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NURSING STUDENTS AND OLDER PEOPLE NURSING

Towards a future career

Sanna Koskinen

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NURSING STUDENTS AND OLDER PEOPLE NURSING – TOWARDS A FUTURE CAREER

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ABSTRACT

The purpose of this two-phased study is to examine the interest of nursing students in choosing a career in older people nursing. First, the scoping phase explores the different premises for choosing older people nursing as a career. Second, the evaluation phase investigates the outcomes of the developed educational intervention involving older people as promoters of choosing a career in older people nursing, factors related to these outcomes, and experiences with educational intervention. The ultimate goal is to encourage more nursing students to choose older people nursing as their career.

The scoping phase applies an exploratory design and centres around a descriptive, cross-sectional survey, documentary research and a scoping literature review. The information sources for this phase include 183 nursing students, 101 newspaper articles and 66 research articles. The evaluation phase applies a quasi-experimental design and a pre-post-test design with a non-equivalent comparison group and a post-intervention survey. The information sources for this phase include 87 nursing students and 43 older people. In both phases, statistical and narrative methods are applied in the data analysis.

Nursing students neutrally regarded the idea of a career in older people nursing. The most consistent factors related to the nursing students' career plans in older people nursing were found to be nursing work experience and various educational preparations in the field. Nursing students in the intervention group (n=40) were more interested in older people nursing and had more positive attitudes towards older people than did students in the comparison group (n=36). However, in both groups, the interest that students had at the baseline was associated with the interest at the one-month follow-up. There were no significant differences between the groups in terms of the students' knowledge levels about ageing. The nursing students and older people alike highly appreciated participating in the educational intervention.

It seems possible to positively impact nursing students and their choices to pursue careers in older people nursing, at least in the short-term. The involvement of older people as promoters of this career choice provides one encouraging alternative for impacting students' career choices, but additional research is needed.

Keywords: nursing students, older people, nursing, career, education, involvement

Sanna Koskinen

SAIRAANHOITAJAOPISKELIJAT JA IÄKKÄIDEN HOITOTYÖ – KOHTI TULEVAISUUDEN TYÖURAA

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TIIVISTELMÄ

Tämän kaksivaiheisen tutkimuksen tarkoituksena oli selvittää sairaanhoitajaopiskelijoiden kiinnostusta iäkkäiden hoitotyöhön uravalintana. Ensimmäisessä vaiheessa analysoitiin iäkkäiden hoitotyön uravalinnan lähtökohtia. Toisessa vaiheessa arvioitiin tätä tutkimusta varten kehitetyn iäkkäiden hoitotyön uravalinnan edistämiseen tarkoitetun koulutusintervention (Learning with Older People Programme LOPP) tuloksia ja siihen yhteydessä olevia tekijöitä sekä kokemuksia koulutusinterventiosta. Koulutusintervention keskeisenä elementtinä oli iäkkäiden henkilöiden osallistuminen interventioon. Tutkimuksen tavoitteena on edistää useampien sairaanhoitajaopiskelijoiden kohdalla iäkkäiden hoitotyön valitsemista työuraksi.

Selvitysvaiheen kuvailevassa tutkimusasetelmassa hyödynnettiin poikkileikkauskyselyä, dokumenttianalyysiä ja kirjallisuuskatsausta. Tutkimusaineiston muodostivat 183 sairaanhoitajaopiskelijaa, 101 sanomalehtiartikkelia ja 66 tutkimusartikkelia. Arviointivaiheen puolikokeellisessa tutkimusasetelmassa hyödynnettiin interventio- ja vertailuryhmien ennen-jälkeen-mittauksia ja intervention jälkeistä kyselyä. Tutkimusaineiston muodostivat 87 sairaanhoitajaopiskelijaa ja 43 iäkästä henkilöä. Molemmissa vaiheissa käytettiin sekä tilastollisia että narratiivisia analyysimenetelmiä.

Sairaanhoitajaopiskelijoiden kiinnostus iäkkäiden hoitotyöhön urana oli neutraalia. Keskeisimmät kiinnostukseen yhteydessä olevat tekijät olivat työkokemus hoitotyöstä ja erilaiset ratkaisut iäkkäiden hoitotyön koulutuksessa. Interventioryhmän opiskelijat (n=40) olivat kiinnostuneempia iäkkäiden hoitotyöstä ja heillä oli myönteisemmät asenteet iäkkäitä henkilöitä kohtaan kuin vertailuryhmän opiskelijoilla (n=36). Molemmissa ryhmissä opiskelijoiden kiinnostus iäkkäiden hoitotyöhön ennen opintojaksoa (ennen-mittaus) oli yhteydessä kiinnostukseen kuukauden kuluttua opintojakson päättymisestä (jälkeen-mittaus). Ryhmien välillä ei ollut eroja ikääntymistä koskevassa tiedon tasossa. Sekä opiskelijat että iäkkäät henkilöt kokivat osallistumisen koulutusinterventioon erittäin myönteisenä.

Koulutuksella on mahdollista vaikuttaa sairaanhoitajaopiskelijoiden kiinnostukseen iäkkäiden hoitotyöhön uravalintana myönteisesti ainakin lyhytaikaisesti. Iäkkäiden henkilöiden osallistuminen iäkkäiden hoitotyön koulutukseen ja sitä kautta iäkkäiden hoitotyön uravalinnan edistämiseen tarjoaa yhden rohkaisevan vaihtoehdon vaikuttaa sairaanhoitajaopiskelijoiden uravalintaan. Aiheesta tarvitaan kuitenkin lisätutkimusta.

Avainsanat: sairaanhoitajaopiskelija, iäkkäät ihmiset, hoitotyö, ura, koulutus, osallisuus

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LIST OF ABBREVIATIONS

AACN	American Association of Colleges of Nursing
ANCOVA	Analysis of covariance
ANOVA	Analysis of variance
CG	Comparison group
CINAHL	Cumulative Index to Nursing and Allied Health Literature
ECTS	European Credit Transfer and Accumulation System
ERIC	Education Resource Information Center
ETENE	National Advisory Board on Social Welfare and Health Care Ethics
FAQ1	Facts on Aging Quiz
ICN	International Council of Nurses
IG	Intervention group
KAOP	Kogan's Attitudes towards Older People scale
LOPP	Learning with Older People Programme
LPN	Licensed practical nurse
MEDLINE	Medical Literature Analysis and Retrieval System Online
OPN	Older people nursing
OSF	Official Statistics of Finland
RM-ANOVA	Repeated measures analysis of variance
RN	Registered nurse
SAS	Statistical Analysis System
SINOPS	Students' Interest in Nursing Older People Scale
SPSS	Statistical Package for the Social Sciences
SUI	Service user involvement
TENK	Finnish Advisory Board on Research Integrity
UN	United Nations
VAS	Visual analogue scale
WHO	World Health Organization
WVI	Work Value Inventory

LIST OF ORIGINAL PUBLICATIONS

This thesis is based on the following publications which are referred to in the text by their Roman numerals I–V.

I Koskinen S, Hupli M, Katajisto J & Salminen L. 2012. Graduating Finnish nurse students' interest in gerontological nursing – A survey study. Nurse Education Today 32(4), 356–360.

II Koskinen S, Salminen L & Leino-Kilpi H. 2014. Media portrayals of older people as illustrated in Finnish newspapers. International Journal of Qualitative Studies on Health and Well-being 9, 25304. doi: 10.3402/qhw.v9.25304

III Koskinen S, Salminen L, Stolt M & Leino-Kilpi H. 2015. The education received by nursing students regarding nursing older people: a scoping literature review. Scandinavian Journal of Caring Sciences 29(1), 15–29.

IV Koskinen S, Salminen L, Puukka P & Leino-Kilpi H. 2016. Learning with older people – Outcomes of a quasi-experimental study. Nurse Education Today 37, 114–122.

V Koskinen S, Salminen L & Leino-Kilpi H. Learning with older people – Experiences of nursing students and older people. (Submitted)

The thesis also contains unpublished material.

1. INTRODUCTION

Older people nursing (OPN) is one of the future careers in nursing. As one of societies' greatest achievements, the increase in average life expectancy is resulting in fast-growing older people populations worldwide (Eurostat 2015, United Nations UN 2015). In Finland, the proportion of people over age 65 in the population is estimated to rise from the current 20% to 26% by 2030, and to 29% by 2060 (Official Statistics of Finland OSF 2015). Despite a general increase in health, a portion, especially the oldest, of this demographic lose their ability to manage independently at some point, due to chronic and degenerative diseases causing declines in physical or cognitive functioning (World Health Organization WHO 2015). In these cases, many older people turn to health and social services to receive nursing care. This increases the need of services, and thus workforce demands, in the future.

In Finland, registered nurses (RN) and licensed practical nurses (LPN) are the largest staff groups that provide care for older people. Approximately 5000 RNs and, depending on the calculation method, from 25 000 to 31 000 LPNs work in municipal social services for older people (including, for instance, residential nursing care, sheltered housing and home help services). In addition, RNs and LPNs work with older people in health services such as the wards of health centres (National Institute for Health and Welfare 2015). Due to an ageing population, large numbers of nurses are expected to retire and leave the workforce during the next two decades, just when there will be higher demand for this type of work (Sherman et al. 2013, European Commission 2012). In Finland, the average age of the personnel in municipal health and social services today is just below 45. Of the personnel in 2014, about 29% will have reached the age of 65 by 2025, and it is likely that most of them will then retire. By 2030, about 43% will have reached the age of 65 (National Institute for Health and Welfare 2015).

The need for an increased nursing workforce has been taken into account in the education planning in the health care sector, and the intake of students has increased (Ministry of Education and Culture 2012) to ensure that an adequate supply of skilled nursing staff will be available to provide high-quality care across settings to diverse older people populations in the future (Ministry of Social Affairs and Health 2013, Act 980/2012, International Council of Nurses ICN 2006, 1999). One of the greatest needs for this increase exists in the initial vocational health and social care education. To be able to meet the requirements of the Act (980/2012) on Supporting the Functional Capacity of the Older Population and on Social and Health Services for Older Persons, to have a competent nurse workforce in older people services, the intake of RNs (bachelor's degree) has also been increased (Ministry of Education and Culture 2012).

The importance of nurses' education and competence in OPN has been recognised. Several international and national policy papers and guidelines state that the competence of nurses in OPN needs to be established in undergraduate education and strengthened with continuing training. These documents regulate and recommend that nursing degree programmes should include theoretical and clinical instruction on the care of older people and geriatrics (Eriksson et al. 2015, WHO 2015, Ministry of Social Affairs and Health 2013, Directive 2013/55/EU, 2005/36/EC, ICN 2006, 1999, Ministry of Education 2006). In some countries, more detailed recommendations concerning the curricula of OPN has been established (e.g., American Association of Colleges of Nursing AACN and the Hartford Institute for Geriatric Nursing at New York University College of Nursing 2010), in terms of improving and enhancing

education and training in OPN. The goal of these documents is to ensure that nursing students are able to provide the necessary care for the ageing population.

The involvement of service users – all potential users of health care services – in health care education has also been encouraged internationally through increasing the emphasis on policy (Towle et al. 2010, Morgan & Jones 2009, Repper & Breeze 2007). Service user involvement (SUI) is recommended in order to bring the patient voice into education by recognising their expertise based on experience. Involvement is assumed to reduce the power imbalance between health care professionals and patients, and thus lead to improvements in health care services in terms of patient-centred care, shared decision making and the promotion of self-care (Perry et al. 2013, Towle et al. 2010, Jha et al. 2009, Morgan & Jones 2009, Repper & Breeze 2007). Similar to SUI, the active participation of older people should be recognised and enabled, according to their individual needs, preferences and capacities (WHO 2015, 2002, Ministry of Social Affairs and Health 2011). The diverse inclusion of older people − allowing them to make their voices heard within various municipal services, such as cultural, sports, education and technical services, and in other activities, – should be safeguarded (Ministry of Social Affairs and Health 2013, Act 980/2012).

In this study, OPN is defined as a nursing field that aims to promote and maintain the wellbeing – or the health and functional capacity – of older people as well as provide treatment and care for the sick, frail and dying. The foundation of OPN lies in ethical principles, such as individuality and special competence, that combine multidisciplinary knowledge and teamwork (Bing-Jonsson et al. 2015, Finnish Hoidokki thesaurus 2015, Medical Subject Headings MeSH thesaurus 2015, Ministry of Social Affairs and Health 2013, National Advisory Board on Social Welfare and Health Care Ethics ETENE 2008, ICN 2006, Kelly et al. 2005). OPN is carried out in all health and social care settings where care is provided for older people. However, it is particularly exercised in settings such as long-term care in health centres, nursing homes, assisted living residences and facilities, and the homes of older people. This study focuses on nursing students and their plans of whether or not to choose OPN as their career.

2. LITERATURE REVIEW

The following chapters describe the career choices of nursing and nursing education, and explore the role older people as promoters of a career choice in OPN, based on literature. When older people act as promoters of this career choice students are provided with opportunities to learn directly from the ones they might eventually care for. Consequently, it is assumed that this may enhance student understanding of the reality and uniqueness of OPN and encourage them to consider the field as a potential career choice.

2.1. Career choices of nursing and nursing education

The process of choosing a career in nursing can be examined by first defining the concept, then exploring nursing students' reasons for entering nursing programmes, as well as factors that influence the decision to choose a career in nursing. This exploration is based on a narrative analysis of original research. The sources were identified through a systematic search carried out in the beginning of 2016, in four international electronic databases (MEDLINE, CINAHL, PsycINFO and ERIC). The terms, "nursing students" and "career choice" were used to search for relevant titles and abstracts of the citations. In addition, studies found through a manual search, for instance based on reference lists, were used to complete the review of the literature. The search was limited to publications from 1995–2015 and to works written in English. In total, 14 studies were included.

Definition of career choice

Career choice in this study is defined as choosing one field of nursing over other alternatives. To choose one nursing field over another is a complex process influenced by a variety of variables, comparable to choosing a nursing career over other occupation alternatives. Career choice is a dynamic process of career construction, and requires ongoing adjustment, not just a one-time decision (Price 2009).

Reasons to choose a career in nursing

Students' reasons for entering nursing programmes are both personal and career related. Personal reasons are more dominate in the decision to study nursing and include the desire to care for others and help people and the opportunity for self-development. The desire to care for others and wanting to help people are the most consistent and important reasons for students worldwide choosing a career in nursing (Başkale & Serçekuş 2015, Wilkes et al. 2015, Halperin & Mashiach-Eizenberg 2014, Tayebi et al. 2013, Usher et al. 2013, Jirwe & Rudman 2012, McLaughlin et al. 2010, Price 2009, Mooney et al. 2008, Rognstad et al. 2004, Larsen et al. 2003). Some students have viewed nursing even as their vocation and life calling and felt compelled to pursue it (Usher et al. 2013, McLaughlin et al. 2010). When students seek an opportunity for self-development (McLaughlin et al. 2010, Rognstad et al. 2004) in the nursing field, they generally have personal interest in health related issues, they want to develop professional knowledge and clinical competency (Halperin & Mashiach-Eizenberg 2014, Haron et al. 2014, Tayebi et al. 2013, Lai et al. 2008), and they regard nursing as a profession with possibilities for career advancement (McLaughlin et al. 2010, Rognstad et al. 2004).

Career related reasons – job security, actual content of practising nursing, and social status – are also important in a student's decision to enter a nursing programme. Job security, an

employee continuing in gainful employment throughout his or her working life, is among the most significant reasons for choosing nursing as a career (Wilkes et al. 2015, Usher et al. 2013, McLaughlin et al. 2010, Mooney et al. 2008, Larsen et al. 2003). Students generally regard nursing as a career with almost guaranteed employment opportunities (Başkale & Serçekuş 2015, Haron et al. 2014, Tayebi et al. 2013), and it offers at least a satisfactory income (Başkale & Serçekuş 2015, Halperin & Mashiach-Eizenberg 2014, Haron et al. 2014, McLaughlin et al. 2010, Rognstad et al. 2004). The actual content of practising nursing also attracts some to consider a career in nursing. Nursing is regarded to offer a wide range of possible work tasks, areas and settings (Haron et al. 2014, Usher et al. 2013, Jirwe & Rudman 2012, McLaughlin et al. 2010, Mooney et al. 2008, Grainger & Bolan 2006, Larsen et al. 2003). The teamwork nature of the job is also attractive to students (Halperin & Mashiach-Eizenberg 2014, McLaughlin et al. 2010). Nursing is generally regarded as a noble and respectable career path, and, although this is not the main reason for choosing this profession, its social status is valued by students (Halperin & Mashiach-Eizenberg 2014, Usher et al. 2013, Jirwe & Rudman 2012, Price 2009). Students are also drawn into the field by its academic education requirements (Wilkes et al. 2015, Tayebi et al. 2013).

Factors influencing the decision to choose a career in nursing

The most significant factors that can affect the decision to choose a career in nursing include the influence of other people, past personal experiences and the media. The influence of family members and friends, through their support and encouragement, is one of the most influential factors in this career choice (Başkale & Serçekuş 2015, Jirwe & Rudman 2012, McLaughlin et al. 2010, Price 2009, Mooney et al. 2008, Grainger & Bolan 2006). A family member or a friend who has worked as a nurse or another type of health care professional can provide information about nursing to potential nursing students (Usher et al. 2013, McLaughlin et al. 2010, Price 2009, Larsen et al. 2003). Similarly, other positive role models and supporters, such as nurse educators, supervisors and peers, are influential when students consider a career in nursing (McLaughlin et al. 2010, Price 2009, Lai et al. 2008).

Past personal experiences also affect the career choices of students. The experience of a loved one or oneself having been ill and/or hospitalised has, at times, led students to pursue a nursing career (Haron et al. 2014, Usher et al. 2013, McLaughlin et al. 2010, Price 2009, Mooney et al. 2008, Larsen et al. 2003). Also, past experiences in nursing-related employment can positively influence a student to choose a career in nursing (Mooney et al. 2008, Larsen et al. 2003).

The media is another potential factor that can influence students' perceptions regarding a career in nursing. However, the media has only been the *main* factor in a few cases. Students have often already made up their minds in favour of pursing nursing training, and the publicity of the field has only confirmed their decision (Haron et al. 2014, Price 2009, Mooney et al. 2008, Larsen et al. 2003).

A career choice in older people nursing

The choice of a career in OPN can be further examined from the perspectives of nursing students' career plans in the field, and their reasons for and factors related to their plans. These perspectives are described based on a narrative analysis of original research. The sources for this angle of examination, as in the previously mentioned source selection process, were identified through a systematic search carried out in the beginning of 2016, in four international electronic databases (MEDLINE, CINAHL, PsycINFO and ERIC). The search terms included

"nursing students", "older adults", "older people", "older patients", "older persons", "elderly", "elderly patients", "elderly people", "aged people", "geriatric", "gerontological" and "career". These terms were applied to titles and abstracts of the citations. In addition, studies found through a manual search, for instance based on reference lists, were used to complete the review of the literature. The search was limited to publications from 1995–2015 and to works written in English. In total, 32 studies were included.

Career plans regarding older people nursing

Nursing students worldwide have predominantly considered a career in OPN to be among the least preferred nursing areas to pursue after graduation. This was the case during the years covered in this literature review (Rathnayake et al. 2016, Mattos et al. 2015, Birks et al. 2014, Haron et al. 2013, King et al. 2013, Xiao et al. 2013, Shen & Xiao 2012, Stevens 2011, McCann et al. 2010, Bernardini Zambrini et al. 2008, Henderson et al. 2008, Kloster et al. 2007, DeKeyser Ganz & Kahana 2006, Hweidi & Al-Obeisat 2006, Happell 2002, Burg et al. 2001, Stevens & Crouch 1995). Even so, a minority of nursing students do consider OPN as potential career alternative (Carlson & Idwall 2015, Frost et al. 2015, Gould et al. 2012, Wang et al. 2009, Lee et al. 2006). Some studies have even found that students neutrally or moderately regard a career OPN (Cheng et al. 2015, Brown et al. 2008, Lee et al. 2006). Moreover, students are often still uncertain about their intention to work with older people (McCann et al. 2010, Pan et al. 2009), although the proportion of undecided students drops significantly as graduation approaches (McCann et al. 2010). Of graduated nurses, approximately 16–26% start working in OPN as their first job (Abrahamsen 2015, Marsland & Hickey 2003).

Like OPN, psychiatric nursing has also been among the least preferred career alternatives in the nursing field, especially when students are asked at the beginning of their education, although it does see some increase in popularity by the time of graduation (Birks et al. 2014, McCann et al. 2010, Kloster et al. 2007, Happell 2002). Contrarily, among the most preferred career alternatives for the majority of nursing students, regardless of the study phase, are pediatric nursing (Birks et al. 2014, Xiao et al. 2013, Shen & Xiao 2012, Gonc¸alves et al. 2011, Stevens 2011, McCann et al. 2010, Henderson et al. 2008, Kloster et al. 2007, DeKeyser Ganz & Kahana 2006, Happell & Brooker 2001, Stevens & Crouch 1995), surgical nursing (Shen & Xiao 2012, Stevens 2011, Kloster et al. 2007, DeKeyser Ganz & Kahana 2006, Happell 2002, Stevens & Crouch 1995) and intensive or critical care nursing (King et al. 2013, Stevens 2011, Henderson et al. 2008, DeKeyser Ganz & Kahana 2006).

Reasons not to choose a career in older people nursing

The following paragraphs focus on the most common reasons why a career in OPN is often not chosen as a field of employment after graduation. Specifically, attention is given to the negative view of work characteristics in older people nursing, the negative image of work environments, the perceived negative effect on one's career path, and the lack of personal interest or abilities. These reasons remained static during the time period covered in this literature review. Students considering OPN as a potential career alternative often state the reasons for their preference as being that they enjoy working with older people (Kloster et al. 2007, Lee et al. 2006) and that they consider OPN to be meaningful. Students are generally aware of the challenges in this type of nursing and want to take responsibility for solving its problems (Rathnayake et al. 2016, Kloster et al. 2007).

The negative view of work characteristics in OPN (Gould et al. 2015, Xiao et al. 2013, Shen & Xiao 2012, Stevens 2011, Henderson et al. 2008, Kloster et al. 2007, Happell 2002, Happell & Brooker 2001, Stevens & Crouch 1995) is based on various perceptions of the job. It may be seen as lacking challenge, boring, repetitive, routine-like, or physically and/or psychologically taxing with a heavy workload (Gould et al. 2015, Rejeh et al. 2011, Kloster et al. 2007, Happell 2002, Fagerberg et al. 2000). Moreover, the negative view of this type of work can relate to the frustration that students may perceive at working with older people who do not get better. The work can be seen as sad and depressing (Happell 2002).

The negative image of work environments often relates to the shortage and poor quality of resources (Xiao et al. 2013, Shen & Xiao 2012, Rejeh et al. 2011, Stevens 2011, Kloster et al. 2007, Happell & Brooker 2001, Fagerberg et al. 2000). Due to financial cutbacks, students have expressed concerned about how they would manage to work in the way they wanted and have been taught. Moreover, students have expressed a feeling of powerlessness at not always being able to influence how services and care are provided to older people (Fagerberg et al. 2000).

The perception that working in OPN can negatively affect one's career path (Gould et al. 2015, Xiao et al. 2013, Shen & Xiao 2012, Stevens 2011, Happell 2002, Happell & Brooker 2001, Fagerberg et al. 2000, Stevens & Crouch 1995) relates to the view that the prospects of a career in OPN are regarded as low (Fagerberg et al. 2000). Students have been found to think that there is less diversity of diseases and conditions in OPN than in other areas, and therefore, they would not be able to use all of their acquired knowledge and skills and would eventually forget them (e.g., how to give injections) (Gould et al. 2015, Happell 2002, Happell & Brooker 2001, Fagerberg et al. 2000). Moreover, students have expressed worries about being paid less than they would be in other nursing areas for doing more work (Xiao et al. 2013, Shen & Xiao 2012).

Some students simply lack the personal interest or abilities (Xiao et al. 2013, Shen & Xiao 2012, Stevens 2011, Henderson et al. 2008, Happell & Brooker 2001, Stevens & Crouch 1995) needed to pursue a career in OPN. This relates to the fact that some students do not feel comfortable with older people (Xiao et al. 2013, Happell & Brooker 2001) or otherwise find the field ill-suited for them (Henderson et al. 2008, Happell & Brooker 2001). Some may even have a fear of dealing with dying or suffering patients (Henderson et al. 2008). Others may lack the confidence to work with older people (Xiao et al. 2013, Shen & Xiao 2012) and are unable to communicate with them (Henderson et al. 2008). Some students may be frightened of the responsibility, as it is often the case that nurses in OPN are solely in charge of patients, with no colleagues or superiors available for discussion or consultation (Fagerberg et al. 2000).

Factors related to choosing a career in older people nursing

Several sociodemographic, experiential and educational factors have been repeatedly examined to determine their effect on nursing students' career plans in OPN. Table 1 provides a summary of the main factors having statistically significant connections, either positive or negative, to students' career plans in OPN.

Only two background factors seem to have a consistent relation to students' career plans in OPN. These factors are previous experience − either personal or work-related − with older people, and students' attitudes towards older people. Students who have had experience with and positive attitudes towards older people tend to regard a career in OPN more preferably.

Some factors, such as age and stage of education, have either a contradictory or weak relation to students' career plans in OPN. Regarding factors like gender and cultural or ethnic backgrounds, study samples tend to have only a limited number of male participants or students from diverse backgrounds. Therefore, it is difficult to examine these as potential factors related to career plans in the field.

Table 1. Background factors of nursing students related to choosing career in OPN

Background factor	Related to career in OPN +/-		Authors, publication year
Age			
Younger	++		Xiao et al. 2013, Shen & Xiao 2012
Older	++	-	Abrahamsen 2015, Gonçalves et al. 2011, Lee et al. 2006
Personal experience with older people			
Yes/A lot	++		Cheng et al. 2015, Henderson et al. 2008
Nursing work experience			
Yes/A lot	++++++	- -	Cheng et al. 2015, Zisberg et al. 2015, Haron et al. 2013, Xiao et al. 2013, Gonçalves et al. 2011, Stevens 2011, Henderson et al. 2008, Brown et al. 2008
Stage of education			
Beginning	+		Zisberg et al. 2015
Graduation		- - -	Zisberg et al. 2015, Gould et al. 2012, Lee et al. 2006
Experience with studying OPN			
Positive	+++		Carlson & Idwall 2015, Cheng et al. 2015, Brown et al. 2008
Negative		- -	Brown et al. 2008, Marsland & Hickey 2003
Knowledge about older people/ageing			
High	++	-	Mattos et al. 2015, Gonçalves et al. 2011, Lee et al. 2006
Low		-	Lee et al. 2006
Attitudes towards older people			
Positive	++++++++		Rathnayake et al. 2016, Cheng et al. 2015, Mattos et al. 2015, Zisberg et al. 2015, de Guzman et al. 2013, Haron et al. 2013, Gonçalves et al. 2011, Pan et al. 2009, Henderson et al. 2008, Hweidi & Al-Obeisat 2006, Burg et al. 2001
Negative		- - -	Xiao et al. 2013, Shen & Xiao 2012, Henderson et al. 2008

The symbols +/- (one symbol/study) indicate the statistically significant positive or negative connection to students' career plans regarding OPN. The symbol + indicates positive relation to the career plans; the symbol - indicates a negative relation to the career plans.

2.2. Older people as promoters of a career choice in older people nursing and nursing education

Older people themselves can act as promoters of a career choice in OPN. This phenomenon is examined from two perspectives. Firstly, the concept of SUI in health care education is defined,

and its characteristics and outcomes are described. Secondly, the educational solutions featuring the involvement of older people, in terms of visits to older people and service learning, are described.

Service user involvement in health care education

SUI in health care education is described based on a narrative analysis of literature reviews as well as a concept analysis. The sources were identified through a systematic search carried out in the beginning of 2016, in four international electronic databases (MEDLINE, CINAHL, PsycINFO and ERIC) by applying the search terms to the titles of the citations. The search terms included "patient and public involvement", "patient participation", "consumer participation", "user involvement", "patient involvement", "consumer involvement", and "education", and were used to search titles of the citations. The search was limited review-type publications from 1995–2015 that had been written in English. In total, nine reviews and one concept analysis were included.

Definition of service user involvement in health care education

Service user involvement in health care education in this study is defined as a teaching and learning strategy in which the lived experiences of health care users are utilised in the education of students aiming to become health care professionals. As seen in the search terms listed above, there are many other applicable terms to name this process (Towle et al. 2010). With these in mind, the term *service user* can refer to a variety of people, including healthy people, people with health problems and their lay caregivers, that is as anyone with direct experience of health and social care services (Scammell et al. 2016, Towle et al. 2010). The dictionary definition of *involvement* is "the fact or condition of being involved with or participating in something" (MOT Oxford Dictionary of English).

Characteristics of service user involvement in health care education

SUI in health care education is different from SUI in direct care and in research. In education, it refers to the situation in which people – most commonly those from seldomly heard groups who often have the most need to be heard (Rhodes 2012, Le Var 2002) – are engaged because of their expertise and experiences of health, illness or disability. In these situations, the service users are aware that they have designated roles. SUI in health care education does not refer to simulated patients (or standardised patients or patient instructors) who act as real patients, simulating a set of symptoms or problems they do not actually have, in order to create an educational situation (Towle et al. 2010, Terry 2012). Moreover, involvement in education is characterised by signifying genuine collaboration between service users and nursing education staff (Rhodes 2012, Le Var 2002).

SUI in health care education can occur in a number of ways, from design and development of the course, to student selection, direct teaching, assessment of students, and research (Scammell et al. 2016, Rhodes 2012). Service users have often played the role of teachers or teaching aids in classrooms (Happell et al. 2014, Terry 2012, Jha et al. 2009, Morgan & Jones 2009, Repper & Breeze 2007). Service users consistently prioritise the need for training in interpersonal skills over 'technical' skills (Repper & Breeze 2007). Therefore, the most common teaching and learning strategies employed in classrooms include service users' personal stories and students being required to demonstrate awareness of user perspectives in case study presentations (Terry 2012). Less often, service users participate in assessment or curriculum development, course

advisory committees, producing learning materials, and teaching students on clinical placements (Scammell et al. 2016, Happell et al. 2014, Jha et al. 2009, Morgan & Jones 2009, Repper & Breeze 2007).

Outcomes of service user involvement in health care education

Students' perceptions of SUI in their own education have been generally positive and acceptable, regarded as adding value in their education (Scammell et al. 2016, Happell et al. 2014, Perry et al. 2013, Towle et al. 2010, Morgan & Jones 2009, Repper & Breeze 2007, Le Var 2002). SUI gives students the opportunity to learn directly from service users (Terry 2012, Towle et al. 2010). Students are able to gain insight into the perspectives of service users and demonstrate a more empathic understanding of the needs of vulnerable populations (e.g., people with mental illness) and their care (Scammell et al. 2016, Happell et al. 2014, Perry et al. 2013, Towle et al. 2010, Morgan & Jones 2009, Repper & Breeze 2007, Le Var 2002). As a consequence, students' assumptions and attitudes may improve significantly, which may help to ensure relevant care provision (Jha et al. 2009). Students can learn to be more holistic and person-centred in the manner in which they practise nursing (Perry et al. 2013, Rhodes 2012, Terry 2012, Morgan & Jones 2009, Le Var 2002). Specifically, students exposed to SUI tend to demonstrate better interpersonal and communication skills (Perry et al. 2013, Repper & Breeze 2007), they are able to more accurately identify clients' needs, and they develop better assessment skills (Terry 2012) as well as physical examination skills (Towle et al. 2010).

Service users themselves also benefit from the involvement in health care education. The reported specific therapeutic benefits include raising self-esteem and feelings of empowerment, increasing confidence and self-worth, gaining new insights into their problems, and expanding their knowledge. Service users also enjoy the companionship of students and generally feel well-treated by students (Scammell et al. 2016, Towle et al. 2010, Morgan & Jones 2009, Repper & Breeze 2007).

Educational solutions featuring the involvement of older people

Educational solutions featuring the involvement of older people are described based on a narrative analysis of original research. The sources were identified through a systematic search carried out in the beginning of 2016, in four international electronic databases (MEDLINE, CINAHL, PsychINFO and ERIC). The search terms were applied to the titles and the abstracts of the citations, and included "nursing students", "elderly", "older people", "older person", "older adult", "aged", "intervention", "program", "learning", "course", "curriculum", "module", "session", "seminar", "presentation", "education", "training", and "teaching". In total, 17 studies were included. The educational solutions featuring the involvement of older people were visits to older people and service learning.

Visits to older people

Visits to older people have been the most common educational solution involving older people themselves. In these visits, nursing students have been individually or in small groups, paired with a certain older person for a pre-determined period of time (Eaton 2015, Reitmeier et al. 2015, Walton & Blossom 2013, Basran et al. 2012, Lamet et al. 2011, Chen & Walsh 2009, Walsh et al. 2008, Ryan et al. 2007). Typically, these visits have spanned from about one month (Chen & Walsh 2009, Walsh et al. 2008) or one semester (Eaton 2015, Walton & Blossom 2013, Basran et al. 2012), up to a whole academic year (Ryan et al. 2007). Students have been

expected to visit their older person four (Eaton 2015, Walton & Blossom 2013, Basran et al. 2012, Chen & Walsh 2009, Walsh et al. 2008) to ten times (Reitmeier et al. 2015, Ryan et al. 2007), depending on how long the sequential visits were to last. Single visits usually have taken about one hour (Reitmeier et al. 2015, Chen & Walsh 2009, Walsh et al. 2008). Visits have taken place either in the homes of community-dwelling older people (Walton & Blossom 2013, Basran et al. 2012, Chen & Walsh 2009, Walsh et al. 2008, Ryan et al. 2007) or in assisted living facilities (Eaton 2015, Reitmeier et al. 2015).

The most common activity that students have been required to carry out during their visit has been to conduct an interview with the older person. Students have been given a list of questions or themes, most often concerned with the older person's general life-history, living situation, and significant life events, as well as changes in the world over their life span. Students have also inquired about the older person's knowledge of available community resources for older people, their partner's knowledge about their medications, nutrition, and physical activities, and their late-life potential (Eaton 2015, Reitmeier et al. 2015, Walton & Blossom 2013, Basran et al. 2012). Some of the visits have been informally organised in various environments, and students and older people have even met for dinner or at a party, either at the nursing school (Basran et al. 2012) or at the community senior centres (Chen & Walsh 2009). In addition to interviewing and discussing with older people, students have created art (Lamet et al. 2011, Chen & Walsh 2009, Walsh et al. 2008) or an ethnodrama – a form of theatre – with older people.

Other elements, such as introductory lecturing, written learning assignments and summarising reflective discussions, have also been combined with the visits. Before the visits, students have received 1–2 hours of instructions for interviewing and regarding communication with older people, as well as lectures about old age (Lamet et al. 2011, Chen & Walsh 2009, Walsh et al. 2008, Ryan et al. 2007). Most often students have written structured reflective journals regarding their experiences with older people (Eaton 2015, Reitmeier et al. 2015, Walton & Blossom 2013, Basran et al. 2012, Ryan et al. 2007). Moreover, students have also been invited to share their experiences among peers during or after the visits, in group discussions moderated by their instructors (Eaton 2015, Reitmeier et al. 2015, Basran et al. 2012, Chen & Walsh 2009).

The outcomes of the visits with older people are unsound because of the nature of how single studies have reported on a variety of visits. However, there are slight indications that these sequential visits may improve students' attitudes towards older people as well as help sustain existing positive attitudes (Basran et al. 2012, Lamet et al. 2011, Ryan et al. 2007). When it comes to changes in attitudes though, there is a question of whether creating art with older people during the visits is what improves students' attitudes or the improvement comes from simply interviewing older people (Walsh et al. 2008, Chen & Walsh 2009). Based on a single study, visiting alone has not had an effect student willingness to work with older people (Lamet et al. 2011).

Students have been highly satisfied with and have appreciated the visits and found them enjoyable (Reitmaier et al. 2015, Basran et al. 2012, Lamet et al. 2011, Walsh et al. 2008). Students have valued their relationships with older people and also demonstrated understanding of generational experiences that define the human experience and the impact of this uniqueness on the nursing care profession (Eaton 2015, Reitmaier et al. 2015, Walton & Blossom 2013). Moreover, students have reported that they have learned more about older people than they would have in traditional education, and that they have improved their knowledge of geriatrics, community resources for older people, and how to communicate with older people (Walton & Blossom 2013, Basran et al. 2012).

Service learning

Service learning is commonly used, especially in the United States, to learn about ageing issues and OPN. Service learning is a teaching strategy that incorporates organised service activities in meeting the needs of an identified community, while reinforcing course content and providing an opportunity for applied learning experience and reflection. These community-based, mainly out-of-classroom experiences, carried out in places like senior citizen centres or older people's homes, are especially intended to develop students' views on the value of service to individuals and vulnerable populations, such as older people (Beauvais et al. 2015, Lai et al. 2015, Hwang et al. 2014, Hwang et al. 2013, Leung et al. 2012, Davis et al. 2008).

Service learning and similar solutions, usually covered midway through clinical training in nursing practice and academic education, mainly include the same forms and activities as the aforementioned visits to older people. The service learning initiatives have commonly started with an introductory lecture or a workshop as a classroom session, which has focused on the aims of service, assignments and activities expected to be completed, and issues related to ageing (Lai et al. 2015, Hwang et al. 2014, Hwang et al. 2013, Leung et al. 2012, Shellman 2006, 2007). The service itself has often involved visiting and interviewing older people, conducting health assessments and nursing plans for them, creating artwork and participating in recreational activities with them, or reminiscencing with them (Beauvais et al. 2015, Lai et al. 2015, Hwang et al. 2014, Hwang et al. 2013, Gallagher & Carey 2012, Leung et al. 2012, Davis et al. 2008, Shellman 2007, 2006).

The duration of total service has varied from approximately 10 to 20 hours, at 1–2 hours per week over a 6–13 week period (Beauvais et al. 2015, Hwang et al. 2014, Hwang et al. 2013, Leung et al. 2012, Shellman 2007, 2006). Students have also visited the same older person three or four times each consecutive semester over a year and a half (Davis et al. 2008) or even up to two years (Lai et al. 2015). During the service, there has often been a tutoring instructor who has facilitated the interactions and the activities between students and older people (Beauvais et al. 2015, Lai et al. 2015, Hwang et al. 2014, Hwang et al. 2013, Davis et al. 2008, Shellman 2007, 2006). The service has been supported by learning activities such as reflective writings, collecting a learning portfolio and self-studying of materials in the course management system. The reflective, intergenerational discussions during and after the service have been core activities of service learning (Beauvais et al. 2015, Lai et al. 2015, Hwang et al. 2014, Hwang et al. 2013, Leung et al. 2012, Davis et al. 2008, Shellman 2006, 2007).

The outcomes of service learning and other, similar solutions are very limited by the small number of relevant studies. When compared to students who had not participated in service learning activities, those who did demonstrated higher levels of cultural self-efficacy (Shellman 2007) and felt more competent in areas specific to geriatric assessment (e.g., nutritional status, depression, sleep problems, polypharmacy) (Davis et al. 2008). Their overall knowledge of ageing and their understanding of mental health needs in old age increased, and their negative attitudes toward older adults decreased, although the effect was not long-lasting (Leung et al. 2012). Similarly, although no significant differences were found between groups, the attitudes of students who had attended service learning did improve (Beauvais et al. 2015, Hwang et al. 2014, Hwang et al. 2013), as did their knowledge about older people (Beauvais et al. 2015). Students reported that they had learnt about the worldviews and cultural perspectives of older people, and thus were better prepared to care for them (Shellman 2006). Students also expressed appreciation for the opportunity to acquire social skills in caring and communication (Lai et al. 2015, Hwang et al. 2014).

2.3. Gaps in the knowledge of current literature

Previous literature concerning the career choice of nursing students in OPN has focused on surveying students about their plans to work in the field after graduation and the various factors associated with these plans. There is a limited number of follow-up studies examining how the career plans of students change over the education period and how students realise those plans after graduation, when they move into working life. Similarly, there is very limited information available on specific interventions aiming to effect the career choices of students in OPN. Although the previous educational solutions have assigned a role to older people in nursing education, this role has often been rather implicit and even passive. The older people have acted as respondents to pre-determined questions or as the subject of a geriatric assessment. To sum up, there is limited evidence supporting the relationship between the involvement of older people and the career choices of nursing students in OPN.

Based on the literature review, nursing students' career plans regarding OPN as well the reasons not to choose a career in OPN were investigated in terms of the interest of nursing students in OPN, and this was the main outcome of this study. For the secondary outcomes, factors related to choosing a career in OPN were studied by exploring the attitudes of nursing students towards older people. Moreover, because various educational solutions have been created to develop knowledgeable nursing students for OPN, knowledge levels about ageing were examined also as a secondary outcome.

3. PURPOSE OF THE STUDY AND RESEARCH QUESTIONS

The purpose of this study is to examine the interest of nursing students in choosing OPN as a career. This study has two phases: the scoping phase and the evaluation phase (Figure 1). In the first phase, different premises for choosing older people nursing as a career were explored. In the second phase, the outcomes of the developed educational intervention, and factors related to the outcomes, were evaluated, along with the experiences of the participants in the educational intervention. The ultimate goal of this study is to encourage more nursing students to choose older people nursing as their career.

More specifically, the research questions addressed are as follows:

Scoping phase: Premises for nursing students to choose a career in older people nursing

1. What are the premises for nursing students to choose OPN as a career?

    1.1 What is nursing students' interest in OPN?
    1.2 What are the attitudes of society towards older people in Finland?
    1.3 What are the main research areas in the field of nursing education pertaining to OPN?

Evaluation phase: Nursing students' choice of a career in older people nursing

2. What are the outcomes of the developed educational intervention involving older people (Learning with Older People Programme LOPP)?

3. What factors are related to the outcomes of the educational intervention?

4. What significant experiences result from the educational intervention?

    4.1 What are the experiences of older people during their active role in the educational intervention?
    4.2 What are the experiences of nursing students during the educational intervention involving older people?

The following hypotheses (H) for the evaluation phase are proposed:

Students in the intervention group (IG)
    H1: are more interested in OPN,
    H2: have more positive attitudes towards older people, and
    H3: have higher knowledge levels about ageing
than students in the comparison group (CG).

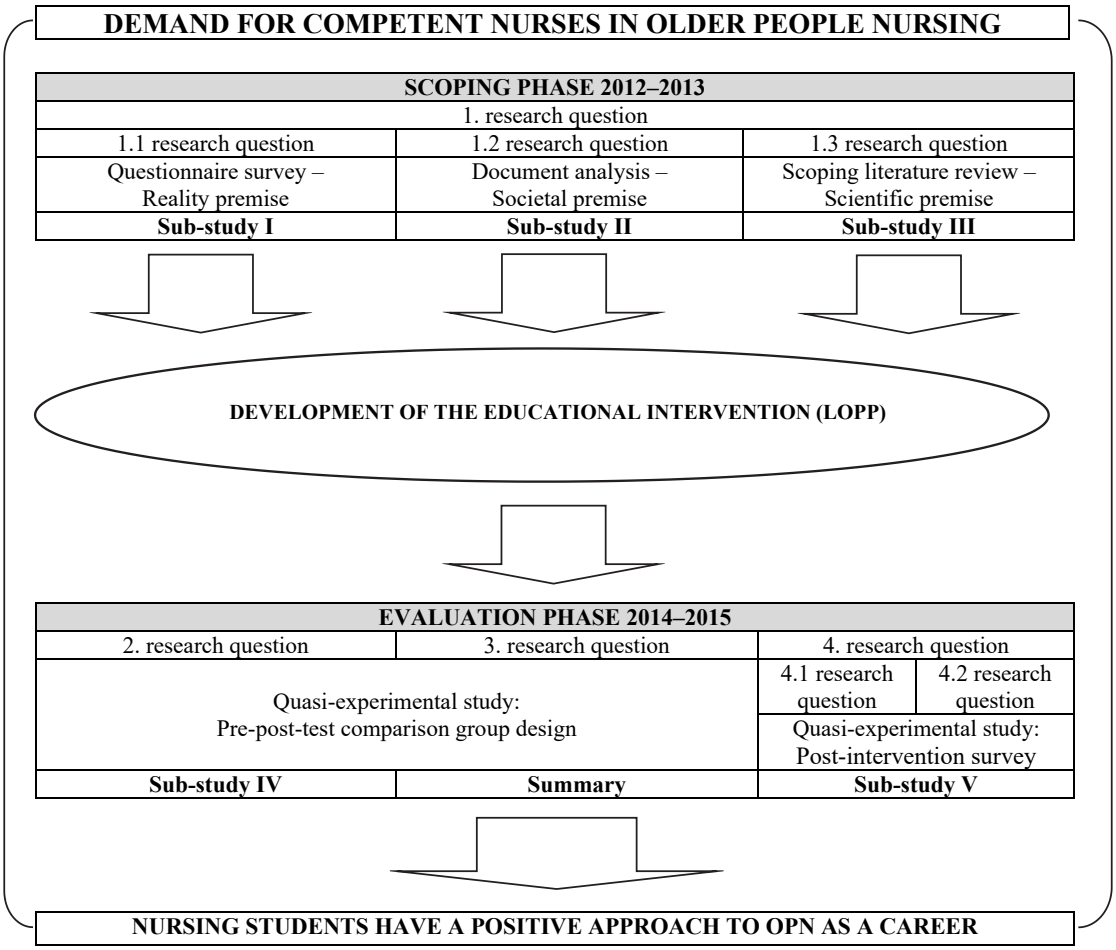

Figure 1. Design of the study

4. MATERIALS AND METHODS

The answers to the research questions are based on various materials and methods (Table 2).

Table 2. Study sample, setting, time, design, data collection and analysis in five sub-studies (I–V, Summary)

Phase	Sub-study	Sample, setting, time	Design	Data collection	Data analysis
Scoping	I	Graduating bachelor's degree nursing students (n=183), three polytechnics in Southern Finland, 2009	Cross-sectional survey	Questionnaire: background questions and instrument (later called SINOPS) developed for this study	Descriptive statistics, *t*-test for independent samples, Spearman *r*
	II	Newspaper articles (n=101), three Finnish daily newspapers, three months in 2012	Documentary research/document analysis	Article selection from Helsingin Sanomat, Aamulehti and Turun Sanomat following the sampling strategy	Thematic analysis, quantification
	III	Research articles (n=66), three international electronic databases, 2013	Scoping literature review	Systematic searches from MEDLINE, CINAHL and ERIC, selection of articles following the inclusion and exclusion criteria	Qualitative content analysis, quantification
Evaluation	IV, summary	Nursing students in the middle of their bachelor's degree studies(n=87), two Finnish polytechnics geographically separate, 2014	Quasi-experimental pre-post-test design	Questionnaire: background questions including WVI, SINOPS, KAOP, FAQ1 instruments	Descriptive statistics, Chi-Square, Fisher's exact test, *t*-tests for independent and paired samples, RM-ANOVA, ANCOVA, Pearsson/Spearman *r*, multivariate linear modeling
	V	Nursing students (n=46), older people (n=47), two polytechnics, 2014	Post-intervention survey	Questionnaire: open and structured questions developed for this study	Descriptive statistics, qualitative content analysis

4.1. Study designs, participants and data collection

4.1.1. Scoping phase (I, II, III)

The overall design of the scoping phase was exploratory. In terms of data sources, the aim was to investigate the nature of those premises potentially related to nursing students' interest in OPN (Polit & Beck 2008).

In Finland, polytechnic schools, as institutions of higher education, are responsible for bachelor level education of RNs (Ministry of Education and Culture 2016). Nursing degree programmes in Finland follow the European Union directives (Directive 2005/36/EC and 2013/55/EU) as well as national guidelines and recommendations (Eriksson et al. 2015, Ministry of Education 2006). Nursing degree studies generally consist of 210 study points, according to the European Credit Transfer and Accumulation System (ECTS). This equates to 3.5 years of full-time study. Based on Finnish legislation (Act 932/2014), polytechnics have the autonomy to decide on their own nursing degree curriculum, including how training for OPN is carried out. Therefore, education regarding OPN varies depending on the polytechnic. A similar situation has been recognised internationally, where the education regarding OPN can also vary considerably within one country (Lahtinen et al. 2014, Deschodt et al. 2010, Gilje et al. 2007).

A descriptive, cross-sectional survey design (I) was used to chart nursing students' interest in OPN. Data were collected in 2009 from three purposefully selected polytechnics of different sizes in the Southern Finland. A convenience sample (N=254) of graduating nursing students were invited to take a part in this study. Data were collected with a structured paper-and-pencil questionnaire. In two polytechnics, the researcher herself distributed the questionnaires to students, and they either returned them directly to the researcher, an appointed contact person at the polytechnic, or they left the questionnaires in a designated box at their school. At one of the polytechnics the contact people distributed the questionnaires and return envelopes to the students and the students returned the questionnaires by post. The overall response rate was 72% (n=183).

A documentary research design (II) was used to obtain information concerning Finnish society's attitudes towards older people in a feasible, cost-effective and time-efficient way: instead of data collection, data selection was required. Over the course of three months in 2012, data were collected from the three main Finnish daily newspapers: *Helsingin Sanomat*, *Aamulehti*, and *Turun Sanomat* (MediaAuditFinland 2011). The selection of newspaper articles for analysis was based on the sampling strategy of applying the inclusion criteria (Miller & Alvarado 2005) by one researcher in the first phase and by two researchers in the second phase. Finally, 101 articles were selected for the analysis.

A scoping literature review design (III) was used to map the relevant nursing education literature, in terms of the volume, nature and characteristics of the primary research, by including various study designs (Armstrong et al. 2011, Levac et al. 2010, Arksey & O'Malley 2005). A systematic search was performed in three electronic databases in 2013: MEDLINE, CINAHL and ERIC. These searches were limited to studies published in English between 1999 and 2012. Two researchers independently examined abstracts in the first phase and full texts in the second phase, and selected studies by applying inclusion criteria. Finally, a total of 66 studies were included in the review.

4.1.2. Evaluation phase (IV, V, Summary)

The overall design of the evaluation phase was quasi-experimental. The aim was to establish causal connections between the intervention and outcomes. As a characteristic of a quasi-experimental design, there was no randomisation (Polit & Beck 2008, Eccles et al. 2003). To evaluate outcomes of the developed intervention, a pre-post-test design with a non-equivalent comparison group was used (IV). In addition, to examine the experiences of the nursing students and older people, regarding their participation in the intervention, a post-intervention survey was conducted for the IG (V).

The evaluation phase was carried out at two different polytechnics located in geographically different areas. These polytechnics were invited to take a part in the study because their curricula concerning OPN corresponded with the focus of this study in both polytechnics, theoretical courses on OPN were offered midway through the nursing degree programme.

A convenience sample of nursing students (N=87) in the middle of their studies and enrolled in compulsory theoretical OPN courses were invited to take part in the study (Figure 2). In both polytechnics, there were an IG and CG. The achieved sample size was regarded as satisfactory − by including more polytechnics, additional uncontrolled confounding factors would have arisen due to differences in curricula and other characteristics of the schools. Moreover, as the intervention was being carried out for the first time, it was challenging to predict the potential risks and difficulties that may arise, so unnecessary arrangements concerning polytechnics and students were avoided (Billingham et al. 2013).

The formation of the IG and the CG in both polytechnics followed existing parallel classes. The IG and the CG participated separately in similar theoretical OPN courses, which ran parallel. Thus, there was no interaction between the IG and CG within the theoretical courses. The IG participated in the intervention before the theoretical OPN course and the CG only attended the theoretical course.

Data were collected using a structured paper-and-pencil questionnaire. The researcher herself recruited the students to participate in the study and distributed the questionnaires to students during class time. The baseline (M0) data of the students in the IG were collected the morning before the first day of intervention, and the first post-test (M1) data were collected right after the intervention (Figure 2). For the students in the CG, the baseline (M0) data were collected during the first class of the theoretical course. The one-month follow-up (M2), post-test data from both groups were collected during the last class of the theoretical course.

Two post-test data collections were conducted for the IGs: M1) the first was conducted immediately following LOPP to ascertain the immediate single effect of LOPP and, similar to the CGs, M2) a second measurement was conducted after one month to ascertain the joint effect of LOPP and the theoretical course. For the purpose of this study, it was deemed appropriate to collect post-test data at two points in time from the IG, in order to be able to make possible causal inferences. Data collection times held after one week (M1) and one month (M2) were regarded as frequent enough and close enough together to accurately know the causal sequence (Morrison 2009). Since the CG students received no intervention other than the standard teaching (theoretical course), no M1 measurement was obtained. It was assumed that the introductory lessons that the CG students had attended during the first week of the theoretical course would not have had an effect yet, and thus, were not considered worthwhile to examine.

Students returned the questionnaires directly to the researcher. A reminder letter and questionnaire were sent by post to students who had been absent, including a prepaid return envelope. The response rate in the baseline was 100%. The post-test response rate after one-month's time was 87% (n=40) for the students in the IG and 88% (n=36) for the students in the CG.

Altogether, 47 ordinary, community dwelling older people without any predetermined qualifications, volunteered to participate in the intervention (Figure 2). The participants were required to be at least 70 years old, able to give informed consent and communicate verbally, and in overall good enough health.

The researcher recruited older people from the local pensioner and patient organisations and via various community contacts. In the recruitment, it was clarified that the intervention was a part of a research study. It was emphasised that participation was voluntary and that it was possible to only participate in the intervention and not answer the questionnaire about the participation experiences.

At the end of each day, there was time reserved for the researcher to once more tell about the study and give out written information letters and the short paper-and-pencil questionnaires to the older people. Those who volunteered to participate had the opportunity to fill in the questionnaire at that time and return it right away in a sealed envelope to the researcher. Alternatively, participants were provided with a prepaid return envelope, and could choose to complete the questionnaire at home and send it to the researcher by post. Older people who participated in the intervention for several days were requested to answer the questionnaire only after their last day of participation. The overall response rate was 92% (n=43).

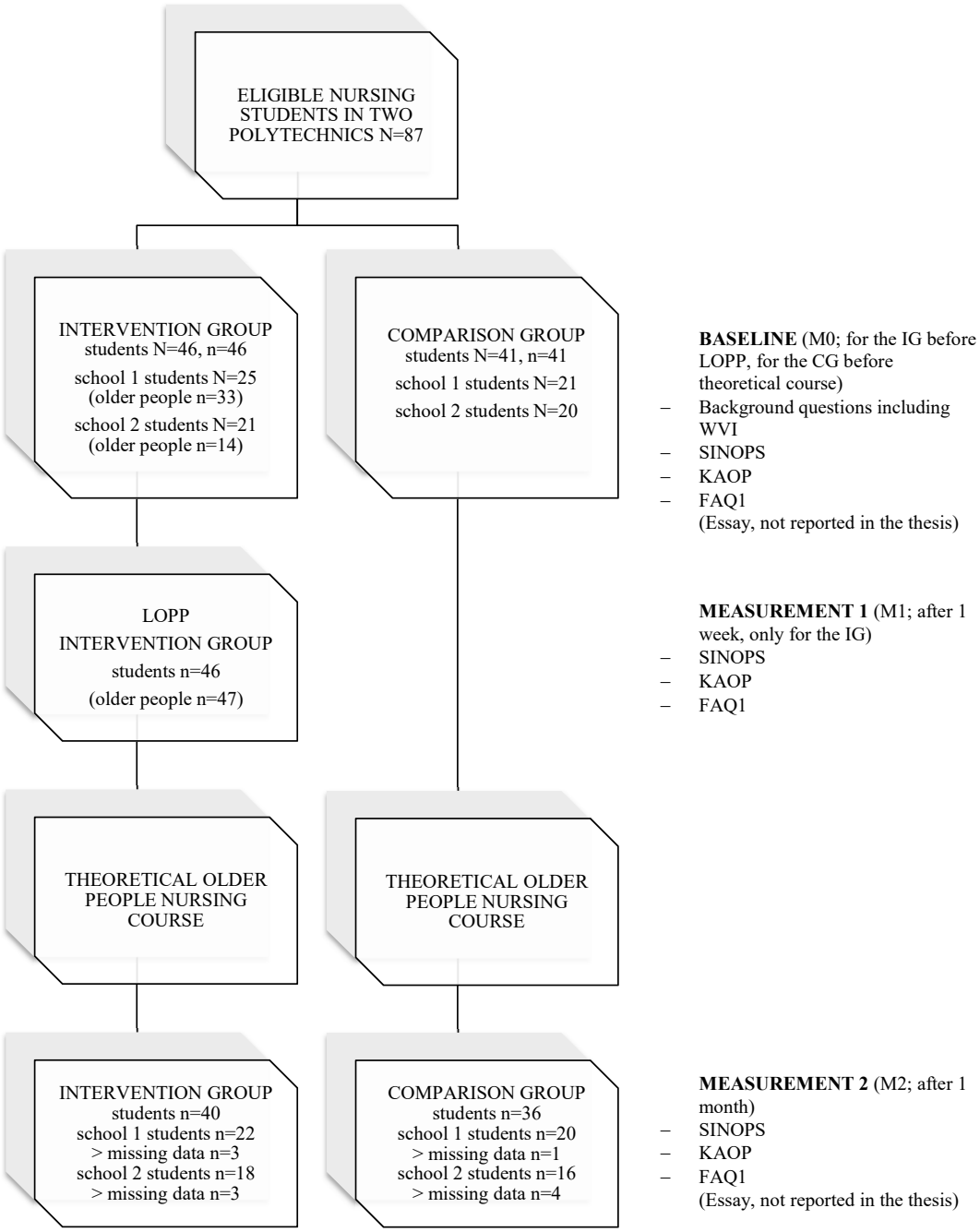

Figure 2. Flow chart of the sub-study IV (2014) and its measurement design (modified from Koskinen et al. 2016)

4.2. Implementation of standard teaching and the intervention

4.2.1. Standard teaching

In this study, *standard teaching* is regarded to be a compulsory, three ECTS theoretical OPN course lasting one month at both polytechnics. The learning objectives for the courses dealt with ethical action, health promotion, decision-making, guidance, cooperation, development and management, multicultural nursing, societal activity, clinical nursing and medication. The courses consisted of lectures, divided into short segments, which aimed to involve students in well-crafted, in-depth questions and discussions. Throughout the course, active lectures were supported by self-study and students were provided with materials on the learning management system. In both polytechnics, students were assessed similarly, given final grades from 1 (Sufficient) to 5 (Excellent).

4.2.2. Learning with Older People Programme (LOPP)

The Learning with Older People Programme (LOPP) was developed to promote nursing students' understanding of ageing, older people and OPN and to increase their interest in OPN.

LOPP was designed by the researcher for this study based on the results of the scoping phase, the evidence from the previous literature (see, for example, section 2.2) as well as the national and international policies and agendas (WHO 2015, 2002, Ministry of Social Affairs and Health 2011). The content of LOPP, the materials and the activating methods were validated by four nurse educators, experienced in teaching OPN, from the participating polytechnics, two from each polytechnic. Two meetings were arranged, one in each polytechnic, in which the researcher requested nurse educators to freely give feedback on how well the objective set for LOPP had been met that week. Based on their feedback, only fine-tuning adjustments were made to the programme. The intervention was carried out similar way at both polytechnics.

LOPP draws on the experiences of people in the community over the age of 70. This age was set because it was considered that people of this age have more likely experienced some consequences of ageing and changes in their role in society than those who had just retired at age 65 (WHO 2015). No upper age limit was set for participation. LOPP focused on healthy people, as they would probably be more likely to improve students' views than if students were exposed to fragile older people in poor condition (Chonody 2015, Tullo et al. 2010, Schwartz & Simmons 2001). This decision was also made because LOPP was being implemented and tested for the first time.

LOPP was carried out in the polytechnic setting. This setting is regarded as an environment where students are allowed to be learners, not necessarily having mastered nursing yet, unlike expectations in clinical practice settings. In the polytechnic setting, students may feel safer and more free to ask questions. In addition, LOPP should not increase the costs related to the teaching infrastructure, and the classrooms equipped with computers and data projectors were sufficient for this programme.

LOPP is delivered as *intensive teaching*. In this study, intensive teaching is defined as a format of teaching where the time taken to deliver the teaching is compressed into the timespan of one week. Thus, LOPP lasts for five days and consists of 27 contact lessons (equivalent to one ECTS), five to six hours daily. Although the evidence concerning the outcomes of intensive teaching is scarce, intensive teaching has demonstrable advantages overall when compared to

the ‘traditional’ formats of one and a half-hour-long lectures during semester-long courses. The benefits of intensive teaching can include increased motivation, commitment and concentration, diversity of teaching methods, stimulation and enthusiasm, stronger relations among students and flexibility for both students and instructors. (Davies 2006.) Similarly, it was assumed that by concentrating solely on lessons involving older people, it would be possible to deepen the relationships between the students and the older people, and as such, to improve deep-level learning and understanding. These benefits were regarded to outweigh the concerns that longer educational interventions are more likely to lead attitudinal changes (Tullo et al. 2010). Moreover, from the feasibility point of view, knowing that nursing curricula are often full and that it is difficult to include any new content related to OPN (AlSenany & AlSaif 2014, Deschodt et al. 2010, Gilje et al. 2007), a one-week programme was regarded as a realistic way to implement this content into existing curricula. In addition, five to six hours of daily participation is regarded as the maximum time length that older people can manage. It was assumed that longer days would result in less quality interaction, if older people, as well as students, became tired.

The goal when selecting the content for LOPP was to introduce content to which the older people could easily relate, based on their experiential knowledge. Because of this, complex medical information and detailed clinical information relating to nursing procedures was left out. The content of LOPP emphasised the health promotion and well-being of older people and diverse nursing care for older people. The selection of the topics for the content was based on several sources, including the main principles of the nursing curricula for older people at the two participating polytechnics, the previous literature (see, for example, section 2.2) and the national and international policies and agendas.

Concretely, students and older people worked together daily in small groups on various topics. There were approximately five students and two older people per group, and most of the time the groups worked on their own. After a short orientation and introduction held by the researcher, the activating methods referred to in the previous literature (see, for example, section 2.2) were applied to promote the exchange of thoughts and stimulate further discussion in small groups (Table 3). The tasks of older people were to discuss with the students and participate in the daily learning assignments. For the discussions, the older people were anticipated to, for instance, share personal health data and reflect on life events and their experience of aging. For the learning assignments, older people were expected to, for instance, take part in the exercises and games and pose for photographs.

Table 3. Outline of the Learning with Older People Programme (LOPP) (modified from Koskinen et al. 2016)

	Day 1 – Monday	**Day 2 – Tuesday**	**Day 3 – Wednesday**	**Day 4 – Thursday**	**Day 5 – Friday**
Duration of the day	6 lessons*	6 lessons	5 lessons	5 lessons	5 lessons**
Topic of the day	Similarities and differences between generations	Health promotion for individually ageing older people	Encounters with illness, losses and death	Person-centred OPN	Older people involvement in society
Orientation	Short lectured evidence-based bulletins about the topic of the day and instructions for the day's working groups				
Group work assignment	Reflect on own preferences, opinions and life events and compare those with others.	Rotate to different stations dealing with nutrition, alcohol consumption, exercise, medication, mental health, conditions for driving, and consider how to promote healthy ageing.	Reflect on how falling ill effects an older person's life, how close relatives react, to what extent nurses should pay attention and what are the essential values in end-of-life care.	Find out older people's most memorable experiences concerning health care and consider what to pay attention to in those situations.	Chart how older people are involved in society and think how to support the involvement of less active people.
Methods to stimulate discussions	Listing personal preferences (e.g., favourite hobbies) and opinions (e.g., the most important thing in life), as well as important public events that have affected one's life.	Reading evidence-based bulletins, carrying out health assessments, imitating physical changes when ageing, exercising, playing games and quizzes.	Writing down personal reflections while watching a movie.	Taking a photograph with the student's smart phone or a provided tablet to illustrate the core message in one situation.	Making posters using magazine clippings and coloured pencils.
Conclusions	Small group presentations based on the assignments, reflective discussions of all groups together and summary of the day***				

*Two lessons in the beginning of the day were used for orientating the students to LOPP by providing practical information concerning the arrangements and introducing the learning objectives for the week. The older people did not participate in these lessons.
**Two lessons at the end of the day were used for reflecting on LOPP and answering the feedback questionnaires. The older people did not participate in these lessons.
***One lesson each day was allocated to concluding the day together.

4.3. Instruments

In this study, three instruments were used to measure outcomes. The Students' Interest in Nursing Older People Scale (SINOPS) was developed for the purpose of this study, and it was used in both the scoping (I) and the evaluation (IV) phase of the study. Therefore, in this summary SINOPS is described in more detail than the other two instruments, the Kogan's Attitudes towards Older People scale (KAOP, Kogan 1961) and the Palmore's Facts on Aging Quiz (FAQ1, Palmore 1977, 1998), which were used only in the evaluation phase of the study (IV). Moreover, Manhardt's Work Value Inventory (WVI, Manhardt 1972) was used as an independent variable in the evaluation phase of the study.

Students' Interest in Nursing Older People Scale (SINOPS)

A new instrument was developed for the study, because no existing instrument for this purpose was found. There are, however, two related instruments that were already in existence. The first of these is a career choice tool, which was used repeatedly in previous studies (Stevens & Crouch 1995). This tool is about a ranking task that requests respondents to place ten nursing specialties in the order of their preference. In addition, there are a number of open-ended questions for commenting on the rankings. The second instrument, Perceptions of Working with Older People (PWOP, Nolan et al. 2002), focuses on working with older people in general, personal disposition towards working with older people and consequences of working with older people. More information beyond the ranking of career alternatives and identifying potential factors related to choosing a career in OPN was desired. Therefore, a new instrument was developed to cover the concept more comprehensively. An inductive approach to the instrument development was used.

Conceptual basis of SINOPS

To investigate the nursing students' career plans in OPN, a new concept, *interest in older people nursing*, was generated. Interest is defined as a) a feeling of wanting to know or learn about something or someone, b) a quality of exciting curiosity or holding attention, or 3) an activity or subject which one enjoys doing or studying (MOT Oxford Dictionary of English). This concept originated and has a long tradition in psychology (Schiefele 1991). Interest as a motivational variable is a directive force. It is able to explain students' choices in an area in which they strive for high levels of performance or exhibit intrinsic motivation. Interest also refers to a relatively enduring predisposition to re-engage with a certain topic area (object of interest) over a shorter or longer period of time. This type of interest applies to in-school and out-of-school learning and to young and older people alike (Hidi & Renninger 2006, Krapp 1999, Schiefele 1991).

Interest has both an affective and a cognitive component. Typically, the affective component describes positive emotions accompanying engagement in a certain topic, whereas the cognitive component refers to perceptual and representational activities related to engagement (Hidi & Renninger 2006, Krapp 1999). Experiencing interest involves an affect from the outset of an encounter. This affect is then combined or integrated with cognition as it develops. As interest develops and is maintained, both affect and cognition contribute to the experience, but the relative strength of the components change over time, and cognition gains an increasing presence (Hidi & Renninger 2006). A person will only engage continuously in a certain topic area if it is assessed, on the basis of cognitive reflections and rational considerations, as being sufficiently important and if the course of interactions on the whole is experienced as positive

and emotionally satisfactory. Thus, interest is characterised by optimal experiential modes that combine positive cognitive qualities (e.g., thoughts of meaningful goals) and positive affective qualities (e.g., "good mood") (Krapp 1999).

Interest has a powerful influence on a person's learning (Hidi & Renninger 2006). As a content-specific concept, interest fits well with the cognitive theories of knowledge acquisition, in that new information is always acquired in particular domains (Schiefele 1991). Rather than being equally interested in everything, individuals are more interested in certain topics, want to learn about (or become involved with) that topic to satisfy that interest (Schiefele 1991). Interest develops between people, resulting in an interactive relationship (Hidi & Renninger 2006, Krapp 1999, Schiefele 1991).

The Students' Interest in Nursing Older People Scale (SINOPS) measures nursing students' interest in OPN. At the sub-score level, SINOPS tries to explain the factors motivating or discouraging students to pursue this field. At the item level, SINOPS also aims to capture the affective (OPN is joyful.) and the cognitive (There are educational possibilities in OPN.) components of interest.

The construct of SINOPS

SINOPS is based on the literature review. Its current 54 items (originally 82 items, I) deal with students' interest in OPN and the factors enhancing or decreasing this interest (Table 4). SINOPS consists of a set of 27 items with negatively worded statements and a second set of 27 items with positively worded statements. A mixture of both positively and negatively worded items are intended to minimise the tendency for respondents to blindly agree with a particular statement or respond in the same way to a series of items, which can lead to bias (Rattray & Jones 2007).

The Visual Analogue Scale (VAS) was used in measuring. With this scale, students answered each item by marking the point on the 100 mm line that best matched their perceptions (0=strongly disagree, 100=strongly agree). VAS is an interval scale (Foley 2008, Waltz et al. 2010). It is able to determine even subtle changes because of the great range of possible scores. It can also be used for smaller sample sizes and allow more powerful parametric statistical analysis, as the data are more likely to be normally distributed than with categorical scales (Celenza & Rogers 2011). Furthermore, VAS is useful for measuring possible changes over time in a particular individual (Waltz et al. 2010).

Five sum variables were decided upon, based on the literature review, and included 1) a willingness to work in OPN, 2) characteristics of OPN, 3) valuing OPN, 4) the quality of OPN and 5) challenging aspects of OPN and opportunities for career advancement (Table 4). To be able to correctly interpret the scores, the scores for the negatively worded items had to be reversed. The total and sum scores were calculated by summing up the values for each answer and dividing the sum by the number of items. The range of the total and sum scores was the same for each single item ranging between 0 and 100, with higher scores indicating more interest in OPN and more interest enhancing factors.

Table 4. Structure and statements of the Students' Interest in Nursing Older People Scale (SINOPS)

Willingness to work in OPN (Willingness)	
Positive statements	***Negative statements***
I am interested in working in OPN right after graduation.	I am not interested in working in OPN right after graduation.
I will possibly work in OPN later on my career.	I do not want to work in OPN in any phase of my career.
I am interested in working in outpatient care (e.g., home health care).	I am not interested in working in outpatient care (e.g., home health care).
I am interested in working in inpatient care (nursing home, health centre ward).	I am not interested in working in inpatient care (nursing home, health centre ward).
I knew already when applying that I want to work in OPN.	I knew already when applying that I want to work in other fields than OPN.
My interest in OPN has increased as studies have progressed.	My interest in OPN has decreased as studies have progressed.
Characteristics of OPN (Characteristics)	
Positive statements	***Negative statements***
OPN is developing.	Old-fashioned practices still strongly exist in OPN.
I do not want to work with terminally ill older people.	I want to work with patients expected to fully recover.
I regard encountering death as a natural part of nursing.	I do not want to work with older people close to death.
OPN is challenging.	OPN is boring.
OPN is comprehensive.	OPN focuses on single actions.
OPN is joyful.	OPN is sad.
I experience pleasure when working in OPN.	OPN is depressing.
OPN is not physically taxing.	OPN is physically taxing.
Valuing OPN (Valuation)	
Positive statements	***Negative statements***
OPN is valued in Finland.	OPN is not valued in society.
Nurses working in OPN are valued among other nurses.	Other nurses do not value nurses working in OPN.
Quality of OPN (Quality)	
Positive statements	***Negative statements***
Nurses behave respectfully towards older people.	Nurses have negative attitudes towards older people.
Nurses in OPN are enthusiastic.	Nurses in OPN have low motivation.
There is good team spirit in OPN wards.	There is poor team spirit in OPN wards.
There is no sense of hurry in OPN.	There is a sense of hurry in OPN.
There is an adequate amount of staff in OPN.	There is shortage of employees in OPN.
There are good learning experiences available in OPN.	There are no good learning experiences available in OPN.
Challenging aspects of OPN and opportunities for career advancement (Career)	
Positive statements	***Negative statements***
OPN requires special competence.	In OPN no special skills are required.
There are possibilities for fulfillment in OPN.	OPN is routine-like.
There are educational possibilities in OPN.	OPN is the end of a career.
The responsibility due to the independence of nurses in OPN is rewarding.	The responsibility due to the independence of nurse in OPN is frightening.
Regular continuing training is required in OPN.	Everything necessary to practise OPN can be learned in single clinical training.

Attitudes towards Older People scale (KAOP)

KAOP measures attitudes towards older adults (Kogan 1961). It is a 34-item scale including a set of 17 items with the statements worded negatively (KAOP-) and a second set of 17 items with the statements worded positively (KAOP+). KAOP is a Likert-type scale, measuring attitudes using six response categories (1=strongly disagree, 7=strongly agree), with a neutral score of four assigned in cases of a failure to respond to an item. To obtain the total KAOP score, scores for the negatively worded items must be reversed. The total score ranges between 34 and 238. Higher total scores indicate more positive attitudes (Kogan 1961). The KAOP+ and KAOP- scores range between 17 and 119. Higher scores for KAOP+ and lower scores for KAOP- indicate more positive attitudes. Validation studies conducted in several countries have demonstrated a good reliability level (Yen et al. 2009, Matarese et al. 2013). KAOP continues to be the most commonly used instrument despite some concerns about its current relevancy (Neville 2015).

Facts on Aging Quiz (FAQ1)

FAQ1 assesses the knowledge level of physical, psychological, social and economic factors related to ageing and misconceptions about older people (Palmore 1977, 1998). FAQ1 consists of 25 questions with possible answers of "true", "false" or "don't know". The total score ranges from 0 to 25. Higher scores reflect higher knowledge levels about ageing. To calculate the total score, a "true" response is assigned one point and "false" and ''don't know'' responses are assigned zero points. The FAQ1 has been validated internationally, and it has been proven to be reliable (Wang et al. 2010, Zisberg et al. 2015).

Feedback questionnaire concerning LOPP

Both the older people and nursing students were requested to give feedback on LOPP using structured questionnaires developed for this purpose. The older people's questionnaire contained background questions, one open-ended question requesting the respondent's reasons for participating in LOPP, one five-point Likert-scaled (1=extremely poor, 5=extremely good) question about their participatory experience, and a further open-ended question requesting the grounds for the given rating.

The students' questionnaire contained two general VAS-scaled (0=not useful at all, 100=extremely useful) questions concerning 1) LOPP as a whole and 2) impressions about the older people's involvement in the teaching from the point of view of the learning process, 14 focused five-point Likert-scaled (1=totally disagree, 5=totally agree) questions about LOPP, and two open-ended questions concerning 1) the best qualities of LOPP and 2) how LOPP could be developed.

Work Values Inventory (WVI)

WVI was used as a background, not outcome, instrument. It measures work values by requesting respondents to indicate how important it is to them to have a job with certain characteristics (Manhardt 1972). The scale consists of 25 job characteristics to rate on a five-point scale (1=not important, 5=very important). There are three general categories: Comfort and Security, Competence and Growth, and Status and Independence. Scores for each category are calculated by summing and averaging items in each factor. WVI has been tested for its reliability among college and university students and graduates from various fields, and has been found reliable (Leuty 2010, Takase et al. 2005, Meyer et al. 1998, Manhardt 1972).

4.4. Data analysis

In the both phases of the study, various analysis methods were used.

Statistical analyses

Statistical methods were used for the analysis of the structured data (Table 5). In the scoping phase, the data was analysed using Statistical Package for the Social Sciences (SPSS) 16.0 software, and Statistical Analysis System (SAS) software (version 9.3 Inc, Cary, NC, USA) was used for the evaluation phase. Both descriptive and inferential statistics were used. Descriptive statistics were used to communicate the information about study samples and the values of the dependent variables. The analyses began with examining frequency distributions, central tendencies and variabilities in order to organise the data and clarify patterns.

Inferential statistics were used to estimate population parameters from sample statistics. Mainly, the parametric tests were used, as the amount of observations supported the choice of the parametric statistical tests, and the data were, for the most part, normally distributed. For all tests, the level of statistical significance was set at $p \leq 0.05$.

The differences between the means of the two groups were tested with the *t*-test when the dependent variable was on interval scale. The *t*-test was used for comparison of two independent groups (e.g., IGs and CGs), and a paired *t*-test for examining within group changes (e.g., pre-post-test scores for the CG). As an extension of a paired t-test, repeated measures analysis of variance (RM-ANOVA) were used when there were multiple means being compared over time (comparison within IG). The chi-square test was used to test group differences in proportions by comparing observed frequencies and expected frequencies when the dependent variable was categorical. For small cell sizes, Fisher's exact test was used. Confidence intervals were constructed around the difference between two means and proportions providing information about both the statistical significance and the precision of the estimates.

The magnitude of two-variable relationships was tested with the Pearson's correlation coefficient when the variables were on an interval scale. Spearman's correlation coefficient (r) was used for ordinal level variables or when the distribution of the variable was skewed.

Analysis of covariance (ANCOVA) was used to control for confounding variables when comparing the means of two groups. ANCOVA was proved to be useful, as in the non-equivalent comparison group design, the influence of preexisting group differences on the obtained results needs to be considered. ANCOVA adjusts for initial differences so that the results more precisely reflect the effect of an intervention.

Multivariate linear modeling (or regression analysis) was used to find associations between a continuous dependent outcome variable (SINOPS total, KAOP total, FAQ1) and several independent variables. To assess the strength of the relationship between the dependent outcome variable and the several independent variables, multiple correlation coefficients (R) were used. The squared R statistic (R^2) was calculated to indicate the proportion of variance in the dependent outcome variable accounted for by the combined, simultaneous influence of the independent variables. The test for the significance of this equation, principles analogous to those for analysis of variance (ANOVA) was based on the examination of the means. Regression coefficients (betas) assessed the relative importance of each independent variable.

Table 5. Summary of the statistical procedures used in different phases of the study

Phase	Sub-study	Data analysis
Scoping	I	Descriptive statistics, *t*-test for independent samples, Spearman's correlation coefficient
Evaluation	IV	Descriptive statistics, Chi-Square, Fisher's exact test, *t*-tests for independent and paired samples, RM-ANOVA, ANCOVA
	Summary	*t*-tests for independent samples, Pearson's and Spearman's correlation coefficients, multivariate linear modeling

Narrative analyses

Inductive analysis methods – qualitative content analysis (Graneheim & Lundman 2004) and thematic analysis (Braun & Clarke 2006) – were applied for all textual data generated in this study, that is the scoping literature review (II), the document analysis (III) and the open questions of the post-intervention survey (V). Qualitative content analysis and thematic analysis share many similarities (Vaismoradi et al. 2013). However, the thematic analysis method was regarded more suitable for analysing the Finnish society's attitudes towards older people based on the newspapers (III), as the thematic analysis is considered to emphasise the context of the data (Vaismoradi et al. 2013). For other studies (II, V), qualitative content analysis was chosen.

The data analysis process in both of the analysis methods is rather equivalent (Vaismoradi et al. 2013, Braun & Clarke 2006, Graneheim & Lundman 2004). In all of the studies (II, III, V), the researcher herself concentrated on the initial analyses, becoming familiar with the data at an in-depth level, and maintaining a sense of the broader picture. For validity purposes, a research group was involved in later phases of the analyses. Depending on the study, either manifest (II) or latent (III, V) content were analysed. The analyses started with coding. The coding process was conducted incident by incident, using words from the raw data to stay close to the original expressions. Next, the coded data extracts containing aspects related to each other were condensed and grouped together, based on their similarities, into either subcategories (II, V) or basic themes (III), depending on the analysis method used in the study. These subcategories or basic themes were then combined into categories or organising themes, and finally abstracted as overarching categories or universal themes. Generating and reviewing the categories and the themes was an iterative process, requiring movement back and forth between the coded data extracts and the categories and themes.

4.5. Ethical considerations

This research followed good research ethics throughout the research process, from the selection of the research topic to the publishing of the results (Finnish Advisory Board on Research Integrity TENK 2012, European Science Foundation and ALL European Academies 2011, ETENE 2001). From the ethical point of view, this research addressed three major topics. First, this research is justified, as it addresses the need for more competent nurses to take care of older people. Ultimately better nursing care for older people could be expected if more enthusiastic, competent and motivated nurses would seek their way to the field (ETENE 2008). Secondly, this research promotes an increase in older people involvement in society, as it highlights examples of older people actively being a part of nursing education. Thus, this study includes those voices which need to be heard: the ones which will most likely be, at some point, the recipients of care (Ministry of Social Affairs and Health 2013, WHO 2002). Thirdly, as nursing education needs more research to develop the evidence on which curricular and

programmatic decisions are made, this study provides discipline-specific evidence for evaluation and further development, to determine the most effective means of nursing education which have been repeatedly called for (Salminen et al. 2010, Ridley 2009, Ferguson et al. 2006).

Research integrity

Ethical approval for the evaluation phase was received from the Ethics Committee of the University of Turku (Statement 5/2014, 10.2.2014). In both phases, permission to conduct the study was obtained from each of the polytechnics, according to their policies. Permission to use and translate the scales was received from the scales' copyright holders.

The research was explained to all study participants in an information letter and also verbally, by the researcher. First, a brief recruitment statement was presented, explaining the study's purpose, what it would entail, the confidentiality procedures and contact information. Then, participants were told what contributions to nursing education the researcher hoped to make, and that possibly, the study would not actually benefit the participants themselves. All research participants were assured that nonparticipation, or withdrawal from the study at any time, would result in no penalty (European Science Foundation and ALL European Academies 2011, Bradbury-Jones & Alcock 2010, Ridley 2009). In the scoping phase, students gave their informed consent by answering the questionnaire (I). In the evaluation phase (IV, V), students volunteering to participate in the study were asked to sign a consent form and were given a copy to keep for their personal records. Similarly for older people, a written statement of informed consent was requested on the first day they attended LOPP. If they participated several days, consent was confirmed orally each day.

The researcher demonstrated genuine gratitude to all participants and made the benefits of participation clearly known to them. After students gave their consent to participate in the study, they were verbally thanked for participating and were offered sweets (I, IV, V). To prevent students from dropping out in the evaluation phase, a lottery was arranged for participants in both the IG and the CG (Ridley 2009). The prize was a gift voucher to a bookshop.

The confidentiality of the research participants was maintained by assigning code numbers to all collected data. Further, the polytechnics could not be identified based on the results, and no comparisons between them were done. For the evaluation phase (IV), a coding list was created, linking a code number to each nursing student's identity, so that each participant's responses from different times of data collection could be linked together for analysis. The coding list was kept separate from the research data, in a file accessible only to the researcher. Encoded electronic data were kept on a firewalled network, accessed only with a password, and updated anti-virus protection. Paper questionnaires were kept together in a locked file cabinet and will be eventually destroyed (Ridley 2009).

Nursing students as research participants

Nursing students were the main research participants in both phases of the study (I, IV, V). Nursing students are not considered a highly vulnerable research group, as such, because they are adults and are able to give their informed consent. However, the power difference between nursing students and their instructors requires ethical sensitivity when conducting education research. This power relationship is based on the differences in knowledge, skills and attitudes

in the profession of nursing as well as the social contract that exists when students are admitted to an educational programme. It is further emphasised when instructors have evaluative roles in grading student achievement and making decisions about their progress in the programme. Thus, students' vulnerability in relationships with their instructors may limit their abilities to consent voluntarily (Bradbury-Jones & Alcock 2010, Ridley 2009, Ferguson et al. 2006). In these cases, students may be at risk of feeling that their course grades are tied to their research participation, or lack thereof, even if they are assured otherwise. However, in neither phase of this study was the researcher involved in the academic evaluation of the students. The researcher was not a member of staff at either participating polytechnic. Further, the researcher met the students for the first time when she recruited them to participate in the study. Therefore, it is assumed that students did not feel uncomfortable with participating in the study (Ridley 2009), as they had no previous relationship with the researcher. Even so, some students may have agreed to participate in order to please the researcher, as she was *a* researcher/instructor, although this might not necessarily mean that they felt overtly coerced (Bradbury-Jones & Alcock 2010).

For the evaluation phase, LOPP was regarded as a mandatory part of the existing curriculum, and thus, it was compulsory for students to participate in the programme. Although LOPP was designed to be a new, beneficial approach to learning about older people, it was thought students in the CG could also prosper from learning about OPN (Ferguson et al. 2006). As in the CG, research participation in LOPP was voluntary, and students in the IG had the opportunity to not respond to the questionnaire (Ridley 2009). Most likely, students felt free to refuse to participate and did not fear that the refusal would in any way affect their academic progress or subsequent learning experiences. Nursing students were verbally encouraged to respond honestly according to their opinion when asked about their experiences regarding LOPP. It was pointed out that the researcher would value truthful positive experiences as well as development ideas. Further, students were assured that they need not fear that unenthusiastic or disapproving responses would affect them in any way (Ferguson et al. 2006). The one-month follow-up data collection was scheduled for a class in which participation was not compulsory but highly recommended. Some students were absent and were therefore approached individually by posting the questionnaire and return envelope to them.

Older people in LOPP

Older people should have opportunities to participate in research. Increasing the participation of older people in research will improve the generalisability of research findings and reveal best practices in the clinical care of the growing older population. First of all, as a matter of human rights, just as with any human research subjects, older people have a right to be involved in research that is aimed to have an impact to their care. Secondly, to produce findings that may possibly contribute to the quality of life of older people or the services for them, it is essential to involve them so that they can contribute their own understandings about ageing and service (Walker 2007).

Older people were recruited via telephone and face-to-face contact. It was of primary importance that provided information was in a language that was readily understood. Sophisticated research terminology that older people might not understand and that may obviously undermine the process of informed consent was avoided, but at the same time, balanced with the risk of it being insufficiently simplistic or patronising. For recruiting, time, space and a safe environment was provided for participants to ask questions about LOPP and the current research. This also provided an opportunity for the researcher to assess participants'

understanding. After initial contact, the older people were given time to consider whether they wanted to participate in LOPP or not. About a week preceding LOPP, the researcher re-contacted the older people who had tentatively agreed to participate, to confirm their inclusion in LOPP. Telephone numbers and permission to call were requested orally at the first contact.

During LOPP, it was essential to secure the well-being of the older people. Considering physical well-being, older people were not exposed to any manipulative or invasive nursing treatments, and they were insured for accidents, such as falling. They were requested to share personal health data and reflect on life events and their experiences of ageing. This could be emotionally stressing, but they were allowed to regulate and decide for themselves what information they wanted to share with the students. They were not required to relate anything they did not wished to. To be able to ensure the emotional well-being of older people, at the end of each day, they were encouraged to stay after the class and reflect on their experiences of the day with the researcher. This provided an opportunity to for them to unburden themselves, if something happened to be bothering them.

5. RESULTS

The results are presented according to the study phases, following the research questions. First, the results of the different premises (I, II, III) for nursing students' to choose a career in OPN are described. After that, nursing students' the actual choice of a career in OPN is described (IV, V).

5.1. Premises for nursing students' choice of a career in older people nursing

In this study, the premises for nursing students' choice of a career in OPN were seen to be nursing students' interest in OPN (I), Finnish society's attitudes towards older people (II) and main research areas in the education of OPN (III).

5.1.1. Nursing students' interest in older people nursing (I)

Nursing students' interest in OPN was determined based on their self-reported answers to SINOPS. Generally, based on results, the interest of nursing students in OPN was not clear, and variation existed between students. The background variables that were found to be consistently related to interest included prior nursing work experience and having taken an independent OPN course.

The sub-score of SINOPS measuring nursing students' willingness to work in OPN was approximately in the middle of the VAS (Willingness mean 45.05, SD 22.70). In regards to the other sub-scores, the quality of (Quality mean 72.25, SD 18.12) and challenging aspects of OPN and opportunities for career advancement (Career mean 64.02, SD 14.28) enhanced students' interest in OPN. The low valuing of OPN decreased students' interest (Valuation mean 31.82, SD 18.52). The characteristics of OPN did not distinctly enhance or decrease student interest in OPN (Characteristic mean 55.13, SD 12.28).

Students who had prior work experience ($p<0.001$) and had more work experience ($r=0.295$ $p<0.001$) were more willing to work in OPN. Similarly, students with work experience regarded the quality of OPN more highly ($p=0.037$) and perceived its characteristics more positively ($r=0.253$ $p=0.001$). Students who attended a polytechnic that taught OPN as an independent course were more willing to work in OPN ($p=0.018$), perceived it to be more challenging and saw opportunities for advancing their careers ($p=0.022$), and regarded its characteristics more positively ($p=0.046$).

Of the single background variables, female students were more willing to work in OPN ($p=0.022$). Students with no prior health care degree ($p=0.020$) and male students ($p=0.031$) perceived that OPN was valued but older students perceived it was not ($r=-0.168$ $p=0.024$).

5.1.2. Finnish society's attitudes towards older people (II)

The analysis of Finnish society's attitudes was based on articles in three main Finnish newspapers. Three portrayals were identified: 'being advocated for', 'being looked after' and 'being engaged with'. The first portrayal, 'being advocated for' describes society's attitudes towards older people through other people's reactions without specifying what these older people are like. The portrayal consists of three organising themes: the expectations for change in care, the equality of older people and looking out for older people.

The second and the third portrayals, 'being looked after' and 'being engaged with', are concerned with society's attitudes towards older people in terms of their personal characteristics, their residential environments and their level of social participation as well as the issue of taking personal responsibility for one's own health and the principal actors involved in their care. The portrayal 'being looked after' consists of three organising themes: a weak person in need of help, an outsider in their own care and a passive recipient. In turn, the portrayal 'being engaged with' consists of three organising themes: vibrant survivor, master of their own health and active agent.

Overall, *all* older people and their care were regarded as important in this society, suggesting that societal attitudes towards older people are generally positive. However, there were also indications of negative attitudes based on the suggestions of paternalistic attitudes towards older people. Moreover, although older people, and their care, are regarded as important in society, various groups of older people are viewed differently within society, which may possibly lead to inequality.

5.1.3. Main research areas in the education of older people nursing (III)

Main research areas in the education of OPN were analysed based on a literature review (Figure 3). These research areas have remained rather consistent throughout the entire covered time period.

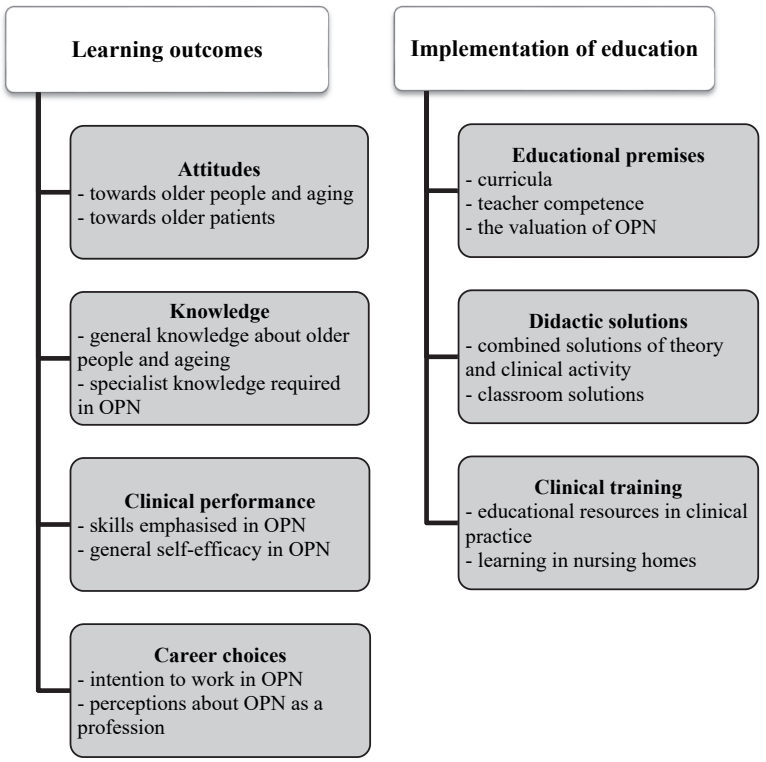

Figure 3. Main research areas in the education of OPN (III)

5.2. Nursing students' choice of a career in older people nursing

In this chapter, all the results of the evaluation phase are summarised. First, the IG and CG are shortly presented, then the outcomes of LOPP (IV), factors related to the outcomes and experiences of LOPP are described.

At baseline, the IG and the CG can be considered comparable. There were no significant differences between the two groups for the majority of background variables measured. The groups did not differ in work values either, which were measured as their preferences for a job with certain characteristics (Table 6, Table 7). More IG students (73.3%) had already had some clinical training in OPN than the CG students (50.0%, p=0.027). Similarly, IG students (Mean 22.6, SD 21.0) had more work experience in nursing than the CG students (Mean 13.0, SD 8.5, p=0.033). There was no significant difference between the groups in terms of interest, attitudes or knowledge level (Table 8).

Table 6. Descriptive statistics in students' categorical background variables and group differences at the baseline (M0)

	IG n=46		CG n=41		Difference at M0
Background	***f***	**%**	***f***	**%**	***p***
Gender					0.467
Female	43	93.5	36	87.8	
Male	3	6.5	5	12.2	
Highest previous degree before nursing degree					0.666
General/vocational upper secondary degree	43	95.6	38	92.7	
Higher education degree from polytechnic	1	2.2	2	4.9	
Higher education degree from university	1	2.2	1	2.4	
Previous health/social care degree					0.448
Yes	17	37.0	12	29.3	
No	29	63.0	29	70.7	
Nursing work experience					0.630
Yes	28	60.9	27	65.9	
No	18	39.1	14	34.1	
Education of OPN	***f***	**%**	***f***	**%**	***p***
The most appropriate semester to take the studies related to OPN					0.478
first	17	38.6	12	30.0	
second	13	29.6	18	45.0	
third	10	22.7	6	15.0	
fourth	4	9.1	2	5.0	
fifth	0	0	2	5.0	
sixth	0	0	0	0	
seventh	0	0	0	0	
Information search related to OPN					0.530
Yes	25	55.6	20	48.8	
No	20	44.4	21	51.2	
Intent to choose optional studies in OPN if available					0.893
Yes	8	18.2	7	17.1	
No	36	81.8	34	82.9	
Previous clinical training in OPN					**0.027**
Yes	33	73.3	20	50.0	
No	12	26.7	20	50.0	
Place were the clinical training was carried out?					
Outpatient clinic	0	0	0	0	
Health centre's ward	15	46.9	11	61.1	0.334
Nursing home	8	25.0	4	22.2	0.825
Sheltered home	7	21.9	0	0	**0.040**
Home care	0	0	0	0	
Activity arranged by polytechnic	0	0	0	0	
Hospital	0	0	1	5.6	0.178
Other	2	6.2	2	11.1	0.543

	IG n=46		CG n=41		Difference at M0
Relationships with older people	***f***	**%**	***f***	**%**	***p***
Any older person close to oneself					0.467
Yes	43	93.5	36	87.8	
No	3	6.5	5	12.2	
Usually take up with older people					1.000
Yes	41	89.1	37	90.2	
No	5	10.9	4	9.8	
The closest relationship you have with an older person					
Mother or father	5	11.6	2	5.0	0.263
Grandmother or grandfather	32	74.4	33	80.5	0.506
Other relative	2	4.7	1	2.4	0.585
Friend	1	2.3	1	2.4	0.973
Neighbour	0	0	0	0	
Person you know through volunteer work	0	0	0	0	
Patient/client	2	4.7	3	7.3	0.606
Fellow worker	0	0	0	0	
Other	1	2.3	1	2.4	0.973
How often you meet the closest older person					0.387
Daily or several times a week	10	23.3	3	7.5	
Once a week	7	16.3	7	17.5	
Several times a month	12	27.9	15	37.5	
Once a month or less	11	25.6	11	27.5	
Some times a year	3	6.9	4	10.0	
Career plans	***f***	**%**	***f***	**%**	***p***
Intention to work in nursing after graduation					0.482
Yes	44	100	40	97.6	
No	0	0	1	2.4	
Preferred age group to work with after graduation					
Children	11	25.0	8	20.0	0.584
Adolescents	2	4.5	2	5.0	1.000
Working aged (18–65 years old)	26	59.1	25	62.5	0.749
Older people (over 65 years old)	5	11.4	5	12.5	1.000
Change in career plans regarding preferred nursing area after graduation					
Stayed the same	9	20.0	11	26.8	0.454
Somewhat changed	23	51.1	17	41.5	0.370
Completely changed	3	6.7	3	7.3	1.000
No plans before or at this moment	10	22.2	10	24.4	0.812
Preferred area of expertise if planning to study a postgraduate degree					
Manager (e.g., head nurse)	11	29.7	8	25.8	0.719
Specialist (e.g., clinical nurse specialist)	15	40.5	18	58.1	0.150
Researcher	0	0	0	0	
Nurse educator	8	21.6	5	16.1	0.566
Other	3	8.1	0	0	0.245

Table 7. Descriptive statistics in students' numeric background variables and group differences at the baseline (M0)

	IG n=46		CG n=41		Difference at M0
Background	**Mean (SD)**	**Range**	**Mean (SD)**	**Range**	***p***
Age	23.6 (4.8)	19–41	23.4 (4.2)	20–39	0.812
The length of nursing work experience (months)	22.6 (21.0)	2–96	13.0 (8.5)	2–36	**0.033**
Education of OPN	**Mean (SD)**	**Range**	**Mean (SD)**	**Range**	***p***
How important you find the education of OPN (0–100)	77.5 (14.9)	35–99	73.6 (18.7)	19–100	0.286
The length of clinical training in OPN (weeks)	5.2 (0.5)	5–7	6.2 (3.0)	3–16	0.216
Your experience of OPN overall based on your clinical training (0–100)	67.0 (21.2)	9–100	71.4 (19.9)	29–100	0.461
Your learning experience in OPN (0–100)	76.7 (17.0)	34–100	76.4 (17.7)	22–100	0.942
Relationships with older people	**Mean (SD)**	**Range**	**Mean (SD)**	**Range**	***p***
Age person can be considered old	69.2 (3.6)	60–80	70.2 (6.0)	60–80	0.361
Significance of the closest relationship you have with an older person (0–100)	81.7 (21.1)	16–100	84.9 (20.1)	14–100	0.475
Career plans	**Mean (SD)**	**Range**	**Mean (SD)**	**Range**	***p***
Likelihood to work in OPN right after graduation (0–100)	50.5 (19.6)	2–94	49.3 (30.1)	3–100	0.830
Likelihood to study a postgraduate nursing degree in the future (0–100)	51.3 (23.9)	2–99	51.3 (29.2)	0–94	1.000
Work values	**Mean (SD)**	**Range**	**Mean (SD)**	**Range**	***p***
Competence and growth	4.1 (0.4)	3.2–4.7	4.1 (0.4)	3.3–4.8	0.835
Comfort and security	3.8 (0.4)	3.1–4.6	3.8 (0.41)	2.9–4.9	0.912
Status and independence	3.5 (0.5)	2.6–4.5	3.5 (0.5)	2.6–4.6	0.769

5.2.1. Outcomes of the Learning with Older People Programme (IV)

The examined outcomes for LOPP were: interest in OPN, attitudes towards older people and knowledge levels of ageing.

Nursing students in the IG were more interested in OPN and had more positive attitudes towards older people than those of students in the CG. There were no differences between the groups in terms of the students' knowledge levels about ageing. IG students improved significantly in several scores and CG students only in two scores between the measurement times.

Outcome differences between the groups (IV)

For the interest, there were significant differences between the groups (Table 8). The SINOPS total score (p=0.004) was greater among IG students than CG students. For the sub-scores, IG students regarded the characteristics of (p=0.003) and a career in OPN (p=0.002) more positively than CG students.

For the attitudes, there were also significant differences between the groups (Table 8). KAOP total score (p=0.024) was higher among IG students, indicating more positive attitudes than among CG students. In the sub-scores, IG students had a lower KAOP- score (p=0.021), indicating less negative attitudes towards older people than CG students.

For the knowledge, there were no significant differences between the groups (p=0.068), as the FAQ1 score for the IG students and for the CG students were at a similar level (Table 8).

Table 8. Differences between the IG and the CG at the baseline (M0) and follow-up (M2)

	M0 **IG n=46, CG n=41**				**M2** **IG n=40, CG n=36**			
Outcome variables (score range)	**Mean (SD)**	**Difference Mean (SD)**	**95% CI**	***t*** ***p***	**Mean (SD)**	**Difference Mean (SD)**	**95% CI**	***t*** ***p***
SINOPS total (0–100)								
IG	58.16 (9.02)	3.17 (9.48)	-0.88–7.22	0.123	61.26 (8.36)	6.16 (8.88)	2.10–10.23	**0.004**
CG	54.98 (9.99)				55.10 (9.42)			
Willingness (0–100)								
IG	55.63 (17.86)	5.37 (20.56)	-3.41–14.15	0.227	61.22 (18.90)	8.52 (20.64)	-0.92–17.97	0.076
CG	50.25 (23.23)				52.70 (22.42)			
Characteristics (0–100)								
IG	63.72 (10.21)	2.43 (10.22)	-1.94–6.79	0.272	66.82 (8.03)	6.28 (9.04)	2.14–10.41	**0.003**
CG	61.29 (10.23)				60.54 (10.05)			
Valuation (0–100)								
IG	41.39 (18.66)	1.40 (19.35)	-6.86–9.67	0.737	40.58 (18.94)	4.71 (17.67)	-3.37–12.80	0.249
CG	39.99 (20.11)				35.87 (16.14)			
Quality (0–100)								
IG	48.51 (7.43)	2.25 (7.25)	-0.85–5.35	0.152	49.77 (8.22)	3.45 (7.78)	-0.12–7.01	0.058
CG	46.26 (7.04)				46.33 (7.26)			
Career (0–100)								
IG	70.58 (11.11)	3.68 (12.21)	-1.53–8.89	0.164	74.49 (8.51)	6.99 (9.53)	2.63–11.35	**0.002**
CG	66.90 (13.33)				67.50 (10.55)			
KAOP total (34–238)								
IG	172.54 (17.11)	2.76 (17.69)	-4.79–10.32	0.469	185.20 (20.80)	10.53 (19.90)	1.42–19.64	**0.024**
CG	169.78 (18.32)				174.67 (18.84)			
KAOP+ (17–119)								
IG	85.35 (9.14)	0.57 (9.30)	-3.40–4.54	0.777	91.03 (9.82)	4.19 (9.83)	-0.31–8.69	0.067
CG	84.78 (9.47)				86.83 (9.84)			
KAOP- (17–119)								
IG	48.80 (9.27)	2.20 (10.85)	-6.83–2.44	0.349	41.83 (11.84)	6.34 (11.68)	-11.69–-1.00	**0.021**
CG	51.00 (12.38)				48.17 (11.49)			
FAQ1 (0–25)								
IG	12.63 (3.32)	0.07 (3.26)	-1.32–1.46	0.921	15.03 (3.12)	1.39 (3.25)	-0.10–2.88	0.068
CG	12.56 (3.19)				13.64 (3.40)			

CI = Confidence Interval

Outcome differences within the groups (IV)

IG students improved significantly in several scores between the measurement times (M0–M1–M2). The improved scores were the SINOPS total, the sub-score for characteristics of OPN, the KAOP total, the sub-score KAOP+, the sub-score KAOP- and the FAQ1 score. The sub-score for willingness to work in OPN, which was significantly higher (p=0.001) right after LOPP than at the baseline, did not continue to increase at the same extent over the course of one month (p=0.069). The sub-score for valuing OPN (p=0.015) declined significantly from at the end of LOPP to the measurement after one month's time.

CG students improved significantly in two scores, the KAOP total (p=0.027) and the FAQ1 (p=0.011), between the measurement times (M0–M2).

5.2.2. Factors related to the outcomes

Factors selected for the further analysis, were those having enough observations for statistical analysis. In this text, only the statistically significant relations are reported. Several factors were related to the outcomes, the most common ones were: *interest in OPN*, *attitudes towards older people*, *intent to choose optional studies in OPN* and *frequency of meeting the closest older person*. There were some differences in factors between the measurement points. Part of the factors was the same for the IG and CG but there were also differences between the groups.

Baseline (M0) examination

Factors related to interest

For both groups, students who would choose optional studies in OPN were more interested in OPN (IG p=0.003, CG p=<.0001) (Table 9). Further, students who found the education of OPN more important (IG r=0.37 p=0.012, CG r=0.59 p=<.0001) and had more positive attitudes towards older people (IG r=0.33 p=0.026, CG r=0.34 p=0.028) were more interested in OPN (Table 10).

For the IG, students who had a previous health/social care degree (p=0.045) and had nursing work experience (p=0.011) were more interested in OPN (Table 9). Further, students who found comfort and security as job characteristics more important (r=-0.31 p=0.035) were less interested in OPN (Table 10).

Factors related to attitudes

For both groups, students more interested in OPN (IG r=0.33 p=0.026, CG r=0.34 p=0.028) had more positive attitudes towards older people (Table 10).

For the IG, students who had carried out an information search related to OPN based on one's own initiative (p=0.038) had more positive attitudes towards older people (Table 9). For the CG, students who met their closest older people more often (r=0.46 p=0.003) had more positive attitudes towards older people (Table 10).

Factors related to knowledge

For both groups, students who met their closest older people more often (IG r=0.45 p=0.003, CG r=0.31 p=0.048) had a higher knowledge level about ageing (Table 10).

Follow-up (M2) examination

Factors related to interest

For both groups, students who would choose optional studies in OPN were more interested in OPN (IG p=0.006, CG p=<.0001) (Table 11). Further, students more interested at the baseline (IG r=0.79 p=<.0001, CG r=0.87 p=<.0001) were more interested in OPN at the one month follow-up (Table 10).

For the IG, students who had nursing work experience (p=0.001) and had more positive attitudes towards older people (r=0.34, p=0.032) were more interested in OPN (Table 11). For the CG, students who found the education of OPN more important (r=0.45, p=0.006) and had a higher knowledge level (r=0.38, p=0.024) were more interested in OPN at the one month follow-up (Table 10).

Factors related to attitudes

For both groups, students who had more positive attitudes at the baseline (IG r=0.75 p=<.0001, CG r=0.85 p=<.0001) had more positive attitudes towards older people at the one month follow-up (Table 10).

For the CG, students who met their closest older people more often (r=0.46 p=0.002) had more positive attitudes towards older people. Further, students more interested in OPN at the baseline (r=0.46, p=0.005) had more positive attitudes towards older people at the one month follow-up (Table 10).

Factors related to knowledge

For both groups, students who had a higher knowledge level at the baseline (IG r=0.54 p=0.000, CG r=0.71, p=<.0001) had a higher knowledge level about ageing at the one month follow-up (Table 10).

For the CG, students who found comfort and security as job characteristics more important (r=0.33 p=0.047) had a higher knowledge level about ageing at the one month follow-up (Table 10).

Table 9. Relations between the independent variables and the outcomes at the baseline (M0)

	IG n=46						CG n=41					
	Interest		Attitude		Knowledge		Interest		Attitude		Knowledge	
Independent variable (measured at M0)	**n**	**Mean (SD)**	***t* *p***	**Mean (SD)**	***t* *p***	**Mean (SD)**	***t* *p***	**n**	**Mean (SD)**	***t* *p***	**Mean (SD)**	***t* *p***	**Mean (SD)**	***t* *p***
Previous health/social care degree			**0.045**		0.809		0.162			0.642		0.253		0.231
Yes	17	61.11 (4.93)		173.40 (13.56)		13.53 (3.28)		12	53.59 (13.35)		174.90 (20.78)		13.50 (3.99)	
No	29	56.43 (10.41)		172.10 (19.11)		12.10 (3.29)		29	55.56 (8.44)		167.70 (17.15)		12.17 (2.79)	
Nursing work experience			**0.011**		0.059		0.064			0.584		0.971		0.699
Yes	28	61.22 (5.88)		176.40 (16.49)		13.36 (3.54)		27	55.51 (11.56)		169.70 (18.84)		12.44 (3.73)	
No	18	53.39 (10.99)		166.60 (16.80)		11.50 (2.66)		14	53.98 (6.15)		169.90 (17.97)		12.79 (1.89)	
Information search related to OPN			0.347		**0.038**		0.315			0.113		0.129		0.685
Yes	25	59.38 (7.43)		177.80 (15.66)		13.16 (3.59)		20	57.57 (11.92)		174.30 (20.31)		12.35 (3.27)	
No	20	56.77 (10.88)		167.40 (16.74)		12.15 (2.93)		21	52.52 (7.17)		165.50 (15.52)		12.76 (3.19)	
Intent to choose optional studies in OPN if available			**0.003**		0.140		0.601			**<.0001**		0.173		0.364
Yes	8	66.48 (4.39)		181.10 (18.09)		13.25 (4.37)		7	67.81 (6.73)		178.40 (15.19)		13.57 (3.21)	
No	36	56.11 (8.80)		171.30 (16.45)		12.55 (3.14)		34	52.34 (8.40)		168.00 (18.60)		12.35 (3.20)	
Previous clinical training in OPN			0.532		0.427		0.206			0.173		0.439		0.597
Yes	33	57.70 (9.83)		171.90 (16.58)		13.09 (3.38)		20	52.68 (10.58)		171.90 (17.17)		12.85 (3.70)	
No	12	59.65 (6.90)		176.50 (17.66)		11.67 (3.03)		20	57.05 (9.31)		167.30 (19.91)		12.30 (2.76)	

Table 11. Relations between the independent variables and the outcomes at the follow-up (M2)

	IG n=40						CG n=36					
	Interest		Attitude		Knowledge		Interest		Attitude		Knowledge	
Independent variable (measured at M0)	**n**	**Mean (SD)**	***t* *p***	**Mean (SD)**	***t* *p***	**Mean (SD)**	***t* *p***	**n**	**Mean (SD)**	***t* *p***	**Mean (SD)**	***t* *p***	**Mean (SD)**	***t* *p***
Previous health/social care degree			0.693		0.336		0.555			0.751		0.514		**0.006**
Yes	14	61.99 (5.75)		189.60 (16.09)		15.43 (3.23)		11	55.87 (11.66)		177.80 (16.39)		15.91 (3.21)	
No	26	60.88 (9.56)		182.80 (22.89)		14.81 (3.10)		25	54.77 (8.52)		173.30 (19.98)		12.64 (3.03)	
Nursing work experience			**0.001**		0.114		0.888			0.453		0.740		0.432
Yes	25	64.38 (6.45)		189.20 (17.03)		15.08 (3.44)		22	56.06 (11.06)		173.80 (18.83)		14.00 (3.78)	
No	15	56.07 (8.78)		178.50 (25.11)		14.93 (2.60)		14	53.60 (6.13)		176.00 (19.49)		13.07 (2.73)	
Information search related to OPN			0.084		0.080		0.660			0.132		0.103		0.621
Yes	21	63.64 (7.21)		191.60 (17.22)		15.29 (3.00)		19	57.35 (10.78)		179.50 (19.98)		13.37 (3.62)	
No	18	59.03 (9.02)		181.60 (17.28)		14.83 (3.37)		17	52.59 (7.12)		169.20 (16.37)		13.94 (3.21)	
Intent to choose optional studies in OPN if available			**0.006**		0.889		0.620			**<.0001**		0.213		0.297
Yes	8	68.04 (6.44)		187.80 (21.88)		14.50 (3.86)		7	66.95 (7.92)		182.70 (20.13)		14.86 (3.89)	
No	30	59.34 (7.63)		186.70 (17.23)		15.13 (2.99)		29	52.24 (7.35)		172.70 (18.35)		13.35 (3.28)	
Previous clinical training in OPN			0.728		0.268		0.520			0.152		0.575		0.676
Yes	27	61.20 (8.69)		184.90 (16.80)		15.30 (3.23)		18	52.77 (9.82)		176.20 (17.82)		13.44 (3.60)	
No	12	62.22 (7.74)		191.80 (19.61)		14.58 (3.00)		17	57.43 (8.92)		172.50 (20.67)		13.94 (3.34)	

Table 10. Correlations between the independent variables and the outcomes at the baseline (M0) and at the follow-up (M2)

	M0						**M2**					
	IG n=46			**CG n=41**			**IG n=40**			**CG n=36**		
Independent variable (measured at M0)	**Interest**	**Attitudes**	**Knowledge**	**Interest**	**Attitudes**	**Knowledge**	**Interest**	**Attitudes**	**Knowledge**	**Interest**	**Attitudes**	**Knowledge**
	r *p*	*r* *p*	*r* *p*	*r* *p*	*r* *p*	*r* *p*	*r* *p*	*r* *p*	*r* *p*	*r* *p*	*r* *p*	*r* *p*
Age	-0.02 0.872	0.01 0.938	-0.06 0.694	-0.17 0.308	0.03 0.867	0.09 0.593	-0.05 0.767	-0.27 0.091	0.01 0.967	-0.01 0.949	-0.05 0.797	0.05 0.775
Opinion of the importance of education in OPN	**0.37** **0.012**	0.16 0.302	-0.06 0.684	**0.59** **<.0001**	0.25 0.112	-0.08 0.612	0.27 0.095	-0.09 0.582	0.04 0.831	**0.45** **0.006**	0.27 0.118	-0.09 0.587
Age a person is considered old	-0.01 0.955	0.02 0.921	0.17 0.273	0.13 0.422	-0.18 0.255	-0.16 0.337	-0.01 0.947	-0.08 0.630	-0.14 0.396	0.09 0.628	-0.21 0.224	-0.13 0.467
Frequency of meeting the closest older person*	0.21 0.188	0.19 0.223	**0.45** **0.003**	0.01 0.965	**0.46** **0.003**	**0.31** **0.048**	0.16 0.330	0.07 0.678	0.31 0.060	0.11 0.518	**0.49** **0.002**	0.28 0.099
Significance of the closest relationship	0.29 0.059	0.03 0.845	0.15 0.337	0.19 0.253	0.24 0.130	0.03 0.845	0.08 0.622	0.03 0.865	0.01 0.974	-0.01 0.954	0.24 0.155	0.22 0.204
WVI competence and growth	-0.20 0.173	0.19 0.220	0.07 0.642	0.19 0.226	0.18 0.262	0.04 0.820	-0.21 0.199	0.07 0.691	0.21 0.205	0.22 0.195	0.15 0.383	0.15 0.383
WVI comfort and security	**-0.31** **0.035**	-0.03 0.855	-0.10 0.495	0.11 0.502	-0.10 0.532	0.19 0.248	-0.07 0.647	-0.15 0.364	-0.11 0.503	0.24 0.156	-0.04 0.812	**0.33** **0.047**
WVI status and independence	-0.15 0.328	0.00 0.989	0.13 0.385	-0.15 0.367	0.11 0.502	-0.04 0.821	0.07 0.653	-0.14 0.374	0.11 0.495	-0.15 0.393	-0.01 0.941	0.18 0.294
KAOP total	**0.33** **0.026**	-	0.17 0.254	**0.34** **0.028**	-	0.20 0.201	**0.34** **0.032**	**0.75** **<.0001**	0.24 0.137	0.31 0.066	**0.85** **<.0001**	0.14 0.427
FAQ1	-0.02 0.922	0.17 0.254	-	0.23 0.144	0.20 0.201	-	0.25 0.128	0.13 0.440	**0.54** **0.000**	**0.38** **0.024**	0.27 0.113	**0.71** **<.0001**
SINOPS total	-	**0.33** **0.026**	-0.02 0.922	-	**0.34** **0.028**	0.23 0.144	**0.79** **<.0001**	0.17 0.303	0.00 0.977	**0.87** **<.0001**	**0.46** **0.005**	0.26 0.129

r=Pearson correlation coefficients, *=Spearman correlation coefficient

Multivariate linear modeling of interest, attitudes and knowledge

Multivariate linear modeling was used to identify the independent determinants of students' interest in OPN, attitudes towards older people and knowledge levels about ageing. The modeling progressed hierarchically (Polit & Beck 2008), starting with the background variables, to remove the confounding effect of these variables. Finally, the outcome score was entered to the equation.

For both groups, the total scores for interest, attitudes and knowledge levels at the baseline had a significant association with the total scores of the same determinants one month later. For the IG, the other associated factors related to interest were previous nursing work experience and having carried out an information search related to OPN based on one's own initiative.

Interest in older people nursing

At first, both groups were analysed together. However, there was a significant difference between the groups when it came to the relation between interest and previous nursing work experience. For this reason, the groups were then examined separately. After dropping out non-significant factors one by one in the IG, the factors that were still associated with the interest in OPN included nursing work experience, the information search related to OPN based on one's own initiative and the intent to choose optional studies in OPN (Table 12). Finally, the interest total score obtained at baseline was added to the model. The intent to choose optional studies in OPN then turned out to be non-significant (Table 13). Thus, in addition to the interest at the baseline (p=<.0001), previous nursing work experience (p=0.006) and the information search related to OPN (p=0.015) were found to be associated with the interest in OPN.

Table 12. Independent determinants (excluding SINOPS total score) at M0 of the SINOPS total for the IG at M2

Determinant	n	Beta	SE	95% CI	p [1)]
Intercept		51.4	1.9	47.5–55.4	
Nursing work experience					
Yes	25	8.8	2.0	4.7–12.9	0.0001
No	13	0			
Information search related to OPN					
Yes	20	4.4	1.9	0.5–8.2	0.026
No	18	0			
The intent to choose optional studies in OPN					
Yes	8	7.8	2.3	3.1–12.6	0.002
No	30	0			

Significance of the model F(3.34)=12.8, p<.0001
Model 100*R-square = 58.1%
SE = Standard error of estimate
CI = Confidence interval
[1)] Significance of the determinant

Table 13. Independent determinants (including SINOPS total score) at M0 of the SINOPS total for the IG at M2

Determinant	n	Beta	SE	95% CI	*p* [1)]
Intercept		11.3	6.4	-1.6–24.2	
Nursing work experience					
Yes	25	4.9	1.7	1.5–8.3	0.006
No	13	0			
Information search related to OPN					
Yes	20	3.7	1.4	0.8–6.6	0.015
No	18	0			
Interest total score at M0		0.8	0.1	0.5–1.0	<.0001

Significance of the model F(3, 34)=30.7, p<.0001
Model 100*R-square = 73.0%
SE = Standard error of estimate
CI = Confidence interval
[1)] Significance of the determinant

For the CG, interest in OPN was found to have an association with intent to choose optional studies in OPN. However, this turned out to be non-significant when the total interest score obtained at baseline was added to the equation. Thus, the interest at the baseline (p=<.0001) was associated with the interest after one month follow-up.

Attitudes towards older people

The groups were analysed together, and no significant interactions were found when it came to attitudes towards older people. After a stepwise elimination of non-significant determinants, the only significant factors were the type of group (p=0.004) and having carried out an information search related to OPN based on one's own initiative (p=0.016). When the attitudes score at baseline was added to the model, the information search turned out to be non-significant and after one month's time, the baseline score for attitudes (p=<.0001) was the only determinant that had an association with the attitude score.

Knowledge levels about ageing

When considering knowledge levels of ageing, the groups were analysed together, and no significant interactions were found. The final model only included previous health/social care degree (p=0.020). The group variable was only borderline significant (p=0.070). When the score knowledge levels at baseline was added to this model, the significance of previous health/social care degree vanished, and the knowledge score at the baseline (p=<.0001) remained as the only determinant that had an association with the knowledge level score at the one month follow-up.

5.2.3. Experiences of the Learning with Older People Programme (V)

Overall, both nursing students and older people found LOPP useful and productive. No discrepancies were found between the feedback from the students and the feedback from the older people.

Background information of the older people

Altogether, 47 ordinary, community dwelling older people participated in LOPP, of which 43 also volunteered to respond to the questionnaire (Table 14). Of the respondents of the questionnaire, a majority were women (n=27, 62.8%), and on average they were 76.1 years old (SD 5.9, range 62–93 years). In regards to marital status, the majority were either married (n=18, 41.9%) or widowed 15 (n=15, 34.9%). In regards to educational background, 81.0% (n=34) had lower than an upper secondary school degree. Just over half of the older people lived alone (55.8%, n=24). All but one participant regarded themselves as being in average or above average health (97.6%, n=41). Almost half of the participants perceived themselves as younger than they actually were (46.5%, n=20), and 69.8% (n=30) positively regarded their own ageing.

Table 14. Background information of the older people in LOPP

Background	**Mean (SD)**	**Range**
Age, years	76.1 (5.9)	62–93
	f	**%**
Gender		
Female	27	62.8
Male	16	37.2
Marital status		
Married	18	41.9
Widowed	15	34.9
Divorced	8	18.6
Never married	2	4.7
Basic education		
Less than comprehensive school	0	0
Some comprehensive school	5	11.9
Comprehensive school and some middle school	22	52.4
Middle school	7	16.7
Upper secondary school	8	19.0
Living alone		
Yes	24	55.8
No	19	44.2
Self-perceived current health status		
Very poor	0	0
Poor	1	2.4
Average	23	54.8
Good	14	33.3
Very good	4	9.5
Self-perceived age		
Older than in reality	1	2.3
As I am	22	51.2
Younger than in reality	20	46.5
Perception of own ageing		
Very negatively	0	0
Rather negatively	0	0
Neither positively nor negatively	13	30.2
Rather positively	28	65.1
Very positively	2	4.7
Has acted as a family caregiver		
Yes	9	23.1
No	30	76.9
Is cared for by a family caregiver		
Yes	1	2.6
No	37	97.4

The majority of older people evaluated the experience of their participation as good (n=27, 62.8%) or extremely good (n=15, 34.9%). Older people gave four different kinds of grounds for their evaluations, and these partly overlapped with the four reasons for participating (Figure 4).

On the whole, the students evaluated LOPP as very useful (VAS mean 83.9, SD 11.6). As far as what they had learned in the programme, students evaluated the participation of the older people as being very useful (VAS mean 93.2, SD 8.6). In their responses, the students identified what they considered to be the five best areas of LOPP as well as four areas that should be further developed (Figure 4).

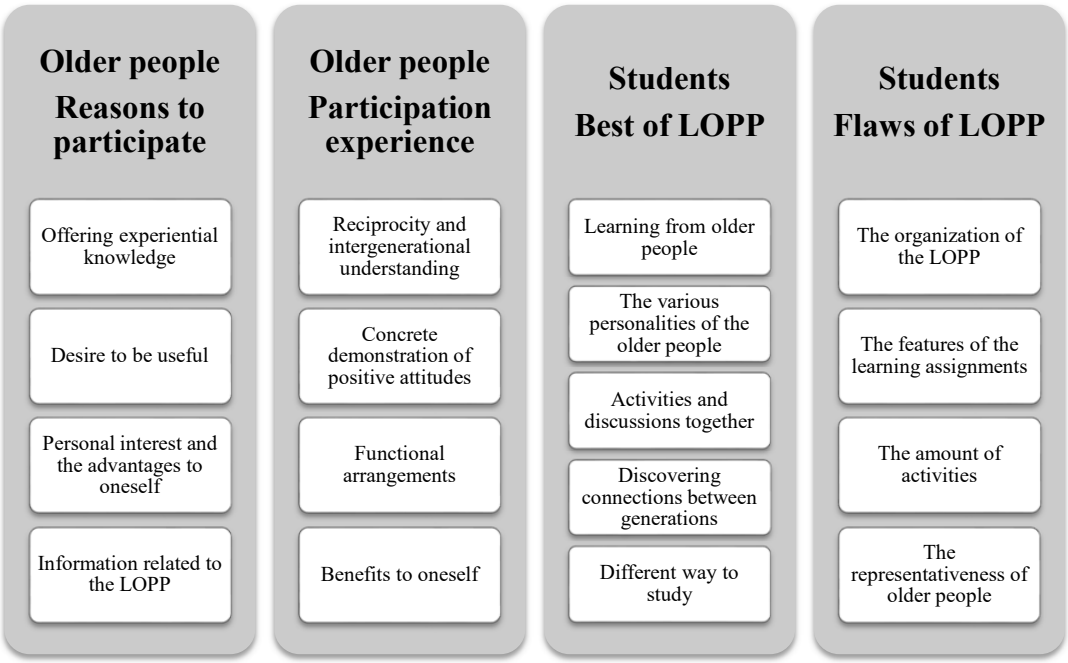

Figure 4. Findings of the sub-study V

5.3. Summary of the results

Figure 5 summarises the answers to the research questions presented in the different the sub-studies (I–V, summary).

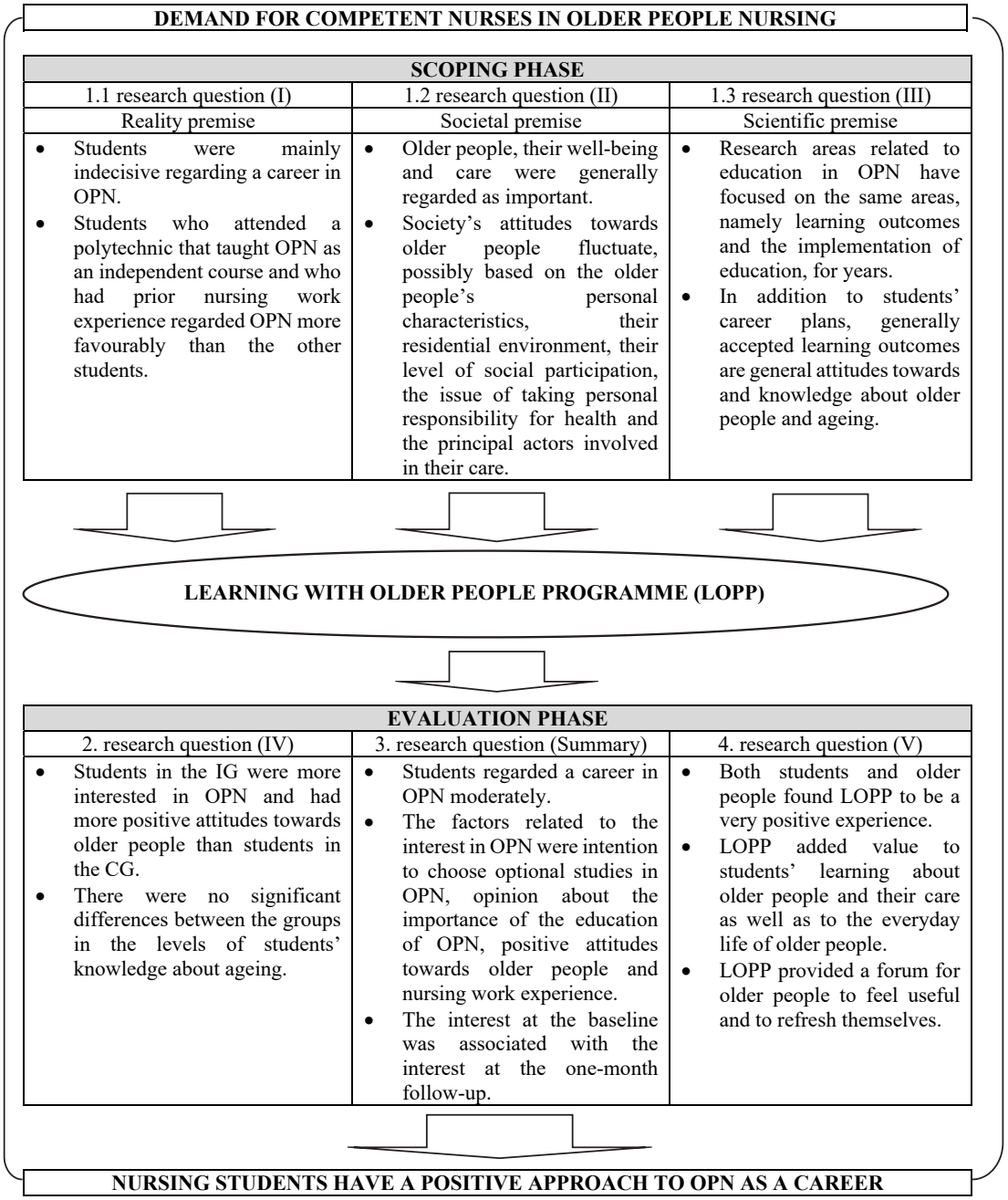

Figure 5. Summary of the results

6. DISCUSSION

6.1. Discussion of the results

The purpose of this study was to examine nursing students' interest in choosing OPN as a career. The results of this study are discussed from perspectives of the nursing students' career plans in OPN and older people as promoters of career plans in LOPP.

Nursing students' career plans in older people nursing

Nursing students regarded the choice of a career in OPN moderately, or at least they were not against it. The interest level of students in 2014 (IV) was similar to, yet slightly more favourable than, that in 2009 (I). These results confirm those of earlier studies, that students remain uncertain about their intention to work with older people (Cheng et al. 2015, McCann et al. 2010, Pan et al. 2009, Brown et al. 2008, Lee et al. 2006). Although measurements from 2009 and 2014 are not completely comparable, for instance due to different samples of graduating nursing students and those that were only midway through their studies, it could be that the general discussion and attitudinal atmosphere in Finnish society have placed a greater importance (II) on older people and their care, and have therefore led more students to consider OPN as future career option.

This study confirmed the previous findings about factors related to career plans in OPN. These factors are various and complex and must be regarded in relation to each other in order to increase interest in choosing OPN as career. In both in the 2009 (I) and the 2014 (IV) studies, one of these factors was nursing work experience, also identified in the previous literature (Cheng et al. 2015, Zisberg et al. 2015, Haron et al. 2013, Xiao et al. 2013, Gonçalves et al. 2011, Henderson et al. 2008). Work experience in clinical practice can either enhance or decrease interest in OPN. Thus, cooperation between nursing and education administration needs to ensure good learning and work environments for nursing students in order to attract nurses to and retain them in OPN (Carlson & Idwall 2015, Chenoweth et al. 2010, Brown et al. 2008).

Some factors related to career plans in OPN, can be supported during education. Educational investments in OPN in the curricula, in terms of independent courses or LOPP, were related to favourable career plans in OPN. Although there is still insufficient evidence in the field to determine the most effective educational solutions (III), it has been recognised that positive educational experiences are beneficial in directing students' careers towards OPN (Carlson & Idwall 2015, Cheng et al. 2015, Brown et al. 2008).

This study produced some new findings. First, students interested in OPN regarded education in OPN as important and were also motivated to choose optional studies in that field. Further, having carried out an information search related to OPN based on one's own initiative was associated positively with interest in OPN. When combined with the finding that students appreciate different ways of learning about ageing, older people and their care (III, V), new educational solutions and innovations, like LOPP, can be developed in nursing education. For instance, the intensive form of learning that was exemplified in LOPP can be considered to be a potential alternative form of acquiring the credits needed for nursing studies, as this enabled uninterrupted concentration on the matter. Students evaluated LOPP positively because of the fresh nature of it and it was a variation in learning methods.

The SINOPS instrument was developed and tested during various phases of this study. Based on the results, SINOPS can be considered to be sufficiently reliable and a tolerably valid scale for measuring students' interest in OPN. However, the construct validity of the scale could have been stronger. SINOPS was constructed to be used on students in Finland, but the instrument can be used and tested internationally. It was developed based on international literature on nursing students who are about to graduate as well as on those who are midway through their studies. As the instrument covers some factors that can only be measured after nursing students have experienced working in OPN, its suitability for students at very beginning of their studies needs to be considered. The factors of SINOPS can also be used as guidelines for the theoretical education of OPN and the supervision of students during their clinical placements.

Older people as promoters of nursing students' career plans in LOPP

This study applied a positive approach by providing older people with an opportunity to influence to the competence of the future nursing workforce. The involvement of older people as promoters of nursing students' career plans was a novel approach and was developed and tested in this study. Collectively, older people were seen as a valuable resource that could contribute to the competence of future nurses. LOPP enabled meaningful, as opposed to tokenistic, participation for older people to express themselves. Their contributions were understandable and deemed valid by the nursing students. In this regard, LOPP was successful, although the involvement of older people as a complex social phenomenon is not unproblematic in practice. Their involvement in LOPP is strongly seen as emancipating, as the programme offered opportunities for interactions between people with different types of expertise, and new knowledge was constructed in the emergent social relationships. Older people were empowered, capacitated and supported to engage with nursing students as future professionals on equal terms, thus influencing nursing education and clinical practice (Gibson et al. 2012).

LOPP confirmed that interventions introducing students to "healthy" older people (Chonody 2015, Tullo et al. 2010, Schwartz & Simmons 2001) and exposing students to their lives likely produce positive outcomes. The polytechnic setting equalised the power differences between students and older people, which may occur in clinical practice when the older people are patients whom students care for. Further, in clinical settings, older people may end up in the role of a teacher, more or less willingly (Jha et al. 2010). In academic settings, nurse educators should be prepared to step back and not question or understate the worth of the experiential knowledge of older people. The attitudinal atmosphere in polytechnics should be welcoming and should value the contributions of older people (Speed et al. 2012, Mckeown et al. 2012). In order for there to be more of a balance of power, any anxiety older people may feel due to being in a strange environment can be alleviated by providing them with enough information and guidance before and during their stay at the polytechnic.

The examined outcomes for LOPP were interest in OPN, attitudes towards older people and knowledge levels of ageing. The outcomes of LOPP were encouraging, in terms of increased interest and positive attitudes towards older people. Moreover, students and older people highly appreciated the experience. However, the results demonstrate that students in both groups had already developed their interest in OPN prior to LOPP, as the baseline interest score was associated to the interest score at the one moth time. Thus, considering the dynamic nature of the process of choosing a career (Price 2009), it can be questioned whether or not the timing of LOPP was ideal. Many factors, including the ones which led students to initially apply to study

nursing, could have influenced their choice of a future career. Thus, the study concerning the critical time-points for the career choice needs to be continued. In regards to the times of data collection, as nursing students' interest in OPN and LOPP were known to be complex (Chonody 2015), collecting data more frequently over a longer period of time could have possibly been beneficial for increasing the likelihood of being able to make causal inferences about the long-term outcomes (Morrison 2009). However, the only valid way to evaluate when the time is right for the intervention is to follow students after graduation to see if they actually do pursue a career in OPN.

This study confirmed the fact that interest in OPN and attitudes towards older people are intertwined with each other. Having a positive attitude towards older people was, based on the previous literature, one of the few consistent factors related to the career plans in OPN (e.g., Cheng et al. 2015, Zisberg et al. 2015, Haron et al. 2013, Gonçalves et al. 2011, Pan et al. 2009). It was also a factor related to interest in OPN, and vice versa. Some other factors related to attitudes included carrying out an information search related to OPN based on one's own initiative and the frequency of meeting the closest older person to the student. Both relations are logical as students with a positive attitude towards older people might well seek information about OPN. Students with a positive attitude towards older people feel natural and rewarded in visiting the closest older person to them.

Corresponding to the previous studies (Mattos et al. 2015, Gonçalves et al. 2011, Lee et al. 2006), the relation between interest in OPN and knowledge levels about ageing remains ambiguous, as no consistent associations were found. LOPP did not result in improvements in students' knowledge levels about ageing any more than the theoretical course alone did. This might be due to the content covered in LOPP or the measurement instrument (FAQ1). As for the content of LOPP, setting the optimal degree of difficulty for the learning assignments, and providing information to both the students and the older people was demanding, perhaps resulting in the information needs of the students not being met. Regarding the measurement instrument, it is possible that the applied FAQ1 did not cover the issues dealt with in the discussions between the students and older people. Overall, knowledge about older people and their care is a difficult construct to measure and operationalise in a measurement instrument. Some shortcomings of the FAQ1 have also been reported recently, and despite the overall utility and value of FAQ1, some adjustments for its research use are warranted (Van der Elst et al. 2014). Nevertheless, in the future, the knowledge component of LOPP still needs to be considered. Factual knowledge about older people and ageing can be gained in several other ways as well.

Despite the positive outcomes, the results need to be interpreted with caution. The fact that the CG did not have an intensive week without the involvement of older people somewhat questions what the effective element actually was in LOPP. Originally, it was assumed that it was the older people and their lived experiences (Chonody 2015). However, it could have been the overall new way of learning about older people, ageing and OPN, as it was one week of intensive study, which included small group work, various topics and activating methods to stimulate discussion. Thus, further study is required to confirm the value of older people and their lived experiences to the learning outcomes of students.

Results of this study can be applied in Finland. However, the idea of LOPP can be adopted internationally, since the development of the programme was mainly based on international literature about SUI in health care education and educational solutions featuring the involvement of older people. When using the experiential knowledge of older people, it is

possible get up-to-date information about the current health care provisions and the services in any country. Moreover, this study demonstrated that the one-week programme of LOPP is adjustable to implement into different curricula.

LOPP was carried out based on the contributions of one person, which in this case, was also the researcher of this study. The researcher had several tasks, including collaborating and negotiating with the polytechnics, recruiting the older people, organising the practical arrangements, facilitating the learning assignments of LOPP, and carrying out the research activities. Therefore, the conclusion of this follows the previous notions that SUI requires time and commitment. As the researcher had the opportunity to focus on LOPP full time, similarly, nurse educators need to be allocated enough resources, if nursing degree programmes decide to establish involvement of service users such as older people (Speed et al. 2012, Mckeown et al. 2012).

6.2. Validity and reliability of the study

The strength of this study lies in the multitude of perspectives and methods used to examine nursing students' career choice in OPN. This was initially seen in the division of the study into the scoping and evaluation phases. In the scoping phase, the perspectives of nursing students, newspapers reflecting Finnish society, and the results of previous educational research were described. The methods in this phase comprised carrying out a survey, document analysis and doing a literature review. In the evaluation phase, the perspectives of nursing students and older people were investigated using a survey with structured and open-ended questions. In the following chapters, the validity of the study is examined, especially from the point of views of the data collection, instruments and results.

6.2.1. Validity and reliability of the data collection

Scoping phase

The data for the first sub-study (I) was collected with a questionnaire. The understandability of the questionnaire was ensured by piloting it with a nursing student (n=20) sample corresponding with the final sample. The reliability of the data collection was strengthened by the fact that the researcher collected the data herself, with the exception of at one polytechnic. This ensured the consistency of the received information about the study and instructions on how to respond to the questionnaire. At one polytechnic the contact person distributed the questionnaires to the students. This contact person was personally informed by the researcher through emails. Moreover, all students received a similar information letter about the study.

The data for the second sub-study (II) was selected from the newspapers. The reliability of the data collection was affirmed by the fact that the researcher carried it out herself, following explicit inclusion and exclusion criteria for the initial selection. The final selection of the articles was made with another researcher. A data collection period longer than three months or a repeated data collection could have been beneficial in terms of supporting the findings.

The data for the third sub-study (III) was selected from the databases. The reliability of the data collection was asserted by the fact that two researchers independently examined abstracts and full texts produced from the systematic search by applying inclusion and exclusion criteria. The search terms used were general, to avoid biased results. The search yielded a wide range

of citations as it was intended to. By using more specific search terms the number of citations might have been higher, but they could have misrepresented the results.

Evaluation phase

The data for the fourth and fifth sub-studies (IV, V) were collected with questionnaires. The understandability of each questionnaire was ensured by piloting it with a nursing student (n=28) sample corresponding with the final sample. The reliability of the data collection was high, as the researcher collected all data herself from students in both the IG and CG, as well as from older people. This ensured consistency in relaying information about the study and instructions on how to respond to the questionnaire.

6.2.2. Validity and reliability of the instruments

This chapter focuses on the validity and reliability of the instruments used in both phases of the study. In the scoping phase, only SINOPS was used. The validity and the reliability of SINOPS is described in detail, as it was developed and used for the first time in this study (I, IV).

SINOPS seems to have a high level of usability, as none of the nursing students reported problems in understanding the items or responding to the items, and there were only few missing values (Rattray & Jones 2007). VAS-scale has mostly been used in social and behavioural sciences as well as in practical nursing, but not so often in research on nursing education (Foley 2008). Therefore, evidence regarding the use of VAS in educational evaluation in nursing is uncommon (Celenza & Rogers 2011). However, based on comparisons with other scales (e.g., Likert-scales), VAS-scales produce corresponding or even more valid results (Foley 2008, Celenza & Rogers 2011).

The reliability of SINOPS was examined in terms of internal consistency (DeVon et al. 2007) by counting the Cronbach's alpha (α) coefficients for the entire SINOPS and for the sum variables (Table 15). For the scoping phase, the Cronbach's alphas of SINOPS were calculated based on the primary data gathered (students n=183). The Cronbach's alphas were mainly satisfactory, achieving a level above 0.70, indicating moderate and acceptable reliability of the novel instrument (Polit & Beck 2008). However, SINOPS lacked adequate reliability for some of its parts. Despite this, the decision was made to not change it in any way for the evaluation phase (IV), as SINOPS mainly demonstrated sufficient reliability. Radical revisions and deletion of items should only be done after thorough theoretical consideration. For the evaluation phase, the Cronbach's alphas of SINOPS were calculated based on the primary data gathered at baseline (students n=87). The Cronbach's alphas were mainly satisfactory and considered appropriate for group-level comparisons (Polit & Beck 2008).

Table 15. Internal consistency of the instruments (Cronbach's alpha (α) coefficients)

Measurement (n items)	α in I	α in IV
SINOPS total (n=54)	not calculated	0.89
Willingness (n=12)	0.93	0.92
Characteristics (n=16)	0.78	0.73
Valuation (n=4)	0.76	0.79
Quality (n=12)	0.79	0.44
Career (n=10)	0.79	0.77
KAOP total (n=34)	not used	0.83
KAOP- (n=17)		0.78
KAOP+ (n=17)		0.72
FAQ1 (n=25)	not used	0.62
WVI	not used	not calculated
Competence and growth (n=10)		0.63
Comfort and security (n=7)		0.56
Status and independence (n=8)		0.64

The construct validity of SINOPS was evaluated. The evaluation was based on the student data from the scoping phase (n=183) and on the baseline data from the evaluation phase (n=87). The combination of these two sets of data (n=270) was needed for valid statistical procedures (DeVon et al. 2007). The aim of the evaluation was to explore the support of the data for the original theoretical construct with five sum variables.

At first, five factors were extracted, as this was originally assumed to be the number of factors needed to describe the concept. The eigenvalues of these five factors ranged between 11.9 and 2.1, explaining 46% of the total variance in SINOPS, with variances between 15.1% and 5.2%. Thus, the current number of factors did not quite reach the recommended total variance of 60% (Polit & Beck 2008, Rattray & Jones 2007, Watson & Thompson 2006).

Secondly, factor rotation (Varimax method) was performed to make the factors more interpretable by presenting which items best fit with which factor, in terms of factor loadings for each factor (Polit & Beck 2008). The results confirmed the previous notions suggested by the Cronbach's alphas; some, but not all, of the original theoretically assumed factors were well supported by the data. The sum variables quality of OPN and the characteristics of OPN were found to be especially problematic. This is indicated by the several cross-loads between the factors due to the low magnitude of loadings which should be greater than 0.30, and preferably greater than 0.40 (Watson & Thompson 2006).

Basically, the construct validity of the scale should be studied further. The results of analysis can be used to make decisions about item retention and deletion in the future (Polit & Beck 2008, DeVon et al. 2007). Some of the current items may be worded ambiguously, and it would be beneficial to revise them for clarity and simplicity. Similarly, it is worth considering if the items with an active voice could belong to some other sum than originally assumed. These revisions could possibly lead to more coherent theoretical constructs of the sum variables, meaning that the deletion of items could be avoided.

Table 16. Factor loadings of SINOPS

Theoretically constructed sum variables	Factor1	Factor2	Factor3	Factor4	Factor5
Willingness					
I am interested in working in OPN right after graduation.	**0,817**				
I will possibly work in OPN later on in my career.	**0,721**				
I am interested in working in outpatient care.	**0,700**				
I am interested in working in inpatient care.	**0,779**				
I knew already when applying that want to work in OPN.	**0,570**				
My interest in OPN has decreased as studies have progressed.	**0,430**		0,345		
I am not interested in working in OPN right after graduation.	**0,809**				
I do not want to work in OPN in any phase of my career.	**0,696**				
I am not interested in working in outpatient care.	**0,702**				
I am not interested in working in inpatient care.	**0,797**				
I knew already when applying that I want to work in fields other than OPN.	**0,641**				
My interest in OPN has increased as studies have progressed.	**0,568**				
Quality					
Nurses behave respectfully towards older people.		**0,731**			
Nurses in OPN are enthusiastic.		**0,738**			
There is good team spirit in OPN wards.		**0,698**			
There is a sense of hurry in OPN.					**0,747**
There is a shortage of employees in OPN.					**0,549**
There are good learning experiences available in OPN.		**0,654**			
Nurses have negative attitudes towards older people.		**-0,687**			
Nurses in OPN have low motivation levels.		**-0,725**		0,341	
There is poor team spirit in OPN wards.		**-0,654**		0,317	
There is no sense of hurry in OPN.					**0,621**
There is staff available for OPN.				0,366	**0,425**
There are no good learning experiences available in OPN.		**0,348**			
Career					
In OPN no special skills are required.			**0,594**		
There are possibilities to fulfil oneself in OPN.	0,301	0,353	**0,462**		
OPN is the end of one's career.			**0,487**		
The responsibility due to the independence of nurses in OPN is frightening.			**0,232**		
One can learn everything one needs to know about OPN in a single clinical training.			**0,583**		
OPN requires special competence.		**0,368**	0,358		
OPN is routine-like.	0,394		**0,462**		
There are educational possibilities in OPN.			**0,385**	0,313	
The responsibility due to the independence of nurses in OPN is rewarding.		**0,376**			
Regular continuing training is required in OPN.		**0,521**	0,306		
Characteristics					
OPN is developing.		**0,309**			
I do not want to work with terminally ill older people.	0,368		**0,587**		
I regard encountering death as a natural part of nursing.			**0,386**		
OPN is boring.	**0,504**		0,483		
OPN focuses on single actions.			**0,429**		
OPN is sad.			**0,445**		
I experience pleasure when working in OPN.	**0,470**		0,337		
OPN is physically taxing.					**0,649**
Old traditions still strongly exist in OPN.				**0,461**	
I want to work with patients expected to fully recover.			**0,656**		
I do not want to work with older people close to death.			**0,624**		
OPN is challenging.		**0,392**			
OPN is comprehensive.		0,353	**0,399**		
OPN is joyful.	**0,461**		0,354		
OPN is depressing.	**0,445**		0,441		
OPN is not physically taxing.					**0,516**
Valuation					
OPN is not valued in society.				**0,693**	0,320
Other nurses do not value nurses working in OPN.				**0,658**	
OPN is valued in Finland.				**0,758**	
Nurses working in OPN are valued among other nurses.				**0,739**	
Eigenvalues	11.9	4.7	3.3	2.8	2.1
Percentage of explained variance	15.1	9.7	9.4	6.6	5.2
Cumulative percentage of explained variance	15.1	24.8	34.2	40.8	46.0

In the evaluation phase, two other instruments, KAOP (Kogan 1961) and FAQ1 (Palmore 1977, 1998), were used as outcome measurements in addition to SINOPS. Furthermore, WVI was used as an independent variable. The Cronbach's alphas for these instruments were calculated based on the primary data gathered at baseline (students n=87). The reliability of KAOP and FAQ1 instruments, based on Cronbach's alphas, was similar to that of previous studies conducted internationally (Table 15), and therefore the instruments were regarded as reliable (Zisberg et al. 2015, Matarese et al. 2013, Wang et al. 2010, Yen et al. 2009). For WVI, the Cronbach's alphas in this study (Table 15) were a little lower than in the previous studies (Leuty 2010, Meyer et al. 1998). Thus, the reliability of the instrument is somewhat debatable. One reason for this could be that the scale was not originally developed for the nursing field, but rather for university graduates, mainly in business. Nursing students may simply understand the items differently.

6.2.3. Validity of the results

Scoping phase

For the survey about nursing students' interest in OPN (I), the sample size being fairly small and from a restricted geographical area of Finland limits the generalisations that can be made based on the results. At the time that the survey was taken, the sample comprised approximately 13% of the graduating nursing students in Finland in 2009. On the other hand, the sample size can be considered to be satisfactory, because the sample was representative of the target population in terms of gender distribution, age and work experience, when compared to the results of a contemporary national survey conducted among graduating nursing students (Salminen et al. 2013). Thus, the results could be suggestively applied to a similar type of group. Also, the response rate (72%, n=183) can be considered to be rather good.

To avoid a biased perspective, a variety of data sources were used to obtain diverse and representative samples for the document analysis about Finnish society's attitudes towards older people (II) and the scoping literature review on previous research regarding OPN (III). In regards to the document analysis (II), the findings are only applicable at the time of this study in the areas of southern Finland where the studied newspapers are dominant. However, the findings could possibly be applied to the Nordic countries in general, due to, for instance, their broadly corresponding social systems and public health care services. The findings may also benefit researchers beyond the Nordic countries who study similar topics by providing possible contrasts. Although the findings constitute insights into Finnish society, which are otherwise difficult to acquire (Miller & Alvarado 2005), one should be very cautious to use them in isolation or as sole evidence of the general public's attitudes towards older people. For the scoping literature review (III), the lack of a scientific-quality assessment of the included articles may impact the uptake and relevance of the review's findings (Armstrong et al. 2011, Levac et al. 2010, Arksey & O'Malley 2005).

Evaluation phase

The quasi-experimental design enables some control over threats concerning the validity of the results (Polit & Beck 2008). However, it is highlighted that this study was purposefully carried out in actual circumstances (Eccles et al. 2003), i.e., in a natural environment with ordinary older people who were welcomed as they were, without any predetermined qualifications or training. Therefore, strict control was not the main focus, but rather development of a new educational approach readily implementable within the various existing nursing curricula.

Threats to internal validity compromise the conclusion that a relationship exists between the independent and dependent variables (Ferguson 2004, Eccles et al. 2003). In this study, most of these threats were eliminated by using comparison group design. Examples of said eliminated threats include history, maturation and testing, which are assumed to affect both groups alike.

The fact that the groups were non-equivalent caused a threat to the internal validity, as it was not initially possible to be sure if the groups differed significantly from each other (Eccles et al. 2003). When aiming to ensure comparable groups, it was decided to concentrate only on the groups made up of individuals who were completing their nursing degree programmes as full-time day students, and excluding, for instance, adult education and blended learning programmes. Moreover, both IGs and CGs were formed within the same polytechnic to equalise potential differences between the groups related to a specific geographical area or characteristics of a particular nursing degree programme.

Some contamination between the groups might have occurred, as it was not worthwhile to aim to fully control the design (Eccles et al. 2003). Although the IGs and CGs took their theoretical courses separately, it is possible that students from different groups discussed LOPP with each other. Similarly, students in the CGs actually saw the older people at the polytechnics, which may have impacted their responses. For the experimental mortality, similar fine loss of participants occurred across groups, therefore having very limited to no effect on the results. In both groups, the response rates were very high.

External validity refers to the degree to which the results of the study can be generalised across individuals, settings, and times (Ferguson 2004). The sample of the nursing students can be regarded as representative of the Finnish population in terms of gender distribution and age, when compared to the results of a recent national survey conducted among graduating nursing students (Kajander-Unkuri et al. 2014). From this perspective, the results are rather generalisable. However, generalising the results to apply to other populations, such LPN students, social work students or medical students, requires more caution.

Regarding the representativeness for the students' sample size, if it would have been bigger, it could have been possible to make stronger conclusions regarding the effect of LOPP. The achieved sample size was, however, regarded as satisfactory; inviting more polytechnics would have added uncontrolled confounding factors due to differences in curricula and characteristics of the polytechnics. Moreover, moderate recruiting was justified because there was no complete awareness of how the older people would handle the intervention, and unnecessary arrangements concerning polytechnics and students were avoided (Billingham et al. 2013). However, adjusting the sample size to better fit conventional power analysis would have strengthened the design by giving an estimation of the magnitude of the reached effects.

The results can be regarded a rather generalisable and applicable to other polytechnics in Finland because the starting point for nursing education in all polytechnics is the same (Eriksson et al. 2015, Directive 2005/36/EC and 2013/55/EU, Ministry of Education 2006). For the international educational institutions that share corresponding features with Finnish polytechnics and nursing degree programmes, these results can be taken in a suggestive nature.

It has not totally been excluded that the effect of LOPP is simply due to the fact that nursing students knew that they were participating in an experiment, and experienced the novelty of it (the Hawthorne effect). Effects might also be related to the fact that the researcher was also the instructor of LOPP, although the researcher did not know the students beforehand. The

researcher was not an employee at either of the polytechnics where LOPP was carried out. She had not taught or supervised any of the students before LOPP, nor did she do so afterwards. She has not had any impact on assessments or grades of the students either. Therefore, the relationship between the researcher and students is assumed to have had very limited or no impact on the students' responses. However it is possible that the students became acquainted with the researcher during LOPP and wanted to promote her study, leading them to comment on LOPP more favourably than they may have otherwise.

Like the nursing students, the older people also became acquainted with researcher, as she was in contact with them several times before LOPP as well as during the week. It is possible that this relationship became important to the older people, resulting in more positive evaluations. When planning LOPP, this personal contact was regarded as important, firstly, to a successful recruitment and secondly, to monitor and ensure the well-being of the older people.

6.3. Suggestions for future research

For future research, there are both methodological and content suggestions. There will be great need of research in the field of OPN, as well as in the field of nursing education. In this study, the perspectives of older people themselves and nursing students have been combined. A specially designed, new intervention was tested in nursing education that included older people as teachers.

- This study adds to the knowledge about the involvement of older people in nursing education and the resulting learning outcomes for nursing students. Previous studies have mainly produced descriptions of educational solutions without evaluating their effectiveness. Therefore, it is necessary to continue experimental research to develop evidence-base of the involvement of older people in nursing education.

- In addition to experimental research, longitudinal research should also be carried out. By examining how the career plans of nursing students change during education and how these plans actually realise after graduation, more information could be gained about the critical points in curricula when students make decisions regarding their future career. The most accurate method of revealing students' career choices would be to check if the students are in fact engaged in OPN post-graduation. These studies could provide information for possible curricula adjustments.

- It is justified to continue focusing on productive outcomes – interest in OPN and attitudes towards older people. However, it could be beneficial to expand the variation of outcomes. For instance, emotional and value-based outcomes and perceived self-efficacy or self-confidence could be relevant. For example, it was obvious that students had gained more courage and could better act on their own initiatives after LOPP, but there were no measurements for these outcomes. The relevance of the knowledge levels as an outcome measure should also be re-considered.

- This study focuses on nursing students studying to be RNs. Despite the supply of RNs, is important for the overall organisation of OPN, that LPNs be the largest staff group in the field in Finland. In addition, the reform of social welfare and health care services will have an impact on the delivery of OPN and most likely on the job descriptions of RNs and LPNs. Therefore, it is important to study LPNs and their career plans to ensure the future workforce supply.

- Older people who participated in LOPP were physically in good condition. The reality, however, is that some older people live in institutions, such as nursing homes, and are often isolated from the outside world. Given this fact, it is important to consider how they could continue to contribute and participate in society. As a result, the variation in participants of LOPP could be expanded. This requires exploring the possibilities and pre-conditions for this kind of partnership between older people and nursing education.

- This study produced knowledge about a new educational intervention tested for first time. LOPP and its outcomes still need further validation in future studies. At the same time, it would be beneficial to study its effects on nursing education. To improve the likelihood of successful implementation, systematic progress is required in terms of studying the implementation process.

- The instrument developed in this study, the Students' Interest in Nursing Older People Scale (SINOPS) is a worthy of further testing. In particular, the construct of the scale should be studied further.

- The topics of this study, i.e., nursing students and OPN as a future career and SUI in health care education are of international importance. Demographic changes are taking place in a number of countries worldwide. International research collaboration in these topics would produce new knowledge for solving the workforce demands in OPN and support the active involvement of service users, including older people, in a variety of societal activities.

6.4. Practical implications

According to the results of this study, the following practical implications for nursing education and policymaking can be presented.

Implications for nursing education:

- More attention needs to be paid to nursing education to be able to promote nursing students' interest in OPN as a future career. To reach this outcome, it is recommended that OPN is emphasised in nursing degree curricula. However, there are several ways to realise this: for instance, by providing students with learning experiences involving older people, delivering teaching as independent courses, offering optional studies related to OPN and supporting self-study with diverse learning materials.

- The variety of the teaching and learning methods could be broadened in OPN education. The intensive format applied in this study could be useful when the aim is to provide an opportunity for students to immerse themselves into a learning environment to deepen their understanding of an issue.

- If SUI is to be implemented, an explicit systematic approach is required in order to fully recognise the value of older people as service users in students' learning. Commitment, in terms of preparation and continuous evaluation, is required from all levels − from educational administrators to nurse educators − to avoid tokenistic participation of service users.

- The results of this study could also have implications on clinical placements, as they constitute a major part of nursing students' education, although this study did not address clinical practice, as such. The development of clinical learning environments is important for attracting nursing students to OPN.

Implications for policymaking

- Older people were proven to be valid partners when educating nursing students. Thus, there is no longer a need to categorise and label older people as particular group of people requiring paternalistic attention. Rather, they are able to equally participate in different arenas in society, if they want to.

- The enthusiastic attitudes of older people towards voluntary participation in a variety of actions aimed to improve the services and activities in society should be recognised and acknowledged. These kinds of valuable contributions, which are possibly related to generational characteristics, can be deployed in various arenas in society. This does not mean that the voluntary input of older people should not be reimbursed at all, but rather that increased participation of older people could be an economical way of developing and sustaining an affluent society.

- The concept of service users, nursing education staff and nursing students working together in equal partnership, could be the next educational export for Finland. As SUI continues to expand worldwide, the demand for best practices will increase. Demographic changes, the public social and health care services, and active citizens willing to participate and contribute are the foundations upon which Finland could build up its new export. Therefore, developing our evidence-base and diverse competence related to SUI could pave the way for international education markets.

7. CONCLUSIONS

It seems possible to positively impact nursing students towards choosing a career in OPN, at least in the short-term. The involvement of older people as promoters of career choice provides an encouraging alternative for impacting students' career choices. The involvement of older people enables meaningful participation for them to express themselves, and their contributions were both understandable and deemed valid by nursing students when learning about OPN. Choosing a career in OPN is, however, related to other factors as well, such as nursing work experience and educational preparation.

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9. REFERENCES

Abrahamsen B. 2015. Nurses' choice of clinical field in early career. Journal of Advanced Nursing 71 (2), 304–314.

Act 932/2014. Polytechnic Act. Accessed November 19, 2015, at: http://www.finlex.fi/fi/laki/ajantasa/2014/20140932 (in Finnish)

Act 980/2012. Act on Supporting the Functional Capacity of the Older Population and on Social and Health Services for Older Persons. Accessed November 19, 2015, at: http://www.finlex.fi/fi/laki/ajantasa/2012/20120980 (in Finnish)

AlSenany S, AlSaif AA. 2014. Gerontology course in the nursing undergraduate curricula. Revista da Escola de Enfermagem da USP 48 (6), 1077–1084.

American Association of Colleges of Nursing AACN and the Hartford Institute for Geriatric Nursing at New York University College of Nursing. 2010. Recommended Baccalaureate Competencies and Curricular Guidelines for the Nursing Care of Older Adults: A Supplement to The Essentials of Baccalaureate Education for Professional Nursing Practice. Accessed November 19, 2015, at: http://www.aacn.nche.edu/geriatric-nursing/AACN_Gerocompetencies.pdf

Arksey H, O'Malley L. 2005. Scoping studies: towards a methodological framework. International Journal of Social Research Methodology 8 (1), 19–32.

Armstrong R, Hall BJ, Doyle J, Waters E. 2011. "Scoping the scope" of a cochrane review. Journal of Public Health 33 (1), 147–150.

Başkale H, Serçekuş P. 2015. Nursing as career choice: perceptions of Turkish nursing students. Contemporary Nurse, 51 (1), 5–15.

Basran JFS, Dal Bello-Haas V, Walker D, Macleod P, Allen B, D'Eon M, McKague M, Chopin NS, Trinder K. 2012. The longitudinal elderly person shadowing program: outcomes from an interprofessional senior partner mentoring program. Gerontology & Geriatrics Education 33 (3), 302–323.

Beauvais A, Foito K, Pearlin N, Yost E. 2015. Service learning with a geriatric population. Changing attitudes and improving knowledge. Nurse Educator, 40 (6), 318–321.

Bernardini Zambrini DA, Moraru M, Hanna M, Kalache A, Macias Nunez JF. 2008. Attitudes toward the elderly among students of health care related studies at the University of Salamanga, Spain. Journal of Continuing Education in the Health Professions 28 (2), 86–90.

Billingham S, Whitehead A, Julious S. 2013. An audit of sample sizes for pilot and feasibility trials being undertaken in the United Kingdom registered in the United Kingdom Clinical Research Network database. BMC Medical Research Methodology 13, doi: 10.1186/1471-2288-13-104

Bing-Jonsson PC, Bjørk IT, Hofoss D, Kirkevold M, Foss C. 2015. Competence in advanced older people nursing: development of 'Nursing older people – Competence evaluation tool'. International Journal of Older People Nursing 10 (1), 59–72.

Birks M, Missen K, Al-Motlaq M, Marino E. 2014. Babies and machines that go 'beep': first-year nursing students' preferred areas of future practice. International Journal of Nursing Practice 20 (4), 353–359.

Bradbury-Jones C, Alcock J. 2010. Nursing students as research participants: A framework for ethical practice. Nurse Education Today 30 (2), 192–196.

Braun V, Clarke V. 2006. Using thematic analysis in psychology. Qualitative Research in Psychology 3 (2), 77–101.

Brown J, Nolan M, Davies S, Nolan J, Keady J. 2008. Transforming students' views of gerontological nursing: Realising the potential of 'enriched' environments of learning and care: A multi-method longitudinal study. International Journal of Nursing Studies 45 (8), 1214–1232.

Burg M-A, Waddell R, Doty R, Horne C, Weilgas C, Davidson R. 2001. Student interest in geriatric medicine: Comparing beginning medical, nursing and pharmacy students. Gerontology & Geriatrics Education 21 (4), 1–12.

Carlson E, Idvall E. 2015. Who wants to work with older people? Swedish student nurses' willingness to work in elderly care – A questionnaire study. Nurse Education Today 35 (7), 849–853.

Celenza A, Rogers IR. 2011. Comparison of visual analogue and Likert scales in evaluation of an emergency department bedside teaching programme. Emergency Medicine Australasia 23 (1), 68–75.

Chen S, Walsh SM. 2009. Effect of a creative-bonding intervention on Taiwanese nursing students' self-transcendence and attitudes toward elders. Research in Nursing & Health 32 (2), 204–216.

Cheng M, Cheng C, Tian Y, Fan X. 2015. Student nurses' motivation to choose gerontological nursing as a career in China: A survey study. Nurse Education Today 35 (7), 843–848.

Chenoweth L, Jeon Y-H, Merlyn T, Brodaty H. 2010. A systematic review of what factors attract and retain nurses in aged and dementia care. Journal of Clinical Nursing 19 (1–2), 156–167.

Chonody JM. 2015. Addressing ageism in students: A systematic review of the pedagogical intervention literature. Educational Gerontology 41 (12), 859–887.

Davies WM. 2006. Intensive teaching formats: A review. Issues In Educational Research 16 (1), 1–20.

Davis RL, Beel-Bates C, Jensen S. 2008. The Longitudinal Elder Initiative: Helping students learn to care for older adults. Journal of Nursing Education 47 (4), 179–182.

de Guzman AB, Jimenez BCB, Jocson KP, Junio AR, Junio DE, Jurado JBN, Justiniano ABF. 2013. Filipino nursing students' behavioral intentions toward geriatric care: A

structural equation model (SEM). Educational Gerontology 39 (3), 138–154.

DeKeyser Ganz F, Kahana S. 2006. Perceptions of Israeli student nurses regarding clinical specialties and factors that influence these perceptions. Journal of Advanced Nursing 56 (1), 88–98.

Deschodt M, Dierckx de Casterlé B, Milisen K. 2010. Gerontological care in nursing education programmes. Journal of Advanced Nursing 66 (1), 139–148.

DeVon HA, Block ME, Moyle-Wright P, Ernst DM, Hayden SJ, Lazzara DJ, Savoy SM & Kostas-Polston E. 2007. A psychometric toolbox for testing validity and reliability. Journal of Nursing Scholarship 39 (2), 155–164.

Directive 2005/36/EC. The European Parliament and the Council. The recognition of professional qualifications. Accessed November 19, 2015, at: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32005L0036&rid=1

Directive 2013/55/EU. The European Parliament and the Council. Amendment of the Directive 2005/36/EC. Accessed November 19, 2015, at: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013L0055&rid=1

Eaton J. 2015. The Feasibility of Ethnodrama as Intervention to Highlight Late-Life Potential for Nursing Students and Older Adults. Gerontology & Geriatrics Education 36 (2), 204–222.

Eccles M, Grimshaw J, Campbell M, Ramsay C. 2003. Research designs for studies evaluating the effectiveness of change and improvement strategies. Quality & Safety in Health Care 12 (1), 47–52.

Eriksson E, Korhonen T, Merasto M, Moisio E-L. 2015. Sairaanhoitajan ammatillinen osaaminen. Sairaanhoitajakoulutuksen tulevaisuus -hanke. Ammattikorkeakoulujen terveysalan verkosto ja Suomen sairaanhoitajaliitto ry. Bookwell Oy, Porvoo.

European Commission. 2012. EU Level Collaboration on Forecasting Health Workforce Needs, Workforce Planning and Health Workforce Trends – A Feasibility Study. Accessed November 20, 2015, at: http://ec.europa.eu/health/workforce/docs/health_workforce_study_2012_report_en.pdf

European Science Foundation and ALL European Academies 2011. The European Code of Conduct for Research Integrity. Accessed November 19, 2015, at: http://ec.europa.eu/research/participants/data/ref/h2020/other/hi/h2020-ethics_code-of-conduct_en.pdf

Eurostat 2015. Population structure and ageing. Statistics Explained. Eurostat, the statistical office of the European Union. Accessed November 20, 2015, at: http://ec.europa.eu/eurostat/statistics-explained/index.php/Population_structure_and_ageing

Fagerberg I, Winblad B, Ekman S-L. 2000. Influencing aspects in nursing education on Swedish nursing students' choices of first work area as graduated nurses. Journal of Nursing Education 39 (5), 211–218.

Ferguson L. 2004. External validity, generalizability, and knowledge utilization. Journal of Nursing Scholarship 36 (1), 16–22.

Ferguson LM, Myrick F, Yonge O. 2006. Ethically involving students in faculty research. Nurse Education Today 26 (8), 705–711.

Finnish Advisory Board on Research Integrity TENK 2012. Responsible conduct of research and procedures for handling allegations of misconduct in Finland. Accessed November 19, 2015, at: http://www.tenk.fi/sites/tenk.fi/files/HTK_ohje_2012.pdf

Finnish Hoidokki thesaurus 2015. Term in thesaurus: Gerontological Nursing. Accessed November 20, 2015, at: http://www.hoidokki.fi/index.php?MITform=termikorttti&la=eng&id=6414&MITklose=Stäng

Foley DK. 2008. Development of a Visual Analogue Scale to Measure Curriculum Outcomes. Journal of Nursing Education 47 (5), 209–213.

Frost J, Ranse K, Grealish L. 2015. Assessing ageist behaviours in undergraduate nursing students using the Relating to Older People Evaluation (ROPE) survey. Australasian Journal of Ageing, doi: 10.1111/ajag.12260.

Gallagher P, Carey K. 2012. Connecting with the well-elderly through reminiscence: Analysis of lived experience. Educational Gerontology 38 (8), 576–582.

Gibson A, Britten N, Lynch J. 2012. Theoretical directions for an emancipatory concept of patient and public involvement. Health 16 (5), 531–547.

Gilje F, Lacey L, Moore C. 2007. Gerontology and geriatric issues and trends in U.S. nursing programs: A national survey. Journal of Professional Nursing 23 (1), 21–29.

Gonçalves DC, Guedes J, Fonseca AM, Pinto FC, Martin I, Byrne GJ, Pachana NA. 2011. Attitudes, knowledge and interest: preparing university students to work in an aging world. International Psychogeriatrics 23 (2), 315–321.

Gould ON, Dupuis-Blanchard S, MacLennan A. 2015. Canadian nursing students and the care of older patients: How is geriatric nursing perceived? Journal of Applied Gerontology 34 (6), 797–814.

Gould ON, MacLennan A, Dupuis-Blanchard S. 2012. Career preferences of nursing students. Canadian Journal on Aging, 31 (4), 471–482.

Grainger P, Bolan C. 2006. Perceptions of nursing as a career choice of students in the Baccalaureate nursing program. Nurse Education Today 26 (1), 38–44.

Graneheim UH, Lundman B. 2004. Qualitative content analysis on nursing research: concepts, procedures and measures to achieve trustworthiness. Nurse Education Today 24 (2), 105–112.

Halperin O, Mashiach-Eizenberg M. 2014. Becoming a nurse - A study of career choice and professional adaptation among Israeli Jewish and Arab nursing students: A quantitative research study. Nurse Education Today 34 (10), 1330–1334.

Happell B, Brooker J. 2001. Who will look after my grandmother? Attitudes of student nurses toward the care of older adults. Journal of Gerontological Nursing 27 (12), 12–17.

Happell B, Byrne L, McAllister M, Lampshire D, Roper C, Gaskin CJ, Martin G, Wynaden D, McKenna B, Lakeman R, Platania-Phung C, Hamer H. 2014. Consumer involvement in the tertiary-level education of mental health professionals. A systematic review. International Journal of Mental Health Nursing 23 (1), 3–16.

Happell B. 2002. The role of nursing education in the perpetuation of inequality. Nurse Education Today 22 (8), 632–640.

Haron Y, Levy S, Albagli M, Rotstein R, Riba S. 2013. Why do nursing students not want to work in geriatric care? A national questionnaire survey. International Journal of Nursing Studies 50 (11), 1558–1565.

Haron Y, Reicher S, Riba S. 2014. Factors influencing nursing career choices and choice of study program. Health Marketing Quarterly 31 (2), 167–177.

Henderson J, Xiao L, Siegloff L, Kelton M, Paterson J. 2008. 'Older people have lives their lives': First year nursing students' attitudes towards older people. Contemporary Nurse 30 (1), 32–45.

Hidi S, Renninger KA. 2006. The four-phase model of interest development. Educational Psychologist (41) 2, 111–127.

Hwang H-L, Wang H-H, Lin H-S.2013. Effectiveness of supervised intergenerational service learning in long-term care facilities on the attitudes, self-transcendence, and caring behaviors among nursing students: A quasiexperimental study. Educational Gerontology 39 (9), 655–668.

Hwang H-L, Wang H-H, Tu C-T, Chen S, Chang S-H. 2014. Reciprocity of service learning among students and paired residents in long-term care facilities. Nurse Education Today 34 (5), 854–859.

Hweidi IM, Al-Obeisat SM. 2006. Jordanian nursing students' attitudes toward the elderly. Nurse Education Today 26 (1), 23–30.

International Council of Nurses ICN. 1999. Nursing Matters: ICN on Healthy Ageing: A Public Health and Nursing Challenge. International Nursing Review 46 (2), 60–61.

International Council of Nurses ICN. 2006. Nursing care of the older person. Position Statement. Accessed January 5, 2016, at: http://www.icn.ch/images/stories/documents/publications/position_statements/A15_Nsg_Care_Older_Person.pdf

Jha V, Quinton ND, Bekker HL, Roberts TE. 2009. Strategies and interventions for the involvement of real patients in medical education: a systematic review. Medical Education 43 (1), 10–20.

Jha V, Setna Z, Al-Hity A, Quinton ND, Roberts TE. 2010. Patient involvement in teaching and assessing intimate examination skills: A systematic review. Medical Education 44 (4), 347–357.

Jirwe M, Rudman A. 2012. Why choose a career in nursing? Journal of Advanced Nursing 68 (7), 1615–1623.

Kajander-Unkuri S, Meretoja R, Katajisto J, Saarikoski M, Salminen L, Suhonen R, Leino-Kilpi H. 2014. Self-assessed level of competence of graduating nursing students and factors related to it. Nurse Education Today 34 (5), 795–801.

Kelly T, Tolson D, Schofield I, Booth J. 2005. Describing gerontological nursing: an academic exercise or prerequisite for progress? International Journal of Older People Nursing in association with Journal of Clinical Nursing 14 (3a), 13–23.

King B, Roberts T, Bowers B. 2013. Nursing student attitudes toward and preferences for working with older adults. Gerontology & Geriatrics Education 34 (3), 272–291.

Kloster T, Høie M, Skår R. 2007. Nursing students' career preferences: a Norwegian study. Journal of Advanced Nursing 59 (2), 155–162.

Kogan N. 1961. Attitudes towards old people: The development of a scale and an examination of correlates. Journal of Abnormal and Social Psychology 62 (1), 616–622.

Koskinen S, Hupli M, Katajisto J, Salminen L. 2012. Graduating Finnish nurse students' interest in gerontological nursing – A survey study. Nurse Education Today 32 (4), 356–360.

Koskinen S, Salminen L, Leino-Kilpi H. 2014. Media portrayals of older people as illustrated in Finnish newspapers. International Journal of Qualitative Studies on Health and Well-being 9:25304, doi: 10.3402/qhw.v9.25304

Koskinen S, Salminen L, Puukka P, Leino-Kilpi H. 2016. Learning with older people – Outcomes of a quasi-experimental study. Nurse Education Today 37, 114–122.

Koskinen S, Salminen L, Stolt M, Leino-Kilpi H. 2015. The education received by nursing students regarding nursing older people: a scoping literature review. Scandinavian Journal of Caring Sciences 29 (1), 15–29.

Krapp A. 1999. Interest, motivation and learning: An educational-psychological perspective. European Journal of Psychology of Education 14 (1), 23–40.

Lahtinen P, Leino-Kilpi H, Salminen L. 2014. Nursing education in the European higher education area – Variations in implementation. Nurse Education Today 34 (6), 1040–1047.

Lai HL, Lin YP, Chang HK, Chen CJ, Peng TC, Chang FM. 2008. Is nursing profession my first choice? A follow up survey in pre-registeration student nurses. Nurse Education Today 28 (6), 768–776.

Lai CK, Chan JH, Wong IY, Fung JT, Pang PC, Fung KH, Kwok CP. 2015. Gains and development of undergraduate nursing students during a 2-year community service program. Journal of Nursing Education 54 (3, Suppl.), S21–25.

Lamet AR, Sonshine R, Walsh SM, Molnar D, Rafalko S. 2011. A Pilot Study of a Creative Bonding Intervention to Promote Nursing Students' Attitudes towards Taking Care of Older People. Nursing Research and Practice, Article ID 537634, doi:10.1155/2011/537634

Larsen PD, McGill JS, Palmer SJ. 2003. Factors influencing career decisions: Perspectives of nursing students in

three types of programs. Journal of Nursing Education 42 (4), 168–173.

Lee ACK, Wong AKP, Loh EKY. 2006. Score in the Palmore's Aging Quiz, knowledge of community resources and working preferences of undergraduate nursing students toward the elderly in Hong Kong. Nurse Education Today 26 (4), 269–276.

Leung AYM, Chan SSC, Kwan CW. 2012. Service learning in medical and nursing training: A randomized controlled trial. Advances in Health Sciences Education 17 (4), 529–545.

Leuty ME. 2010. Exploring evidence of validity for the construct of work values. Accessed November 30, 2015, at http://purl.umn.edu/97268.

Levac D, Colquhoun H, O'Brien KK. 2010. Scoping studies: advancing the methodology. Implementation Science 5:69, doi:10.1186/1748-5908-5-69

Le Var RM. 2002. Patient involvement in education for enhanced quality of care. International Nursing Review 49 (4), 219–225.

Manhardt PJ. 1972. Job orientation of male and female college graduates in business. Personnel Psychology 25 (2), 361–368.

Marsland L, Hickey G. 2003. Planning a pathway in nursing: do course experiences influence job plans? Nurse Education Today 23 (3), 226–235.

Matarese M, Lommi M, Pedone C, Alvaro R, De Marinis MG. 2013. Nursing student attitudes towards older people: validity and reliability of the Italian version of the Kogan Attitudes towards Older People scale. Journal of Advanced Nursing 69 (1), 175–184.

Mattos MK, Jiang Y, Seaman JB, Nilsen ML, Chasens ER, Novosel LM. 2015. Baccalaureate nursing students' knowledge of and attitudes toward older adults. Journal of Gerontological Nursing 41 (7), 46–56.

McCann TV, Clark E, Lu S. 2010. Bachelor of nursing students career choices: A three-year longitudinal study. Nurse Education Today 30 (1), 31–36.

Mckeown M, Malihi-Shoja L, Hogarth R, Jones F, Holt K, Sullivan P, Lunt J, Vella J, Hough G, Rawcliffe L, Mather MM. 2012. The value of involvement from the perspective of service users and carers engaged in practitioner education: Not just a cash nexus. Nurse Education Today 32 (2), 178–184.

McLaughlin K, Moutray M, Moore C. 2010. Career motivation in nursing students and the perceived influence of significant others. Journal of Advanced Nursing 66 (2), 404–412.

MediaAuditFinland. 2011. Statistics. Circulations 2011. Accessed January 6, 2016, at: http://mediaaudit-finland.fi/english/

Medical Subject Headings MeSH thesaurus 2015. Term in thesaurus: Geriatric Nursing. Accessed November 20, 2015, at: http://www.ncbi.nlm.nih.gov/mesh/?term=geriatric+nursing

Meyer JP, Irving G, Allen NJ. 1998. Examination of the combined effects of work values and early work experiences on organizational commitment. Journal of Organizational Behavior 19 (1), 29–52.

Miller FA, Alvarado K. 2005. Incorporating documents into qualitative nursing research. Journal of Nursing Scholarship 37 (4), 348–353.

Ministry of Education 2006. Ammattikorkeakoulusta terveydenhuoltoon. Koulutuksesta valmistuvien ammatillinen osaaminen, keskeiset opinnot ja vähimmäisopintopisteet. Opetusministeriön työryhmämuistioita ja selvityksiä 2006:24. Accessed November 19, 2015, at: http://www.minedu.fi/OPM/Julkaisut/2006/Ammattikorkeakoulusta_terveydenhuoltoon.html

Ministry of Education and Culture 2012. Education and Research 2011–2016. A development plan. Reports of the Ministry of Education and Culture, Finland 2012:3. Accessed November 19, 2015, at: http://www.minedu.fi/export/sites/default/OPM/Julkaisut/2012/liitteet/okm03.pdf?lang=fi

Ministry of Education and Culture 2016. Studies and degrees. Accessed January 6, 2016, at http://www.minedu.fi/OPM/Koulutus/ammattikorkeakoulutus/opiskelu_ja_tutkinnot/?lang=en

Ministry of Social Affairs and Health 2011. Socially sustainable Finland 2020. Strategy for social and health policy. Publications of the Ministry of Social Affairs and Health 2011:6. Accessed November 19, 2015, at: http://urn.fi/URN:ISBN:978-952-00-3136-7

Ministry of Social Affairs and Health 2013. Quality recommendation to guarantee a good quality of life and improved services for older persons. Publications of the Ministry of Social Affairs and Health 2013:19. Accessed November 19, 2015, at: http://urn.fi/URN: ISBN:978-952-00-3443-6.

Mooney M, Glacken M, O'Brien F. 2008. Choosing nursing as a career: a qualitative study. Nurse Education Today 28 (3), 385–392.

Morgan A, Jones D. 2009. Perceptions of service user and carer involvement in healthcare education and impact on students' knowledge and practice: a literature review. Medical Teacher 31 (2), 82–95.

Morrison K. 2009. Causation in educational research. Routlegde, London and New York.

National Advisory Board on Health Care Ethics ETENE 2001. Shared Values in Health Care, Common Goals and Principles. ETENE-publications 3. Accessed November 19, 2015, at: http://etene.fi/documents/1429646/1571616/Publication+3+Shared+values+in+Health+Care%2C+Common+Goals+and+Principles%2C+2001.pdf/10bdd2be-c322-48c2-a143-4e11ebc9235f

National Advisory Board on Health Care Ethics ETENE 2008. Old age and ethics of care. Report of the National Advisory Board on Health Care Ethics (ETENE). ETENE-publications 22. Accessed November 19, 2015, at: http://etene.fi/documents/1429646/1571616/Publication+22+Report+on+elderly+care,+2008.pdf/07934bba-7d1e-4f96-b911-a4e20d53136b

National Institute for Health and Welfare 2015. Personnel in local government health and social services 2014. Statistical report 16:2015. Accessed November 20, 2015, at: http://urn.fi/URN:NBN:fi-fe2015070210543

Neville C. 2015. Undergraduate nurse attitudes toward older adults and perceptions of working with older adults: An analysis of measurement instruments. Nurse Education Today 35 (1), 183–188.

Nolan MR, Davies S, Brown J, Keady J, Nolan J. 2002. Longitudinal Study of the Effectiveness of Educational Preparation to Meet the Needs of Older People and Carers: The AGEIN (Advancing Gerontological Education in Nursing) Project. English National Board for Nursing, Midwifery and Health Visiting, London.

Official Statistics of Finland OSF 2015. Population projection. Statistics Finland. Accessed November 20, 2015, at: http://www.stat.fi/til/vaenn/2015/vaenn_2015_2015-10-30_tie_001_en.html

Palmore E. 1977. Facts on Aging. A short quiz. The Gerontologist 17 (4), 315–320.

Palmore E. 1998. Facts on Aging Quiz, 2nd ed. Springer Publishing Co., New York.

Pan I-J, Edwards H, Chang A. 2009. Taiwanese nursing students' attitudes toward older people. Journal of Gerontological Nursing 35 (11), 50–55.

Perry J, Watkins M, Gilbert A, Rawlinson J. 2013. A systematic review of the evidence on service user involvement in interpersonal skills training of mental health students. Journal of Psychiatric and Mental Health Nursing 20 (6), 525–540.

Polit DF, Beck CT. 2008. Nursing research: Generating and assessing evidence for nursing practice, 8ht ed. Lippincott, Williams & Wilkins, Philadelphia.

Price SL. 2009. Becoming a nurse: a meta-study of early professional socialization and career choice in nursing. Journal of Advanced Nursing 65 (1), 11–19.

Rathnayake S, Athukorala Y, Siop S. 2016. Attitudes toward and willingness to work with older people among undergraduate nursing students in a public university in Sri Lanka: A cross sectional study. Nurse Education Today 36, 439–444.

Rattray J, Jones MC. 2007. Essential elements of questionnaire design and development. Journal of Clinical Nursing 16 (2), 234–243.

Reitmaier A, Davies S, Reveling Smith L, Mangan-Danckwart D, Hongerholt K, Klinkner J. 2015. Discovering intergenerativity: an evaluation of learning partnerships between student nurses and older adults. International Journal of Older People Nursing 10 (2), 115–126.

Rejeh N, Heravi-Karimooi M, Vaismoradi M. 2011. Iranian nursing students' perspectives regarding caring for elderly patients. Nursing and Health Sciences 13 (2), 118–125.

Repper J, Breeze J. 2007. User and carer involvement in the training and education of health professionals. A review of the literature. International Journal of Nursing Studies 44 (3), 511–519.

Rhodes C. 2012. User involvement in health and social care education. A concept analysis. Nurse Education Today 32 (2), 185–189.

Ridley RT. 2009. Assuring ethical treatment of students as research participants. Journal of Nursing Education 48 (10), 537–541.

Rognstad MK, Aasland O, Granum V. 2004. How do nursing students regard their future career? Career preferences in the post-modern society. Nurse Education Today 24 (7), 493–500.

Ryan A, Melby V, Mitchell L. 2007. An evaluation of the effectiveness of an educational and experiential intervention on nursing students' attitudes towards older people. International Journal of Older People Nursing 2 (2), 93–101.

Salminen L, Stolt M, Koskinen S, Katajisto J, Leino-Kilpi H. 2013. The competence and the cooperation of nurse educators. Nurse Education Today 33 (11), 1376–1381.

Salminen L, Stolt M, Saarikoski M, Suikkala A, Vaartio H, Leino-Kilpi H. 2010. Future challenges for nursing education – A European perspective. Nurse Education Today 30 (3), 233–238.

Scammell J, Heaslip V, Crowley E. 2016. Service user involvement in preregistration general nurse education: a systematic review. Journal of Clinical Nursing 25 (1–2), 53–69.

Schiefele U. 1991. Interest, learning and motivation. Educational Psychologist 26 (3 & 4), 299–323.

Schwartz LK, Simmons JP. 2001. Contact quality and attitudes toward the elderly. Educational Gerontology, 27 (2), 127–137.

Shellman J. 2006. "Making a Connection": BSN Students' Perceptions of Their Reminiscence Experiences with Older Adults. Journal of Nursing Education 45 (12), 497–503.

Shellman J. 2007. The effects of a reminiscence education program on Baccalaureate Nursing students' cultural self-efficacy in caring for elders. Nurse Education Today 27 (1), 43–51.

Shen J, Xiao LD. 2012. Factors affecting nursing students' intention to work with older people in China. Nurse Education Today 32 (3), 219–223.

Sherman RO, Chiang-Hanisko L, Koszalinski R. 2013. The ageing nursing workforce: a global challenge. Journal of Nursing Management 21 (7), 899–902.

Speed S, Griffiths J, Horne M, Keeley P. 2012. Pitfalls, perils and payments: Service user, carers and teaching staff perceptions of the barriers to involvement in nursing education. Nurse Education Today 32 (7), 829–834.

Stevens J, Crouch M. 1995. Who cares about care in nursing education? International Journal of Nursing Studies 32 (3), 233–242.

Stevens J. 2011. Student nurses' career preferences for working with older people: A replicated longitudinal survey. International Journal of Nursing Studies 48 (8), 944–951.

Takase M, Maude P, Manias E. 2005. Explaining nurses' work behaviour from their perception of the environment and work values. International Journal of Nursing Studies 42 (8), 889–898.

Tayebi Z, Dehghan-Nayeri N, Negarandeh R, Shahbazi S. 2013.Motives for entering nursing in Iran: A qualitative study. Iranian Journal of Nursing and Midwifery Research 18 (1), 59–64.

Terry J. 2012. Service user involvement in pre-registration mental health nurse education classroom settings: a review of the literature. Journal of Psychiatric and Mental Health Nursing 19 (9), 816–829.

Towle A, Bainbridge L, Godolphin W, Katz A, Kline C, Lown B, Madularu I, Solomon P, Thistlethwaite J. 2010. Active patient involvement in the education of health professionals. Medical Education 44 (1), 64–74.

Tullo StC E, Spencer J, Allan L. 2010. Systematic review: Helping the young to understand the old. Teaching interventions in geriatrics to improve the knowledge, skills and attitudes of undergraduate medical students. Journal of the American Geriatrics Society 58 (10), 1987–1993.

United Nations UN 2015. World Population Prospects: The 2015 Revision, Key Findings and Advance Tables. United Nations, Department of Economic and Social Affairs, Population Division. Working Paper No. ESA/P/WP.241. Accessed November 20, 2015, at: http://esa.un.org/unpd/wpp/Publications/Files/Key_Findings_WPP_2015.pdf

Usher K, West C, MacManus M, Waqa S, Stewart L, Henry R, Lindsay D, Conaglen J, Hall J, McAuliffe M, Redman-MacLaren M. 2013. Motivations to nurse: An exploration of what motivates students in Pacific Island countries to enter nursing. International Journal of Nursing Practice 19 (5), 447–454.

Vaismoradi M, Turunen H, BondasT. 2013. Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. Nursing and Health Sciences 15 (3), 398–405.

Van der Elst E, Deschodt M, Welsch M, Milisen K, Dierckx de Casterlé B. 2014. Internal consistency and construct validity assessment of a revised Facts on Aging Quiz for Flemish nursing students: an exploratory study. BMC Geriatrics 14:128, doi: 10.1186/1471-2318-14-128

Walker A. 2007. Why involve older people in research? Age and Ageing 36 (5), 481–483.

Walsh SM, Chen S, Hacker M, Broschard D. 2008. A creative-bonding intervention and a friendly visit approach to promote nursing students' self-transcendence and positive attitudes toward elders: a pilot study. Nurse Education Today 28 (3), 363–370.

Walton J, Blossom H. 2013. The experience of nursing students visiting older adults living in rural communities. Journal of Professional Nursing 29 (4), 240–251.

Waltz CF, Strickland OL, Lenz ER. 2010. Measurement in Nursing and Health Research. 4th ed. Springer Publishing Company, New York.

Wang C, Liao W, Kao M, Chen Y, Lee M, Lee M, Yen C. 2009. Taiwanese medical and nursing students interest levels in and attitudes towards geriatrics. Annals, Academy of Medicine, Singapore 38 (3), 230–236.

Wang C-C, Liao W-C, Kuo P-C, Yuan S-C, Chuang H-L, Lo H-C, Liao H-Y, Miller E, Lee M-C, Yen C-H. 2010. The Chinese version of the facts on aging quiz scale: Reliability and validity assessment. International Journal of Nursing Studies 47 (6), 742–752.

Watson R, Thompson DR. 2006. Use of factor analysis in Journal of Advanced Nursing: literature review. Journal of Advanced Nursing 55 (3), 330–341.

Wilkes L, Cowin L, Johnson M. 2015. The reasons students choose to undertake a nursing degree. Collegian 22 (3), 259–265.

World Health Organization WHO 2002. Active Ageing: A Policy Framework. Accessed November 19, 2015, at: http://whqlibdoc.who.int/hq/2002/WHO_NMH_NPH_02.8.pdf?ua=1

World Health Organization WHO 2015. World report on ageing and health. Accessed November 20, 2015, at: http://apps.who.int/iris/bitstream/10665/186463/1/9789240694811_eng.pdf

Xiao L, Shen J, Paterson J. 2013. Cross-cultural comparison of attitudes and preferences for care of the elderly among Australian and Chinese nursing students. Journal of Transcultural Nursing 24 (4), 408–416.

Yen C, Liao W, Chen Y, Kao M, Lee M, Wang C. 2009. A Chinese version of Kogan's Attitude toward Older People Scale: reliability and validity assessment. International Journal of Nursing Studies 46 (1), 37–43.

Zisberg A, Topaz M, Band-Wintershtein T. 2015. Cultural- and educational-level differences in students knowledge, attitudes, and preferences for working with older adults: An Israeli Perspective. Journal of Transcultural Nursing 26 (2), 193–201.