Research Integrity, 2012).

5 Results

5.1 COMPETENCE NEEDED IN OLDER PEOPLE NURSING IN CARE HOMES (ARTICLES I-III)

Integrative literature review (Article I)

A total of 10 studies were included in the integrative literature review. Studies were conducted in Sweden (n=4), Norway (n=2), United Kingdom (n=1), Switzerland (n=1), the USA (n=1), and the Netherlands (n=1). In six studies, a qualitative approach was used. Four studies used focus group interviews and one study used individual interviews. In one study, writing analysis, document analysis, and observations were used alongside interviews. Two studies used a quantitative approach. In addition, there was one expert consensus study and one Delphi study, which used a combination of qualitative and quantitative processes. Two studies identified the competence needed for older people nursing in nursing homes and home care services for an entire nursing staff, while six studies were related only to RNs' work. One study described future distinguishing competencies of baccalaureate-educated registered nurses, and one study described LPNs' roles and responsibilities in nursing homes. More detailed information regarding the studies included in the review is presented in Table 1 in the Article I.

Five competence areas required for RNs in older people nursing in care homes were identified: 1) attitudinal and ethical; 2) interactional; 3) evidence-based care; 4) pedagogical; and 5) leadership and development competence.

Attitudinal and ethical competence is needed in care homes to be able to recognize, reflect and solve ethical dilemmas and to meet the older person with respect. Ethical competence in care home context include the ability to respect the resident's autonomy and privacy and to support the individuality and integrity of older people (Bedin et al., 2013; Carlson et al., 2014; Carlson & Bengtson, 2014). In addition, nurses have to reflect on how to ensure human dignity and respect for one resident while simultaneously ensuring quality of life for the rest of the residents. (Bedin et al., 2013) A respectful approach towards older people entails respectful attitudes such as meeting an older person at his or her level and behaving politely. Nurses' willingness to understand the feelings and needs of older people and to promote the participation of an older person is essential. (Bedin et al., 2013; Carlson & Bengtsson, 2014) RNs are also expected to be older people's advocates in situations such as when contacting or meeting a physician (Karlsson et al., 2009).

Communication, interaction and collaboration are significant parts of older people nursing and they require interactional competence. Nurses' work in care and nursing home context includes cooperation with residents, their families, colleagues and other professionals (Karlsson et al., 2009; Bedin et al., 2013; Furåker & Nilsson, 2013; Carlson et al., 2014). The ability to listen, empathise and create a safe and confidential atmosphere is important. RNs are expected to inform family members and have conversations in sensitive situations (Karlsson et al., 2008; Carlson & Bengtsson, 2014) requiring the ability to have a respectful dialogue with people (Carlson & Bengtsson, 2014). Documentation is also a part of RNs' work (Bedin et al., 2013; Furåker & Nilsson, 2013).

Wide evidence-based care competence is needed in care and nursing homes because planning, assessment, health promotion, risk management, and many clinical activities, as well as end-of-life care, are all part of RNs' work. Theoretical, experiential and evidence-based knowledge, as well as personal knowledge of the older person, are needed. (Karlsson et al., 2009; Bedin et al., 2013; Furåker & Nilsson, 2013; Carlson et al., 2014; Carlson &

Bengtsson, 2014) It is also necessary to be able to assess an older person's health and needs, to recognise changes in situations and to act early enough. To make the correct assessments, advanced medical and nursing knowledge is required (Heath, 2010; Furåker & Nilsson, 2013).

RNs' work in nursing home contexts also involves health promotion and risk management (Heath, 2010; Carlson et al., 2014), such as prevention of ulcers, malnutrition and falls (Carlson et al., 2014). The abilities to support older people's resources and rehabilitation are a part of nurses' work (Heath, 2010). The nurse covers the basic needs of older people and takes care of residents' acute and chronic diseases (Furåker & Nilsson, 2013). Knowledge of geriatric and general long-term illnesses is needed (Furåker & Nilsson, 2013). Nurses must have knowledge of behavioral changes caused by memory disorders, and they must have the ability to manage challenging situations (Bedin et al., 2013; Furåker & Nilsson, 2013). Practical nursing tasks, such as minor procedures, wound treatments (Heath, 2010; Furåker & Nilsson, 2013), and pain management are also required (Karlsson et al., 2006; Furåker & Nilsson, 2013). RNs are expected to have the medication competence, including the ability to monitor the effects of medicines and an awareness of possible drug interactions (Heath, 2010; Furåker & Nilsson, 2013). In addition, end-of-life-care is a key part of nurses' work in nursing homes (Karlsson et al., 2009; Heath, 2010; Furåker & Nilsson, 2013; Carlson & Bengtsson, 2014). Overall, nurses have to be able to promote the well-being of older people holistically.

Pedagogical competence includes the ability to supervise, teach and/or educate residents, their family members, student nurses and nursing staff. Nurses' work in care and nursing homes includes the guiding of residents, as well as the counselling of residents' family members (Karlsson et al., 2009). RNs supervise, teach and educate other nursing staff (Karlsson et al., 2009; Bedin et al., 2013; Furåker & Nilsson, 2013) and precept undergraduate student nurses (Carlson et al., 2014; Carlson & Bengtsson, 2014).

Leadership and development competence consists of the ability to plan and organise the work, manage resources, and think creatively and innovatively. RNs working in care and nursing homes are expected to have leadership competence, whether they are officially in a managerial position or not (Heath, 2010; Bedin et al., 2013; Furåker & Nilsson, 2013). RNs plan, organise, direct, control and coordinate the work, and they are expected to manage human and other resources in varying degrees. In addition, RNs assess staff competence (Furåker & Nilsson, 2013) and teamwork, and try to develop individual and collective competencies with other team members. (Bedin et al., 2013). Creativity and innovative activities are necessary for older people nursing (Heath, 2010; Carlson & Bengtsson, 2014).

In addition to those studies that described RNs' work, one study focused on the competencies that should, in the future, distinguish baccalaureate-educated RNs from other nursing staff in nursing homes. (Backhaus et al., 2015). In addition, Bing-Jonsson et al. (2015a, 2016) identified the competence needed in older people nursing for the whole nursing staff working in nursing homes and home care services. Only one study described LPNs' work in nursing homes focusing on the nursing practice domains of assessment, care planning, and care plan evaluation, delegation, and supervision. LPNs reported being actively engaged in these domains (Mueller et al., 2012).

Delphi study (Article II)

In total, 38 panelists were recruited to identify competencies RNs and LPNs need to care for older people in care homes providing intensive service housing for older people. The recruited panel was comprised of professionals who worked in Finnish care homes as LPNs (n=13), RNs (n=9) and front-line managers (n=7) or were directors (n=9) of care homes or municipal care services for older people. In total, 31 panelists participated in the first round. Second round questionnaires were sent only to those panelists who responded in the first round, with 21 people participating in the second round.

In the first round the panel members were asked to rate the importance of proposed competencies for 1) RNs and for 2) LPNs. However, some of the participants (n=14) had evaluated either RNs work or LPNs work, so two panels were formulated. Panel A rated competencies needed for RNs and panel B rated competencies needed for LPNs. Some members (n=17) served on both panels. The composition of the panels is presented in Table 1 on the Article II.

During the first round panel A (n=20), which focused on the work of RNs, reached consensus on 59 of the 60 items. The item that did not reach consensus was: '*ability to provide group guidance for older people (exercise sessions, music sessions, etc.)*'. In panel B (n=28) where the focus was on the work of LPNs, consensus was also reached on 59 of the 60 items, but the item that did no gain consensus was: '*ability to extract blood samples and, when necessary, take care of delivering them to a laboratory according to examination instructions*'. In addition, a total 21 new items were found during the first round. During the second round, panel A (n=14) reached consensus on all items, while panel B (n=19) reached consensus on 21 of the 22 items. The item that did not reach consensus in panel B was the same as in the first round.

In total, 80 competencies for LPNs and 81 competencies for RNs were identified as necessary during this Delphi study. The list of competencies is presented in Table 2 in Article II.

Interview study (Article III)

In total, 18 care home residents' family members from different sections of Finland participated in the interview study. Interviewees ranged in age from 56 to 83 years (mean 70.5 years). Most of them (n=15) were retired and a few (n=3) were in a working life. One male and 17 females were spouses (n=13), adult daughters (n=3) and close friends (n=2) of care home residents. Participants' loved ones had been living in a care home from periods ranging from 4 months to 4,5 years. The care homes were intensive service housing units (classified as non-institutional care), except for one care home that was officially categorised as institutional care at the time the interview was conducted. Many study participants visited their loved ones every day or nearly every day, and all interviewees visited at least once a week.

Family members' pre-expectations were minor when their loved one moved into the care home. Many of the interviewees had acted as primary caregivers and they expected to return to the role of a spouse. In addition, interviewees expected to be welcome at care home and that there would be professional staff. Participants also expected that their loved one's individuality would be respected and that the well-being, health and functional capacity of the loved one would be maintained.

However, family members' current expectations were multifaceted. Four primary categories were identified that described family members' current expectations regarding nurses' competence in care homes: *encountering and treating people respectfully, reflective collaboration between the nurses and the older persons' family members, holistic and individualized promotion of the older person's well-being, and older person's high-quality basic care and nursing*. A summary of the categories and primary categories is presented in Table 8.

Table 8. Family members' expectations regarding the competence of nurses in care homes

Primary category	**Upper category**
Encountering and treating people respectfully	Encountering people
	Encountering a person with a memory disorder
	Reading non-verbal communication
	The appropriate treatment of an older person
	Respecting an older person's property
	Appropriate treatment of co-workers
Reflective collaboration between the nurses and the older persons' family members	Supporting the participation of the family members
	Keeping the family members informed
	Supporting the family members
	Developing operations based on family members' feedback
Holistic and individualized promotion of the older person's well-being	A holistic approach
	Considering an older person's individuality
	Supporting the participation of an older person
	Supporting the social contacts of an older person
	Promoting communality
	Humour
	Providing recreation and activities inside and outside the care home
	Understanding music and singing as components of the well-being of an older person
Older person's high-quality basic care and nursing	Preventing dangerous situations and accidents
	Hygiene competence
	Nutritional care
	Basic care
	Maintaining the physical functional capacity of an older person
	Recommending aids and the acquisition of aids
	Assisting in transfers
	Observation
	Monitoring chronic diseases
	Considering sensory impairments
	Understanding and considering the disease of an older person
	Preventing and managing challenging situations with an older person with a memory disorder
	Addressing the benefits to which an older person is entitled
	Documentation
	Managing the flow of information
	Appropriate and safe pharmacological care
	Pain management
	Hospice care

Encountering and treating people respectfully
Care home residents' family members expected nurses to be able to encounter people respectfully. Participants hoped that nurses would greet residents, family members and other visitors and be willing to listen and talk to people. According to family members, a competent nurse is one who is able to be fully present when encountering an older person and who is able to read non-verbal communication. The ability to encounter an older person with a memory disorder is also required. According to family members, nurses should engage with and inform the older person when nurses are performing different procedures. The residents should not be ignored. Family members described a competent nurse as warm and empathetic and able to perceive the older person as a human being and not just as a client. Interviewees expected nurses to treat both residents and co-workers properly, and not abuse their power. Nurses should always help residents when necessary and they should not use 'baby talk' in communicating with the residents. In addition, nurses should treat residents calmly, kindly and gently. Family members mentioned that nurses should act according to what is best for the resident and not what is easier for the nurse. In addition, nurses should not discount an older person's subjective experience based on the nurse's own feelings or experiences. For example, a nurse should believe a resident who complains of pain. However, nurses should not always believe what an older person with a memory disorder says. Nurses should observe the residents to understand their needs. In addition, family members hoped that nurses would respect the residents' clothes, furniture and other property.

Reflective collaboration between the nurses and the older persons' family members
Nurses' ability to collaborate with family members was considered a basic requirement and nurses were expected to support the participation of family members in numerous ways. Family members wanted to feel welcome in the care home and to be given accurate information in response to their questions. They wanted nurses to discuss the resident's daily activities, condition, illnesses and care honestly and without being asked. Family members wanted nurses to accept feedback from family members and develop actions based on this. It was also mentioned that nurses should be able to welcome a family member as a volunteer worker if the family member is willing to function as a volunteer in the care home. Many participants had feelings of guilt related to their loved one's transition to a care home and emphasised the importance of nurses' willingness to support family members, particularly in the beginning when the resident has moved to the care home.

Holistic and individualised promotion of the older person's well-being
Interviews revealed that care home residents' well-being should be promoted holistically. According to family members, both residents' social contacts and overall communality in a care home should be promoted. Family members appreciate nurses who create a positive atmosphere in the care home and who use humour in their daily work. According to family members, nurses should provide opportunities for all residents to enjoy recreational and outdoor activities. These activities are not necessarily always the nurses' responsibility, but they should at least have a positive attitude towards these activities and towards visitors in the care home. Music and singing was considered especially beneficial to older peoples' well-being in numerous ways. Nurses were expected to recognise the resident's individuality in every action. Family members were happy to see that a nurse was truly interested in their loved one's likes and dislikes and was willing to use this information in practice. Participants appreciated nurses who were able to handle situations individually and were sufficiently flexible in adjusting routines when necessary. In addition, family members expected that nurses understand that the care home is a home for older people and that residents' opinions should be listened to and acknowledged. Interviewees expected nurses to identify the older person's resources and utilise them.

Older person's high-quality basic care and nursing

Family members expected nurses to do their best to ensure the residents' safety in the care home. Vigilance and awareness of during the performing of housekeeping duties were expected. Safety expectations were related to the prevention of falls and the prevention of physical conflicts between the care home residents. In addition, family members expected nurses to have food hygiene competence and competence in other areas of hygiene. The importance of good basic care (including the older person's personal hygiene, oral care, shaving, cutting nails, skin care and toileting) was emphasised. The ability to recognise the resident's need for rest during the day was also expected. In addition, family members expected nurses to assist a resident with eating and drinking whenever necessary and ensure a pleasant meal situation. Interviewees hoped that nurses would help residents remain active and rehabilitate the residents whenever possible. Nurses were expected to assist residents in transfers using a patient lift (or without a lift, depending on the resident's condition). Family members appreciated nurses who recommended and supplied suitable aids for the older person. In addition, family members expected nurses to observe the residents for possible symptoms of disease. The monitoring of chronic diseases was also required. Nurses were expected to consider the resident's visual and hearing impairments and the limitations caused by various diseases. The ability to prevent and manage challenging situations with an older person with a memory disorder was also emphasised. One interviewee also emphasised the importance of documentation. In addition, the smooth flow of information within the care home and between the care home and the hospital was emphasised. Nurses were also expected to conduct safe and appropriate pharmacological care, to address pain management, and be able to provide hospice care. Also important were being able to discuss death, preparing family members for a loved one's death, and communicating with family members of the deceased.

Although the goal in this study was not to explore family members' perceptions of nurses' level of competence, the interviews clearly revealed large variations in families' perceptions of the degree to which the nurses fulfilled expectations. The majority of the participants were satisfied or very satisfied with the nursing personnel and the care provided. However, some interviewees expressed their deep dissatisfaction with nurses' competence and a few of them even worried about their loved one's well-being.

5.2 CARE HOME NURSING PROFESSIONALS' SELF-ASSESSED COMPETENCE (ARTICLE IV)

In total, 781 care home professionals completed the survey questionnaire. The characteristics of the participants are presented in Table 9. The sample consisted mostly of females (97%), with a mean age of 39 years. Participants were from different sections of Finland and from the public (58%), private (38%) and third sector (3%). Most of the respondents were working in LPN position (n= 680), while the rest were working in RN and/or managerial position (n=101). Study participants' highest education varied. Most of the respondents (90%) working in LPN position had completed *The Vocational Qualification in Social and Health Care, Practical Nurse* programme. 6 % had completed an older Practical Nurse programme and others (4%) had completed RN or other health or social care programmes that no longer exist (e.g. auxiliary nurse).

In RN/manager group 71% of the participants reported that the *Bachelor of Health Care, Nursing* was their highest level of education. 20% had completed an older RN programme. Others in this group had completed *Master of Health Care* programme (4%) or other education programmes.

Table 9. Characteristics of survey study participants: n (%), Mean, SD (n=781)

Characteristics	n (%)	Mean	SD	Missing n (%)
Age (years)		39	11.9	17 (2.2)
≤ 30	211 (27.0)			
31-40	206 (26.4)			
≥ 41	347 (44.4)			
Gender				2 (0.3)
Female	756 (96.8)			
Male	21 (2.7)			
Other	2 (0.3)			
Native language				2 (0.3)
Finnish	758 (97.1)			
Swedish	16 (2.0)			
Other	5 (0.6)			
Education (highest)				2 (0.3)
Practical nurse (older education)	43 (5.5)			
Practical nurse (current education)	614 (78.6)			
RN	23 (2.9)			
Bachelor of Health Care (Nursing)	76 (9.7)			
Bachelor of Social Services and Health Care (Elderly care)	3 (0.4)			
Master of Health Care	4 (0.5)			
Master of Health Sciences	1 (0.1)			
Other	15 (1.9)			
Further training				92 (11.8)
Yes	215 (27.5)			
No	474 (60.7)			
Service relationship/employment				10 (1.3)
Permanent employee	587 (75.2)			
Temporary employee	184 (23.6)			
Form of working hours				7 (0.9)
Three-shift work	514 (65.8)			
Only morning shifts	38 (4.9)			
Only night shifts	25 (3.1)			
Other	197 (25.5)			
Sector of the organization				8 (1.0)
Public	452 (57.9)			
Private	297 (38.0)			
Third sector	24 (3.1)			
Years worked in social and health care		11	8.6	10 (1.3)
≤ 5	261 (33.4)			
> 5	510 (65.3)			
Years worked in intensive sheltered housing units		6	4.6	5 (0.6)
≤ 5	472 (60.4)			
> 5	304 (38.9)			

Care home nursing professionals' self-assessed competence: quantitative data

The mean value of the total scores for self-assessed competence was 3.57 (SD = 0.31) among all participants. The 'observation, communication, interaction' subscale received the highest evaluation (3.74, SD = 0.29) and the 'group guidance and activities' subscale received the lowest evaluation (3.22, SD = 0.64).

Of all respondents, 64.7% were in the 'adequate competence' category (> 3.50). The percentage of care home nursing professionals (n=781) in the 'adequate competence' category on a subscale level are presented in Figure 3. More detailed results are presented in Article IV.

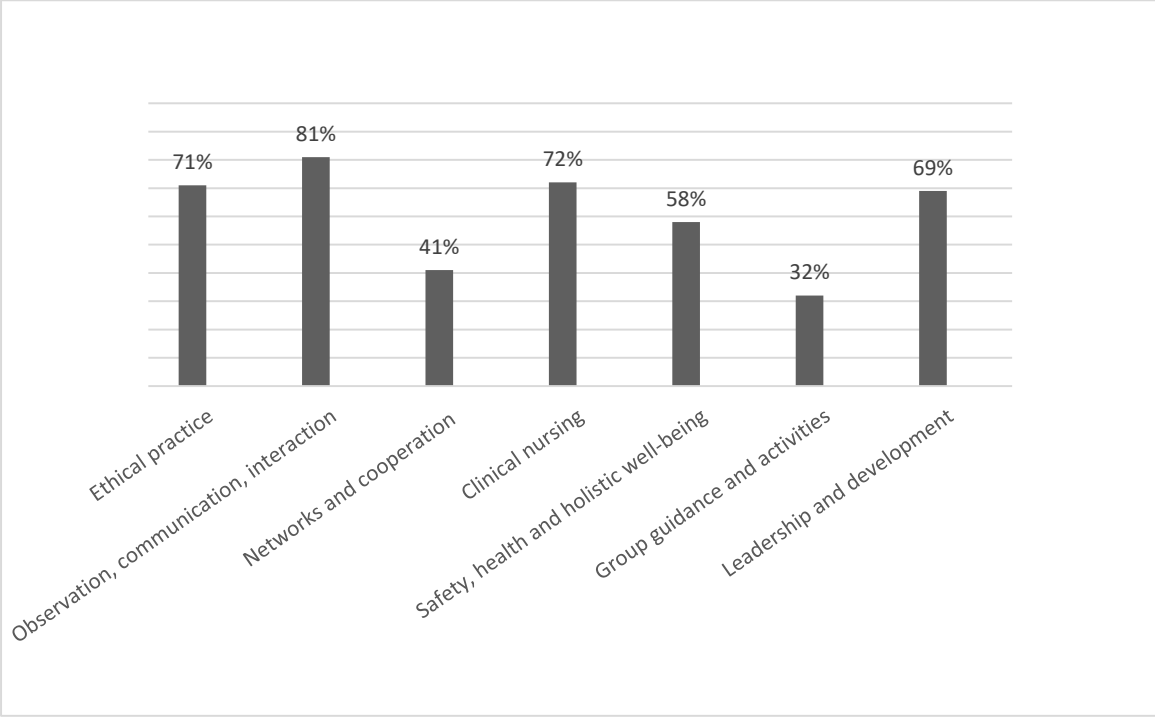

Figure 3. Percentage of care home nursing professionals (n=781) in the 'adequate competence' category (mean score of self-assessed competence >3.50) by subscale

Among participants working in RN/manager positions (n=101), the mean value of self-assessed competence was 3.59 (SD = 0.31) and 67.3 % were in the 'adequate competence' category. The 'clinical nursing' (3.76, SD = 0.29) and the 'observation, communication, interaction' (3.74, SD = 0.28) subscales received the highest evaluations among this group. The 'group guidance and activities' subscale received the lowest evaluation (3.14, SD = 0.68).

Among those participants working as LPNs (n=680) the mean value of the total scores for self-assessed competence was 3.57 (SD = 0.31) and 64.3 % were in the 'adequate competence' category. The 'observation, communication, interaction' subscale received the highest evaluation (3.74, SD = 0.30) and the 'group guidance and activities' subscale the lowest evaluation (3.23, SD = 0.64).

Percentage of RNs/managers and LPNs in the 'adequate competence' category (mean score of self-assessed competence >3.50) by subscale are presented in Figure 4

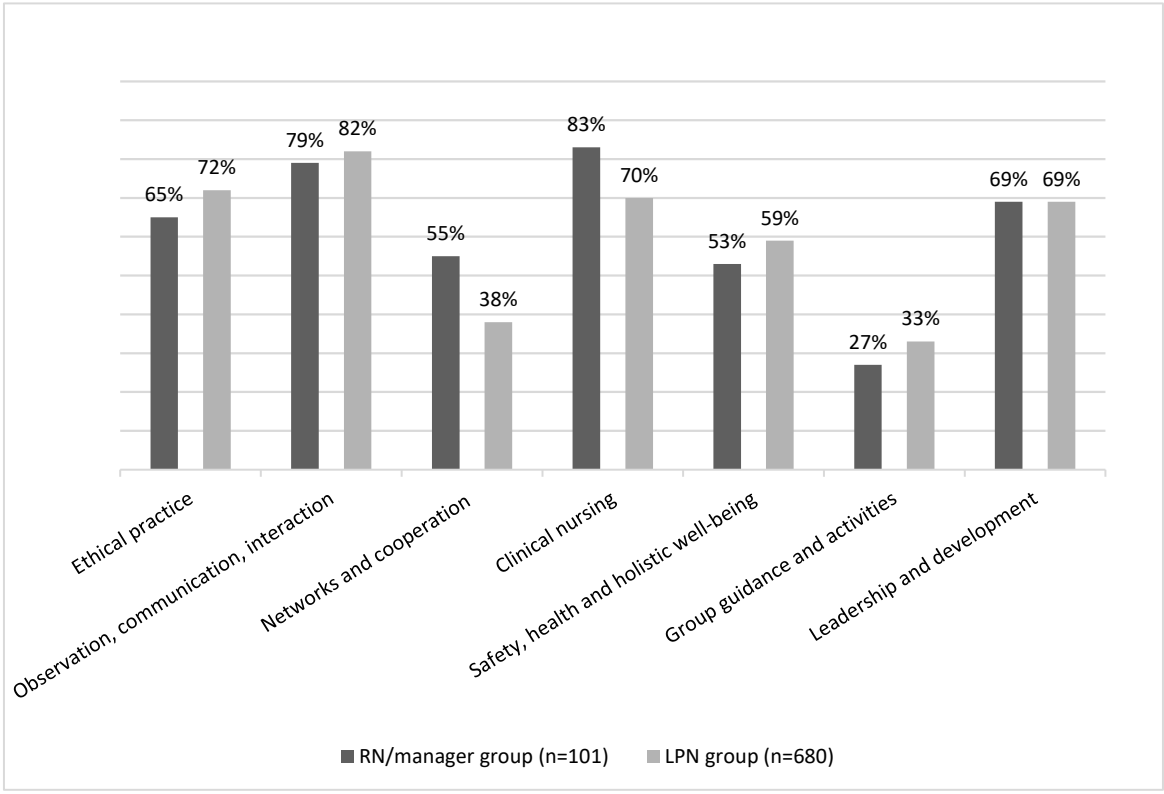

Figure 4. Percentage of the participants in the 'adequate competence' category (mean score of self-assessed competence >3.50) by subscale

There were great variations in ratings between the items. Among all participants, the highest mean value regarding all items (n=84) was in item 'I am able to take care of the resident's basic care' (3.97, SD = 0.19). The lowest mean values (< 3.0) were in items 'I am able to support the resident's sexuality' (2.55, SD = 0.87) and 'I am able to advice the resident and/or his or her family member in matters relating to social benefits (e.g. care subsidy)' (2.78, SD = 0.94) among all respondents.

Among RNs/managers the highest mean values were in item ''I am able to take care of basic care' (3.97, SD = 0.17). The lowest mean values (under 3.0) were in items 'I am able to support the resident's sexuality' (2.44, SD = 0.86) and 'I am able to support the resident's spiritual well-being' (2.95, SD = 0.82).

Among participants working as LPNs, the highest mean value was in item 'I am able to take care of the resident's basic care' (3.97, SD = 0.19). While, the lowest mean values (under 3.0) were in items 'I am able to support the resident's sexuality' (2.57, SD = 0.87) and 'I am able to advice the resident and/or his or her family member in matters relating to social benefits (e.g. care subsidy)' (2.73, SD = 0.93).

The results on item level by subscales are presented on Tables 10-16, which show the proportion (n, %) of the participants in RN/manager group and in the LPN group, who chose the Likert scale alternative 'totally agree' when rating the items (competence statements) related to older people nursing. The scale range was 1-4: 1 (totally disagree), 2 (somewhat disagree), 3 (somewhat agree), 4 (totally agree)

In the '**ethical practice**' subscale (Table 10), the highest mean value among RNs/managers was in item 'I treat residents with respect' (3.91, SD = 0.29) and the lowest mean value was in item 'I take into account the resident's life history and cultural background' (3.36, SD = 0.60). Among participants working as LPNs, the highest mean value was in item 'I respect the resident's property (clothes, furniture etc.)' (3.92, SD = 0.30) and the lowest mean value was in the item 'I support the resident's autonomy' (3.43, SD = 0.59).

Table 10. Care home nursing professionals' self-assessed competence in the 'ethical practice' subscale (n, %)

Item	RNs/managers (n=101) **Totally agree n (%)**	LPNs (n=680) **Totally agree n (%)**
I treat residents with respect	92 (91.1)	593 (87.5)
I take into account the resident's likes, customs and habits	57 (56.4)	405 (59.9)
I take into account the resident's life history and cultural background	42 (42.0)	355 (52.4)
I support the resident's autonomy	45 (44.6)	318 (46.9)
I protect the resident's privacy	70 (69.3)	530 (78.2)
I treat residents equally	65 (64.4)	485 (71.7)
I recognize ethical dilemmas	66 (65.3)	393 (58.1)
I act as advocate for the resident (e.g. passing on the wishes)	73 (73.0)	474 (70.0)
I react to possible abuse of the resident	82 (81.2)	552 (81.4)
I respect the resident's property (clothes, furniture etc.)	89 (88.1)	628 (92.8)

In the '**observation, communication, interaction**' subscale (Table 11), the highest mean value among RNs/managers was in item 'I am able to encounter a person (listen, discuss, to be fully present)' (3.87, SD = 0.34) and the lowest mean value was in item 'I am able to read non-verbal communication of the resident' (3.50, SD = 0.52).

Among participants working as LPNs, the highest mean value were in items 'I am able to encounter a person (listen, discuss, to be fully present)' (3.84, SD = 0.39) and 'I am able to express empathy' (3.84, SD = 0.39). The lowest mean value was in the item 'I am able to read non-verbal communication of the resident' (3.57, SD = 0.52).

Table 11. Care home nursing professionals' self-assessed competence in the 'observation, communication, interaction' subscale (n, %)

Item	RNs/managers (n=101) **Totally agree n (%)**	LPNs (n=680) **Totally agree n (%)**
I am able to encounter a person (listen, discuss, to be fully present)	88 (87.1)	574 (84.5)
I am able to express empathy	88 (87.1)	572 (84.4)
I am able to read non-verbal communication of the resident	52 (51.5)	393 (57.9)
I am able to create a sense of security	69 (68.3)	493 (72.6)
I am able to use humour in an appropriate manner in nursing	74 (73.3)	543 (80.1)
I am able to encounter a person with a memory disorder	72 (71.3)	482 (71.0)
I am able to give verbal reports	82 (81.2)	564 (83.1)
I am able to record necessary information in a patient record system	82 (82.0)	543 (80.0)
I am able to assess the resident's functional capacity	75 (74.3)	515 (76.0)
I am able to plan and implement person-centred care	72 (71.3)	484 (71.3)
I am able to assess care	77 (76.2)	461 (67.9)

In the '**networks and cooperation**' subscale (Table 12), the highest mean value among RNs/managers was in item 'I am able to inform the family members about the resident's condition and care' (3.81, SD = 0.39) and the lowest mean value was in item 'I am able to advice the resident and/or his or her family member in matters relating to social benefits (e.g. care subsidy)' (3.13, SD = 0.95).

Among participants working as LPNs, the highest mean value was in item 'I am able to inform the family members about the resident's condition and care' (3.72, SD = 0.50) and the lowest mean value was in the item 'I am able to advice the resident and/or his or her family member in matters relating to social benefits (e.g. care subsidy)' (2.73, SD = 0.93).

Table 12. Care home nursing professionals' self-assessed competence in the 'networks and cooperation' subscale (n, %)

Item	RNs/managers (n=101) **Totally agree n (%)**	LPNs (n=680) **Totally agree n (%)**
I am able to promote communality in a care home	48 (47.5)	278 (41.0)
I am able to inform the family members about the resident's condition and care	82 (81.2)	503 (74.1)
I am able to support the participation of a family member	53 (52.5)	288 (42.5)
I am able to give emotional support to a family member	50 (49.5)	278 (40.9)
I am able to negotiate things	63 (62.4)	403 (59.4)
I am able to use multiprofessional network (physician, physiotherapist, etc.)	79 (78.2)	430 (63.3)
I am able to create networks to promote the well-being of the resident (e.g. volunteers)	36 (35.6)	221 (32.5)
I am able to manage the flow of information (e.g. between care home and hospital)	79 (78.2)	418 (61.8)
I am able to advice the resident and/or his or her family member in matters relating to social benefits (e.g. care subsidy)	46 (45.5)	164 (24.2)
I am able to take care of the benefits to which a resident is entitled (e.g. free pedicures)	54 (54.0)	310 (45.7)

In the '**clinical nursing**' subscale (Table 13), the highest mean value among RNs/managers was in item 'I am able to take care of the resident's basic care' (3.97, SD = 0.17) and the lowest mean value was in item 'I am able to coordinate care for the resident between the actors participating in his/her treatment' (3.50, SD = 0.67).

Among participants working as LPNs, the highest mean value was in item 'I am able to take care of the resident's basic care' (3.97, SD = 0.19) and the lowest mean value was in the item 'I am able to coordinate care for the resident between the actors participating in his/her treatment' (3.03, SD = 0.81).

Table 13. Care home nursing professionals' self-assessed competence in the 'clinical nursing' subscale (n, %)

Item	RNs/managers (n=101) **Totally agree n (%)**	LPNs (n=680) **Totally agree n (%)**
I am able to assess the resident's health condition and changes in it	85 (84.2)	521 (77.0)
I am able to take care of the resident's basic care	98 (97.0)	659 (97.6)
I am able to act in situations requiring first aid	78 (77.2)	425 (63.0)
I am able to perform minor procedures (e.g. urinary catheterization)	95 (94.1)	476 (70.3)
I am able to treat ulcers	84 (83.2)	440 (65.0)
I am able to conduct safe and appropriate pharmacological care	93 (92.1)	596 (88.0)
I am able to acquire suitable aids for the resident	70 (69.3)	452 (66.9)
I am able to use aids (e.g. patient lift)	87 (86.1)	611 (90.5)
I am able to assist the resident in transfers ergonomically	57 (57.0)	447 (66.1)
I am able to recognize and treat the most common acute illnesses	82 (81.2)	453 (66.9)
I am able to monitor and treat the resident's long-term illnesses	81 (80.2)	519 (76.9)
I am able to treat the resident's pain	76 (75.2)	518 (76.6)
I am able to provide palliative, symptomatic care	76 (75.2)	473 (70.0)
I am able to provide hospice care	77 (76.2)	470 (69.7)
I am able to take care of the procurement of care supplies (diapers etc.)	73 (72.3)	408 (60.3)
I am able to coordinate care for the resident between the actors participating in his or her treatment	59 (58.4)	215 (31.8)
I am able to guide and teach employees participating in nursing	77 (76.2)	414 (61.2)
I am able to support the learning of nursing students in older people nursing	72 (71.3)	437 (65.0)

In the '**safety, health and holistic well-being**' subscale (Table 14), the highest mean value among RNs/managers was in item 'I am able to prevent infections and prevent them from spreading' (3.74, SD = 0.44) and the lowest mean value was in item 'I am able to support the resident's sexuality' (2.44., SD = 0.86).

Among participants working as LPNs, the highest mean value was in item 'I am able to prevent ulcers' (3.78, SD = 0.45) and the lowest mean value was in the item 'I am able to support the resident's sexuality' (2.57, SD = 0.87).

Table 14. Care home nursing professionals' self-assessed competence in the 'safety, health and holistic well-being' subscale (n, %)

Item	RNs/managers (n=101) **Totally agree n (%)**	LPNs (n=680) **Totally agree n (%)**
I am able to prevent dangerous situations and accidents	43 (43.0)	413 (60.7)
I am able to encounter an aggressive resident	60 (59.4)	331 (48.9)
I am able to properly use safety devices that limit movement	61 (61.0)	476 (70.3)
I am able to prevent infections and prevent them from spreading	74 (74.0)	502 (73.8)
I am able to take care of the resident's oral care	46 (46.0)	406 (60.0)
I am able to take care of the resident's nutritional care (e.g. prevent malnutrition)	63 (63.0)	485 (71.5)
I am able to prevent ulcers	73 (73.0)	538 (79.1)
I am able to recognize the resident's pain	54 (53.5)	422 (62.4)
I am able to support and use the resident's resources	61 (61.0)	504 (74.2)
I am able to maintain the physical functional capacity of a resident	68 (68.0)	511 (75.4)
I am able to support participation of the resident	52 (52.0)	380 (56.0)
I am able to support the resident's social relations	44 (44.0)	326 (48.2)
I am able to recognize an older person's depression	46 (45.5)	283 (41.8)
I am able to support the resident's sexuality	12 (12.0)	105 (15.5)
I am able to support the resident's spiritual well-being	29 (29.0)	228 (33.7)
I am able to handle challenging situations related to the care of a person with a memory disorder without using restraints (physical restraining, medications)	62 (61.4)	360 (53.4)
I am able to consider the resident's hearing impairment	68 (68.7)	498 (73.3)
I am able to consider the resident's visual impairment	61 (61.6)	494 (73.0)
I am able to use technology in the care of residents	50 (49.5)	349 (51.6)

In the '**group guidance and activities**' subscale (Table 15), the highest mean value among RNs/managers was in item 'I am able to provide experiences and recreational activities for resident' (3.30, SD = 0.77) and the lowest mean value was in item 'I am able to guide groups of persons with memory disorders' (3.04., SD = 0.87).

Among participants working as LPNs, the highest mean value was in item 'I am able to provide experiences and recreational activities for resident' (3.37, SD = 0.66) and the lowest mean value was in the item 'I am able to guide groups of persons with memory disorders' (3.12, SD = 0.86).

Table 15. Care home nursing professionals' self-assessed competence in the 'group guidance and activities' subscale (n, %)

Item	RNs/managers (n=101) **Totally agree n (%)**	LPNs (n=680) **Totally agree n (%)**
I am able to guide groups (e.g. exercise or music sessions)	43 (42.6)	308 (45.5)
I am able to guide groups of persons with memory disorders	35 (34.7)	272 (40.2)
I am able to provide experiences and recreational activities for resident	47 (47.0)	316 (46.5)
I am able to promote the well-being of the resident with music and singing	39 (39.0)	297 (43.7)

In the '**leadership and development**' subscale (Table 16), the highest mean value among RNs/managers was in item 'I am able to handle situations creatively, flexibly in the everyday contexts of residents' care' (3.80, SD = 0.43) and the lowest mean value was in item 'I am able to use reliable research knowledge on older people' (3.41, SD = 0.68).

Among participants working as LPNs, the highest mean value were in items 'I am able to plan daily distribution of work in the care of residents' (3.79, SD = 0.45), 'I am able to handle situations creatively, flexibly in the everyday contexts of residents' care' (3.79, SD = 0.43) and 'I am able to share knowledge in a work community' (3.79, SD = 0.46). The lowest mean value was in the item 'I am able to use reliable research knowledge on older people' (3.31, SD = 0.71).

Table 16. Care home nursing professionals' self-assessed competence in the 'leadership and development' subscale (n, %)

Item	RNs/managers (n=101) **Totally agree n (%)**	LPNs (n=680) **Totally agree n (%)**
I am able to plan and organize my own work in caring for the resident	73 (72.3)	484 (71.5)
I am able to plan daily distribution of work in the care of residents	79 (78.2)	549 (81.0)
I am able to work in a team	81 (80.2)	512 (75.6)
I am able to adjust to changing situations	82 (81.2)	538 (79.4)
I am able to handle situations creatively, flexibly in the everyday contexts of residents' care	82 (81.2)	540 (79.8)
I am able to act economically	57 (56.4)	393 (58.1)
I am able to share knowledge in a work community	81 (80.2)	546 (80.5)
I am able to give feedback properly	60 (59.4)	416 (61.4)
I am able to receive and use feedback	61 (60.4)	429 (63.3)
I am able to assess my professional competence	72 (71.3)	449 (66.3)
I am able to use reliable research knowledge on older people	52 (51.5)	301 (44.7)
I am able to develop actions in the work unit together with others	66 (65.3)	421 (62.4)

Care home nursing professionals' self-assessed competence: qualitative data

The survey participants were asked to tell how they perceive their own competence in relation to competence requirements of their current work. In total, 462 LPNs and 79 RNs/managers answered the open-ended question. The length of the answers varied from one to two words to several sentences.

Most of the respondents working in RN/manager position described their competence as good, very good, or sufficient in relation to competence demands in their current work. Some reported that their knowledge or competence is inadequate in certain area(s) of older people nursing. A few respondents reported that they have too much responsibility for multimorbid residents because the physician rarely visits the care home and/or there is only one RN working in the unit. However, among RNs/managers, the most commonly reported area in need of development was not older people nursing, but administrative work, management and organisation.

Most of the respondents working in LPN positions described their competence as good or very good, or sufficient in relation to competence demands in their current work. Some stated that their competence is wider than what is required in their current work, but only some of them specified the areas of competence they could not use. Those LPNs who reported these areas most commonly wanted more responsibility related to pharmacological care. Some LPNs reported that their knowledge or competence is insufficient in certain competence areas or in some situations, for instance, during evening shifts and weekends when the RN is not at work. A few of the respondents working in LPN position stated that their competence was insufficient in older people nursing overall, and that this was because they had specialised in children´s nursing and/or youth care during their education.

In addition, many respondents in both groups reported that there was always something new to learn. The view was that competence needs to be constantly maintained and developed, and that you are never fully educated. The answers revealed the need for additional knowledge regarding a list of subjects such as illnesses (most commonly dementia and mental disorders). Many LPNs expressed a need to gain further knowledge and skills in order to deal with challenging situations relating to residents with memory disorders.

Some LPNs reported that there were some competencies listed in the questionnaire which they did not need in their current work because RNs took care of certain tasks (e.g. advice on social benefits). Additionally, some responsibilities were shared among the nursing staff (e.g. procurement of care supplies). Some study participants in both groups stated that their work included activities other than older people nursing, such as housekeeping duties. Many participants highlighted that the problem is not lack of competence but lack of time. For example, they know how to provide appropriate hospice care or how to maintain the physical functional capacity of a care home resident, but they do not have enough time to do so.

5.3 PREDICTORS OF SELF-ASSESSED COMPETENCE IN OLDER PEOPLE NURSING (ARTICLE IV)

Binary logistic regression was conducted to predict care home nursing professionals' self-assessed competence. Older age (OR = 1.02, 95% CI = 1.01-1.04, p = 0.002) and further training after graduation (OR = 1.71, 95% CI = 1.14-2.58, p = 0.01) were significant predictors of higher self-assessed competence of the participants working in LPN positions. A one-year increase in age increases the odds of being in the 'adequate competence' category by 1.02 times. Prediction success overall was 65.7% (3.4% for the 'inadequate competence' and 99.5% for the 'adequate competence' groups).

Binary logistic regression revealed that longer work experience in intensive service housing (OR = 1.51, 95% CI =1.24-1.83, $p < 0.000$) was a significant predictor of higher self-assessed competence for RNs/managers. A one-year increase in length of work experience in intensive service housing increases the odds of being in the 'adequate competence' category by 1.51 times. Prediction success overall was 74.3% (54.5% for the 'inadequate competence' and 83.8% for the 'adequate competence' groups).

5.4 NURSE COMPETENCE IN CARE HOME SCALE AND ITS PSYCHOMETRIC PROPERTIES

Nurse Competence in Care Home Scale was developed to measure care home nursing professionals' competence in older people nursing. The psychometric properties of the instrument were examined during this study. The NCCHS includes seven subscales and 84 items (statements related to older people nursing) (See Tables 10-16). A four-point Likert scale was used as a rating scale.

Face and content validity
The face and content validity of the instrument were assessed by creating items based on the literature review, expert opinions, and family members' interviews. In addition, the researcher's personal experience was considered in the formulation of items. Furthermore, respondents were asked to comment upon the questionnaire during its pre-test phase, leading to the revision of one background variable. In total, 86 items were included in the instrument before testing the construct validity of the scale.

Construct validity
Care home nursing professionals' (n=781) data was used in psychometric testing of the NCCHS. When conducting the principal component analysis, preliminary analysis revealed that one item had low correlations (under 0.3) and this item, related to extracting blood samples, was eliminated before further analysis (Rattray & Jones, 2007). The data were suitable for PCA, as shown by a significant value on Bartlett's test of sphericity (<0.001) and a satisfactory value for Kaiser-Meyer-Olkin's measure of sampling adequacy (0.96) (Field, 2018.)

A PCA was conducted on the 85 items with oblique rotation (Promax) and an initial analysis was run to obtain eigenvalues for each component in the data. In total, 16 components had eigenvalues over Kaiser's criterion of 1. However, Kaiser's criterion may overestimate the number of factors to retain when the sample size is large and there are large numbers of variables (Field, 2018). The scree plot was ambiguous, however, justifying retaining fewer components than Kaiser's criterion. As a result, the analysis was rerun several times and finally, a seven-component structure was obtained that explained 47% of the variance in the data. Table 17 shows the eigenvalues of the components. The factor loadings of two items ('I recognize ethical dilemmas' and 'I am able to guide the resident individually') were below 0.3 and the latter was excluded from further analysis. Table 17 shows the number of items per subscale and the range of the factor loadings of these items (pattern matrix, after rotation). The seven subscales were given the following interpretative labels based on their conceptual content: 'ethical practice'; 'observation, communication, interaction'; 'networks and cooperation'; clinical nursing'; 'safety, health and holistic well-being'; 'group guidance and activities'; and 'leadership and development'.

Internal consistency

Reliability was assessed by testing internal consistency, which refers to the extent to which the items in an instrument measure the same trait (Polit & Beck, 2010, p. 375). Internal consistency reliability was adequate for the NCCHS, as evidenced through a total Cronbach's alpha of 0.97. In addition, the Cronbach's alpha coefficients for the subscales were 0.77-0.92, showing good reliability (Rattray & Jones, 2007). The corrected item-total correlation coefficients varied from 0.31 to 0.86 (Table 17.)

Table 17. Psychometric properties of the Nurse Competence in Care Home Scale

Subscale (number of items)	**Cronbach's alpha**	**Corrected item-total correlation**	**Eigenvalues of the components**	**Factor loadings (Pattern Matrix)**
Ethical practice (10)	0.77	0.31-0.53	1.9	0.21-0.68
Observation, communication, interaction (11)	0.86	0.45-0.64	1.7	0.31-0.74
Networks and cooperation (10)	0.87	0.51-0.70	2.0	0.34-0.75
Clinical nursing (18)	0.90	0.38-0.69	26.2	0.30-0.82
Safety, health and holistic well-being (19)	0.92	0.50-0.66	3.2	0.33-0.61
Group guidance and activities (4)	0.81	0.68-0.86	1.6	0.48-0.84
Leadership and development (12)	0.90	0.53-0.69	3.1	0.33-0.88

5.5 SUMMARY OF THE RESULTS

Multifaceted competence is needed in older people nursing in care homes according to this study. Figure 5 sums up the necessary competence.

The NCCHS, an instrument developed to measure care home nursing professionals' self-assessed competence, includes 84 items and seven subscales (presented in Finnish in Appendix I). A four-point Likert type scale asking the level of agreement is used as a rating scale. The results regarding the validity and reliability of the instrument were promising.

The majority of the participants reported that their competence is good or sufficient in relation to their current competence requirements. However, the quantitative survey data revealed several competence gaps. Those working in LPN position assessed their competence highest in the 'observation, communication, interaction' subscale. Among RNs/managers the 'clinical nursing' and the 'observation, communication, interaction' were rated highest. Both groups assessed their competence lowest in the 'group guidance and activities'. There were great variations on ratings between the items. Two thirds of the participants reached the 'adequate competence' category (the total score of competence > 3.5).

Older age and further training after graduation predicted higher self-assessed competence of LPNs and longer periods of work experience in intensive service housing units was a predictor of higher self-assessed competence for RNs/managers.

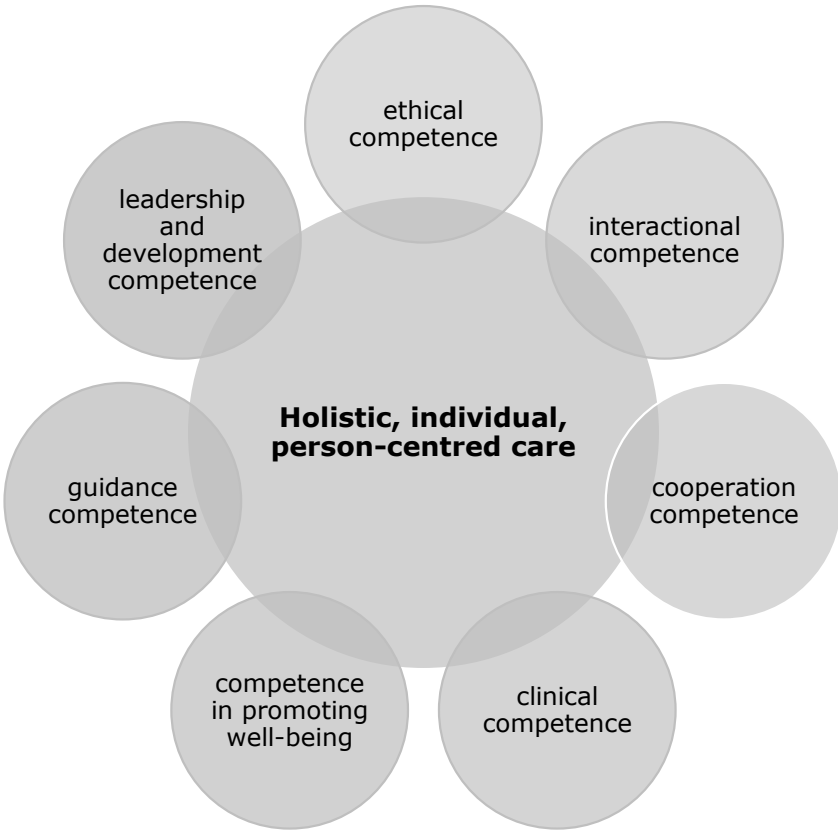

Figure 5. Nurse competence needed in older people nursing in care homes

6 Discussion

This study identifies competencies needed in older people nursing in Finnish care homes and explores nursing professionals' self-assessed competence with a new competence assessment instrument. The main findings of this study show that a wide range of competencies are necessary in older people nursing in care homes; a holistic approach is required to ensure care home residents' well-being. According to this study, there are both strengths and competence gaps in care home nursing professionals' self-assessed competence and a need for competence development in several areas of older people nursing is necessary. Older age and further training were predictors of higher self-assessed competence of the participants working in LPN position and longer periods of work experience in intensive service housing units were a predictor of higher self-assessed competence for RNs/managers. A new competence self-assessment instrument (NCCHS) was developed during this research process which can be used to measure the care home nursing professionals self-assessed competence.

6.1 COMPETENCE IN OLDER PEOPLE NURSING IN CARE HOMES

According to this study, the competencies RNs and LPNs need in older people nursing in Finnish care homes are very similar. This result is not surprising, considering the fact that in Finland LPNs often work alone in care homes during night shifts and RNs are not always available at weekends. This means that not only RNs but also LPNs (to varying degrees) must be able to make independent clinical decisions and to rely on their own competence. However, it is very important to note that while this study identified the competencies that are necessary in the work of RNs and LPNs, it did not explore the depth of knowledge and skills required in the identified areas. Multifaceted competence is required of both groups. However, it is clear that more in-depth knowledge in these identified areas is required in RNs' work.

In this study, the mean values for the total score of competence were very close for participants working in both LPN and RN/manager positions. In a study by Bing-Jonsson et al. (2016), the main trend was that RNs in home care and nursing homes displayed more competence than ANs and assistants, but there were exceptions to this trend. It seems that higher education does not necessarily mean higher self-rated competence. This can be due to several reasons. Firstly, more in-depth competence is necessary in RNs' work compared to LPNs' role and this may have an impact on the RNs' self-assessments. Secondly, it seems that the differences between these professional groups' ratings on a subscale level reflect differences in their job descriptions. For example, providing activities for residents is more common in LPNs' work than in RNs' work. In addition, the sample involved RNs with managerial responsibility who potentially do not participate in day-to-day nursing as much as LPNs. In care homes, personal knowledge of individual older people is an important part of nurses' knowledge. Therefore if LPNs work more closely with the residents and therefore know them better, this may impact, for instance, ratings regarding the 'ethical practice' subscale, which measures (among other things) nurses' ability to provide individual care.

For analysis, the mean values of the competence were categorised into two classes: 'adequate competence' (> 3.50) and 'inadequate competence' (≤ 3.50). These categorisation

levels are not based on previous research; no other studies measure nursing professionals' competencies with the same type of instrument. Therefore, this categorisation must be treated with caution. An exploration of the adequate level of competence might be necessary in the future—for instance, an expert panel could investigate the best cut-off points. However, it is important not to focus only on the mean values of competence; instead, the nursing professionals' competence should also be considered at the item level.

The results regarding care home nursing professionals' level of competence showed some partial contradictions in the qualitative and quantitative survey data. In an open-ended question, the majority of care home nursing professionals described their competence as good, very good or sufficient in relation to competence requirements in their current work. However, the measurement of competence revealed several competence gaps in care home nursing professionals' competence. It is difficult to give a definite explanation for this. One reason could be that some nursing staff members believe that certain competencies are less important or are outside their scope of practice and are not aware of all competencies that are necessary to holistically promote care home residents' well-being.

The study results highlight the need for ethical competence in care homes. However, according to study participants' self-assessments, it seems that there is room for improvement regarding some care home nursing professionals' ethical competence. This is not surprising because ethical dilemmas are common in everyday practice in care homes (Bollig et al., 2016) and requirements for nurses' ethical competence are high. In care homes the needs and rights of many people with complex needs must be considered equally (Evans et al., 2018) and residents are not necessarily able to defend their rights.

In the area of ethical competence, the lowest ratings were given to the statement 'I support the resident's autonomy', in which fewer than half of the respondents chose the option 'Totally agree'. In care homes where the majority of the residents have memory disorders, nurses are required to find a balance between supporting an individual's autonomy and the need to protect the person's dignity and safety (Evans et al., 2018). However, it is vital to recognise that even though the residents might not have the capacity to make complex decisions, they are capable of making smaller decisions. It is important to discuss how to best support each resident's autonomy in practice. Another ethical competence area that was most in need of development was the ability to take into account the resident's life history and cultural background. These findings are in line with an earlier study describing recognition and the continuity of self in Finnish round-the-clock care units for older people, where both recognition and misrecognition of persons occurred (Pirhonen & Pietilä, 2015). It has been stated that even though care home staff are committed to providing the best possible care for residents, few of the workers are aware of the ethical nature of their day-to-day decisions (Dunworth & Kirwan, 2009).

When aiming to promote the ethical competence of care home personnel it is essential to recognise the special characteristics of care home contexts. It is important to prevent a high turnover of employees because knowing the older person is a prerequisite for individual care. Nurses' continuous interactions with the same residents enable them to notice changes in the resident's condition. Furthermore, nurses' cultural competence is nurtured and developed through interaction with residents in ongoing daily practice (Tayab & Narushima, 2015). It is essential that care home managers are aware of the factors that create an environment conducive to ethical competence of nurses in the organisation. For instance, multidisciplinary cooperation, effective leadership, time for discussion and reflection, written policies, and opportunities to consult with ethically competent people can promote nurses' ethical competence (Poikkeus et al., 2014). Multimethod educational interventions, allowing participants to reflect and discuss their thoughts in groups face-to-face or online, can have an impact on the ethical competence of nurse. In addition, it has been suggested that it is essential to develop alternative interventions, such as ethics clubs, checklists, ethical games and mobile applications in addition to educational interventions (Stolt et al., 2018.)

Nursing staff's ability to interact with residents, family members, team members and other professionals was emphasised in this study. The 'observation, communication, interaction' was rated highest in respondents' self-assessments. This is promising because the importance of nurses' interactional competencies cannot be over-emphasised. Nurse-resident interaction is a vital resource for promoting well-being among older people in care home contexts (Haugan et al., 2013). The ability to read non-verbal communication of residents received the lowest rating on item level in the area of interactional competence. Out of all respondents, 57% chose the option 'totally agree' when rating this ability. In addition, some family members stated that nurses should more closely observe residents, highlighting the importance of non-verbal communication. These findings are in line with a study by Smythe et al. (2017) describing nursing home nurses' challenges in non-verbal communication.

Cooperation competence was required of nursing staff in care homes. However, the ratings in the 'networks and cooperation' were relatively low. This indicated, for example, a need to develop nurses' ability to provide family-centred care. The ability to support the participation of family members and the ability to give emotional support to a family member received rather low ratings. Both this study and earlier studies (Bollig et al., 2016; Cronfalk et al., 2017) show that family members have reported feelings of guilt when they are no longer able to take care of their loved one at home. The transition from home to a care home requires adaptation both from residents and relatives (Bollig et al., 2016; Phelan & McCormack, 2016) and care staff have an important role in caring for a newly relocated older person and their family (Ellis & Rawson, 2015). Having family around is also important in enabling care home residents to experience a sense of home (van Hoof et al., 2016). Therefore, it is important to develop nurses' competence in family-centred care. In addition it is important that care home staff are encouraged to cooperate with both volunteers and other professionals because a wide network is necessary to ensure the well-being of older people in care homes.

According to this study a wide range of clinical competencies are required of nurses working in care homes, which is natural considering the diverse characteristics of the resident population. 'Clinical competence' was highest rated in addition to 'observation, communication, interaction' among RNs/managers. In this study, care home nurses' ability to provide high-quality basic care was emphasised, which is in line with earlier studies (Lopez et al., 2013; Ryan & McKenna, 2015). Basic care was an area were participants' self-assessed competence was highest regarding all items in the NCCHS. Qualitative data revealed the need for additional knowledge regarding certain illnesses (such as dementia and mental disorders) which should be developed in the future.

However, providing high-quality clinical care is not enough. The care home is an environment where nurses are required to promote the older person's well-being and quality of life from a holistic standpoint. According to study participants' self-assessments there are significant competence gaps related to holistic promotion of residents' well-being. Participants' ability to support the residents' spiritual well-being and sexuality received the lowest ratings of all items. This is not surprising because the majority of care home residents in Finland have memory disorders and it has been reported that developing an understanding of the spiritual needs of older people with dementia is challenging for nurses (Toivonen et al., 2017). A need for educational interventions or training on sexuality and dementia in care homes has also emerged in earlier studies (Di Napoli et al., 2013; Mahieu et al. 2016). It has been reported that health care professionals often seem to consider older peoples' sexuality as outside their scope of practice (Haesler et al., 2016).

Other competencies related to the promotion of older peoples' well-being that were in need of development were: ability to encounter an aggressive resident; ability to recognise an older person's depression; ability to support resident's social relations; and ability to handle challenging situations related to the care of a person with a memory disorder without using restraints. Training related to challenging situations is extremely important

because nurses in care homes encounter these challenging situations daily. There is evidence that it is possible to develop nurses' abilities to response to complex care situations with a targeted training (Söderlund et al., 2014). It is vital to develop nurses' ability to encounter aggressive residents since 40% of care workers in Finnish round-the-clock aged care units have reported experiencing violence or the threat of violence almost every day, or every week (Kröger et al., 2018).

Supporting the involvement of residents in meaningful activities should be part of nursing care in care homes. Perhaps a reconceptualisation of the nature of nursing care in the context of aged care is necessary. Residents' participation in everyday activities (such as watering plants and helping to set the table) can promote well-being and quality of life (Edvardsson et al., 2014; Koskenniemi et al., 2015; Bollig et al., 2016). It is important that care home professionals are aware of non-pharmacological approaches that can promote older people's well-being. It is important to note, for instance, that activities involving singing or listening to music can improve or maintain cognitive functioning, mood and the quality of life of people with dementia (Särkämö et al., 2014). According to a study that explored the implementation of socio-cultural elements in Finnish aged care, a new broader approach is needed in aged care facilities rather than an approach that mainly focuses on physical aspects of care (Riekkinen-Tuovinen, 2018). It is essential to acknowledge these new approaches in nurse education.

Leadership and development competencies are also required from nursing staff in care homes, according to this study. The aim of this study was to identify competencies needed in older people nursing instead of focusing on competencies required in nurse management. Therefore, self-management competencies were highlighted in the 'leadership and development competence' subscale instead of competencies needed in formal leadership positions. It is useful to acknowledge that many RNs in Finnish care homes are in front-line manager positions, which require other management and leadership competencies aside from the ones represented in the NCCHS. When looking at competencies at the item level, it was unsurprising that less than half of all respondents chose the option 'totally agree' when rating the statement 'I am able to use reliable research knowledge on older people'. It has been reported previously that nurses lack the evidence-based practice competencies required for integrating best evidence into clinical care delivery (Saunders, 2016). However it was surprising that, for some reason, the ability to act economically received quite low ratings.

Overall, licensed nurses' level of competence in care homes ought to be high because they supervise unlicensed personnel and other nursing staff (Karlsson et al., 2009; Mueller et al., 2012; Bedin et al., 2013; Furåker & Nilsson, 2013). In addition, care home nursing professionals serve as role models for student nurses and have an impact on students' attitudes and future career choices (Duggan et al., 2013; Carlson & Idvall, 2015). In Finland, the reform of vocational upper secondary education will update the entire vocational education and training (VET) system, including practical nurse education, by the year 2018. This reform includes an increase in workplace-based learning which further emphasises the importance of care home staff competence.

It is important that nurses aim to develop their own competence throughout their career; individual motivation to develop competence is crucial. However, in addition to nurses' own contributions, organisational support is needed to keep nursing staff competence up to date. The limited ability of aged care staff to participate in training during working hours have been reported (Häggström & Bruhn, 2009) though well-organised and continuous competence development is important. The importance of clinical supervision to personal development in aged care facilities has also been highlighted (Häggström et al., 2010). In addition it is essential to build an organisational culture of learning in which daily activities are viewed as a learning opportunity for continuous improvement. Innovative solutions are needed to ensure sufficient collegial and multi-professional support for all professional groups in care homes. Overall, in a situation where the care home sector is struggling to

attract, recruit and retain nurses, it is extremely important to provide enough support for nursing staff in these units in every possible way. For example, according to a large survey, 38% of care workers (n=976) in Finnish round-the-clock aged care units had seriously considered quitting their jobs (Kröger et al., 2018), which is alarming.

Nursing degree programmes have been perceived as inadequately preparing nurses for a nursing home role (Cooper et al., 2017) and it is essential to ensure that competencies needed in older people nursing in care homes are sufficiently recognised in nursing education. The European Core Competencies Framework (ECCF) for health and social care professionals working with older people were released 2016 for the purpose of being utilised in higher level nursing education (Dijkman et al., 2016). In the future, therefore, graduating nursing students may be better prepared to meet the needs of older people. In addition, it is important that policymakers consider the multifaceted competence requirements of older people nursing when deciding what type of education is required for staff working in care homes. A sufficient number of licensed nursing staff in care homes should be ensured, with laws or recommendations to avoid, for instance, the replacement of LPNs with unlicensed assistive nursing personnel.

Innovation and collaboration are necessary to develop the quality of care in care homes and teaching/research-based care homes have been developed in some countries (Barnett, 2014). Multi-partnership models linking research, clinical care, education and training are necessary to ensure high-quality evidence-based care in care homes. In addition, international cooperation is also important when developing the quality of care in care home contexts. Obviously, socio-contextual factors differ across LTC across countries. However it has been stated that despite these differences, there is surprising consistency across countries in terms of the fundamental barriers to person-centred, high-quality care that relate to how nursing practice is operationalised (Corazzini et al., 2016).

Care home residents' family members emphasised that they also have other expectations besides those regarding nursing staff competence. In addition, many survey participants reported factors that influence the use of their competence in care homes. It is essential to note the complexity of the care home environment. A hidden complexity underlies practices in LTC facilities and each nurse must negotiate this complexity when providing care (Cammer et al., 2014). In other words care is not only an act between a nurse and a resident, but is an act shaped by contextual factors (Cammer et al., 2014; Heggestad et al., 2015; Pirhonen & Pietilä, 2015; Evans et al., 2018). In this study, the care home nursing professionals' self-assessed competence was examined and it is useful to note that there are many important factors related to nurse competence in care homes that were not explored in this research. This study does not offer answers to questions such as: *What factors promote the care home nurses' competence?* or *Is the staff members' competence sufficiently utilised in care homes?* In addition, in this study the aim was not to get an overall picture of all duties and required competencies in care homes. Nursing staff duties in Finnish care homes often include housekeeping (Riekkinen-Tuovinen, 2018), requiring other competencies aside from the ones represented in this study.

6.2 RELIABILITY AND VALIDITY OF THE NURSE COMPETENCE IN CARE HOME SCALE

This study provides a new competence self-assessment instrument, the NCCHS, which provides a simple way to measure care home nursing professionals' competence in older people nursing. The results regarding the psychometric properties of the NCCHS are encouraging. All Cronbach's alpha values exceeded 0.70 and all item-total correlations were above 0.3, indicating appropriate internal consistency (reliability). However, the NCCHS needs to be further tested in the future. This instrument was used for the first time in this research; additional studies using it are needed to further analyse aspects such as its

construct validity. In particular the 'ethical practice' subscale may need some revision because one item's factor loading in that subscale was under 0.3. In the future, confirmatory factor analysis could be conducted to further evaluate the construct validity of the instrument (Rattray & Jones, 2007).

Preliminary PCA revealed that one item had a large number of low correlation coefficients, and this item (the ability to extract blood samples and, when necessary, to take care of delivering them to a laboratory according to examination instructions) was eliminated before further analysis. It was found already in the Delphi stage that this competence requirement depended on the work unit; it is not required of all care home nursing professionals. Furthermore, another item (the ability to guide a resident individually) was excluded from further analysis due to low factor loading. It is uncertain whether this was the best solution. However, several items in the instrument actually involve this competence. For instance, supporting and utilizing a care home resident's resources usually requires the ability to guide the resident individually.

The development and testing of this kind of instrument is always a lengthy process. In addition, competence assessment in older people nursing in care homes is quite demanding, because the required competence includes competencies that are both difficult to measure and essential for the residents' well-being. For example, nurse's ability to use humour in appropriate way in care home contexts is very important according to this study and earlier studies (van Hoof et al., 2016; Pirhonen & Pietilä, 2015) but is quite difficult to measure. Therefore, in this study it was decided to use a four-point Likert type scale asking the level of agreement on competence statements, instead of using a numerical grading scale or a scale such as Benner's novice to expert continuum. This solution seems successful; respondents found the NCCHS easy to fill in and the results provided useful information about respondents' competence.

The NCCHS was used in research in this instance. However, it may be assumed that it is also suitable for assessing nursing professionals 'competence within care homes because it is fairly quick to fill in. Self-assessment enables nurses to critically reflect on their own competence and is considered an integral part of competence evaluation. The NCCHS could potentially be used as a part of professional development discussions. However, it is unknown how sensitive this instrument is in detecting changes in individuals' level of competence over time. The instrument's ability to detect changes in nurses' self-assessed competencies could be tested in the future.

6.3 LIMITATIONS AND STRENGHTS OF THE STUDY

This study provides information regarding nurses' self-reported competence in care homes. All forms of competence evaluations have limitations and therefore these study results should be interpreted carefully, acknowledging possible bias related to self-assessments. Although self-assessment provides valuable information about competence it is a subjective method. Differences occur, for example, between managers' and nurses' assessments. In some studies, managers have assessed nurses' competence somewhat higher than nurses themselves (Meretoja & Leino-Kilpi, 2003; Meretoja & Koponen, 2012; Numminen et al., 2015) and, in some studies, nurses have assessed their competence higher than their managers (Bahreini et al., 2011; Koskinen et al., 2014). It is important to note that nurses' self-assessment does not necessarily correlate with actual performance (Baxter & Norman, 2011). The use of other evaluation methods alongside self-assessment is recommended when evaluating professional competence. However, self-assessments are one way to assess competence and the instrument developed during this study provides an opportunity for nurses to critically reflect on their own competence.

Social media was used for recruitment in survey study and it is not possible to carry out the dropout analysis when using this kind of recruitment strategy. In Finland, almost all of

people in these age groups that were involved in our study use the internet (Official Statistics of Finland, 2017), so it can be assumed that a lack of internet connection did not exclude possible participants. In addition, the nurse associations assisted with the data collection phase by sharing research invitations and information; non-members of these associations also had an opportunity to participate the study. However, not everyone belonging to the target group of this study visits the social media forums and sites utilised in the recruitment process. This recruitment strategy resulted in a large and heterogenous sample. However, it is difficult to estimate how the recruitment strategy affected our study results while assessing the direction and magnitude of the effects. The distribution of care home professional groups in our sample closely match the actual number of RNs, managers and LPNs in care homes. In addition, the participants were from different parts of Finland and were from public, private and third sector organisations.

In this study, the data were collected in Finland and the international generalisability of the results to care homes (and nursing homes etc.) may vary. There might be cultural differences, for instance, related to expectations regarding care home nursing professionals' competence. If the NCCHS would be used outside Finland, the relevance of the items should be evaluated before the data collection.

Patient and public involvement in research can enhance its relevance and it is recommended that older people be involved in studies related to aged care. Care home residents were not involved in this study, which may be perceived as a limitation. However, many of the care home residents' family members who participated in the study were older people themselves. In addition, they visited their loved ones often and were frequent observers of daily life in the care home.

Both LPN's, RNs', managers' and care home residents' family member' perceptions of the competence requirements in older people nursing were investigated during this study and qualitative methods were used alongside quantitative methods, offering an opportunity for participants to express their perceptions on their own words.

The strengths of this study include the basic premise that both RNs' and LPNs' competence was examined. It is very important to study and discuss RNs' competence because of their unique contribution in care homes. However, it is also essential to be aware of LPNs' competence. In addition, in this study a specific competence self-assessment instrument developed for the context of older people nursing was used to measure care home nursing professionals' competence.

7 Conclusions

Based on the findings of this study the following conclusions can be drawn:

1) Multifaceted competence is required in older people nursing in care homes; more than "a pair of hands" is needed to ensure safe and appropriate care for residents with complex care needs. Care home nursing professionals are expected to be able to provide person-centred, individual and holistic care. In addition to skills and attitudes, theoretical knowledge, evidence-based knowledge, experience-based knowledge and knowledge of the individual older person are needed in older people nursing in care homes.

2) Nursing professionals working in Finnish care homes are competent in many areas. There are also many competence gaps according to nursing professionals' self-assessments. It seems that care home nursing professionals are more competent in meeting the physical needs of an older person than meeting the psychosocial and existential needs of older people. Care home nurses' ability to provide family-centred care is also in need of improvement.

3) Higher education does not necessarily mean higher self-rated competence. Other factors (such as age, further training and length of work experience) can predict the level of self-assessed competence.

4) The new competence self-assessment instrument, the NCCHS, can be used to measure care home nursing professionals' self-rated competence in older people nursing. Testing of the instrument with different samples is needed to further evaluate the validity of the scale.

8 Recommendations

Recommendations for future research:

1) The NCCHS, a new competence self-assessment instrument developed during this study, needs to be further developed with different samples. In particular, the construct validity of the scale needs further testing.

2) It would be important to investigate the development of care home nursing professionals' competence over time in order to find out what happens to competence gaps revealed in this study.

3) The NCCHS could provide a basis for cross-cultural comparative study. In this case, the instrument should be pre-tested and the relevance of the items should be evaluated (for example, with an expert panel) before the data collection.

4) It is important to explore the competence of care home staff using different evaluation methods (such as knowledge tests and observation) in addition to self-assessments.

Recommendations for clinical practice:

1) Nursing personnel should aim to provide individual, person-centred and evidence-based care for older people in care homes and they should consider all aspects of older people's well-being holistically. It is important that nurses are interested in the older person's likes, dislikes, customs and habits and are willing to utilise this knowledge in practice.

2) It is essential for care home staff to note the importance of active interaction with residents and family members. Nurses should note that their support is crucial especially in the transition phase, when adaptation is often required from the new resident and his/her relatives.

3) Care home nursing professionals should maintain and develop their competence throughout their career to be able to meet the multifaceted needs of older people.

Recommendations for leadership and policy level:

1) It is recommended that policy makers consider the current competence demands in older people nursing in care homes when drafting laws or recommendations regarding nurse-to-resident ratios and staff education requirements.

2) It is recommended that the competence requirements represented in this study are considered when recruiting nursing staff to the care home.

3) It is important to identify and assess nursing staff competence in care homes. The NCCHS provides an opportunity for nurses to identify and reflect their competence and it can be used alongside other methods when evaluating and discussing care home nursing professionals' competence (for example, during performance appraisal).

4) Possibilities for competence development should be provided for care home nursing personnel. It is necessary to consider different forms and methods of learning that can be integrated into working life. For instance, critical reflection is important in care home contexts where nursing staff face many ethical dilemmas.

5) Care home nursing professionals should have opportunities for multi-professional cooperation. In addition to social and health care professionals (such as physicians), third sector organisations could provide support for nurses' competence. Overall, it is important to create an organisational culture where nursing staff are encouraged to cooperate with different stakeholders.

Recommendations for education of nurses:

1) It is essential to discuss whether competencies needed in older people nursing in care homes are sufficiently recognised in nursing curricula and education programmes.

2) People living in care homes are vulnerable individuals with complex care needs, and multifaceted competence is required for older people nursing. Therefore, sufficient theoretical knowledge should be provided for nursing students before their practical training in care homes for older people.

3) It is important to evaluate graduating nursing students' preparedness to meet the complex needs of older people living in care homes.

In addition, it is essential that different stakeholders cooperate to promote the competence of nursing staff and to ensure the well-being of older people in care homes. Multi-partnership models linking research, clinical care, education and training are needed to ensure high-quality evidence-based care in care homes.

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Reforms in aged care have influence on nursing practice. Therefore, it is important to be aware of the current competence requirements and of the preparedness of nursing staff to meet these competence demands in older people nursing. The purpose of this study was to identify and describe competence requirements in older people nursing in care homes and to describe and predict care home nursing professionals' self-assessed competence. In addition, a new competence self-assessment instrument, the Nurse Competence in Care Home Scale, was developed during this study.

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