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**Student nurse knowledge and attitudes about ageing, older people and working with them:  
Does nursing education make a difference?**

By

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A thesis submitted in fulfilment of the  
requirements for the Degree of Doctor of

Philosophy in Nursing

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# Abstract

**Aim:** The ageing of the population requires student nurses to be adequately prepared to provide a range of care to older people across a variety of care settings. This study involved the development, implementation and evaluation of educational interventions that focus on student learning in relation to knowledge and attitudes about the ageing process, older people and working with them.

**Study setting and participants:** This study was conducted within a school of nursing in New Zealand and included undergraduate students from a Bachelor of Nursing programme across a four year period from 2011 to 2012.

**Study design:** A multiphase mixed methods longitudinal design was employed to address the aims of the research.

**Methods:** Phase I of the study employed a multimethod approach, including focus groups, a baseline survey questionnaire and an analysis of course documents. The findings from this phase informed phase II of the study, which involved the design of four educational interventions that were implemented within the undergraduate nursing programme. The interventions incorporated a blend of didactic and experiential learning opportunities. The third and final phase of the research involved an evaluation of the impact of these educational interventions on knowledge and attitudes using longitudinal quantitative survey data and qualitative student focus group data.

**Findings:** The findings revealed that student knowledge and attitudes towards the ageing process, older people and working with them shift in a positive direction during nursing education. The qualitative findings also offer valuable insights into the student experience of how nursing education impacts on knowledge and attitudes in relation to ageing, older people and working with them.

**Conclusions:** This study concludes that nursing education can be a valuable window of opportunity for facilitating the development of the necessary capabilities and in particular, the positive attitudes and knowledge, required by graduating nurses to meet the health needs of the ageing population.

# Dedication

In loving memory of my grandparents Leslie Arthur Boyer (1918-2006) and Peggy Irene Boyer (1921-2016). For as long as I can remember, they always referred to themselves as old. However, they were both young and heart and always knew how to enjoy a good laugh.

# Acknowledgements

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# Chapter one: Introduction

*Let us never consider ourselves finished nurses.... we must be learning all of our lives.*

Florence Nightingale (1820 – 1910)

## 1.1 Background

Over the last century, New Zealand along with other developed nations has experienced a shifting of the population age structure from younger to older people (Kinsella & Philips, 2005; World Health Organization, 2015). Population ageing brings with it many challenges for government planning in relation to the provision and delivery of social support and care systems. Significant to health care, the changing structure of the population has brought with it an epidemiological transition, in which there is an increasing prevalence of morbidity and mortality attributed to long-term chronic conditions (Kalach, Barreto, & Keller, 2005). New directions in health service delivery and hence the health workforce is required to meet the needs of older people.

The ageing process is not a disease. However, ageing does increase vulnerability to disease, with the onset and accumulation of long-term chronic health conditions disproportionately affecting the older population (Barnett et al., 2012; Marengoni et al., 2011; Miller, 2012; Watson, 2008). Despite this, older people are a diverse group (Bowling, See-Tai, Ebrahim, Gabriel, & Solanki, 2005). The health profile and health needs of older people span a wide spectrum, with some experiencing deteriorating health with advancing age, while others lead long healthy and active lives (Davey & Glasgow, 2006; Kinsella & Philips, 2005). The growing number of older people, coupled with the diversity of the ageing population will result in significant increases in service demand for a wide range of health services across the continuum of primary, secondary and tertiary healthcare provision (Eliopoulos, 2010).

To address the health needs of older people, a reorientation of the existing reactive care model, which focuses on cure and episodic, medicalised service delivery, to a more holistic and proactive model of care that prioritises health maintenance, wellness and

quality of life is required (Swerissen, 2009). In line with international directives the New Zealand Government Health of Older People Strategy (2002) and more recently, the Healthy Ageing Strategy (2016) were developed to guide service provision to ensure appropriate, responsive and timely services to meet the varied needs of older people.

Key concepts identified within both strategies are aligned to current literature relating to service provision for older people and encompass the concepts of proactive, restorative models of care and interdisciplinary and person-centred approaches that facilitate autonomy, independence and wellbeing for older people (World Health Organization, 2002). However, the success of any service level implementation is to an extent, reliant on the health professionals who execute care delivery. Despite system level changes in New Zealand and internationally to address the health needs of older people, there remain concerns globally about the quality of healthcare currently offered and the availability of suitably skilled staff to work with older people (J. Brown, Nolan, Davies, Nolan, & Keady, 2008a).

Healthcare professionals function in a society that has 'ageist roots' and therefore, it is not surprising that there is a large body of evidence indicating that older people experience discrimination and ageist attitudes in healthcare settings (Band-Winterstein, 2013). Older people are less likely to be informed about their illness, recovery, medications or recommended lifestyle changes (A. Clarke, 2009; Courtney, Tong, & Walsh, 2000). Their care needs are ignored, delayed, marginalised or treated as a low priority (Higgins, Van Der Riet, Slater, & Peek, 2007). Healthcare professionals often make assumptions about older people and their level of illness and frailty based solely on their age rather than on knowledge of them as an individual (Jansen & Morse, 2004; E. Palmore, 2001) and symptoms are often attributed to the ageing process (Wagg et al., 2008). Objectifying labels such as 'bed blockers' (Holroyd, Dahlde, Fehr, Jung, & Hunter, 2009), are often applied to older people as they are typically viewed as complex absorbers of time and resources (Currey, 2008). Ageism and the ageist attitudes of healthcare professionals represents a significant obstacle to the delivery of quality healthcare to older people (L. Giles, Paterson, Butler, & Stewart, 2002).

Alongside ageist attitudes, there is also evidence of inadequate knowledge and understanding of the ageing process by healthcare professionals, which can result in misdiagnosis, poor management of co-morbidities and ineffective discharge planning (J. Andrews, Manthorpe, & Watson, 2004). In addition, due to the interplay and complexity associated with the ageing process, coupled with long-term conditions and polypharmacy, older people have higher rates of iatrogenic complications such as nosocomial infections and functional decline, compared to younger healthcare consumers (Covinsky et al., 2003). Understanding the implications of ageing at an individual and societal level is a pressing health and clinical issue. All health professionals should have a set of core capabilities that are based on sound knowledge and understanding of the normal changes of ageing, age-related issues, and the unique needs of older people to ensure optimal care (Doerflinger, 2009). These core skills are especially significant for nurses who are at the forefront of patient care and therefore the healthcare providers best positioned for meeting the health needs of older people (King, Roberts, & Bowers, 2012).

Nursing, as the largest professional group within the health and disability sector, is key to responding to the challenges of meeting the health needs of the ageing population. Furthermore, nursing care of older people is not isolated to a single care setting, but rather, the majority of nurses will be involved in the care provision of older people regardless of their chosen work setting. The quality of care received by older people can be substantively influenced by nurses' negative stereotyping, misinformation or inadequate knowledge about the ageing process and older people (S. Gallagher, Bennett, & Halford, 2006).

As future health professionals, student nurses present an opportunity to begin to rectify the health service inadequacies experienced by some older people. However, the success of this is largely dependent on nursing education and the ability of curriculum to cultivate positive attitudes and knowledge towards ageing, older people and working with them.

The vocational nature of nursing education means that the undergraduate nursing curriculum is not limited to the classroom but also includes learning opportunities in

the clinical practice environment. From an educational perspective, this model aims to facilitate the opportunity for students to translate theoretical concepts to the practice environment (McGarry, Aubeeluck, Simpson, & Williams, 2009). This model also means that the process of nursing education and curriculum is influenced and shared across both clinical and academic institutions.

The theoretical and practice components of nursing education form the basis for the official or formal nursing curriculum in New Zealand. The formal curriculum is documented, visible and prescribed, which includes the curriculum framework, philosophy, learning outcomes, courses, content, instructional methods and evaluations (Billings & Halstead, 2015; Iwasiw & Goldenberg, 2015; Keating, 2015). Alongside the official curriculum, there is also the operational curriculum which consists of what is actually taught and includes the knowledge, skills and attitudes emphasised by academics in the classroom and clinical settings (Billings & Halstead). Through the operational delivery of the formal curriculum, students learn a great deal in relation to the rules, ways of interacting, beliefs and knowledge that is pervasive but not explicitly stated or overtly intended as part of the formal curriculum. Implicit messages of a curriculum process are often referred to as the hidden curriculum, which includes learning not intended as part of the formal curriculum (Billings & Halstead, 2015; Brodsky & Smith, 2012; Keating, 2015).

The hidden curriculum is characterised by the conveyance of subtle messages that are a function of the learning institution, clinical learning environment and society in general (Billings & Halstead, 2015). This aspect of the curriculum is expressed through verbal and nonverbal communication, priorities and staff interactions with both students and patients that emphasise the implicit beliefs about professionalism, customs, rituals and informal rules (MacMillan, 2016). The transmission of institutional beliefs and values is also present in the null curriculum, which represents content that is not included or recognised in the formal curriculum but portrays to students what is not valued or deemed important (Billings & Halstead). The messages and values transferred through the operational curriculum can function as both positive or negative underlying principles and values. However, they tend to reflect dominant ideologies that are culturally influenced and therefore, often reproduce the

values of society (Iwasiw & Goldenberg, 2015), such as ageism and the devaluing of older people and their care.

The potential for nursing education to reinforce the devaluing of ageing, older people and working with them through the operational delivery of the formal curriculum requires attention from nurse educators. Nursing education needs to incorporate evidence-based teaching and learning strategies concerning ageing and caring for older people that challenge the existing status quo to ensure older people receive effective, quality health services that address their unique health needs.

## **1.2 Study context**

The predominant model of professional nursing education in New Zealand is provided by schools of nursing that sit within polytechnic or university level learning institutions. Each school of nursing offers a three year degree programme that includes both theory and practice based components in the curriculum (Lim & Honey, 2014). Educational standards and outcomes are directed and monitored by both the Nursing Council of New Zealand and the academic institution the schools are located in. This study is conducted within a school of nursing that sits within a faculty of medical and health science at a New Zealand university. The curriculum and learning outcomes for the Bachelor of Nursing (BNurs) programme, offered by this school, are aligned with the New Zealand Nursing Council competencies for registered nurses and the generic graduate profile outlined by the university. The BNurs programme curriculum is organised to allow for an integrated approach. Firstly, integration is evident in the inclusion of both theory and clinical blocks, where students have the opportunity to acquire foundation knowledge and skills to support the learning and application of learning in the clinical environment. Secondly, the programme offers an integrated approach, in which content threads are weaved progressively through single semester 60 credit courses in years two and three of the programme. This structure reflects the way that nursing care operates, with recognition of the multiple facets of nursing knowledge and skills that apply to situations as opposed to a traditional, fragmented subject, oriented view of nursing and healthcare.

In year one of the programme, students complete foundation studies in the biological, behavioural and social sciences which include courses in anatomy and physiology, population health and health psychology. These courses are completed alongside students enrolled in other degree programmes such as Health Science and Biomedical Sciences, in which many of the students from these programmes are completing an intermediate year for admission into the Medical, Pharmacy or Optometry programmes offered within the faculty.

The first compulsory nursing course in year one of the programme is Introduction to Nursing Practice, which is offered in the second semester of this foundation year. This course introduces the profession of nursing and the dimensions of nursing practice together with an introduction to the context in which nursing is practised. The emphasis in this 30-credit course is on the acquisition of skills and attitudes appropriate for beginning nursing practice and the knowledge required to undertake beginning nursing practice safely. The course offers didactic teaching, as well as practical clinical skills and small group learning through tutorials. At the completion of the semester, students attend a clinical practice rotation within an acute care setting.

Year two and three of the programme focus on the profession and practice of nursing, including medical-surgical nursing, acute care, mental health nursing, disability nursing, community, child and family health nursing. A number of teaching and learning strategies, such as problem-based learning, small group work, reflective practice and experiential learning that incorporate the principles of adult learning provide an integrated approach to programme delivery. It is within the third-year semester one course, Child and family health nursing, where students complete a four-week module relating to older people's health.

The researcher has been employed by the School of Nursing since 2004, with a prominent role in the direction of several undergraduate courses. Prior to this, the researcher was a charge nurse of an older person's health assessment, treatment and rehabilitation ward at a tertiary hospital. In both roles, as an educator and a nurse, negative attitudes towards the ageing process, older people and working with them, were evident through interactions with health professionals, nurses and nursing

students. It is these experiences that led to an interest in undertaking the current study, which ultimately aims to improve the healthcare experiences and outcomes of older people by combating misconceptions and negative attitudes towards older people through the process of student nurse education.

### 1.3 The study

The specific purpose of this study is to design, implement and evaluate evidence-based teaching and learning interventions to facilitate the development of the capabilities required by nursing students to care for older people. The study involves three phases. The objective of phase I is to gain an understanding of the student population, the current curriculum and factors that influence student attitudes and knowledge about the ageing process, older people and working with them. The specific research questions associated with this phase are:

1. What are student nurses' current knowledge, skills and attitudes about ageing, older people and working with them?
2. What factors influence student nurses' current knowledge and attitudes about the ageing process, older people and working with them?
3. What role does the existing curriculum have on student knowledge and attitudes about the ageing process, older people and working with them?

Phase II draws on the findings of phase I and the current literature to design and implement a series of tailored and evidence-based teaching and learning interventions into the current nursing curriculum. The objective of the third and final phase of the study is to investigate the impact of the interventions by addressing the following research questions:

1. What is the immediate impact of each educational intervention on student nurse knowledge and attitudes toward the ageing process, older people and working with them?
2. What is the cumulative impact of the educational interventions on student nurse knowledge and attitudes towards the ageing process, older people and working with them (*changes over time*)?

3. What is the overall impact of the educational interventions in relation to student nurse knowledge and attitudes concerning the ageing process, older people and working with them (*changes on completion of the programme*)?

## **1.4 Definition of terms**

Some terms can have different interpretations or meanings depending on the context. To assist in providing clarity of meaning within this thesis the utilisation and interpretation of the following terms, ageism, attitudes and perceptions, capability, knowledge, older person and older people's health, are provided.

### **1.4.1 Ageism**

Ageism is a term frequently used, however; the meaning of this concept continues to be debated within the literature. Ageism was first defined by Butler (1969) as the prejudices and stereotypes that are applied to older people based on their age. While this definition of ageism implies that it involves only older people, ageism can be applied to younger age groups. There are similarities between ageism towards younger and older people, such as the inferior position they hold within the power structures of society. However, Iversen, Larsen, and Solem (2009), highlight that ageism towards older people is qualitatively different, in that it is associated with the negative connotations of deterioration rather than with the developmental potential of youth. In addition, the challenges of youth can be overcome through the life course and therefore, while the concept of ageism can be applied to any age it is most significant and detrimental when associated to those of old age. There are numerous terms utilised under the umbrella concept of ageism. For the purpose of this thesis, the terms: age bias, negative attitudes, negative stereotypes, misconceptions, prejudice, stigma and discrimination are all considered to fall under and constitute the term ageism. Furthermore, this thesis does not involve ageism directed at other groups, so the use of the term ageism and associated concepts only apply to older people.

### **1.4.2 Attitude and perception**

An attitude is an evaluation of people, objects, events, activities, and ideas. The attitude of a person is determined by psychological factors such as ideas, values, beliefs and

perceptions, which can be either positive, negative or ambivalent (Maio & Haddock, 2014). Attitudes include three components: cognitive; affective and; behavioural. The cognitive component refers to the beliefs, thoughts, and attributes associated with an object while the behavioural component relates to past behaviours or experiences regarding the object and behaviours in response to the attitude. The affective component includes the feelings or emotions associated with the object; it is these emotions and feelings that are deemed the most significant target in relation to facilitating attitude changes. Fazio and Olson (2003) describes that attitudes can be explicit, operating at a conscious level of, or implicit, which are formed unconsciously and involuntarily and often exist without our awareness.

Perception is closely related to attitudes and these terms are often used interchangeably in the literature. However, perception relates more specifically to the process by which, sensory information is interpreted and organised to be meaningful to an individual based on their prior experiences and therefore, can be viewed as the cognitive component of an attitude (Pickens, 2005). The term stereotype is a form of perception, in which a fixed set of generalised traits or characteristics are applied to groups of people or objects, as a means of organising sensory information and therefore, are a form of predetermined evaluation or attitude (Pickens). The interrelationship between attitudes and perceptions means that within this thesis and the interpretation of the literature, the terms attitude and perception are viewed as similar constructs and used interchangeably.

### **1.4.3 Capability**

Within the literature pertaining to the education of health professionals, the terms competency and capability are frequently used interchangeably. However, there are some distinct differences between these terms. Competency involves having sufficient knowledge and skill to perform a particular task. Competencies are individual sets of skills that can be measured and assessed against standard criteria (Gardner, Hase, Gardner, Dunn, & Carryer, 2008). In contrast, the term capability embraces a more holistic process and involves the integration of knowledge, skills, attitudes and personal qualities that are applied to respond effectively and appropriately to varied, familiar

and unfamiliar circumstances (Phelps, Hase, & Ellis, 2005). Given the dynamic nature of the healthcare environment and older people's health, capability focused education is favoured over competency-based education. Hase, Tay, and Goh (2006) report that 'capable' people are more likely to manage complex challenges or situations. However, this does not mean competencies are not relevant and indeed the demonstration of competencies is an important attribute of capabilities (Phelps et al.). Throughout this thesis, the term 'competency' will relate to the skills and knowledge of a particular task, whereas the term 'capability' will refer to the process of integrating knowledge, skills and attitudes, to undertake appropriate and effective action in relation to client care.

#### **1.4.4 Knowledge**

Knowledge is an abstract concept which has attracted the attention of philosophers since ancient times. However, debate continues about what constitutes knowledge. The Oxford Dictionary defines knowledge as facts, information, and skills acquired through experience or education; the theoretical or practical understanding of a subject (Stevenson, 2010). However, this definition has some limitations as it does not include cultural, personal or contextual factors in which individual perspectives influence interpretations of experiences. This means the concept of knowledge comprises both objective facts, information and skills that are influenced by subjective attributes (Bolisani & Bratianu, 2018). In this thesis, knowledge refers to awareness, or understanding of concepts that involves factual information or skills, which is acquired through experience or education and acknowledges the individualised nature of knowledge.

#### **1.4.5 Older people**

The terms old, elderly, senior and aged are all used in the literature to draw reference to older people. While these different terms are implied to mean the same group of people, there is no universally accepted definition of what constitutes an older person. At an individual level, the concept of old is increasingly recognised as a social construction that is influenced by culture and attitudes (Miller, 2012). A chronological definition for old is commonly applied, although, this is becoming increasingly contested as the number of years someone has been alive does not necessarily indicate

the manner of ageing. The World Health Organization (2002) defines an older person as someone 65 years and older. However, the category is becoming increasingly complex and contains sub-groups referred to as the young-old (65-74), mid-old (74-84) and old-old (85+) (Cheek, 2010). Therefore, there is a great deal of diversity among older people given that the chronological age range for this group spans 35+ years. While this thesis uses the term older people to include all those 65 years and older, this definition is used for ease of discussion rather than a belief that the concept of old can be so easily defined by a chronological number.

#### **1.4.6 Older people's health**

The term 'older people's health' is used in this thesis to encapsulate the variety of terms applied for both the care needs of older people and the health services provided to older people. Terms such as elderly care, geriatric care, gerontic care and aged care are terms used in the literature and often relate to specialised services for older people. However, given that older people use not only specialised but also mainstream health services, the concept of older people's health is significant across all care settings and therefore all health professionals.

### **1.5 Thesis structure**

This chapter has introduced the background and context for the current study. The next chapter provides a review of the literature that explores the concept of ageism within society, healthcare and student nurses. The literature review then goes on to address the key literature relating to nursing education in relation to facilitating knowledge and positive attitudes about the ageing process, older people and working with them. The methodological underpinnings for the study are discussed in chapter three. Chapter four provides the specific methods and design details of undertaking this study, which involves a multiphase mixed methods longitudinal design. Due to the multiphase nature of the study, the findings from each phase are presented in individual chapters. Chapter five presents the findings from the initial phase of the study, phase I. These findings are then discussed in chapter six in relation to informing the second phase of the research, the implementation of educational interventions. Chapter six also presents and describes the educational interventions designed and

implemented into the BNurs curriculum. The final findings chapter, chapter seven, presents the evaluative investigation of the impact of these interventions on student nurse attitudes and knowledge of the ageing process, older people and working with them. Chapter eight, the final chapter of this thesis, presents a discussion of the findings from phase III, including limitations of the study. Recommendations for nursing education practice and future research are also provided in this chapter.

## Chapter two: Literature review

*Education is not preparation for life; education is life itself.*

John Dewey (1859-1952)

### 2.1 Introduction

Registered nurses are integral to ensuring continuous, evidence-based, person-centred, and safe care to older people. With the increasing demand for healthcare services by this population group, the necessity for all nurses to be adequately prepared to meet the health needs of older people is of vital importance.

The purpose of this literature review is to supply the context and background of the issues that underpin the aims and objectives of the current study. Firstly, the ageing population and its health needs are discussed in part one of this chapter, which highlights the imperative for the nursing profession to be equipped with the appropriate capabilities to meet the diverse and complex health needs of older people. Part two of this chapter presents a significant barrier to achieving this, the stereotypical attitudes and misconceptions associated with older people and ageing that permeate society, healthcare and the nursing profession. Student nurses are not immune to ageism; however, the literature suggests that both knowledge and attitudes are malleable. Part three of this chapter explores nursing education and how it can shape knowledge and attitudes to ensure future cohorts of nurses possess the necessary capabilities to provide safe, effective and quality health care for the older population.

#### 2.1.1 Literature search

A systematic search of published literature was conducted via the databases of MEDLINE (OvidSP), Google Scholar, ERIC and PsycINFO. Limits of these searches included English language publications and publication date from 2000 onwards. Combinations of the following keywords were used for the search: 'ageing', 'older people', 'elderly', 'aged', 'seniors', 'nursing', 'health professionals', 'nursing student', 'ageism', 'stereotypes', 'attitudes', 'education'. The reference list of relevant

publications also served as a valuable resource for obtaining additional literature. A University of Auckland library catalogue search was also conducted for relevant texts.

## **Part 1: An ageing world**

### **2.2 Demographics and population ageing**

Population ageing is not a new phenomenon, nor is it isolated to New Zealand. The demographic trend, observed over the last century in the developed world and last two decades within the developing nations have altered the global age structure, shifting the weight of the population from younger to older people (Kinsella & Philips, 2005; World Health Organization, 2015). This phenomenon is attributed to decreased fertility and mortality rates. Further heightening this population transition is the elevated fertility rates during the two decades post World War II, coupled with decreased mortality rates and a subsequent decline in fertility rate. This has resulted in a demographic 'bulge', which is referred to as the 'baby boom' generation. In New Zealand, the first of the baby boom cohort became part of the over 65-age group in 2011. Population projections point to a significant acceleration in the growth of the older population in the coming decades. The 65+ population is expected to more than double to between 1.17 million and 1.48 million by 2051 when those 65+ will make up one-quarter or more of all New Zealand residents (Statistics New Zealand, 2013).

A further important demographic feature is that the older population is itself ageing; due to a combination of declining mortality and increasing lifespan at advanced ages. New Zealand is experiencing rapid growth in the number of people aged 85 years and over. In 2031, the post-WWII cohort will begin to turn 85, which will further heighten the rapid acceleration in the over 85-age group (Statistics New Zealand, 2009). A sizeable proportion of this cohort is expected to live into their 90s and beyond. New Zealand population projections estimate that those in the 85+ age group will quadruple by 2051 (Statistics New Zealand, 2013). Also, the increase in the old-old population will be particularly pronounced for women. This is similar to international trends, where differences in life expectancy between the sexes are evident and consistently higher for women compared to men. However, as both men and woman are living to

older age, it is expected that the differentiation between the sexes may decline, especially in the younger section of the older population, with overall population projections predicting 122 women for every 100 men aged 65 years and older in 2051 (Statistics New Zealand, 2009).

The ageing population in New Zealand is becoming more ethnically diverse, with significant increases projected for older Māori, Pacific and Asian people. The Māori population of people aged 65 and older is projected to increase by 79 percent in the ten years to 2026. (Statistics New Zealand, 2015) The older Pacific population is expected to increase by 63 percent and the older Asian population by 125 percent in this same period (Associate Minister of Health, 2016).

Both Māori and Pacific people experience morbidity and mortality at younger ages compared to the overall population (Hayman et al., 2012). However, both Māori and Pacific populations in New Zealand are experiencing a demographic transition similar to the general population. By 2051; it is estimated that Māori will make up ten percent of all older people, with the largest portion of the older Māori cohort in the 65-74 age range. Similarly, Pacific peoples will represent 4.4 percent of the older population by 2051. The majority of this group will also be in the 65-74 age range (Statistics New Zealand, 2015). Consequently, the cultural health needs of the ageing population will become increasingly varied.

Population ageing brings with it many challenges for government planning in relation to the provisions and delivery of social support and care systems. In relation to health care, the changing structure of the population has brought with it an epidemiological transition, in which there is an increasing significance of morbidity and mortality attributed to long-term chronic conditions (Kalach et al., 2005). In developed countries such as New Zealand, this epidemiological transition commenced at the end of the 19<sup>th</sup> century where improvements in sanitation and medical advances resulted in increases in life expectancy. While changes to accommodate this epidemiological transition have been made within New Zealand; the need to further adapt to meet the health needs of the ageing population effectively is evident. This is because as people age their health and support needs change (Hollander, Chappell, Prince, & Shapiro,

2007). The impact and dynamics of population ageing on health service delivery and consequently health professional education emphasises the importance of the current research project.

### **2.3 Health of older people**

Recognising and understanding the ageing process and the health of older people is a pressing health and clinical issue. Older people are a diverse population group (Bowling et al., 2005; World Health Organization, 2015) and therefore the health profile of older people spans a wide spectrum, with some experiencing deteriorating health with advancing age, while others lead long healthy and active lives (Davey & Glasgow, 2006; Kinsella & Philips, 2005; World Health Organization, 2015).

The biological and physiological processes associated with ageing are thought to be a complex process of damage accumulation (Kirkwood, 2008). Theories to explain ageing can be categorised as genetic, biochemical or environmental. It is generally recognised that no one factor alone contributes to the process of ageing, but rather a combination of them all (Miller, 2012; Steves, Spector, & Jackson, 2012). A person's genetic make-up has an influence on longevity and susceptibility to disease and therefore, plays a part in how long and how well an individual ages. However, while ageing can be viewed as something intrinsic, it is also well recognised that external factors can influence ageing by accelerating or decelerating the inevitable biological processes. These factors include diet, physical activity, exposure to health risks such as those caused by smoking, alcohol, or other toxic substances. That is, ageing is influenced by behaviours and exposure throughout the lifespan (Steves et al., 2012). This life course approach to ageing identifies that there are modifiable factors in how people age and consequently, this supports a conceptual shift from ageing as an inevitable decline, to that of a successful or healthy ageing paradigm (World Health Organization, 2015).

Healthy ageing recognises health as a multidimensional concept that encompasses not only physiological wellbeing but also the psychological, social, and spiritual wellness of a person (Bowling, 2008; B. J. Smith, Tang, & Nutbeam, 2006). The relationship

between the mind, body, spirit and environment are all significant elements of healthy ageing, which includes active engagement in life, high cognitive and physical function and a low probability of disease and disability (Miller, 2012). Even though a vast majority of older people experience healthy ageing, for others, ageing brings problems that appear to be related to the process of ageing which results in a decreased ability to regulate the internal environment of the body and hence maintain homeostasis (Watson, 2008). Furthermore, with ageing, there is some associated decline in physiological capacity, which increases older person's susceptibility to illness, disease development and the associated decline in functional ability (Beard & Bloom, 2015; Marengoni et al., 2011).

### **2.3.1 Long-term chronic conditions**

While ageing itself is not a disease; ageing processes do increase vulnerability to disease and the onset and accumulation of long-term chronic health conditions disproportionately affect this age group (Barnett et al., 2012; Marengoni et al., 2011; Miller, 2012; Watson, 2008). Long-term conditions are a significant factor in the development of poor health in older people and are the main contributors to ongoing disability, diminished quality of life, institutionalisation, premature mortality and increased demand and need for health and support services (Marengoni et al., 2011; World Health Organization, 2015). Furthermore, having one long-term condition does not prevent the development of another and is associated with the subsequent development of further conditions (Beard & Bloom, 2015; A. Williams, 2004), resulting in many older people living with con-current chronic long-term conditions or co-morbidities.

Despite the correlation between ageing, long-term conditions and co-morbidity, there is evidence to suggest that current and future cohorts of older people will experience longevity coupled with better health than previous generations (Chatterji, Byles, Cutler, Seeman, & Verdes, 2015; Shaw, 2002; Wilson & Rodway, 2006). This compression of morbidity represents the ideal of ageing in which there is a positive shift in life expectancy with a relatively short period nearer the end of life where disability, functional and terminal decline may be experienced (Fries, 2003). Cohort studies

conducted with older people suggest the prevalence of long-term conditions increases with age; however, the prevalence and level of associated disabilities or impairment are decreasing when compared to previous generations of older people (Beltrán-Sánchez, Jiménez, & Subramanian, 2016; Chatterji et al., 2015). However, trends of healthcare usage by older people indicate that regardless of improvements in population health, the sheer numbers of older people will result in an increased demand for health and disability support services. Cornwall and Davey (2004) report older people are known to consume up to four times the amount of health care services than would be consistent with their share of the population. Furthermore, the risk of developing comorbidities and the subsequent consequences are even greater for those in the old-old age group, the fastest growing group of the older population. The older population is rapidly becoming the core business of healthcare; therefore, it is imperative that nurses and other health professionals are appropriately educated to meet their health needs.

### **2.3.2 Complexities of illness and disease**

When disease or illness does occur in older people, the effects can be more debilitating than in younger people. The combined and cumulative effects of ageing and disease can make it increasingly difficult to maintain homeostasis and can place the older person in a precarious situation for maintaining health and independence, especially during or following the onslaught of illness, exacerbations of chronic conditions, injury or stressful life events (Amelia, 2006; Prince et al., 2015).

This can result in older people experiencing increasing cycles of ill health that manifest in a 'yo-yo' effect of ups and downs (Miller, 2012). Such changes are called 'transitions', which refer to some form of destabilisation in a person's health that is often accompanied by diminishing resilience associated with each subsequent transition (Gill, Gahbauer, Han, & Allore, 2015). Each episode of ill health can result in a cascading effect of further ill health, decreased functional ability and quality of life. The impact of functional decline during or post hospitalisation is a well-documented phenomenon (Anpalahan & Gibson, 2008; Covinsky et al., 2003; Doerflinger, 2009; Graf, 2006; Hoogerduijn, Grobbee, & Schuurmans, 2014) and results in an increased

risk of illness and death, longer hospital stays, greater risk of re-admissions, loss of autonomy, increased dependence and institutionalisation (Graf, 2006).

Functional decline does not only occur because of hospitalisation but can occur in all settings. Inouye, Studenski, Tinetti, and Kuchel (2007), identify functional decline as one of the common syndromes of old age. Syndromes manifest as symptoms that arise from the complex interplay between disease, medication management, ageing processes and the environment (Amelia, 2006). Other common syndromes seen in older people include falls, urinary incontinence, delirium, pressure ulcers and malnutrition (Inouye et al., 2007). These syndromes involve accumulated impairments in multiple systems rather than a single discrete disease process. They are associated with poor health outcomes, functional dependency, decreased quality of life (Hoogerduijn et al., 2014; Lee, Cigolle, & Blaum, 2009) and they can be challenging to manage due to their complex causation.

In addition, the complexity of health in older people links to the potential for an altered presentation of disease. That is, the typical signs and symptoms associated with a particular disease or illness, may not be present in an older person (Amelia, 2006; Peters, 2010). Symptoms such as shortness of breath, syncope, nausea / vomiting, or falls can be how an acute condition, such as myocardial infarction, present in an older person, as opposed to the frequently associated chest pain (Miller, 2012; Samaras, Chevalley, Samaras, & Gold, 2010). Additionally, illness or disease in one body system can affect the reserve capacity of another system. Pneumonia or a urinary tract infection can manifest in the neurological system as an acute confusion. Delirium may be the only symptom of a serious illness such as infection or metabolic abnormality (Doerflinger, 2009). Age related changes in thermo-regulation can result in infections and sepsis that are unaccompanied by fever. Typical markers of infection, like elevated body temperature, can be masked by medications such as non-steroidal anti-inflammatory medications that are taken for the management of chronic conditions in other body systems (Amelia, 2006; Gillis, MacDonald, & MacIsaac, 2008).

The increasing complexity of presentation and health needs of an ageing population is raising concerns globally about the quality of healthcare currently offered and the need

for suitably skilled staff to work with older people (Associate Minister of Health, 2016; World Health Organization, 2015). The need to ensure health professionals are adequately trained to address the complex needs of older people highlights the importance of the current study.

## **2.4 Healthcare provision**

As long-term and complex conditions become more prevalent with the ageing population, there is increasing pressure to re-orient the care system from that of a reactive care model to a proactive system that promotes health and wellbeing (Associate Minister of Health, 2016; Swerissen, 2009; World Health Organization, 2015). There is a large body of evidence indicating that older people experience discrimination in healthcare at both an institutional and individual level and that this discrimination occurs across a variety of settings (World Health Organization, 2015). Dobrowolska et al. (2017) conducted a study utilising a purposeful sample of 80 older patients and 100 medical and nursing students. Experiences of age discrimination in healthcare institutions were reported by 30% of the older people and witnessed by 47% of the students. While most of the instances of discrimination were reported to be by physicians, there is also literature highlighting the influence of ageism on nursing practice (Kagan & Melendez-Torres, 2015).

An increased Primary healthcare focus in the form of screening programmes, risk reduction interventions, environmental modifications and health education have a crucial role in facilitating health and wellness in older people. However, Lyons (2009) highlights that the diagnostic work-up for conditions such as cancer and cardiovascular disease is often less extensive in older people as compared to younger people. Age cut-offs for preventive and early recognition screening for diseases such as breast cancer, cervical cancer and cardiovascular disease can potentially result in disparities of access to particular treatments, specialists, surgeries, and diagnostic tests for older people (Kane & Kane, 2005). Literature suggests that misconceptions and negative attitudes about ageing and older people held by General Practitioners (GP) can influence care provision. According to Levenson (2003), age was a considered factor in clinical decision-making by GPs, who often think that because old age is

unstoppable, any illness that accompanies old age is not that important but rather a natural part of ageing. Examples of these include problems such as incontinence, where management tends to emphasis containment, with a widespread failure to establish the cause. A systematic review by (Roe et al., 2011) provides evidence to support a widespread conservative approaches for managing incontinence rather than promoting continence is reported. Hence, incontinence is often treated as an expected consequence of ageing (Wagg et al., 2008). Osteoporosis, a condition that is prevalent in the older population, is not always identified until secondary complications occur (Barton, Behrend, & Carmouche, 2018). If detected early, there are treatment and management options that can prevent the occurrence of unnecessary complications such as fractures (Barton et al., 2018; Mauck & Clarke, 2006).

For those older people who do develop health issues or long-term conditions, early detection, monitoring, access to the right support and a restorative care focus will help offset the impact of functional decline, severe disability and the occurrence of catastrophic consequences (Cornwall & Davey, 2004; McLafferty & Morrison, 2004; Miller, 2012). However, current models of health care tend to remain heavily focused on episodic and medicalised service delivery (Barnett et al., 2012; Swerissen, 2009). Furthermore, evidence to guide the care of older people lags well behind the need. This is largely due to systematic age bias in scientific investigations and health research which tends to focus on individual diseases and exclude older people and / or those with co-morbidities (Barnett et al., 2012; Kagan, 2008; Van Spall, Toren, Kiss, & Fowler, 2007; van Weel & Schellevis, 2006)

Across all care settings, a core focus of healthcare needs to be on maintaining function and where relevant, a rehabilitative and restorative approach to care and management should be applied (Tinetti et al., 2002). However, it is often quicker to 'do for' rather than 'promote independence'. Frequently, older people in the acute care environment experience decreased function and increased dependence by the time they are discharged (Gillis et al., 2008). Graf (2006) highlights that for many older people who do require admission to hospital, poor management of their co-morbidities coupled with ineffective discharge planning and poor communication with community and primary service providers results in 'revolving door admissions'. That is, older people

are subject to repeated hospitalisation for acute care that is superimposed by the poorly met needs of their long-term conditions (A. Williams, 2004). Gillis et al. 2008 conducted a study with 157 registered nurses using a descriptive cross-sectional survey. The findings revealed substantial gaps in nurses' knowledge and theoretical understanding of care management of older people or the prevention of deconditioning in older people. These findings emphasise the significance of nursing education for fostering relevant knowledge and understanding of the care needs of older people.

The acute care setting is a potentially dangerous place for older people. They are more likely to develop post-operative and iatrogenic complications; nosocomial infections and functional decline compared to younger patients (Covinsky et al., 2003). Older people report they are ill-informed regarding their illness, recovery, medications or recommended lifestyle changes, which are invariably factors that contribute to the higher readmission rates observed in this group of the population (A. Clarke, 2009; Courtney et al., 2000). The nature and culture of the acute care environment foster paternalistic, task-oriented routines in which technological and pharmacological management is valued (Moyle, 2003; Stevens, 2011). This can result in older patients and their care being marginalised (Marshall, 2010). The care needs of older patients are often deemed not as important, are disregarded, ignored, delayed or seen as a low priority in the acute care setting (Higgins et al., 2007). Furthermore, because the care of older people does not reflect the fast paced nature of the acute care environment discriminatory, objectifying labels such as 'bed blockers' (Holroyd et al., 2009), are often applied to older people as they are typically viewed as complex absorbers of time and resources (Currey, 2008).

The New Zealand Government's Healthy Ageing Strategy (2016) provides a framework for the provision of appropriate, responsive and timely services to meet the varied needs of older people and maximise health outcomes for older people. Key concepts identified in the strategy align with current literature relating to service provision needs for older people. The strategy encompasses the concepts of proactive and restorative models of care, interdisciplinary and person-centred approaches that facilitate autonomy, independence and wellbeing for older people. At a government

and health system level, numerous strategies, programmes, and models of care have been implemented to address the care needs of older people. However, the success of these is to an extent, reliant on the health professionals who execute care delivery. Older people have reported health professionals making assumptions about their level of illness and frailty based solely on their age rather than knowledge of them as an individual (Jansen & Morse, 2004; E. Palmore, 2001; Skirbekk & Nortvedt, 2014). This suggests the need for health professional education that addresses attitudes and knowledge about the ageing process, older people and their care needs.

## **2.5 Section summary**

This section has highlighted the changing demographics resulting in an ageing population. With this change, health care services need to effectively respond to the diverse, complex and individualised health needs of older people. However, current health service provision and health care professionals often poorly meet these needs. A significant barrier to providing appropriate health services to older people is the negative attitudes and misconceptions of ageing and older people, which are prevalent at both a societal and healthcare level. Within the context of healthcare and nursing, negative attitudes and poor knowledge result in the marginalisation of older people's health needs, poor management of symptoms and increased risk for unnecessary decline in health status and functional ability. Therefore, the concept of ageism can be viewed as a significant risk to the health of older people.

## **Part 2: An ageist world**

### **2.6 Ageism**

A key factor influencing the healthcare received by older people is the persistence of inherent ageism in our society, which in turn is reflected in the attitudes of health professions. There is a pressing need to rectify this because it is a crucial barrier to the delivery of appropriate and quality health services for older people (Angus & Reeve, 2006; J. Brown et al., 2008a; L. Giles et al., 2002; Kite & Wagner, 2002; Liu, Norman, & While, 2013). At the individual level, ageism manifests as avoidance of contact with older people, age denial, patronising ageist language, ageist humour and holding negative attitudes and stereotypes about older people (Bodner, 2009; Nelson, 2005). At the institutional level ageism is present through discrimination in employment and healthcare, mandatory retirement and other social policies which act to demean and devalue ageing and older people (Bodner, 2009; Lyons, 2009). Societal aspects of ageism include age-norms, age-segregation (Bodner, 2009; E. Palmore, 2005) and ageist discourse (Bonnesen & Burgess, 2004; Phelan, 2011).

Ageism is an attitude. It involves the expression of a perception towards an object or person. Like all attitudes, ageism incorporates three parameters; cognitive, affective and behavioural (Lassonde, Surla, Buchanan, & O'Brien, 2012; Phelan, 2011). A stereotype forms the cognitive component and involves the attribution of a range of distinctive characteristics to all members of a group. Stereotypes tend to ascribe to negative characteristics, although they can also be positive and draw upon generalisations that foster a belief about a group of people (Bytheway, 2005a). It is such beliefs that result in prejudice, which is the process of pre-judging a particular object (person, place or thing) by one or more of its characteristics (Braithwaite, 2002). With ageism, individuals are pre-judged based on their chronological age or the perception by others about their age, based on their physical appearance. It implies the arrival at a judgment before sufficient evidence has been gathered about the person and is based on the perceiver's likes, dislikes and feelings (the affective component), and their pre-determined beliefs (Lassonde et al., 2012). The affective prejudice and cognitive belief components of an attitude can influence a person's actions or behaviours. In ageism, this manifests as discrimination, in which people are

marginalised, stigmatised and treated a particular way based on the stereotypical beliefs and prejudices that are held by the perceiver (Nelson, 2005).

Despite a fundamental social expectation to respect older people, Castelli, Zecchini, Deamicis, and Sherman (2005) report that older people automatically activate a negative affective(emotional)response in others. In comparing pictures portraying younger and older people, Castelli et al. (2005) found pictures of older people automatically activated avoidance responses in participants, which demonstrated a negative emotional response to older people which is an implicit bias

This negative feeling about older people, coupled with a general lack of knowledge about ageing, combine to form an extremely pessimistic view of older people and the ageing process (Bonnesen & Burgess, 2004). This results in general societal perceptions that equate being old with:

- i. Poor health, illness, disability;
- ii. Lack of mental sharpness, failed memory, senile;
- iii. Sad, depressed, lonely, grouchy;
- iv. Sexless, boring;
- v. Lack of vitality, loss of vigour, inevitable decline and;
- vi. Unable to learn or change, unproductive (Thornton, 2002).

While ageism is generally thought to be negative, E. Palmore (1999) identified that positive stereotypes and discrimination favouring older people also exist. For example, the positive stereotype the 'perfect grandparent' includes traits such as capable, wise, alert, healthy and family oriented (Bousfield & Hutchison, 2010). Other positive stereotypes associated with older people include helpful, kindly, serene and trustworthy (Cuddy, Norton, & Fiske, 2005). Thus the literature suggests that multiple sub-stereotypes and attitudes exist that can be either negative, positive, or ambivalent. Hence, attitudes about older people are not one-dimensional (Harwood, Hewstone, Paolini, & Voci, 2005). The stereotype content model suggests that people stereotype others along the dimensions of warmth and competence. Utilising multiple survey studies in which participants rated different social groups within American society, Cuddy and Fiske (2002) found that older people are consistently stereotyped high on

warmth but low on competence; that is, they are ‘doddering but dear’. This model also predicts that each stereotype carries with it at least one of four emotions: envy, pity, admiration and contempt.

Further research with college students (N=55) found pity as the emotion they were most likely to feel towards older people (Cuddy et al.). Stereotypes and the associated emotions they provoke, underpin the actions of individuals, organisations and society (Fajemilehin, 2004). Discriminatory actions occur based on the pre-determined expectations that are assumed from underlying stereotypical beliefs and feelings about older people (Bytheway, 2005b; Lyons, 2009). Discriminatory actions can be viewed as positive or negative but often have detrimental consequences, particularly when expressed at an interpersonal level, which is a crucial element of the nurse-client relationship.

Helping behaviours, in the form of paternalism, is often applied to older people and are triggered by the affective emotions of pity and compassion (J. Clarke, 2003; Lassonde et al., 2012). However, compassionate ageism, while often meant with good intentions, tends to reinforce the stereotype that older people are incompetent. In addition, Hagestad and Uhlenberg (2005) describe how behaviours such as over-helping, fosters and results in spiralling helplessness and dependency in older people. Bytheway (2005a) highlights how positive forms of societal discrimination, such as concessionary public transport fares; a positive form of discrimination, can also reinforce the stereotype that older people are poor and need financial support. Furthermore, positive discrimination at a societal level may cause resentment from younger people and thus acts to reinforce and separate older and younger people into a ‘them and us’ situation (Nelson, 2005). Therefore, even when discrimination is positive, it tends to reinforce negative beliefs and attitudes.

Ageist ideology is so implicitly ingrained and accepted in our society that it operates outside of conscious awareness, intention or control (Levy & Banaji, 2002). While people are not innately born with ageist attitudes, Montepare and Zebrowitz (2002) state that ageism is so embedded in broader social perceptions that ageist attitudes and stereotypes are acquired from everyday social environments beginning in childhood

and often without any awareness. Primarily, socialisation to the world occurs through direct and indirect observations, experiences and conditioning to the wider social norms. Within the Western culture, the norms children are socialised into, is one in which ageist discourse and images are prevalent hence, children readily adopt these norms because they appear to be ontologically and epistemologically stable and true (Phelan, 2011). Studies have demonstrated that age related stereotypes develop early in life and children's stereotypes towards older people are very similar to those expressed by young adults (Gilbert & Ricketts, 2008). Children also show a preference to be with younger people and express negative feelings about their own ageing. (Bodner, 2009; Castelli et al., 2005).

### **2.6.1 Theories of ageism**

Ageism is a complex phenomenon that has historical, cultural, social, psychological and ideological dimensions (Iversen et al., 2009). Numerous theories are proposed to explain ageism and incorporate one of two levels of explanation, or a combination of them both. Macro-level theories attribute ageism to societal and cultural structure, norms and attitudes (Ayalon, 2013). Whereas micro-level theories incorporate variables that identify individual differences as a source of ageist attitudes (Ayalon, 2013; Hagestad & Uhlenberg, 2005). The permeation of ageism through all levels of society suggests ageism exists due to multifactorial reasons that span both micro and macro level theories. (H. Giles & Reid, 2005). This section will present an overview of dominant macro and micro theories of ageism to provide valuable insight into this phenomenon and the broader social context that surrounds the current study.

At a macro level, the modernisation theory proposes that the shifts in the social structure that arose from the industrialisation of society resulted in the elimination of older people from important social roles and a decreased status of older people in society (Achenbaum; Cuddy & Fiske, 2002; Nelson, 2005). Industrialisation brought with it, new technology and different jobs and skill sets which older people were not trained for or considered sufficiently physically strong. Urbanisation as a consequence of industrialisation led to younger people being more transient, resulting in the loss of ties with older relatives and the seeking of wisdom from older family members

(Achenbaum, 2005; Ayalon, 2013). The printing press, increased literacy, and the World Wide Web render oral traditions obsolete along with the role of the elder sage in society. Also, improved health and medical advances have extended the lifespan and the size of the older population creating the institution of retirement, in which older people are absent from competitive roles and stripped of responsibility and power (Hagestad & Uhlenberg, 2006; Nelson, 2011).

The changing societal roles identified in the modernisation theory are further used in the social role theory of ageism, which links role information with the changing societal norms and values that occurred due to industrialisation. That is, an important factor in how society and individual's view others relate to their beliefs about the roles they are perceived to occupy (Grefe, 2011; Kite, Stockdale, Whitley, & Johnson, 2005). Productivity is a valued role in society; however, as many older people are retired, they are perceived as non-productive, useless and dispensable members of society (Levy & Banaji, 2002).

The social categorisation theory identifies the segmentation of the life course into age groups as an underlying contributor to ageism. Hagestad and Uhlenberg (2005) argue that government laws using chronological age have created a tri-partition of life, in which children and youth attend schools, adults attend work and older people are expected to retire. This results in institutional and spatial age segregation where people of different age groups do not occupy the same space, therefore, cross-age interactions cannot occur. Furthermore, societal age divisions dictate the behavioural expectations and norms for people of various ages (Nelson, 2005; Phelan, 2011). Residential age segregation is evident in the establishment of residential aged care facilities, retirement homes and communities where older people live in protected environments away from mainstream society; creating cultural sub-groups based on age (Hagestad & Uhlenberg, 2006).

Age contrasts are further reflected and reproduced through ageist discourse in which language, such as ageist humour and advertising, target age specific groups and focus on the distinctiveness and characteristics of specific age groups, promoting and reinforcing the norms and societal expectations for each age group (Bytheway, 2005b).

Societal age segregation serves to promote age homogeneity within social networks and as a result provides fertile ground for ageism (Hagestad & Uhlenberg, 2006; Nelson, 2005). For this reason, older people are often seen as a separate group who are marginalised and objectified due to their perceived inability to contribute in a meaningful way to the continuation of society (Chater, 2002).

The concept of social networks is a key feature of the social identity theory (SIT) of ageism, however; it differs from the social categorisation theory as it views ageism from a micro or individual level perspective. This theory focuses on the individuals need to feel a sense of belonging and identification within social groups. People form group identities based on minimum criteria, such as age, and then demonstrate bias that favours their own group. This is because the group identity formed is also part of their own self-identity (Bodner, 2009). Younger people are likely to favour their own age group more positively and other age groups, such as older people, more negatively and vice versa. Both younger and older people have been found to evaluate their own age group more positively (Bodner & Lazar, 2008; Rupp, Vodanovich, & Credé, 2005). Stereotypes about other groups are largely communicated and transmitted within one's own social group, which serve to create a shared identity and reality among group members. Castelli et al. (2005) suggest that stereotypes also serve to regulate group behaviour and that disconfirming stereotypes about others can result as a threat or challenge to the views of the group. That is, a younger person who describes an older person using stereotypical traits, like forgetful or lonely, is more influential and accepted by their peers or social group than a young person who attempts to disconfirm ageist stereotypes. Therefore, stereotypical beliefs and attitudes about older people maintain and protect the group identity and thus the self-identity of younger people. Through the establishment of social identities, younger people are able to distance themselves from older people to the extent that they subtly cease to recognise older people as human beings. This allows them to adopt and accept ageism as an ideology (Butler, 2009). The process of social categorisation at both a societal and individual level are central to the concept of ageism.

Concerns and anxiety about one's own ageing are associated with the Terror Management Theory (TMT) of ageism. Similar to the SIT, the TMT also recognises

younger people as distancing themselves from older people. However, the reason for distancing is not for self and social identity reasons but instead as an ego protective function related to anxiety or fear of their own ageing and death (Nelson, 2011). Grefe (2011) suggests that older people remind us of our own mortality and declining physical condition and therefore, anything to do with older people or the concept of ageing results in anxiety and a sense of vulnerability. This anxiety and vulnerability manifest as negative affective feelings towards older people and ageing.

Ageist stereotypes enable younger people to psychologically distance themselves from older people by serving to reinforce age related differences (Martens, Goldenberg, & Greenberg, 2005). Ageism enables people to avoid the self-threatening aspects of old age and deny the reality that they will eventually become part of this group (Bodner, 2009). Older people are a reminder that the very basis of self-worth is transitory. This is because the ideals of youth, beauty, productivity and strength are culturally prescribed measurements of self-worth and respect within Western society (Grefe, 2011). For this reason, avoidance; in the form of viewing older people as different from the mainstream social-body, is achieved by perceiving them as unappealing, fragile, declining, sick and dependent (Chater, 2002).

## **2.7 Variables associated with ageism**

Ageism is implicitly present through all levels of society and likely the consequence of a combination of societal and individual factors. The extent that these factors influence attitudes varies, with individual differences evident within the population. The relationship between ageism and demographic variables such as age, sex, ethnic or cultural background, knowledge and contact with older people have been studied. While there is still debate in the literature about the role these variables have on individual attitudes, gaining insight and understanding of the potential influence they may have is an essential step for understanding and modifying student nurse attitudes.

### **2.7.1 Age**

The literature exploring age and ageist attitudes suggests there is a correlation between age and ageist attitudes towards older people; however, the influence or relationship is

not clearly understood. According to Levy and Banaji (2002), younger people appear to be highly susceptible to negative stereotypes of older people. Numerous studies indicate that younger people hold negative attitudes towards ageing and older people and exhibit more ageism than do older people (Hayslip, Caballero, Ward-Pinson, & Riddle, 2012; Kite & Wagner, 2002; Söderhamn, Lindencrona, & Gustavsson, 2001). While this phenomenon is frequently linked to current theories of ageism such as the SIT, there is also some criticism of the literature which predominantly uses college / university aged students as subjects for research about ageism (Lyons, 2009). However, even in college age subjects, it has been found that increasing age correlates to more positive attitudes towards ageing and older people (Koder & Helmes, 2008). Stahl and Metzger (2013) conducted a cross sectional study of 649 undergraduate students enrolled in health courses. The survey data revealed participants age, sex, and perceived vulnerability to disease as significant influencing variables, with younger students, males and those who viewed themselves as susceptible to disease reporting more negative attitudes about ageing and older people.

While the age of the perceiver can influence attitudes, the age of those being perceived can also affect the perceptions and attitudes directed towards them. Kite et al. (2005), in their meta-analysis of the literature report how advancing age is associated with more negative attitudes and age-related bias. That is, the young-old are perceived more favourably than the old-old. This is significant; given the largest growing portion of the older population is the old-old group. However, Kite et al. (2005) also found that providing the assessor with additional information about the older person could influence attitudes. For example, when participants were given information beyond chronological age, such as the history of the person, employment role and their level of social activity, it was found that positive information promoted positive bias towards the older person, whereas negative information, such as not employed or not active in society, correlated with a more negative bias. This supports the social role theory of ageism and suggests that a more personal association with an older person may serve to decrease age related bias.

### **2.7.2 Ethnic and cultural influences**

The majority of research exploring ageism is within the context of Western society; however, there is emerging literature that indicates cross-cultural trends of ageism exist. Cuddy et al. (2005) in their cross-cultural study of individualistic and collectivist cultures, found that in collectivist cultures such as Israel, Japan, Thailand and Turkey, older people were conceptualised as warm but incompetent just as much as they were in individualistic cultures such as America. Harwood et al. (1996) examined the traits associated with older people in six Pacific-Rim countries (Australia, Hong Kong, Korea, New Zealand, Philippines and the USA) and whilst it is often assumed Asian cultures have more positive attitudes towards old age, the findings from this study revealed that those from Asian and non-Asian cultures shared similar negative attitudes towards older people. Furthermore, the findings revealed participants from Hong Kong demonstrated the most negative attitudes towards ageing compared to those from all of the other countries. While these findings suggest ageism is not just a Western concept, there is also an indication that ageism is more prevalent and stronger in Eastern cultures as compared to Western. This is supported by findings from Luo, Zhou, Jin, Newman, and Liang (2013), utilising survey data from 980 college students in China and 332 college students in the United States along with focus group discussions, found Chinese college students held more negative attitudes about ageing and older people compared to their American peers. Ng (2002) suggests that the impact of westernisation, industrialisation and urbanisation has altered the balance of knowledge and hence power between young and old in Asian culture and society, resulting in ageism. In the New Zealand context, given the rising proportion of student nurses from Asian cultures, findings such as this are critical for orientating appropriate educational content.

The literature exploring cultural influences on ageism tends to use cross-country comparisons and there is limited empirical data exploring the attitudes of those that have migrated and live within a different cultural context. In countries with mixed cultures, the traditional views of a minority group may shift towards the values of the dominant group. Beatty (2012) conducted a cross-sectional study exploring social values and degrees of individualism and collectivism with attitudes toward ageing and older people in European-American and Asian-American college students. The

findings revealed that there was no relationship between traditional collectivist values and attitudes towards older people. The findings suggest that a tradition of greater cultural respect for elders does not necessarily prevent negative stereotyping and that the processes of migration may result in a shift from traditional values. The study concluded that more research into the influence of traditional culture, current social values, and ageism was needed.

New Zealand's cultural background is that of a bi-cultural nation that consists of both the indigenous Māori and European cultures. No available literature explores the concept of ageism in current Māori populations. While historically, Māori culture was based on collectivist traditions that embraced respect for elders, any assumptions based on historical traditions fail to capture the social and economic forces that shape current beliefs and attitudes. Furthermore, with increasing numbers of migrants from a variety of different cultural backgrounds, the healthcare workforce and student nurse population span a wide diversity of cultural influences. The impact that culture, colonisation, migration and westernisation have on attitudes towards ageing and older people in New Zealand is unknown.

### **2.7.3 The influence of gender differences**

Studies suggest that on average, men exhibit more negative attitudes towards older people than do women (Bodner & Lazar, 2008; Cherry & Palmore, 2008). Gonçalves (2009); Stahl and Metzger (2013), explored positive perceptions and found women hold more positive attitudes about older people than do men. Musaiger and D'Souza (2009) found significant differences between males and females across some perceptions towards older people, but there were also similarities of perceptions found. Bodner and Lazar (2008) conducted a survey questionnaire with 491 Israeli participants aged 20–50 years. Their findings highlight the multidimensional nature of attitudes. Similar to other studies, they found that woman, held less negative attitudes towards older people; however, they also held more negative perceptions of the contribution of older people to society, when compared to the male participants. Rupp et al. (2005), suggest any gender effect on ageism relates to females having higher scores on the personality dimension of expressiveness (warmth, caring and empathy) and hence

produce lower scores when testing for ageism. Furthermore, they suggest that the differences found between male and female participants could be the result of lifespan development processes and greater experience, exposure and contact with older people. Lyons (2009), indicate that sex differences need to be interpreted with caution because any differences that have been found could be related to sample size and /or the imbalances within study samples, in which female participants often out-weigh males. An example of this is evident in a study conducted by M. L. Smith et al. (2016) that surveyed 641 college students and reported that female students held less ageist attitudes compared with male students. However, the majority of participants (74.4%) in the study were female.

#### **2.7.4 Contact with older people**

An increasing body of literature is emerging about the influence of intergroup contact between younger and older people and the influence this has on attitudes towards ageing and older people. The intergroup contact theory recognises the demarcation of social groups by age as expressed in the social categorisation and social identity theories of ageism. This demarcation results in younger people having limited exposure or contact with older people. Within the family context, grandparent-grandchild contact has served to provide the means to explore this variable. Early studies revealed conflicting evidence with some studies suggesting positive attitudes towards older people resulting from grandparent contact, while others suggested no association between contact with grandparents and ageist attitudes (Harwood et al., 2005). Much of the early literature exploring this phenomenon focuses on the quantity of contact whereas; more recent research into the grandparent-grandchild relationship has recognised the importance of the quality of the contact, rather than just the amount of contact.

Schwartz and Simmons (2001) investigated the views of 64 undergraduate students through a questionnaire designed to measure contact frequency, contact quality and attitudes toward older people. The study found that participants' self-reported frequency of contact with older people had no relationship with attitudes towards older people. However the self-reported favourable quality of the contact and relationship

related to positive attitudes about older people. Bousfield and Hutchison (2010) in a similar sized study with undergraduate students from a London university revealed similar findings. Participants who had high levels of self-reported positive contact with older people were less likely to stereotype on the grounds of age. These studies, suggest that the quality of contact is more influential on attitudes than the amount or frequency of contact. A study by Harwood et al. (2005) exploring the influence of grandparent relationships on the attitudes of 100 undergraduate participants, identified the role of affective, relational processes, that support pleasant and satisfying experiences, on positive attitudes. That is, the associated positive feelings about contact with an older person are related to attitudes that are more positive. This study also identified that for contact with an older person to influence attitudes positively, the older person must also demonstrate their uniqueness and non-conformity to existing stereotypes.

Not all contact with older people results in a positive effect. Gonçalves (2009), reports that previous contact with older people, whether informally with relatives, or through formal channels such as volunteer or paid employment, can influence attitudes in a positive or negative direction. Negative affective feelings may result from negative outcome experiences, such as embarrassment, misunderstanding, or conflict that occurs because of the contact experience. Bousfield and Hutchison (2010) found that the better the quality of contact young people experienced with older people, the less anxious they were about future contact and the more positive their attitudes towards older people in general. Furthermore, a negative contact experience or no previous contact experience with older people can result in contact anxiety.

### **2.7.5 Contact anxiety**

Ageism has been associated with a fear or anxiety of one's own individual ageing. In addition, anxiety concerning previous interpersonal contact is also highlighted as a variable that can influence ageist attitudes. Contact anxiety about older people is associated with a previous negative contact with an older person, little or no contact with older people, or when negative stereotypes are strongly perceived (Bousfield & Hutchison, 2010). This anxiety can lead to maintaining stereotypes and /or lead to

avoidance of contact. Bodner and Lazar (2008), in their study exploring variables associated with negative attitudes towards older people, found a tendency for university students to avoid older people. This avoidance was associated with negative and stereotypical views of older people.

While negative contact experiences may result in negative attitudes, the positive effect associated with positive interactions and /or interpersonal friendships can reduce contact anxiety and stereotypes associated with older people (Bousfield & Hutchison, 2010; Harwood et al., 2005; Schwartz & Simmons, 2001). However, Bousfield and Hutchison (2010) state that to influence already established stereotypical perceptions, not only is pleasant contact needed but also that the older person must demonstrate their uniqueness in order for complex homogenous perceptions to become less tenable.

A study by Allan and Johnson (2008), investigated the influence of knowledge, anxiety and attitudes about older people. A total of 113 university students were assessed using quantitative survey tools. The study found that both contact with older people and factual knowledge relating to the ageing process were related to a reduced level of ageist attitudes. However, both knowledge and contact with older people were found to have an indirect effect on participants' level of ageism by influencing their level of ageing anxiety. That is, participants who were more knowledgeable about ageing tended to be less anxious and this reduction in anxiety directly reduced ageist attitudes. These findings suggest that when attempting to reduce ageist attitudes, an important consideration is reducing anxiety about ageing.

Additionally, from a knowledge development and educational perspective, Harwood et al. (2005) highlight that anxiety limits attention and information processing which leads to stereotypical cognitive processing. That is, new knowledge cannot easily develop in situations where there are high levels of anxiety and in this context, individuals will draw on their past beliefs and knowledge. It is evident that contact with older people, anxiety and knowledge are significant and closely related variables in relation to attitudes about ageing and older people.

### **2.7.6 Knowledge of ageing**

As previously discussed, beliefs and hence individual knowledge underlie attitudes and therefore, knowledge is a critical determinant of attitudes towards ageing and older people. There is a plethora of literature exploring the relationship between knowledge and attitudes about older people and ageing. Given that knowledge informs attitudes, the hypothesis that accurate knowledge concerning the ageing process should beget attitudes that are more positive, seems logical. However, the literature on the relationship between knowledge and attitudes is contradictory with no consistent relationship between what individuals know about ageing and how they think and feel about older people (Boswell, 2012a). Some studies have found no relationship between knowledge and ageist attitudes (Knapp & Stubblefield, 2000; B. Williams, Anderson, & Day, 2007). Cottle and Glover (2007) conducted a study that explored the knowledge and attitudes of undergraduate students enrolled in lifespan human development courses. The findings revealed that participant knowledge about ageing increased during their time in the course; however, no significant relationship between knowledge and attitudes or significant change in attitudes towards older people were found at the completion of the course.

In contrast Lambrinou, Sourtzi, Kalokerinou, and Lemonidou (2009) conducted a study with 418 undergraduate students across two different sites in Greece. Comparisons were made between first and final year students with data obtained from survey questionnaires investigating knowledge and attitudes about ageing and older people. The findings suggest that as knowledge on ageing increases, attitudes towards older people become more positive.

Some studies indicate a relationship between increased knowledge and negative attitudes, particularly with health student sample groups where attitudes become more negative following their training (Boswell, 2012b). While much of the empirical evidence indicates that increased knowledge of ageing has an inverse relationship with negative attitudes towards older people (Boswell, 2012a; Lambrinou et al., 2009), more research into the relationship between knowledge and attitudes is needed. Furthermore, while knowledge may influence attitudes, knowledge is also an independent capability requirement of health professionals. Lack of knowledge about

ageing and older people may result in inferior or inappropriate care provision for this population group.

## **2.8 Ageism in healthcare**

There is a wealth of literature reporting on ageism in healthcare and health professionals, which manifests in paternalistic behaviour, patronising language and care neglect of older people (Band-Winterstein, 2013). The quality of care received by older people is not only dependent on staff attitudes but moreover on the knowledge that health professionals possess about ageing and older people. Knowledge, or a lack of, can affect how older people are treated, as well as influence judgments about which care needs health professionals believe should be, or can be, addressed (Wadenstein & Carlsson, 2003). Another key finding from the literature is that the ageist misconception that equates ageing with illness is often inadvertently reinforced within the healthcare setting and by health professions (Stewart et al 2011; Kane and Kane 2005). L. Giles et al. (2002) reports that healthcare professionals may be particularly susceptible to ageist attitudes because of their increased exposure to ill and infirmed older people. Holroyd et al. (2009) argue that ageism in health professionals is due to working in a care environment that does not offer effective models of care. This creates increased pressure in trying to meet the needs of an ageing population and results in health professionals succumbing to the socialising forces that reinforce ageist attitudes. The perpetuation of ageing as a state of continual physical and cognitive decline is both created and maintained in the healthcare setting. This is because healthcare professionals consider health deterioration as normal ageing and hold fatalistic attitudes towards the value of interventions for older people (Skirbekk & Nortvedt, 2014).

While it can be reasoned that ageism in healthcare reflects the underlying beliefs and attitudes of an ageist society, Featherstone and Wernick (1995) argue that it is the institution of healthcare that is responsible for the prevalence of ageism in society. The dominant ideology of the biomedical model has aligned old age as a time of decline rather than a dynamic phase of the life course. The medicalisation of ageing has shaped the collective social image of old age with physical and mental decline from biological

processes. In addition, the traditional biomedical paradigm, which favours cure as an outcome measure, reinforces negative perspectives of ageing and older people because older people do not fit into this model of care provision (Phelan, 2011).

When ageing is viewed as a biomedical problem, symptoms are disregarded and there are restrictions to treatment options, education and information (Minichiello, Somerville, McConaghy, McParlane, & Scott, 2005). Phelan (2011) states it is the predominate knowledge generated by health professionals that reflect ageist assumptions. This biomedical discourse allows for the de-humanisation of older people making it easier to treat them with disrespect and de-value their experiences and desires (Minichiello et al., 2005). Paternalism and practices of therapeutic nihilism, which de-value an older person's self-determination, dignity and respect, are evident in interactions between health professionals and older people (Phelan, 2011).

Paternalistic behaviours of helping older people, when they are capable of helping themselves, threatens both physical and functional independence, while also serving to undermine older people's ability in decision making and their sense of autonomy (Band-Winterstein, 2013). Older people report that within the healthcare context, they find they are often talked over and excluded from the conversation as if they do not exist. Minichiello, Browne, and Kendig (2000) in their collection of narratives revealed older people felt they were treated as unimportant patients; they were not consulted about major decisions regarding their health and lives, and they had minimal access to pro-active management or preventative health initiatives.

Patronising language known as 'elder-speak' is often used by health professionals (K. Williams, Kemper, & Hummert, 2004). This features a slower rate of speech, exaggerated intonation, elevated pitch and volume, greater repetitions and simple vocabulary and grammar (Langer, 2008). Elder-speak is often indistinguishable from baby talk. Therefore, when used with an older person it demeans them and treats them as if they are incompetent. K. Williams et al. (2004) describe how elder-speak is often adopted with good intentions to promote clear and effective communication or as a means of nurturing older people. However, older people in both institutional settings and those receiving home care services, report they find elder-speak patronising and

demeaning (Langer, 2008). Elder-speak also serves to create an imbalance of care and control and can be overly directive or bossy, similar to the way a naughty child may be spoken to. Both elder-speak and paternalistic behaviours are responsible for the infantilisation of older people, which connotes a dependency relationship (Nelson, 2005) rather than a healthcare partnership.

Band-Winterstein (2013) states the most obvious indication of ageism by health professionals is in their overwhelming preference to work with younger populations. Lack of interest in working with older people spans health professionals from different fields including psychology, medicine, social work, and nursing (Gonçalves, 2009) and occupational therapists, (C. A. Brown, Kother, & Wielandt, 2011). Furthermore, this cross-national phenomenon is associated with the negative attitudes of healthcare professionals and the devaluing of care provision for older people.

### **2.8.1 Ageism and nursing**

Nurses have more frequent and intense patient contact compared to other healthcare professionals. Therefore, the attitudes of nurses can have a substantial influence on the quality of care received by older people (S. Gallagher et al., 2006). Nurse attitudes are also of concern in relation to how they may influence and perpetuate ageist attitudes in future nursing cohorts. That is, how student nurses perceive older people will be influenced by the nurse role models they meet during their training (Coleman, 2015).

There are many identified negative attitudes and beliefs about older people held by nurses. These include, that older people are a burden, possess low skills, are considered as less than adult, possess ill health and eventually become incontinent (Getting et al., 2002; Mellor, Greenhill, & Chew, 2007; Wells, Foreman, Gething, & Petralia, 2004). Caring for older people is considered heavy and arduous, monotonous and a waste of time (Wells et al., 2004). Nurses who do work in the field of older people's health, are viewed by other nurses to be un-skilled and working below their training level (Lovell, 2006). As with other health professions, nurses display patronising behaviour, use

over accommodating speech through which quality of care is compromised and healthcare opportunities are denied (Marshall, 2010).

Ageism in interpersonal relationships and interactions has the most significant impact on the older person's self-perceptions and feelings of safety (Minichiello et al., 2000). Therefore, the presence of ageism in the nurse-client relationship can severely threaten the independence and wellbeing of older people (Courtney et al., 2000). Liu, While, Norman, and Ye (2012) in their critical review of the literature, report mixed findings concerning nursing attitudes, with some studies revealing negative, while others report neutral or positive attitudes. While positive nursing attitudes have been reported in some literature, Higgins et al. (2007) conducted in-depth interviews with nine registered nurses. A significant theme that emerged from the data was the marginalisation and oppression of older people. The findings from this study also highlighted that there is a difference between stereotypically views held about older people and views about unwell or hospitalised older patients and having to care for them. Similar findings were evident in a slightly larger qualitative study by McLafferty and Morrison (2004). This study utilised focus groups with 17 participants, including registered nurses, nurse educators and student nurses. The findings indicate that the more dependent an older person is on receiving nursing care, the more likely it is for nurses to project a negative attitude towards them. That is, the most vulnerable of older people are more likely to be exposed to the detrimental effects of ageism by nurses. Lovell (2006) found that while nurses agreed that older patients have a right to information and education, they also believed that their own patients were too old to learn or understand new information. This suggests that while nurses may hold favourable attitudes towards older people in general, their behaviour towards older patients is influenced by paternalistic stereotypes and attitudes. Negative attitudes towards older patients have a direct impact on care decisions. For example, Courtney et al. (2000) report, that nurses with negative attitudes about older patients often favour the use of physical and chemical restraints, rather than less restrictive behavioural management.

Among nurses, poor knowledge results in a focus on custodial care, such as bathing, feeding and providing medications, with the neglect of functions that restore

independent living (Getting et al., 2002). Mellor et al. (2007), explored knowledge of 31 nursing staff within a multi-purpose health service. This study identified a lack of fundamental nursing knowledge about the normal physiological changes of ageing in a sample of registered nurses. While attitudes towards older people tended to be positive in this sample, the knowledge gaps evident could result in a failure to modify care practices to compensate for age related changes and place older people at risk.

The application of positive attitudes and appropriate knowledge are essential capabilities to ensure that nurses have the necessary skills to provide safe and effective care to all older people. This is imperative because nurses are the clinical supervisors, role models and mentors of future nurses in which, their practice and culture are perpetuated through the student nurse-nurse relationship.

## **2.9 Ageism and undergraduate nursing students**

When students first enter their nursing education, they have likely developed attitudes towards older people and ageing through exposure to societal views and their personal experiences (B. Williams et al., 2007). Studies suggest that student nurse attitudes and knowledge about ageing and older people mirror that of the general population. Nolan, Davies, Brown, Keady, and Nolan (2002) found no significant difference in the attitudes or knowledge of student nurses when compared to qualified nurses, the general public or university students.

De La Rue (2003), in a small qualitative study utilising focus group data from nine nursing students from a Queensland University, found that while most participants held positive views towards ageing and older people, they also held a general fear of the ageing process. The data also suggested that participants found it difficult to separate their view of ageing from the broader cultural beliefs that devalued older people. Student nurses were also found to subscribe to stereotypical misconceptions of ageing that reflect a biomedical approach. This view is reflected in students' association of ageing with loss of physical and mental function, loss of independence, and increased disability (Minichiello et al., 2005). Moyle (2003), who surveyed 103

student nurses, found they associated ageing with frailty, ill health and physical and mental decline, further highlighting the stereotypical beliefs held by student nurses.

### **2.9.1 Influencing variables on student nurse attitudes**

The literature that focusses on student nurses aligns with the general literature on ageism, with similar variables identified as predicting or influencing attitudes towards ageing or older people. A significant positive association between the chronological age of student nurses and attitudes towards older people has been found (Holroyd et al., 2009; Neville, 2015; B. Williams et al., 2007). The gender of a nursing student has also been identified as an influencing demographic factor on attitudes about older people (Neville & Dickie, 2014). While in general, the literature reports female student nurses to have more positive attitudes than males. Holroyd et al., (2009) found that males had more positive attitudes than females. Given that nursing continues to attract more female than male students, participation in studies is likely to be heavily weighted with female participants. In the study by Holroyd et al. (2009), only 9.6 percent of the participants were male. For this reason, a firm conclusion about sex related differences and attitudes about older people in the student nurse population must be viewed with caution.

Studies exploring the influence of student nurses' ethnic background in relation to their attitudes towards older people are limited. However, the range of countries represented in the literature indicates that student nurse attitudes towards older people are of international interest and concern. Studies based in non-Western countries report positive attitudes about older people are held by student nurses (Pan, Edwards, & Chang, 2009; Xiao, Paterson, Henderson, & Kelton, 2008). This is often attributed to traditional cultural values such as respect and protection of older people. Within the New Zealand context, exploration of how these traditional values may influence the attitudes of the ethnically diverse student nurse population is needed.

### **2.9.2 Intergroup contact**

Contact or experiences with older people, whether within families, the workplace or during nursing training, has been linked to either positive or negative attitudes toward

older people. In their study, Koren et al. (2008) surveyed 200 nursing students across all semesters of a nursing programme in the United States with the largest group (N=60) from the first semester. The study found that those who had engaged socially with older people had more positive attitudes than those who had frequent visits with grandparents, described older people more positively.

Neville and Dickie (2014) in their review of the literature, report that student nurses who have worked with older people prior to and or concurrently during their nursing education have more positive perceptions about working with older people. Similar findings have been reported by (J. Brown et al., 2008a; Henderson, Xiao, Siegloff, Kelton, & Paterson, 2008; Holroyd et al., 2009). In contrast, Stevens (2011) found that students who had worked as care assistants during their training ranked working with older people as their lowest preferred career option. Happell (2002) found that part-time employment of student nurses in Aged Residential Care (ARC) has a negative influence on student attitudes about older people.

As described earlier in this chapter, intergroup contact draws on the affective component of the experiences of contact (feelings) and purports positive contact experiences with members of a different social group (e.g. older people) can improve attitudes and prejudices towards the group. Intergroup contact is a particularly significant factor in relation to student nurse attitudes towards ageing and older people. This is because as part of their training they are likely to have frequent contact with older people. Repeated exposure to sick, frail or cognitively impaired older adults can contribute to the development of negative attitudes and misconceptions towards older people and ageing (Pasupathi & Lockenhoff, 2002). The experiences student nurses have with older people before, and during their training is likely to influence their attitudes and behaviour towards older patients. The perceived quality of the experience by student nurses is key to shaping attitudes. Acknowledging and facilitating the opportunity for students to explore previous experiences and promote positive socialisation and clinical experiences with older people is an essential consideration for nursing education (C. A. Brown et al., 2011).

Within the New Zealand context, Stewart, Giles, Paterson, and Butler (2005) compared knowledge and attitudes of beginning nursing, physiotherapy and occupational therapy students. Their findings indicated that across all three groups, increased age and contact with older people had a significant positive impact on both attitudes and knowledge of older people and ageing. Also, knowledge was greater in those that had more contact with older people and increased knowledge correlated with attitudes that were more positive. The findings from this study highlight the relationship between contact, knowledge and attitudes, which is an important consideration in the development of educational strategies.

### **2.9.3 Knowledge**

Many of the studies that report on student nurse knowledge in relation to attitudes towards older people are in the context of exploring the influence of nursing education. This makes it difficult to separate the influence of knowledge, type of knowledge, educational processes and the influence they have on attitudes. The study by Lambrinou et al. (2009) involving first and final year students from two nursing schools in Greece, indicated an increase in knowledge of ageing in final year students and that the increase in knowledge correlated to more positive attitudes about older people. However, there are conflicting findings in the literature about the influence nursing education has on attitudes. Williams et al. (2007) found, in their comparative study of first and final year students, that while the nursing programme supported improvements in knowledge of age related changes, this did not correlate with an increase in attitudes towards ageing. This study reports that the nursing students who completed an ageing and older person course reported more negative bias about older people when compared with a control group. Koren et al. (2008) had similar findings in their study, of 200 nursing students in the United States. Despite the integration of older person content throughout the curriculum, students reported relatively neutral attitudes towards older people, low levels of knowledge and a weak intent to pursue further knowledge.

J. Brown et al. (2008a) propose that students do not enter training negatively predisposed towards older people but rather, that their negative perceptions are

created and sustained by experiences during their training. However, this is not always the case. King et al. (2012) found a positive trend in attitudes towards older people over the entire nursing course. The literature suggests that student nurse attitudes can shift from negative to positive, positive to negative or remain neutral during the course of their nursing education. While findings across studies are conflicting, the findings do indicate that both knowledge and attitudes are malleable and therefore responsive to educational processes.

#### **2.9.4 Work preferences**

Student nurse preferences around working with older people have been highlighted as a strong predictor of positive attitudes towards older people (Liu et al., 2013) and vice versa. King et al. (2012), utilising focus group data from student nurses, report that students who concur with the belief that older people participate in a wide variety of interests and activities demonstrated a positive correlation with the choice to work with older people. Unfortunately, these students are a minority. The findings from this study also suggest student nurses know before they started the programme, where and with whom they wanted to work. The focus group data from the King et al study also revealed that it was only when student experiences did not meet with their preconceived expectations that career preferences changed.

Similar to registered nurses and other health professionals, student nurses consistently indicate that they do not have a high regard for working with older people and consistently rate this as the least preferred career option. (Abbey et al., 2006; C. A. Brown et al., 2011; Happell, 2002; Henderson et al., 2008; Moyle, 2003; Stevens, 2011) A longitudinal study by Happell (2002) examining Australian undergraduate student nurses attitudes, revealed that working with older people is the least preferred area of practice for students and that its popularity declines during the educational process. Henderson et al. (2008) surveyed 262 first year student nurses about career preferences. The most favoured areas for future careers were paediatric nursing, intensive or critical care, and operating theatres. Working with older people was the least preferred option, with only four of the 262 participants nominating this area as their first preferred option.

Stevens (2011), explored the reasons for nursing student career choices across six campuses in New South Wales. Data from 150 questionnaires were matched across the three years to identify change over time. The findings indicate that both experiences and length of time in a clinical area could influence career preferences. The more days spent in an older person's health practicum had a significant correlation with the decreasing preference for it as a career destination. In contrast, the number of days in operating theatres, community health and mental health were correlated to an increasing preference for these areas as a career destination. Understanding the placement experience and how to best support positive clinical learning with older people could influence student attitudes and future career preferences.

While the overwhelming preference of students to work in areas other than older people's health suggests a devaluing of older people and aged care, there is some debate in the literature about the link between career choices and ageism. Herdman (2002) argues social status, financial stability, the work environment, opportunities to utilise knowledge and to advance careers were all factors associated with student career choices. Furthermore, as students become closer to completing their degrees, they become more concerned with how working with older people would affect their career pathway. While these factors may play a part in career direction, there is no denying that if students believe working with older people will influence negatively on their careers, then there is a clear influence of ageism on career decisions. Holroyd et al. (2009) argue that when negative attitudes exist, there is a corresponding devaluing of the care provided to older adults.

It is likely that multiple factors play a part in career decisions, many of the reasons provided for not wanting to work with older people provides further insight into student attitudes and misconceptions about ageing, older people and working with them. A general lack of interest is reported by students and is often related to the perceived nature of the work. Student nurses have described working with older people as lacking excitement, boring, frustrating, unpleasant (the smell), physically heavy, and requiring a limited range of work and skill requirements (Happell, 2002; Henderson et al., 2008; Stevens, 2011). Not being able to communicate or relate to older people was also cited as a reason (Stevens, 2011) and students have expressed

fear of, and discomfort about working with older people because they do not want to deal with suffering, death and dying (Happell, 2002; Henderson et al., 2008). Robinson and Cubit (2005) state that students develop a fear of ageing and distaste and discomfort for the physical difference and frailty they are confronted with when exposed to older people during their training. That is, students can experience contact anxiety that may be reinforced, or created by the process of nursing education.

### **2.9.5 Medicalisation of ageing**

The perceived nature of working with older people suggests students view ageing and care of the older adult through the biomedical paradigm, that aligns ageing to illness and death; therefore there is very little that can be done other than attending to basic care needs. Studies have also found student nurses are consistently attracted to, and show a preference for acute, high-tech and what they perceive to be exciting work environments (J. Brown et al., 2008a; Henderson et al., 2008; King et al., 2012).

Hayes et al. (2006), suggest the favouring of such areas is not just about preconceived ideas about older people, but also that student nurses hold stereotypical views of ageing within the wider society, such as the perceived value of youth over age and the importance of technology. Low-tech areas such as older people's health rely heavily on the capabilities of nurses. The preference for high-tech areas is further evidence that nurses view nursing within a medical paradigm as opposed to a nursing model of care. The extent to which nursing education supports a biomedical paradigm may influence student nurse knowledge and attitudes, towards older people and working with them.

### **2.9.6 Nursing education**

The current literature suggests that nursing education has an opportunity to influence student attitudes and knowledge about ageing, older people and working with them (Getting et al., 2002; Lambrinou et al., 2009; McLafferty & Morrison, 2004; Potter, Clarke, Hackett, & Little, 2013). Although there is some contradictory evidence, education has been found to make a positive and significant difference to overall

knowledge and in changing attitudes in a positive direction (Flood & Clark, 2009; Lambrinou et al., 2009).

Potter et al. (2013) identify the value of education to provide knowledge and opportunity for students; however, they also highlight that the question about the best way to provide this education is still being debated. This presents a challenge to nurse educators to identify evidence-based teaching, learning and curriculum enhancements methods, which will facilitate the necessary capabilities required by student nurses to meet the healthcare needs of an ageing population.

## **2.10 Section summary**

The complex phenomenon of ageism has been presented in this section to provide an overview of the societal context and the attitudes and knowledge of student nurses about ageing, older people and working with this population group. While student nurse attitudes reflect those of the general population, variables have also been identified that can influence ageist attitudes and misconceptions. These individual variables provide insight into the malleable nature of attitudes and knowledge, which can be considered and applied in nursing education.

As future health professionals, student nurses present an opportunity to rectify the health services inadequacies experienced by older people. However, the success of this is mainly dependent on nursing education and the ability of curriculum to cultivate positive attitudes towards ageing and older people. This section has addressed the issues leading to why nursing educational interventions are required. The following section will present the literature relating to nursing education processes and curriculum activity in relation to learning about the ageing process, older people and working with them.

## **Part 3: The world of nursing education**

The mission of undergraduate nursing education is to prepare nurses to enter a range of practice environments and to care for patients they will encounter when they enter the profession (Ervin, Bickes, & Schim, 2006). The ageing population challenges nurse-educators to strengthen the undergraduate curriculum related to the care of older people (Henderson et al., 2008; Neville & Dickie, 2014; Perry & Paterson, 2005; Xiao et al., 2008). The need to better cultivate the knowledge and attitudes required to ensure adequate quality care to older people across an array of care settings is a global concern. The use of both creative teaching modalities and resource to enable robust learning experiences about ageing and older people throughout undergraduate nursing curricula is needed (Heyman, Gutheil, White-Ryan, Phipps, & Guishard, 2008; Potter et al., 2013). Fundamental to this process is the concept of learning.

### **2.11 Learning theories**

Learning can be defined as a change in an individual's behaviour, knowledge or attitudes and involves the process of understanding, clarifying and applying the meaning of acquired knowledge (Billings & Halstead, 2015). Theories of learning provide conceptual foundations about how learning occurs, offering rationales for educational processes and hence inform educators about how best to facilitate learning. Learning theories emphasise different ways in which learning occurs. Within the nursing education literature, there is evidence of the application of different learning theories in relation to student learning about ageing and older people. The following section will provide a brief outline of the prominent theories of learning relating to nursing education literature about older people and ageing. These theories portray a slice of the multidimensional concept of learning and how learning occurs.

#### **2.11.1 Behavioural learning theories**

The concepts of classical and operant conditioning, from the seminal work of both Pavlov and Skinner, are the foundations for the behavioural learning theories, which postulate that all behaviour is learnt and can be shaped and rewarded to achieve the desired goal (Billings & Halstead, 2015). Desired behaviours are shaped through the

application of reinforcement or punishment in association with particular behaviours. Behaviourism continues to be used in contemporary nursing education through the utilisation of marks and grades as a means to shape student behaviour and engagement in learning.

The seminal work by Pavlov, in relation to classical conditioning, emphasises that behaviour is elicited following the pairing of un-associated stimuli where generalisations are learnt and reproduced in similar situations. This theory is significant in relation to emotional reactions. When applying classical conditioning to learning about ageing and older people, this learning theory suggests that students who have previous unpleasant, frightening or embarrassing experiences or interactions with older people may associate these feelings when faced with a new situation with an older person or vice versa. Research suggests that students who report previous rewarding exposure and experiences with older people are more confident and interested in working with this population (Heise, Johnsen, Himes, & Wing, 2012; Jackson et al., 2017). In contrast, negative experiences with older people have been found to be associated with negative attitudes towards older people and working with them (Gould, MacLennan, & Dupuis-Blanchard, 2012; Nolan, Davies, & Brown, 2006; Robinson & Cubit, 2005).

### **2.11.2 Social learning theory**

Observational learning is frequently used in nursing, particularly in the clinical environment where students observe nursing practice. Social learning theory emphasises the importance of observing and modelling behaviours, attitudes and emotional responses of others (Keating, 2015). According to Bandura (1977) the notion that people acquire attitudes through their observation of others is called vicarious learning. Through this process, attitudes are acquired and maintained. This type of observational learning has a powerful influence on the professional socialisation and attitudes of students. One of the problems with observational learning in the clinical environment is that not all behaviour role modelled or observed by students are congruent with professional standards. Poor professional role models

and negative staff attitudes towards older patients can result in the negative attitudes of student nurses (Carlson & Idvall, 2015; Duggan, Mitchell, & Moore, 2013).

Bandura's (1986b) social cognitive theory differentiates from other social learning theories as it also emphasises the importance of cognition in people's behaviour. This theory postulates that people are not driven by inner forces or controlled by external stimuli, but rather, learning is explained in terms of the interactions of three main elements; cognitive (personal) factors, behaviour and environmental influences. A fundamental construct of Bandura's theory is the concept of self-efficacy, which is defined as an individual's judgement of their capabilities. Jackson et al. (2017) report that students who felt confident in providing care to older people also had an interest in working with this population. Furthermore, it was found student confidence was related to exposure to rewarding experiences with older people.

Beliefs about one's own abilities influence persistence, effort and choice of task which in turn influence behaviour or actions (Bandura, 1986b). Individuals who doubt their ability to be successful do not take on tasks they perceive to be difficult. Therefore, students who do not feel comfortable with older people or do not believe in their capabilities to care for older people may be less likely to attend to learning opportunities about or with older people. Koren et al. (2008) found that the more knowledge students have about older people, the more confident and comfortable they feel with caring for them. Also, the intent to pursue further knowledge was also significantly correlated to the level of comfort and confidence, suggesting a connection between knowledge and confidence.

### **2.11.3 Constructivist learning theories**

A fundamental aspect of constructivism is that learners must construct their own knowledge within the context of situations based on their existing beliefs and experiences. Learners interpret concepts and principles in terms of the schemata they have already developed (Biggs & Tang, 2007). Two significant principles underpin constructivism; assimilation and accommodation, in which either learning from a new situation is assimilated into pre-existing personal schema or accommodation occurs,

where new knowledge is developed. Accommodation will only occur when new knowledge challenges previous understandings (Handwerker, 2012). This type of transformational learning is crucial in adult education and nursing practice where students are expected to make their own interpretations rather than act on the judgements and beliefs of others (Keating, 2015). Transformational learning focusses on how learners construct, validate and reformulate their understanding of experiences to transform their perspectives (Rutherford-Hemming, 2012). Learning involves a cognitive change in the way meaning is constructed. It is easy, therefore, to connect transformational learning theory to the constructivist theory (Jarvis, Holford, & Griffin, 2007). The nursing education literature recognises the need to provide learning opportunities that challenge any pre-existing negative schemata students may have about ageing, older people, or working with them, such as exposure to positive ageing role models (Hovey, Dyck, Reese, & Kim, 2017; Neville & Dickie, 2014). The aim of this is to facilitate the process of accommodation and transformation. The majority of nursing education literature points to experiential learning opportunities as a means to achieve this.

#### **2.11.4 Experiential learning**

Experiential learning, which is learning by doing, enables learners to attach meaning while experiencing situations and constructing knowledge. Experiential learning posits that learning occurs when there are continuity and interaction. This means that the individual takes each experience and connects what was learned to current and future events. While there is agreement in the literature that people learn from experience, there is some disagreement as to how this learning occurs, with two key frameworks; reflective practice and situated cognition highlighted (Merriam, Caffarella, & Baumgartner, 2012).

#### **2.11.5 Reflective practice**

Kolb's (1984) reflective framework states that learning requires individuals to construct their own beliefs and judgements rather than assimilating the beliefs and judgements of others (Keating, 2015). Experiential learning is viewed as a cyclical process in which individuals think about their experiences in order to interpret and conceptualise them.

Conceptualising generates a hypothesis about the meaning of the experience. This meaning is then applied to new experiences or situations (Kolb, 1984). Aspects that shape or influence the learning experience include the context of the situation and the personal emotions exerted on reflection. Reflective practice involves returning to and replaying the experience, attending to the feelings the experience provoked and re-evaluating the experience. Hovey et al. (2017) note that it is during the phases of the reflective process that student attitudes will change or be reinforced and therefore experiential learning offers a valuable framework on which nurse educators can design and deliver content and clinical experience aimed at promoting positive attitudes towards ageing, older people and working with them.

Learning can occur during the experience or after the experience has occurred (Torre, Daley, Sebastian, & Elnicki, 2006). Rogan and Wyllie (2003) developed an education programme that focussed on the care of older people, which incorporated a reflective model for ongoing briefing and debriefing sessions for student nurses during their clinical placement. This model supported students to shift from stereotypical images of older people to appreciating them as individuals. Brand and McMurray (2009) used a photo-elicitation technique of older people being cared for prior to attending clinical placement. Students were provided with the opportunity to discuss expectations, previous experiences and anxieties relating to older people. This reflective practice encouraged students to explore their fears, biases, assumptions and stereotypes of older people. The authors concluded that this anticipatory reflective exploration helped to minimise the reality shock of the clinical environment. This, in turn, facilitated a positive clinical learning experience with older people. A more personalised learning journey allows students to develop their own beliefs, values, and attitudes based on their own experiences and reflections (Ross, Jennings, & Williams, 2018).

### **2.11.6 Situated cognition and communities of practice**

In contrast to the internalised process of reflective learning, the situated cognition model focuses on the external relationships that result in a process of learning (Fenwick, 2003). The theory of situated learning, developed by Lave and Wenger

(1991), views learning as the process of social participation with others in ‘communities of practice’. Individual learning is emergent; involving opportunities to participate in the practices of the community as well as the development of an identity, which provides a sense of belonging and commitment (Lave and Wenger (1991). Situated learning is not just about developing one’s practice and knowledge; it involves a process of understanding about which communities of practice individuals belong to, are accepted into and the process of gaining acceptance (Handley, Sturdy, Fincham, & Clark, 2006). Central to Lave and Wenger’s theory is the concept of legitimate peripheral participation, which is the process by which newcomers or novices become members of a community through acquaintance and familiarisation with the tasks, language, tools, routines, and ways of being and knowing of the communities practitioners (nurses).

From a student perspective, the practice placement is often described as the most popular part of a nursing programme (J. Brown, Nolan, & Davies, 2008). The practice placement is essential for influencing and shaping students experiences (McGarry et al., 2009) and is arguably the main way students are socialised into the profession of nursing (J. Brown et al., 2008). Thomson (2007) describes how students develop their professional identity through learning and internalising the values, norms and expectations of the profession from other nurses. This theory suggests that it is within the clinical learning environment community of practice that a student nurse learns about the culture and profession of nursing.

The different learning theories discussed offer valuable insights and theoretical frameworks that guide nursing curricula. The multidimensional nature of learning suggests there are a number of aspects for nurse educators to consider about nursing education and the influence it can have on student nurse knowledge and attitudes. Educational processes and nursing curriculum must incorporate an awareness of how learning occurs to maximise and support the development of positive knowledge and attitudes toward the ageing process, older people and working with them.

## **2.12 Nursing curriculum**

A curriculum embodies the interplay of multiple elements that aim to address, what, when, how and why, with the teaching and learning process. There is an increasing body of literature available that focuses on nursing curriculum and the influence it has in relation to student knowledge and attitudes about the ageing process, older people and working with them. The literature either highlights the shortfalls of current nursing education practices or presents the implementation of or impact of new educational interventions. This literature is presented in the following section under the broad curriculum themes:

- i. The content focus or type of exposure to ageing and older people (The WHAT);
- ii. The curriculum structure or sequencing of learning about ageing and older people (The WHEN);
- iii. The instructional method, pedagogical strategies or the environment students learn about ageing and older people (The HOW), and;
- iv. The curriculum goals or objectives (The WHY).

## **2.13 Content and exposure to ageing and older people.**

The literature theme relating to content focus and exposure includes the amount of time dedicated to ageing and older people within the curriculum, the biomedical or acute care nature of the content and the need to focus on providing specific support to students during their encounters with older people in the clinical setting.

The limited amount of class time and hence content devoted to the care of older people within nursing education is highlighted through the literature (Swanlund & Kujath, 2012; Wesley, 2005). This limited coverage is frequently linked to a shortage of nursing academics with expertise in the field of gerontology (Baumbusch, Dahlke, & Phinney, 2012; Holroyd et al., 2009). Latimer and Thornlow (2006) highlight faculty development as the most essential ingredient in introducing and maintaining an older person focus into undergraduate nursing curricula. However, others argue that the limited coverage is in response to the increasing technological evolution of health care,

in which nursing and nursing education prioritises technological and acute care skills and knowledge (Koh, 2012).

The emphasis on acute care influences the perceptions and values students have of nursing, with technological knowledge valued more highly than skills such as compassion, and person-centred care, which are essential elements for working with older people. Nursing students have been found to perceive nursing curriculum as focussing too much on acute and critical care (Abbey et al., 2006; King et al., 2012). Duggan et al. (2013), in a qualitative study, explored student perceptions of their education and the extent to which this prepared them to work with older people. Findings revealed that students felt the curriculum emphasised acute care as opposed to working in partnership with older people. It is suggested that an acute care focused curriculum negatively influences students' decisions to consider older people's health as a career option. This is because they feel unprepared to work with this population group (Abbey et al., 2006; Duggan et al., 2013) or because working with older people does not conform to their technical image or perceptions of what nursing is (Gillespie, 2013; Xiao et al., 2008).

The acute care focus is not isolated to theoretical content but is also evident in the clinical learning component of the nursing curriculum, where many students learn about the care of the older person in acute hospital environments, despite these settings often characterised with poor standards of care for older people (J. Brown et al., 2008a). McLafferty and Morrison (2004), state students observe hospital staff patronising older people and treating them like children. Dobrowolska et al. (2017) report that 47% of the medical and nursing students from their study witnessed age-based discrimination during clinical placements, with the majority of this discrimination occurring in the hospital setting, which is where students in this current study undertake the majority of their clinical learning experiences.

Students learn by observing others and therefore, the way in which students perceive older people will be influenced by the extent to which staff involved in teaching have an interest in older people. McLafferty (2005) following a survey of academic teachers and student nurses, highlights how both clinical and academic staff can bring ageist

stereotypes into their practice. In particular survey findings of academic teachers As role models, nursing academics need to be aware of their own attitudes and beliefs and keep abreast of knowledge on ageing, as there is a positive relationship between nursing student attitudes and those of their instructors(Cozort, 2008). The process of nursing education reinforces age discrimination when ageism is not addressed or mentioned within the curriculum. This creates a hidden message of the philosophy of the curriculum and nursing profession, which portrays to students that ageism is not important and can be neglected or ignored (Dobrowolska et al., 2017). Furthermore, when the knowledge of how to care for older people is not privileged equally in the curriculum, students will implicitly value knowledge of how to care for younger individuals over those who are old. (Kagan & Melendez-Torres, 2015).

An acute and critical care emphasis in nursing education aligns and supports a biomedical paradigm of care. There is a clear consensus in the literature that when nursing curriculum focusses on age related changes, illness and decline it contributes to students' negative attitudes about older people and working with them. (Koh, 2012). Henderson et al. (2008) found that nursing students demonstrate a stereotypical understanding of ageing that reflects a biomedical approach through their association of ageing with disability and loss of function. Minichiello et al. (2005), note that when ageing is viewed as a biomedical problem, it promotes negative beliefs and allows for the dehumanisation of older people, making it easier to treat them with disrespect and devalue their experiences and desires. Xiao et al. (2008) following their review of an Australian nursing curriculum, highlight the inappropriateness of a biomedical, cure based focus in relation to caring for older people. Person-centred, holistic care is viewed as both fundamental to and the essence of nursing and care of the older person (Chan & Chan, 2009). A curriculum grounded in person-centred care helps students to move from stereotypical images of older people to an appreciation of them as individuals as opposed to biomedical categories (Koh, 2012).

An increasing range of educational interventions are outlined in the literature. These interventions aim to reprioritise older people and shift the focus of ageing and older people from a biomedical presentation to a more positive and holistic focus. Ryan, Melby, and Mitchell (2007) implemented educational interventions that concentrated

on health and ageing in both theoretical and practice modules as part of the first-year requirements of the nursing programme. Illness was presented as a deviation from health rather than focusing primarily on the medical model of care. Also, students were required to undertake a series of visits to well older people living in the community. While the pre and post-intervention data did not reveal a significant change in attitudes, the interventions did maintain existing positive attitudes with some slight improvements, particularly in shifting ambivalent attitudes to positive attitudes.

Parsons, MacDonald, Hajek, and Moody (2015) also implemented a course which emphasised healthy ageing and a holistic perspective, which incorporated; determinants of health; health promotion, illness prevention and health maintenance of the older person. The range of educational strategies included; online case studies and discussions, reflection exercises and clinical assessments of healthy community dwelling older people. Pre and post-test survey data indicated that on completion of the course students expressed overall positive attitudes towards older people and an increased interest in working with them. However, this course was offered in the first year of the programme and there is no indication whether or not the changes were maintained.

Ferrario, Freeman, Nellett, and Scheel (2007) found that students exposed to a new curriculum that employed successful ageing as a framework resulted in more positive views about ageing. Concepts addressed in the curriculum included; normal age-related changes, myths and stereotypes, ageing as a lifelong process, healthy ageing and adjusting to normal ageing and long-term conditions. Also, early in the programme, students were exposed to healthy community dwelling older people to conduct health promotion, with the care of the complex older person addressed in the senior year of the programme when students had medical /surgical and mental health knowledge and experience.

A wellness and positive ageing focus have been shown to improve attitudes about older people (Ferrario et al., 2007; Parsons et al., 2015; Ryan et al., 2007). However, it is also important that the focus of curriculum also address the heterogeneity of ageing to ensure students are prepared for the complex care needs of older people with

physical and mental health problems that they will be exposed to in the clinical environment. Brand and McMurray (2009), highlight that students felt a lack of emotional preparedness for the clinical setting, with many expressing anxiety and awkwardness, particularly about intimate cares of older people. A mixed methods study by (Gillespie, 2013) utilising pre and post clinical experience data revealed student nurses perceive what they learn in class is incongruent with the realities of practice. This can result in a culture shock, stress and anxiety when they attend clinical placement Duggan et al. (2013) found students observed deficits of care in the clinical setting that was in direct contrast to the philosophy of care outlined in the curriculum, with clinical placement modelling ritualistic care as opposed to person-centred care. Furthermore, students felt ill prepared to challenge the deficits of care they witnessed during placement.

The importance of supportive supervision to facilitate positive learning experiences in the clinical environment with older people is increasingly documented in the literature. Rogan and Wyllie (2003) developed a course that included preparation for the care of older people through integrated theoretical content, structured clinical learning activities and ongoing briefing and debriefing support. They found that the academic structure and support enabled students to gain new understandings and appreciations for older people in the clinical environment, with students shifting from stereotypical images of older people to appreciating older people as individuals. In addition, they acknowledged the importance of ensuring continuity across the academic and clinical learning environments to help facilitate and promote individualised person-centred care. Continuity was also reported as a means to minimise the negative influence that clinical placement can have on learning if a student feels overwhelmed, stressed or anxious by clinical situations involving older people.

There is a clear consensus in the literature that nursing education content should focus on quality of life, holistic and person-centred care as opposed to a biomedical approach to ageing that presents older people as biomedical categories and not individual people (Chan & Chan, 2009; Henderson et al., 2008; Koh, 2012). Nash, Stuart-Hamilton, and Mayer (2014) suggest that to provide a more balanced account of ageing, the approach to teaching should be on a health-illness continuum, focusing on enabling and

facilitating older people to maximise independence. Another key focus for the nursing curriculum is to minimise the negative experiences students may have when they feel unprepared to deal with older people or the conflicting philosophies they are exposed to during clinical placement. Misalignment between the academic and clinical learning environments suggest a need to address not only the focus and exposure of curriculum content but also the structure of nursing curriculum to facilitate positive knowledge and attitudes about ageing older people and working with them.

## **2.14 Curriculum structure**

The way the curriculum is structured can influence the alignment between theory and clinical and therefore student experiences. The literature theme relating to the structure of the curriculum spans both the theoretical and clinical learning environments. It encompasses the timing of content and clinical exposure to older people and the delivery of this as either a single stand-alone course or integrated throughout the nursing curriculum.

Andrew, Tolson, and Ferguson (2008) emphasise that, within the nursing context, conflict can arise between what students are taught and the realities of clinical placement. G. R. Andrews (2001), highlights that there is often a gap between theoretical university based nursing education and practical clinical experience, with students caught between different beliefs and values of nursing theory and the realities of clinical practice. In a qualitative study exploring student experiences in the clinical learning environment, McGarry et al. (2009) report that encounters and observations in the practice setting challenged students personal and professional ideals and were often incongruent with the theoretical underpinning espoused in the classroom. Also, the findings highlighted the task-focussed nature of care in which the onus of getting the job done was the dominant ideology within clinical environments and is in direct conflict with the theory of individualised person-centred care. While this was a small-scale study and therefore difficult to generalise the findings, they do mirror the findings of other studies exploring the conflict arising between the theoretical and clinical learning environments. J. Brown et al. (2008) conducted a multi-method longitudinal study including 718 survey questionnaires from nursing students across four

educational institutions in England. This study found student's sense of role identity was challenged by issues such as a lack of support, poor nursing role models, time pressures, role constraints, staff shortages and work overload.

Furthermore, this study highlights that the inconsistencies between the theoretical and clinical settings create tension and conflict for the student and that it is this feeling of conflict and unease that results in students' negative attitudes and lack of desire to work with older people. To minimise the incongruences between theoretical and clinical learning all learning experiences should be based on well-designed learning objectives relevant to the theoretical content and incorporate learning strategies and support with supervision by nurses who have a positive approach to working with older people (Robinson & Cubit, 2005).

The timing of age-related content in the curriculum in relation to clinical exposure to older people has also been found to influence student attitudes and knowledge about ageing, older people and working with them. Following the implementation of a stand-alone ageing course, Lowey (2018) identified the importance of clinical placement and theory timing, with students reporting the theory content, would have been valuable before their first clinical exposure, rather than after. Also, students reported that the lack of a concurrent clinical rotation made the course less effective, suggesting the importance of appropriate clinical experiences to consolidate and apply theoretical learning. Students who learn about caring for older people through an integrated theory and clinical practice experience have been found to express more positive attitudes and empathy towards older people, are more likely to reject stereotypes of older people and felt more comfortable with older people. Gould et al. (2012) in their study exploring student nurse attitudes, report that novice students (N=114) were significantly more negative about working with older people after experiencing a first clinical placement in which they are exposed to older people. The placement was not specific to the care of older people. While the focus was on learning generic nursing skills, the students were exposed to older patients. These findings suggest the need for careful sequencing of clinical placement in relation to learning aims.

The curriculum structure, in many nursing programmes, exposes first-year nursing students to older people during their first clinical placement, which is often in an Aged Residential Care (ARC) facility (Abbey et al., 2006). Clinical placements during this time primarily focus on the consolidation of psychomotor and fundamental skills such as bathing and feeding (Kloster, Høie, & Skår, 2007), resulting in nursing students perceiving the care of older people as requiring only basic skills (Abbey et al., 2006; Gould et al., 2012; Kloster et al., 2007). Furthermore, the focus of these placements is generally on only developing nursing skills as opposed to the care of older people. During these early clinical placements, students are often paired with lesser-qualified health workers because the focus of the placement is about learning basic skills and therefore there is no opportunity for students to identify with the role of registered nurses in working with older people (Abbey et al.; Kloster et al.). It is not surprising that nursing students frequently report that working with older people requires minimal skills, is not exciting or challenging (Henderson et al., 2008; King et al., 2012; Kloster et al.; Stevens, 2011).

The exposure of student nurses to unwell older people early in the programme has also been noted as influencing attitudes towards ageing, older people and working with them. Kloster et al. (2007) note that due to limited competency in both theory and practice, novice students are not equipped to deal with the complexity of care needs associated with sick older people. McLafferty and Morrison (2004) examined the effect of caring for acutely ill older patients on student nurse attitudes in a small qualitative study. The study results showed that experiences, where students are exposed to acutely ill older patients early in the nursing programme, can result in the development of negative attitudes. In contrast, introducing an older person placement in the final year of the nursing programme can improve nursing student attitudes and interest in working with older people (Kloster et al., 2007) especially when it is incorporated with an independent course focussed on the care of the older person. (Koehler et al., 2016; Koskinen, Salminen, Stolt, & Leino-Kilpi, 2015).

In a recent study, Koehler et al. (2016) evaluated attitudes and perceptions of senior level students following the implementation of a stand-alone course relating to older people in an American nursing school. The content focus of the course included;

communication, assessment, active ageing, health promotion projects, illness management, end of life care and interactions with community dwelling older people in which a reflective assignment was attached. This study identified that negative prior experiences with older people resulted in lower pre-test scores than those who have had positive prior experiences. A post-test, conducted following the completion of the course, showed increases in positive attitudes for both of these groups and that the gap in scores between the groups disappeared. This suggests that this independent course, offered to senior students, was able to improve attitudes and counteract the impact of negative prior experiences.

A curriculum structure that offers a stand-alone course focused on the care of older people is viewed by many as the gold standard for curriculum structure, as opposed to threading content relating to older people throughout the curriculum (Baumbusch et al., 2012; King et al., 2012). A focused programme allows students to more readily apply theoretical knowledge when working with older adults, particularly when the content is sequenced to coincide with relevant practice experiences. Xiao et al. (2008), argue that stand-alone courses enable students to be taught by experts with a passion for the care of older people, which facilitates an opportunity for positive role models to inspire students.

Within the New Zealand context, Rodgers and Gilmour (2011) conducted an exploratory study of student attitudes towards older people before and after participating in a fundamental nursing course which incorporated older person content and practical experience with older people. A significant favourable shift in attitudes towards older people was found following the course. While this study suggests this stand-alone course was effective in improving attitudes, this study comprised a small sample size (N=56), so generalisability is limited. Furthermore, data was only collected immediately after the education experience and hence, it is difficult to know if attitude changes were maintained long term.

There are also examples in the literature where stand-alone courses have not produced positive attitudes. Aud, Bostick, Marek, and McDaniel (2006), reported on the implementation of a stand-alone older person course that incorporated both didactic

and a range of clinical experiences that spanned independent community dwelling older adults, home care to frail elders and nursing home care. While an increase in student knowledge about ageing and older people was evident, there was a large range in scores amongst students. In addition, student attitudes were significantly more negative at the conclusion of the course. The authors reported that this finding might be related to the placement of the course within the programme which was provided early in the programme (2nd semester). These findings also suggest that increased knowledge does not necessarily correlate with attitudes that are more positive.

For many nursing programmes, the inclusion of a stand-alone older person focused course is problematic due to what is often described as an overloaded curriculum, in which a number of competing interests are vying for space (Henderson et al., 2008). The integration of older person content throughout a curriculum offers the opportunity for content coverage without the need for an additional course to be introduced. However, Holroyd et al. (2009) state that when age related content is integrated throughout a curriculum, students find it difficult to identify which content relates explicitly to older people. There is also the risk that students will perceive a devaluing of ageing and older person content if it is not overtly evident within the curriculum (Kagan & Melendez-Torres, 2015).

Jansen and Morse (2004) compared the impact of an existing designated ageing course to a new curriculum design that integrated ageing content throughout the programme. Utilising a longitudinal cohort comparison design the attitudes of students completing both an integrated and stand-alone course were evaluated. Initially, the findings indicated no significant difference in attitudes between the two different cohorts at the different data collection time points. However, by the time of graduation, the integrated curriculum group showed significant increases in positive attitudes towards working with older people. The authors suggest that this may have occurred because positive attitudes were able to be reinforced during the integrated curriculum.

In contrast, B. Williams et al. (2007) found some differences in attitudes and knowledge following an integrated curriculum model; however, their findings were not statistically significant suggesting that an integrated curriculum may not significantly

improve student knowledge or attitudes. Holroyd et al. (2009) in their cross-sectional study of 197 Canadian nursing students also found no significant difference in attitudes following an integrated four-year nursing programme. Furthermore, the findings from this study also showed a drop in positive attitudes and a rise in negative attitudes at the beginning of the second and fourth year. Post analysis of the curriculum highlighted the influence of other aspects of the curriculum such as clinical placements that did not specifically relate to older people.

Blais, Mikolaj, Jedlicka, Strayer, and Stanek (2006) describe strategies implemented in two nursing programmes in America in which gerontology focused content was integrated throughout the programme along with a stand-alone elective (non-compulsory) course in the senior year. Strategies integrated into the programmes incorporated positive aspects of ageing such as including a grandparent panel in the maternity course, participation in senior citizen health fairs and the development of health promotion for older people. Evaluations indicated that 60 percent of students, despite the intervention, had a tendency towards a negative bias, indicating negative attitudes towards older people. Two of the recommendations post intervention evaluation include the need for the curriculum to contain positive aspects of ageing and the need for student experiences with community based older people.

Koren et al. (2008) in their survey data of 200 nursing students found that the more knowledge students receive about older people, the more confident and comfortable they feel in caring for them. In addition, the intent to pursue further knowledge was found to be significantly correlated to the level of comfort and confidence. Comfort and confidence were also correlated to time (number of semesters) in the nursing programme. The authors suggest that developing knowledge on older people early in the programme and integrating content throughout the curriculum can result in a sustained interest in learning about older people.

Increasingly, the literature points to the need for alignment between older person theoretical content and clinical placement as an essential consideration to positively influence students experiences with older people. While this seems best achieved by a stand-alone older person focused course in the senior year of the programme

(McGilton & Boscart, 2009), the value of also integrating specific learning opportunities throughout the curriculum is becoming increasingly recognised. Nash et al. (2014) highlight that it is more than just curriculum structure that influences knowledge and attitudes about ageing, older people and working with them. The type of educational methods or teaching strategies also plays an important role.

## **2.15 Teaching and learning strategies**

Teaching and learning strategies in nursing education have traditionally involved didactic theory based teaching, coupled with experiential learning opportunities in the clinical setting. There is limited literature that explores the didactic approach to teaching, other than in relation to the type or focus of information that is presented to students. However, there is recognition in the literature about the importance of didactic information for supporting knowledge acquisition. (Hanson, 2014; Mellor et al., 2007) In contrast, there is a plethora of literature exploring the impact of experiential learning in the clinical environment and alternative experiential opportunities on student nurse knowledge and attitudes about ageing, older people and working with them.

### **2.15.1 The clinical learning environment**

Many studies have explored the effect of clinical placement on student nurse attitudes and willingness to work with older people (Abbey et al., 2006; J. Brown et al., 2008; J. Brown et al., 2008a; Nolan et al., 2002). The impact of exposure to older people during clinical learning experiences has been highlighted as a significant influencing factor on student attitudes, particularly concerning older people and working with them. J. Brown et al. (2008) describe the role of clinical placement experience in structuring student nurse perceptions. The results of their study noted that students do not necessarily enter nursing with negative predispositions towards working with older people but that such negative views grow during their training, mainly as a result of clinical exposure. Furthermore, studies have found that the more days nursing students spend on clinical placements in areas with older people, the less likely they will consider older people's health as a future career option (Garbrah, Välimäki, Palovaara, & Kankkunen, 2017; Stevens, 2011).

Grealish, Bail, and Ranse (2010) note that learning in the clinical environment is a process of professional socialisation but also a process of self-identification, in which student nurses become to identify themselves as nurses. This process of identification relates to the concept of belongingness in which efforts are made by student nurses to fit into nursing communities during their clinical placements. The desire to belong can result in students modelling their personal practice on observed practices. When ageism is role-modelled in the clinical environment, students may emulate this practice by becoming desensitised to poor practice habits and adopting them into their own practice (Thomson, 2007).

A key point of contention in the literature is the type of clinical setting for students to learn about the care of the older person. Historically, the use of ARC for first clinical experiences can give the impression that the care of older people is simple or basic, with these clinical experiences leaving students with negative attitudes about older people and their care provision (Aud et al., 2006; Holroyd et al., 2009). Moyle (2003), highlights the need for nursing education to recognise that working with older people requires highly skilled nurses, particularly in the areas of assessment, diagnosis, pharmacology, palliative and rehabilitative care. For this reason, it is argued ARC is not an appropriate placement for first year students to practice basic nursing tasks. Nursing care of older people requires the ability to respond to complex situations. Therefore, ARC environments can be a positive place for senior nursing students to learn about the complexity associated with older people (B. Williams et al., 2007), once they have adequate assessment skills (Moyle).

Nolan et al. (2002) conducted a longitudinal study that showed that the most significant factor influencing negative attitudes towards older people and working with them was the nature and quality of their clinical experience during their training. Of particular note, the study findings highlight that student nurses did not necessarily hold negative attitudes towards older people but instead, they were aware of the impoverished environments in which older people received care and it was this that influenced their perception of working with older people and their future career choices.

This concept of impoverished environments is explored further by Nolan et al. (2006), in which their findings indicate that if student nurses are exposed to impoverished care environments, where they witness poor standards of care and negative attitudes towards older people, then their views are more likely to be negative. In contrast, if students experience enriched environments, with high standards of care and positive staff role models, they are far more likely to view working with older people positively.

The findings of these studies suggest that there is potential to influence positively student attitudes by facilitating positive experiences in enriched care settings. The Senses Framework (Nolan, Davies, Brown, Keady, & Nolan, 2004); which was initially developed to facilitate a supportive working relationship with older people, family carers and practitioners, has been extended to the student experience to underpin a learning community that places student nurses in the context of caring relationships. The framework identifies that in an enriched clinical environment, patients, staff, students and families should experience the following six senses: Security; Belonging; Continuity; Purpose; Achievement; and Significance (Nolan et al.).

To promote a positive and enjoyable learning experience in the clinical learning environment, Robinson, Abbey, Abbey, Toye, and Barnes (2009) emphasise the critical nature of the clinical orientation process following a study exploring the orientation students received when in ARC placements. They found that when students did not feel welcomed and supported, they quickly became disenchanted, which negatively influenced their experience and perception of working in older people's health. In contrast, providing students with an effective and thorough orientation positively influenced their perceptions of aged care and career choices. In addition, the need to prepare clinical staff to understand clearly the role and needs of student nurses along with forging strong links between schools of nursing and clinical settings are recommended to facilitate a more enriched student learning experience (G. J. Andrews et al., 2006).

The literature suggests that clinical placements, in which students are exposed to enriched environments where they are included as a respected and valued team

member, offer opportunities to promote a positive experience and in turn facilitate positive attitudes about older people and working with them.

Building on the concept of experiential learning, there is an increasing body of health education literature identifying new and innovative teaching and learning strategies aimed at facilitating positive knowledge and attitudes about ageing, older people and working with them. In particular, the application of experiential pedagogies, in which students are provided with the opportunity to meet and interact with healthy older people before engaging in clinical learning, has been found to be beneficial for improving knowledge and attitudes (Neville & Dickie, 2014; Rejeh, Heravi-Karimooi, & Vaismoradi, 2011; Wesley, 2005).

## **2.16 Intergenerational exposure**

For many young students, understanding the realities of ageing and older people can be difficult, especially if they have limited exposure or experience to older people (De La Rue, 2003). J. Brown et al. (2008) emphasise the importance of providing nursing students with the opportunity to personalise their expectations and experiences to create positive images and attitudes towards ageing, older people and working with them. There is a growing body of literature that provides examples and the benefit of increased exposure to older people during the training of health professionals. This exposure extends beyond the clinical placement environment and provides students with the opportunity to interact with well, community dwelling older people and to view first hand a different side of ageing that is commonly experienced in nursing. This type of experience can facilitate a learning journey that allows students to develop their own beliefs, values, and attitudes based on their experiences and their personal reflections (Ross et al., 2018).

The concept of inter-generativity has the potential to engage students in creating new knowledge about ageing through exposure to older people who challenge the traditional stereotypes of what is perceived to be old. In addition, these types of learning opportunities can build student confidence in their interactions with older people (Garbrah et al., 2017). Intergenerational learning activities can occur either in

the real life setting of the older person, in which students go out into the community and homes of older people or through classroom learning activities where older people are invited into the student learning setting.

The nursing education literature offers strong recommendations for the inclusion of experiential intergenerational learning activities with older people. Often these recommendations are based on the findings from medical education literature, which has shown that exposure and opportunity to interact with healthy, vigorous and optimistic community dwelling older people has a positive effect on attitudes towards older people (Adelman et al., 2007; Bernard, McAuley, Belzer, & Neal, 2003; Wilkinson, Gower, & Sainsbury, 2002).

Within the nursing education literature, there are increasing examples of the utilisation of intergenerational learning opportunities as a means to promote knowledge and positive attitudes about ageing older people and working with them. Davis, Beel-Bates, and Jensen (2008) facilitated a learning experience, which involved older people living in retirement facilities; either assisted living or independent housing. Students were paired with an older person whom they continued to visit at regular intervals across one and a half years of their nursing programme. Assignments incorporated reflection, health promotion, care planning and client health assessments. Evaluation of this initiative was performed through analysis of student portfolios, which demonstrated student learning, and focus group interviews. The findings indicated that students got a strong sense of what it is like to be an older person living in the community and that the activity enhanced student knowledge and comfort with older people, but not attitudes.

In terms of improving attitudes, Chonody (2015) identifies the importance of experiences with high functioning older people and notes that care must be taken when using this learning approach to avoid reinforcing stereotypes and deterring interest in working with older people. P. Gallagher and Carey (2012) found qualitative evidence of improvements in nursing student attitudes following encounters with well, community-dwelling older people. Similarly, Redfield et al. (2016) facilitated pairs of beginning nursing students to meet with a high functioning older person four times

over an eight-month period to provide health promotion activities. The results showed increases in student knowledge about ageing and positive views towards caring for older people.

The use of an intergenerational experiential learning activity is often one of many curriculum enhancements. Therefore the success of this specific type of learning activity is not always easily discernible. Ryan et al. (2007) as part of their curriculum enhancements included opportunities for first year students to interact with well older people. As this intervention was part of a number of education strategies implemented, it is difficult to isolate the impact of the intergenerational learning activity. However, as noted previously, the curriculum changes as a whole did not reveal a significant change in attitudes but did maintain existing positive attitudes with some improvement for participants with previously ambivalent attitudes. Aud et al. (2006) and Blais et al. (2006) also incorporated experiential learning experiences that exposed students to a heterogeneous range of community dwelling older people with different levels of functioning. Neither study provides an evaluation of the impact of this specific activity but instead, both conclude that contact with older people, alongside other educational instruction, is associated with greater knowledge about ageing and older people.

Within the New Zealand context, only one study was located that reported on health student interactions with healthy community dwelling older people and this involved medical rather than nursing students. Wilkinson et al. (2002) assessed attitudes of medical students before and after a one-week early community contact learning intervention. Some students were followed-up in the fourth year to determine the effect of an older person's health course on their attitudes. These measures were compared to those taken from an earlier cohort of students who had not undertaken the intervention. The results showed that contact with older people living in the community had a significantly favourable effect on student attitudes towards older people.

### **2.16.1 Classroom based intergenerational interventions**

There is increasing recognition within the realm of health professional education of the need to incorporate patients or the consumers of health services within the curriculum. Towle and Godolphin (2013) identify the unique expertise derived from the experience of illness, disability and the determinants of health from the patient's perspective. When shared with students, this can provide an opportunity for students to be exposed to the personalised, lived experiences of individuals in which students learn with, rather than about patients. While nursing education literature supports the utilisation of this blend of didactic and experiential teaching and learning method (Chonody, 2015; Koh, 2012; Koskinen et al., 2015) no specific examples are available in the nursing education literature. However, there is scant literature available concerning medical student education.

Katz, Conant, Inui, Baron, and Bor (2000), describes a council of elders in which older people were invited into the classroom to discuss dilemmas in caring for older patients. The discussions that occurred between the training doctors and the older person panel revealed novel ways to overcome health related difficulties and a way to address the problem of ageism in doctor patient interactions. Westmoreland et al. (2009) also incorporated a 'council of elders' to provide a lay person perspective to offer potential solutions to care challenges faced by medical trainees. Pre-test and post-test attitude scores demonstrated better attitudes towards being with and listening to older people and caring for older patients. However, there was little influence on overall attitudes towards older people.

Towle and Godolphin (2013) describe an education model in which people with long-term conditions were supported to teach workshops for health professional students. The evaluation of this process suggests a successful patient centred educational intervention, which was well received and valued by the students. Costello and Horne (2001) evaluated the involvement of people living with long-term conditions in the teaching of nursing students. At the end of each session, the students were asked to complete a questionnaire about different aspects of the session and user involvement in nurse education generally. The findings indicated this learning experience facilitate insight into the patient's perspective and the opportunity to develop a more patient-

centred approach to care. While these examples of involving patients in the classroom are not specific to older people, Towle and Godolphin (2013) state that this type of intervention would be useful in providing contact with groups, such as older people, to overcome stigma and stereotyping and challenge student attitudes and values associated with marginalised population groups. Garbrah et al. (2017) note another benefit of involving older people and those with chronic health problems in student learning, is that it encourages students to recognise the wide range of experiences of ageing.

### **2.16.2 Technology based interactions with older people**

The utilisation of online technology provides another form of experiential learning and interactions that can be used to facilitate knowledge, promote positive attitudes towards older people, and dispel the notion that learning about older people is boring. Altpeter and Marshall (2003) state that utilising online interactive technologies is an effective method of captivating younger students' interest in studying ageing and older people.

Tan, Mulhausen, Smith, and Ruiz (2010) outline the benefits of virtual patients in medical education. In particular, they note the value of providing standardised and focused scenarios where all learners can be exposed and experience situational challenges faced by clinicians in a safe learning environment. Orton and Mulhausen (2008) developed a range of online virtual patient simulation modules, GeriaSims, to support the education of medical students in the care of older patients. While their evaluation was not focussed on attitudes towards ageing or older people, it did indicate students found it to be an effective and efficient teaching and learning tool. Also, the virtual patient modules were successful in meeting targeted learning objectives.

Edwards, Nash, Sacre, Courtney, and Abbey (2008) developed a web based learning programme on nursing care of older people. The website was designed around three themes: Healthy ageing and health promotion; the older person in the acute care setting and; the older person in the community and residential care setting. Feedback from students indicated that the website was viewed favourably as a learning tool and

promoted student confidence and positivity about working with older people across various care settings.

Heyman et al. (2008) highlight the need for both creative teaching modalities and resource to enable innovative learning experiences about ageing and older people. While there is scant evidence in the literature about the impact of online learning technologies in relation to student learning about ageing, older people and working with them, the inclusion of online virtual clients in nursing education may provide a means to facilitate confidence and nursing capability about the care of older people.

## **2.17 Curriculum goal and core capabilities**

The literature exploring nursing education about ageing and older people incorporates multiple aspects relating to nursing curriculum; however, the overall goals or aims of the literature are varied. In their review of the literature, Koskinen et al. (2015) highlight the goals in this field of research can be categorised into student knowledge, student attitudes, career choices or self-efficacy in relation to clinical performance. Despite an increasing global emergence of guidelines relating to the competency requirements for nurses, there is a scarcity of research that focuses on the influence of nursing education on the overall capabilities requirements associated with the care of older people.

The American Association of Colleges of (2000) established the baccalaureate competencies and curricular guidelines for nursing care of the older adult in 2000. This document was re-evaluated in 2010 with minor amendments made. The guidelines outline a set of competencies required by graduate nurses for working with older people and curricular guidelines and recommendations for incorporating teaching and learning strategies in undergraduate nursing programmes. Similar competencies have since been developed across a range of countries. The United Kingdom Department of Health (2001) outlined nursing capabilities as part of the National Service Framework for Older People Policy. This policy includes principles, standards, and indicators for caring for older people. In Australia, the School of Nursing Queensland University of Technology (2004) devised core values and competencies, for

undergraduate nursing students, in conjunction with curriculum guidelines about aged and palliative care content. In Ireland, the (Nursing and Midwifery Council) published the professional guidance for nurses working with older people standards in 2009. This document defines the standard of nursing care that can be expected by all older people across all care settings and by all nurses. Most recently, the Canadian Association of Schools of Nursing (2017) released entry to practice gerontological care competencies for baccalaureate programmes in nursing. The purpose of these competencies is to provide direction for nurse educators about the breadth of gerontology coverage in the curriculum and outlines the set of knowledge, skills, and attitudes that all new nursing graduates should have about care of the older person.

Given the global phenomena of population ageing and the extensive body of nursing literature highlighting concerns about student nurses attitudes and knowledge about older people and working with them, it is surprising that only these few documents could be found. This might be because national and international nursing regulatory body standards of practice apply to the nursing care of all people and situations, regardless of a person's age. However, the literature about older people, health care and nursing suggests that generic nursing standards of practice are less likely to be applied to or received by older people (Higgins et al., 2007; Liu et al., 2013).

To date, no such guidelines have been established for the New Zealand context. The ability to establish a purpose or direction for curriculum enhancements requires a clear definition of curriculum goals in the form of expected capabilities and therefore is a crucial element of nursing education. Furthermore, Koskinen et al. (2015) highlighted that without defined capabilities the current field of research will remain limited, focussing only on the traditional competencies of student attitudes, knowledge and clinical performance.

## **2.18 Section summary**

The education literature presented in this review suggests that a multidimensional approach, which encompasses different aspects of a nursing curriculum, is required to facilitate knowledge and positive attitudes about ageing, older people and working with

them. While there are some conflicting findings, to achieve curriculum goals related to improved attitudes, knowledge and interest in working with older people, nurse educators need to focus on what, when and how students are taught and exposed to ageing related content and older people.

Content should be designed to develop student knowledge and understanding of ageing in contemporary society; providing a balance of experience and exposure across the health illness continuum. The focus of content should prioritise person-centred, holistic care for older people, which maximises independence and autonomy. The potential for curriculum content to provide preparation for clinical practice can offset negative experiences and therefore, is an essential focus for curriculum content but also curriculum structure. When considering curriculum structure, aligning theoretical and clinical experiences of older people can facilitate positive learning experiences, which in turn can improve attitudes. The timing of content and experiences should include integration through the curriculum coupled with a stand-alone focussed older person component or course. Furthermore, Kolb's (1984) experiential learning theory provides an opportunity for innovative teaching and learning strategies that move beyond traditional didactic means.

The literature provides substantial evidence of the value of intergenerational experiences, with high functioning older people, on the attitudes and knowledge of students in relation to older people. In contrast, to intergenerational experiences, experiential learning in the clinical environment can have a negative influence on student nurse attitudes about older people and working with them. The importance of supportive enriched clinical learning environments that align with the philosophy of person-centred care is essential for developing knowledge and positive attitudes. The philosophical values of both the learning institution and the nursing profession are reflected in the goals or objectives of a curriculum. While improving attitudes, knowledge, confidence and interest for working with older people are evident in research objectives of the literature reviewed, there is limited linking to fundamental capability requirements for all graduating students about the care of older people.

## **2.19 Chapter summary**

Population ageing means that nurses will continue to find themselves involved in the care of older people across a range of different care settings. It is recognised that there is a need to realign health service provision in order to provide effective, quality health services to the older population. However, the most significant barriers to attaining this are the negative attitudes and misconceptions related to ageing and older people, which are prevalent at both a societal and individual level. Healthcare providers are not immune to ageist attitudes. The consequences of this are evident through a lack of interest in working with older people but also in care provision across the health care continuum, where negative attitudes and poor knowledge result in the marginalisation of older people's health needs, poor management of symptoms and increased risk for unnecessary decline in health status and functional ability.

Education has been identified as a potential catalyst for change by facilitating and promoting knowledge and positive attitudes in relation to ageing, older people and working with this population group. However, the complex interplay of multiple variables and the influence these can have on attitudes and knowledge provides a challenge for nurse educators. While there is no clear consensus about student nurse attitudes and knowledge towards ageing and older people or the influences on these, it is evident that both knowledge and attitudes are malleable and therefore, nursing education has the ability to facilitate change.

The nursing education literature provides valuable insights into nursing curriculum enhancements in relation to the focus, structure and teaching and learning methods that can positively influence student nurse knowledge and attitudes. However, the majority of literature and research in this area focus on one or two specific objectives such as attitudes and knowledge to address workforce shortages as opposed to the capabilities required by all graduate nurses to provide effective, quality care to older people across a range of care settings. The ambivalence and gaps evident in the nursing education literature provide a platform for the current study.

## 2.20 Research aims and questions

This research aimed to design, implement and evaluate evidence-based teaching and learning interventions intended to facilitate the development of the necessary capabilities required by graduating nursing students to care for older people. The study is organised into three sequential phases: Developmental; implementation; and evaluation.

The aim of Phase I, the developmental phase is to gain an understanding of the student population, the current curriculum and factors that influence student attitudes and knowledge about the ageing process, older people and working with them. The specific research questions associated with this phase are:

1. What are student nurses' current knowledge, skills and attitudes about ageing, older people and working with them?
2. What factors influence student nurses' current knowledge and attitudes about the ageing process, older people and working with them?
3. What role does the existing curriculum have on student knowledge and attitudes about the ageing process, older people and working with them?

Phase II draws on the findings of phase I and the current literature, to design and implement a series of tailored and evidence-based teaching and learning interventions into a current nursing curriculum.

The aim of the third and final phase of the study is to investigate the impact of the interventions by addressing the following research questions:

1. What is the immediate impact of each educational intervention on student nurse knowledge and attitudes toward the ageing process, older people and working with them?
2. What is the cumulative impact of the educational interventions on student nurse knowledge and attitudes towards the ageing process, older people and working with them (*changes over time*)?
3. What is the overall impact of the educational interventions in relation to student nurse knowledge and attitudes concerning the ageing process, older people and working with them (*changes on completion of the programme*)?

## Chapter three: Methodology

*Education is the most powerful weapon which you can use to change the world. Nelson Mandela*

(1918 to 2013)

### 3.1 Introduction

Methodology has been described as a fundamental approach to research that connects research methodologies to particular philosophical frameworks (Teddlie & Tashakkori, 2009). The previous chapter highlights the need for research that can inform nursing education in relation to influencing student nurse knowledge and attitudes about ageing, older people and working with them. This study aims to implement and evaluate evidence-based educational interventions to address this need. This chapter discusses the philosophical underpinnings and research methodologies that support the research process and approach in this study, which involves a multiphase mixed methods longitudinal design.

### 3.2 Educational research

Education is both a system and a process. It is multilayered, dynamic, and involves the interactions of institutions, communities, and individuals, and therefore, is influenced by both political and societal forces and values. (National Research Council, 2002). These contextual factors and the role they play in educational processes means that educational research encompasses a broad range of epistemological foundations and modes of inquiry (J. Bridges, Flatley, & Meyer, 2009; Winch, Oancea, & Orchard, 2015). To try and capture the relationship between learning and education, educational researchers have often borrowed theoretical and methodological frameworks from other disciplines such as psychology and sociology. This has led to educational research as being characterised as trans-disciplinary (Winch et al., 2015).

The presence of a variety of disciplinary perspectives in educational research has made it difficult for a clear and universal definition to be established and there remains debate in the literature concerning the understanding, nature, aims, and methods of educational research (Vanderlinde & van Braak, 2010). However, as a discipline, educational research is recognised as being broad in scope and drawing on different techniques and methodologies to investigate many aspects of the education and learning process (Winch et al., 2015). A variety of epistemological foundations influences the specific research questions and the methods used in educational research. Despite this, there is a commonality shared across all educational research and that is the overarching goals. Mortimore (2000), highlights that the goal of all educational research is twofold; the production of knowledge and the improvement of educational practices. Mortimore further suggests that the improvement of educational processes and outcomes should be the main purpose of educational research. With this in mind, it is not surprising that much of the educational research undertaken might be described as evaluative. This current study aims to design, implement and evaluate evidence-based teaching strategies aimed at facilitating the necessary attitudes and knowledge required by graduating nursing students to care for older people; and therefore can be classified as educational research.

### **3.3 Evaluation research**

At a rudimentary level, evaluation is defined as a process for collecting and synthesising evidence that cumulates in conclusions about the merit, value, worth, significance or quality of a programme, product, policy, proposal or plan (Mertens, 2015). There are numerous types of evaluations depending on what is being evaluated and the specific purpose of the evaluation. Most evaluations, however, fall within or across the categories of formative or summative evaluation. Formative evaluations aim to strengthen or improve what is being evaluated by examining the delivery, the quality of implementation, and the organisational context. In contrast, summative evaluations examine the effects or outcomes of an intervention, policy or programme. As applied in education, evaluation often entails an exploration of educational processes and the ways that educational processes influence outcomes or lead to improvements in the outcome or outcomes of interest (National Research Council, 2002). The outcomes

of interest in this current study are student nurse attitudes and knowledge about the ageing process, older people and working with them.

There is some debate in the literature about the extent to which evaluation might be called scientific research. Mertens (2015) argues that at times, these two genres intersect, at other times they follow very separate trajectories with evaluation being associated with the need to inform decision makers and scientific research as being associated with generating new knowledge and understanding of phenomena. However, others argue that evaluation research is uniquely well placed in education to provide a valid and insightful understanding of educational reality at a theoretical level that can generate significant and reliable knowledge for professional action and future decision-making (D. Bridges, Smeyers, & Smith, 2008). As is the case with this study, which involves an exploration of influences on student nurse current knowledge and attitudes towards the ageing process, the implementation of tailored educational interventions and the investigation of the extent to which the interventions impact on knowledge and attitudes.

### **3.4 Research paradigms**

All research, including evaluation research, is guided by the underlying epistemological and ontological beliefs and assumptions of the researcher. Philosophical research paradigms form the overarching cosmological statements that are subscribed to when engaging in research (Mertens, 2015). That is, research paradigms provide an integrated philosophical statement, which encompasses what the nature of reality is, what can be known about that reality, and the axiology or role of values guiding research enquiry. The theoretical underpinnings of research have traditionally been defined as either conventional-positivist or interpretive paradigms, which has created the philosophical dichotomies of; realism versus relativism, objectivism versus subjectivism, deductive versus inductive and quantitative versus qualitative (Niglas, 2010). However, the choice between these dichotomous paradigms is viewed by many as unrealistic in practice and it is argued that the most important determinant of what philosophical stance to adopt are the research questions (Creswell & Plano-Clark, 2007; Saunders, Lewis, & Thornhill, 2009).

### **3.5 Pragmatism**

Teddle and Tashakkori (2009) propose the use of pragmatism as a theoretical orientation to guide researchers. The principles of pragmatism take the ontological position of pluralism, in which reality is viewed as both complex and multiple and the epistemological position that knowledge is both constructed and resulting from empirical enquiry. That is, there are multiple routes to knowledge and varying truths exist (Johnson & Gray, 2010). A pragmatic approach does not classify the research as purely positivist or interpretive but instead provides a balanced point between the inductive and deductive perspectives (Biesta, 2010). Creswell and Plano-Clark (2007) state that pragmatists decide what they want to study based on what is important in their personal value system. The research questions are motivated by the researcher, as opposed to being dictated by a philosophical paradigm. The aims and research questions in this study stem from the researcher's interests in and values surrounding both nursing education and care provision for older people. An underlying axiology of social justice for older people, in relation to discrimination, has prompted the researcher to want to understand better student nurses' perceptions and challenge societal processes that sustain ageism as the status quo.

Pragmatism allows for the merging of different paradigms by making the research questions more important than the underlying worldview for inspiring the methods of research (Mertens, Bledsoe, Sullivan, & Wilson, 2010). The pragmatic approach provides researcher's freedom to embrace methods that are appropriate for addressing the research questions and present findings that recognise varying perspectives and insights. Saunders et al. (2009) contend that pragmatism provides a basis for practical research by integrating different perspectives. In order to address the current research questions, the philosophical position of this study is pragmatism as it allows for the use of both qualitative and quantitative research methodologies to collect information and make enquiry into a complex and real world problem.

### **3.6 Mixed methods**

Creswell (2013) suggests that a pragmatic research approach is the most prominent paradigm offering a strong philosophical basis for a mixed method approach. For

Biesta (2010) mixed methods research, at its most basic, involves a combination of qualitative and quantitative methods. Creswell (2012) further elaborates that mixed methods consist of the merging, integrating, linking or embedding of quantitative and qualitative data strands. The fundamental rationale associated with the use of mixed methods is the ability to more fully address the researcher's aims by combining the strengths of both qualitative and quantitative research, while also compensating for the limitations apparent in both (Punch, 2013).

There are several rationales proposed in the literature for utilising mixed methods. For example, Biesta (2010) states that most mixed methods research originated from validity concerns associated with single data sources or methods. Mixed methods allow for triangulation of data, with evidence stemming from two or more methods enhancing the strength and validity of research findings and providing a more accurate picture of the situation. Triangulation of both quantitative and qualitative sources provides greater strength, validity and breadth of understanding than would be generated from either a singular quantitative or qualitative design (Creswell, 2013). The ability to generate complementary data for elaboration, enhancement and clarification of findings or contradictory data that may result in the need for further exploration of the phenomena under investigation provides further rationale for a mixed method approach (Johnson & Onwuegbuzie, 2004). As a methodological framework, mixed methods enable researchers to collect comprehensive data about a phenomenon that can then guide decisions about educational practice (Giddings & Grant, 2006). Hence, mixed methods as a methodological framework is appropriate for this current study.

To fully address the research questions identified in this study; both a quantitative and qualitative approach is required. Quantitative data yields numbers that can be analysed to assess the frequency and magnitude of trends about a large group of people. It also provides the opportunity to explore relationships between variables and provides the opportunity to compare and measure changes over time. In addressing the research questions in this study, the utilisation of quantitative data is important for establishing baseline information about students, identifying influencing variables on attitudes and knowledge and for evaluating the educational interventions. However, the limitations

of a quantitative approach within the current research are the inability to control external and contextual factors, which may also influence student nurses.

Learning does not occur in a vacuum. For this reason, the utilisation of solely quantitative data is somewhat restrictive when addressing complex phenomena such as learning, attitudes and perceptions of knowledge. Qualitative data collection methods can capture these constructs through the actual words of the people in the study (Creswell, 2012). The use of qualitative data in this study forms an equally valuable data source for addressing the research questions while also providing the opportunity to extend and elaborate on the trends identified from the quantitative data. In addition, Porter (2007) highlights that when evaluating an intervention it cannot be viewed in isolation based on quantitative data, but rather, the intervention must be acknowledged and explored as a human activity, in which the knowledge of requires an understanding of the social mechanisms and contexts within which interventions are implemented. This supports the use of mixed methods as a research design in this study.

A research design involves the basic plan for the research and includes the conceptual framework, the strategy, tools and procedures used to collect and analyse the data (Punch, 2013). There are numerous forms of mixed method frameworks proposed in the literature. A convergent design emphasises the equal importance of both quantitative and qualitative data, which is collected simultaneously and addresses similar concepts or constructs (Creswell, 2012). The evolution of mixed methods research has seen the emergence of more advanced designs such as multiphase mixed methods. This approach can apply convergent or other simple designs across multiphases of a research project. Biesta (2010) suggests that a multiphase design is useful for informing other methods and research processes at different phases or levels of a research study. Creswell (2013) notes this design can be valuable in longitudinal studies and is a popular design for evaluation or research into programme implementation, such as this study.

### **3.7 Quantitative methods**

Quantitative research designs adopt objective strategies for examining cause-effect and how variables interact or influence outcomes as a means to generate and refine knowledge (Sousa, Driessnack, & Mendes, 2007). Quantitative research can be broadly categorised as either experimental or non-experimental. While experimental designs, such as randomised control trials, offer a rigorous method to determine cause-effect relationships; this type of design is often not feasible or ethical in the educational setting (Prideaux & Bligh, 2002). Marsden and Torgerson (2012) suggest if a control group cannot be formed by random assignment then a contemporaneous control group is preferable to no control group. A benefit of non-randomised comparison groups is that it enables the researcher to deal with existing groups and therefore, it does not disrupt the natural environmental context that the research is occurring in (Punch, 2013). This is more feasible in educational research such as this study, where class cohorts form naturally occurring groups

A frequently used design when randomisation is not possible is a non-equivalent pre-test post-test design (Polit & Beck, 2013). Pre-test post-test designs are widely used in behavioural research for the purpose of comparing groups and /or measuring change resulting from interventions (Creswell, 2012). This type of design is particularly common in educational research; where changes in learning following educational modifications are the focus (Dugard & Todman, 1995), as in the case of this study. The collection of baseline data at pre-test provides a method of identifying if comparison groups are similar. If this is the case, the validity of any inferences made from the post-test differences is enhanced (Polit & Beck, 2013).

#### **3.7.1 Survey designs**

The broad area of survey research encompasses any measurement procedures that involve asking questions of respondents (Trochim & Donnelly, 2001). Survey designs are often used in policy type research to determine whether a particular intervention has had a positive effect (Vignoles, 2012). As this aligns with the aim of this research, the inclusion of a quantitative survey design is appropriate and is applied in this study. Furthermore, surveys obtain information about people's actions, knowledge,

intentions, opinions and attitudes (Polit & Beck, 2013). This means survey research is valuable for learning about a population group, which aligns with the aims of the initial phase of this research.

Longitudinal surveys involve collecting data multiple times over an extended period (Polit & Beck, 2013). Longitudinal surveys are a popular design in education research as the data provide a measure for the progress or changes made with students (Vignoles, 2012). Longitudinal surveys can be used to study changes and trends in individuals over time or as is the case in this study, changes within and across nursing student cohorts (class groups). The collection of survey data at periodic intervals enables the investigation of different cohort knowledge and attitudes in relation to educational interventions. A common threat to validity associated with longitudinal surveys includes maturation. That is, it can be difficult to determine whether changes occur because of the intervention or other events (Mertens, 2015). The use of different cohorts in this study provides a 'control group' and the inclusion of qualitative data serves to identify other influences, such as natural maturation, on the survey data.

### **3.7.2 Questionnaires**

For this study, a self-completion questionnaire was considered an appropriate tool due to the ease of distribution and the likelihood of a good response rate. Mertens (2015) suggests a response rate of 70 percent is recommended as an acceptable number of responses. Fortunately, in this study, questionnaires were able to be distributed in a class setting which facilitated a high response rate due to ease of completion and return of the questionnaire by the respondents. Another advantage of self-completion questionnaires is that they provide anonymity, which is important when gathering information about attitudes and perceptions (Polit & Beck, 2013). This is particularly important in this study as the participants are students enrolled in an educational programme where the research is conducted.

While anonymity and confidentiality of participants' data are crucial from an ethical perspective, it is also a means to promote true or accurate responses. On the other hand, a problem with self-completion questionnaires is the awareness of respondents

that they are being investigated and therefore they may modify responses to align with what they perceive is the socially desirable response, not what they truly believe (Cross, 2005). In the case of this study, there is a risk that respondents may not want to report what they perceive as undesirable traits, such as negative attitudes associate with older people and may respond more positively than how they actually feel. This limitation of questionnaire data further supports the need for triangulation of data sources through a mixed methods approach.

### **2.6.1.1 Questionnaire response scales**

A response scale allows for a numeric, quantitative measurement to be assigned to qualitative constructs such as attitudes, perceptions and psychological traits (Polit & Beck, 2013) and are often employed as part of survey questionnaires. Likert scales are a commonly used instrument to measure attitudes by providing a range of responses to a given statement or question (Jamieson, 2004). Likert scales are widely used in research questionnaires because of the simplicity of construction and administration. However, a common criticism of Likert scales is that they only provide an ordinal level of measurement (Jamieson, 2004; Punch, 2013). That is, the Likert scale does not recognise or allow for the fact that different statements or items may carry different scale values of the attitude or construct being measured (Punch, 2013). Likert scales employ positively and negatively worded statements of which respondents must record their level of agreement or disagreement.

Different formats of Likert scales exist. The most commonly seen is the five point Likert scale (Jamieson, 2004). There is some debate in the literature between the use of an even numbered scale or an odd numbered scale. An even numbered scale forces respondents to identify a level of agreement or disagreement whereas an odd numbered Likert scale provides a respondent with the ability to sit on the fence or remain neutral. The Likert scales used in this study employed a five-point scale to incorporate a neutral or unsure option. Each specific question can have its response analysed separately or have it summed with other related items to create a score for a group of statements (Polit & Beck, 2013).

Punch (2013) notes a common dilemma in research is whether to use an existing research instrument or construct a new one. There are some widely used measurement scales to address attitudes and knowledge towards older people and ageing Kogan's (1961) Attitudes Towards Older People Scale (KATOP) measures attitudes towards older people. The Australian developed Reactions to Ageing Questionnaire (Gething, 1994) is a measurement instrument that provides insight into attitudes about ageing by assessing how participants view their own personal ageing based on what the respondent anticipates they will be like in old age. These two tools use Likert scales to identify attitudes towards older people or ageing, whereas Palmore's Facts on Aging Quiz (1977) employs a true-false scale that measures respondents' level of knowledge or misconceptions regarding the ageing process. This tool is often used in conjunction with an attitude scale for exploring the relationship between attitudes and knowledge about ageing and older people.

While these tools have been widely used as measures of attitudes and knowledge of ageing and older people, the current research aimed to capture more focused information about the knowledge and attitudes of student nurses about the ageing process, older people and working with them, within the context of nursing practice. That is, the research focus relates specifically to nursing capabilities as opposed to the items on the established scales which are generic and applicable to the general population and less relevant to the specific population group and research questions in this study. Furthermore, the length of each of these tools, when combined into one focused questionnaire, along with additional measurements to address attitudes of working with older people, would result in a very lengthy questionnaire that could act as a barrier to respondent completion. Punch (2013) notes that short rating scales, tailored to the purpose and context of a particular study, can yield more valuable findings than trying to fit an existing measurement into a new study. For the purpose of this study, the researcher developed a data collection instrument that explored attitudes and knowledge relevant to contemporary nursing and the aims of the study.

When designing a questionnaire, there are a number of considerations to maintain the respondents' attention, interest and focus. The gathering of demographic information at the start of a questionnaire can put participants at ease, while also providing valuable

background information for the research findings. When completing a questionnaire, a variety of different questions and scale structures help to maintain interest and focus and can minimise response set bias, which could occur if participants went through the questionnaire ticking the same response to every question (Polit & Beck, 2013). The use of close-ended questions or tick box scales helps to reduce the time taken to complete a questionnaire which further supports completion and response rate. The utilisation of focus group data as part of the construction of questionnaires can support the external validity of questionnaire findings as they address the themes relevant to the population group. This process was included in this study.

### **3.8 Qualitative methods**

Punch (2013) describes qualitative research as complex and multidimensional, encompassing a broad range of methodologies and practices. However, some overarching key features are evident. Qualitative research tends to be more holistic and flexible and focuses more on understanding phenomena rather than predictions. In contrast to quantitative strategies, qualitative enquiry is based on the expressions and viewpoints of those people being studied. Participants are given a chance to answer in their own words and not be restricted by close-ended quantitative instruments (Polit & Beck, 2013). Qualitative data offers a comprehensive picture of the social dynamic of a particular situation, experience or intervention (Patton, 2008). Also, the use of a qualitative design provides the opportunity to explore the context or setting of peoples' experiences and allows for participants' voices to be heard within the research process (Creswell, 2012). Qualitative methods are frequently used in educational evaluation research as they provide data that relates to both the processes and outcomes of a programme or intervention. Qualitative enquiry enables the discovery of important patterns, themes and relationships and is particularly useful for discovering knowledge that lies hidden or is difficult to tap into because it is hard to quantify; as in the case of this study, in which the variables measured are of a qualitative, subjective and sensitive nature. Patton (2008) highlights the use of qualitative data in evaluations highlights the people behind the numbers and puts faces on the statistics to deepen understanding.

Patton (2008) provides several ways in which qualitative enquiry can contribute to the generation of knowledge, which include:

- i. Illuminating meaning;
- ii. Exploring how things work;
- iii. Capturing stories to understand peoples experiences and perspectives;
- iv. Elucidating how systems function and the consequences on peoples experience;
- v. Understanding the context of people's experience;
- vi. Identifying unanticipated consequences; and
- vii. Making case comparisons to discover important patterns or themes.

While qualitative research does not typically plan to make group comparisons, patterns may emerge in the data that highlight similarities and differences among groups (Polit & Beck, 2013). In this study, comparing emerging themes is used to evaluate the impact of the educational interventions in conjunction with the quantitative questionnaire data. There is a range of qualitative data sources and methods that researchers can use; including direct observation, document analysis, and open-ended interviews or focus groups (Patton, 2008). The collection of qualitative data can range from structured to unstructured and may or may not involve researcher imposed constructs (Punch, 2013). The use of semi-structured formats ensures coverage of relevant points, yet allows for flexibility in responding (Mertens, 2015). For this reason, the current study employed semi-structured focus group discussions.

### **3.8.1 Focus groups**

Focus groups involve an organised discussion with a selected group of individuals in order to gain a collective view about a topic (Gibbs, 2012). Focus groups can be used as a research method on their own, used to complement other methods or to develop other data collection tools such as questionnaires (Gibbs, 2012) In this study, the focus group data were employed in all of these ways. Data collection in focus groups is reliant on the interaction between participants, with the aim of eliciting the participants' viewpoints (Mertens, 2015). Punch (2013), highlights the importance of group interactions for producing insights that would be less accessible from individual

interviews. When compared to individual interviews one of the advantages of focus group discussions is that participants may feel more able to talk about sensitive topics in a way they would not do in a one on one interview (Mertens, 2015). A well facilitated group interaction can bring to the surface aspects of a situation that might otherwise not be exposed (Punch, 2013). However, in the focus group setting, there is the risk that participants may realise their viewpoints are a minority perspective and be disinclined to speak up and risk a negative reaction from the group. Gibbs (2012) notes that the recruitment of focus group participants often attracts people who are articulate and confident in expressing themselves and their viewpoints; while this is good for the process of data collection, there is the possibility that the recruitment process may restrict the range and type of participants.

If all participants share very similar viewpoints, then there is the risk of shallow or poor quality data. Therefore, focus groups should include a reasonably homogenous population that share similar backgrounds but not attitudes. In addition, Patton (2008) states that in an ideal situation, participants should be strangers, as the dynamics can be complex when participants have prior established relationships. This is not possible in this study because the participants were recruited from nursing cohort classes and therefore were known to each other. The problem of getting participants to share their viewpoints fully is further heightened by the issue of confidentiality, which cannot be assured in focus groups (Gibbs, 2012; Patton, 2008). Participants in this study may feel restricted in expressing their viewpoint in front of other class members. However, Patton (2008) highlights that what is not said or how it is said is equally important data to what is said; consequently, consistency or diversity of views can still be identified in focus group data even if it not overtly stated. Therefore, despite potential barriers of participant sharing, focus groups provide a useful tool for exploring issues, experiences and perspectives; enabling the gap between what people say and what they do to be better understood (Gibbs, 2012).

### **3.8.2 Documentary analysis**

Documentary analysis involves obtaining data from existing documents which can provide a rich source of data (Patton, 2008). Documents can be used as an

independent data set, to inform research questions and process or in the case of this study, to gain a snapshot of the current curriculum for planning the implementation of new learning interventions.

Like other forms of data, written texts and documents are socially produced; that is, documents are produced based on certain ideas and principles and written for a specific purpose, which in turn shapes their content. The purpose of course outline documents in the higher education setting is to inform students about the overall structure, purpose and learning outcomes of a course. Course content is outlined in a course timetable document and the required assessments of the course are presented in an assessment schedule document. These documents are part of the curriculum and aim to provide overt information about the course to students. However, these documents also contain the underlying principles and values within the curriculum and school through the inclusion and exclusion of content and subjects. While analysis of course documents provided a snapshot of the existing undergraduate curriculum, it is acknowledged that this process will only provide a review of the formalised curriculum and not information pertaining to the hidden or informal curriculum, which includes the transmission of norms, values and beliefs conveyed through teachers, learning institution or the learning environment.

The techniques of documentary analysis draw on different areas of expertise and can include theoretical, structural and content analysis. Content analysis provides a form of inductive analysis enabling the identification of key patterns or themes which is applicable to the qualitative analysis of documents. For this reason, content analysis was employed to review current course documents to identify the current, inclusion of learning content and exposure to older people and where best and how to implement and integrate teaching and learning strategies aimed at facilitating positive knowledge and attitudes about older people and ageing.

### **3.9 Data Analysis**

Data analysis is the process of transforming raw data into useful information and findings. The type of raw data collected, and the specific research questions and the

overall aim of the research will guide the data analysis process. The nature of this study required both quantitative and qualitative processes to analyse the different types of data collected and to provide useful information to address the research aims and objectives.

### **3.9.1 Quantitative analysis**

Quantitative data analysis frequently applies statistical procedures in order to organise raw data and facilitate the interpretation of the numeric information (Polit & Beck, 2013). Descriptive statistics describe the basic features of the data in a study; in contrast, inferential statistics enable inferences, predictions or conclusions to be drawn from the data by comparing groups or relating two or more variables (Creswell, 2012). This study employed both descriptive and inferential statistics to address the research questions.

Descriptive statistics explore single variables one at a time, providing a synthesis and summary of the characteristics and overall trends or tendencies in the data (Polit & Beck, 2013), simplifying large amounts of data by reducing them into a summary (Trochim & Donnelly, 2001). The mean is the most frequently used measure of central tendency in descriptive research. However, the mean is very sensitive to extreme scores which can pull the mean in one direction making it less representative of the set of scores (Salkind, 2000). This is why it is important in descriptive research to also analyse the variability associated with mean scores (Punch, 2013). The most widely used measure of variability index is the standard deviation (Polit & Beck, 2013). The standard deviation, like the mean, is calculated on every individual measurement and represents the average of deviations from the mean (Polit & Beck, 2013; Punch, 2013). The mean provides a value for summarising an entire distribution and the standard deviation represents how much, on average, the scores deviate from the mean. For this reason, the standard deviation can be interpreted as the degree of error when a mean score is used to describe an entire sample (Polit & Beck, 2013). The mean scores and standard deviation are used in this study to describe the participant and cohort responses to the questionnaire.

### **3.9.2 Statistics**

Descriptive statistics describe the basic features of the data in a study; in contrast, inferential statistics enable inferences, predictions or conclusions to be drawn from the data by comparing groups or relating two or more variables (Creswell, 2012). An independent-samples t-test, is an inferential statistical test that determines if a difference in mean scores, between two groups, is a statistically significant difference (Polit & Beck, 2013). A t-test is most commonly used as a hypothesis test to compare the means of two populations. A limitation of the t-test is that it can only be used to analyse two group means. In contrast, an Analysis of Variance (ANOVA) is a statistical technique that is used to compare the means of more than two groups. Similar to the t-test an ANOVA is used for comparing mean group differences in relation to a variable, however the difference is that ANOVA enables the analysis of more than two groups (Punch, 2013). The ANOVA analysis identifies the variability of an outcome variable into two components; variability due to the independent variable and variability due to all other sources. That is, variation between groups is contrasted with variation within groups. ANOVA can also be used to investigate the effect of two independent variables on an outcome variable or to identify if there is an interaction effect (Polit & Beck, 2013). Both independent sample t-tests and ANOVA are the inferential statistical analysis applied in this study to identify any influencing variables, differences across time and differences within and across cohorts.

### **3.9.3 Qualitative data analysis**

Qualitative data analysis is frequently perceived as being more challenging than quantitative analysis; however, often the findings are easier to understand because they are presented in everyday language (Polit & Beck, 2013). In qualitative analysis, there are no universal rules that apply, although there are key tasks that help to organise and manage the mass volume of data obtained. A requirement of qualitative data analysis is to condense the extensive amount of raw data into useful summaries of information. The general inductive approach provides a convenient and efficient method of analysing qualitative data and its simplicity makes this process an attractive and straightforward option for qualitative data analysis (G. J. Andrews et al., 2006).

Inductive analysis involves identifying patterns, categories and themes within the data (Patton, 2008). This process requires multiple readings of the raw data and involves data coding and then the establishment of categories that are continually refined until key themes are identified. The research objectives guide the general inductive approach; however, these provide a focus of relevance as opposed to a set of expectations about the findings, which allows findings to emerge from the raw data itself (G. J. Andrews et al., 2006).

The techniques of documentary analysis draw on different areas of expertise and can include theoretical, structural and content analysis. Content analysis provides a form of inductive analysis enabling the identification of key patterns or themes which is applicable to the qualitative analysis of documents. For this reason, content analysis was employed to review current course documents and therefore the general inductive approach was applied to both focus group and document analysis data in this study.

The interpretation of raw data into themes can be influenced by the experiences, assumptions and personal views of the researcher (Creswell, 2012). The researcher, therefore, plays a role in the data analysis process by deciding what aspects are treated as more or less significant. For this reason, the credibility and trustworthiness of qualitative findings are less easy to evaluate. Both triangulation of data and confirmation of qualitative analysis by an independent researcher were employed in this study.

### **3.10 Credibility and trustworthiness**

Credibility and trustworthiness refer to the confidence in the truth value of the data and the interpretation of them. Polit and Beck (2013) suggest the use of triangulation in data collection and confirmation of others regarding the analysis process and interpretation process. For this study, the triangulation of data collection methods helped to overcome bias associated with a single method of data collection and facilitated a comprehensive research process by drawing on findings from varied and complementary sources. The importance of reporting on corroboration of both quantitative and qualitative data analysis and interpretation in association with the clear

and detailed reporting of research methods is also recognised as valuable for enhancing the credibility of this research.

## Chapter four: Methods

*The greatest challenge to any thinker is stating the problem in a way that will allow a solution.*

Bertrand Russell (1872 to 1970)

### 4.1 Introduction

Health utilisation trends associated with an ageing population indicate a need for a nursing workforce that is sufficiently qualified to provide care to older people. The aim of the study is to identify, implement and evaluate evidence-based educational interventions that will ensure graduating nursing students possess the necessary capabilities to provide high quality care for the ageing population. This chapter will describe the methods and processes employed to undertake this study which incorporates a multiphase mixed methods longitudinal design.

### 4.2 Study population and setting

The setting for this study was a New Zealand School of Nursing. The participants included in this study were students enrolled in the Bachelor of Nursing (BNurs) programme during the period 2011 to the of end semester one 2014. Within this time frame four distinct student cohorts are included in the study:

- i. Cohort 1 (enrolled in the programme from 2009 to end of 2011);
- ii. Cohort 2 (enrolled in the programme from 2010 to end of 2012);
- iii. Cohort 3 (enrolled in the programme from 2011 to end of 2013) and;
- iv. Cohort 4 (enrolled in the programme from 2012 to end of 2014).

In addition to the student cohorts enrolled in the programme at the time of the study a small number of participants (six) were also included from the graduating class of 2010 to provide a graduate student perspective.

### **4.3 Research design**

A research design incorporates the methods and fundamental form that the research will take. It provides a plan that governs the conduct of the research and how the research aims, objectives and questions will be addressed (Polit & Beck, 2013). The overarching objectives of this research are to firstly, develop and implement into an undergraduate nursing programme, evidence-based educational strategies that facilitate the capabilities required by graduate nurses to meet the health needs of an ageing population. Secondly, the study aims to evaluate the impact, influence and outcomes of the educational strategies on student attitudes and knowledge about ageing, older people and working with them. To meet these objectives, a multiphase mixed methods, longitudinal research design is applied. This design allows for an emergent, constructivist approach in which the first phase informs the subsequent phases.

Phase I involves an exploration of the current student cohort and curriculum to inform the design of educational interventions to be implemented into the BNurs programme. The specific research questions associated with this first phase are:

1. What are student nurses' current knowledge, skills and attitudes about ageing, older people and working with them?
2. What current factors influence student nurse knowledge and attitudes about the ageing process, older people and working with them?
3. What impact does the existing curriculum have on graduate student knowledge and attitudes about the ageing process, older people and working with them?

To address the research questions, this initial phase involved a multi-method approach that applied both sequential and convergent design approaches to facilitate a better understanding of the current situation and the development of the quantitative measurement tool. Data collection included:

- (i) A focus group with newly enrolled students;
- (ii) A focus group with recent graduates from the Bachelor of Nursing programme;
- (iii) An analysis of influencing variables in relation to knowledge and attitudes about the ageing process, older people and working with them and;
- (iv) A document analysis of the current curriculum.

An initial focus group with newly enrolled students was conducted to collect information about the knowledge, skills and attitudes that could be expected from students entering the BNurs programme in relation to ageing and older people. The information gathered was then used to develop the student questionnaire and focus in on areas and themes that were highlighted through the discussion. People are more likely to respond to questionnaires that cover aspects relevant to them. Therefore, the utilisation of focus groups as part of the construction of questionnaires can be valuable (Creswell, 2013) The American Association of Colleges of Nursing (2000) recommends assessing student baseline knowledge, attitudes and experiences to enable the configuration of curriculum that will accommodate their learning needs. This focus group also provided an opportunity to explore the prior experiences of students in relation to ageing and older people, and hence identify aspects that can be used to design and implement educational interventions into the BNurs programme.

While focus groups are a valuable method to achieve this, the small number of participants can be problematic when generalising the findings to the wider population. Therefore the utilisation of initial questionnaire data, to capture the demographic and background profile of the student population, was also conducted in this phase. The questionnaire data further enabled an analysis of potential influencing variables to facilitate a greater understanding of the student cohort.

In shaping and directing curriculum, Rochester, Kilstoff, and Scott (2005) highlight the value of including input from graduates in the early stages of their career. In addition, Bernard (2008) identifies that undertaking an analysis of the curriculum can provide useful data about gaps, overlaps and strengths in which to build a more coherent and systematic curriculum. For this reason, a focus group with recently graduated nurses from the programme and a document analysis of the current curriculum were included in this phase of the research.

Phase II draws on the findings from phase I and the current literature to address the objective of designing and implementing tailored and evidence-based teaching and learning interventions into the current nursing curriculum. This research phase was primarily interesting in exploring the educational interventions required to be

implemented into the current curriculum to facilitate the necessary attitudes, and knowledge required by graduating nursing students to care for older people. The interventions established for phase II of this research design will be presented in Chapter 6.

The third and final phase of the research design aims to evaluate the impact of the educational interventions. The purpose of evaluation is to examine the processes and outcomes of an intervention. An outcome analysis focuses on whether or not the objectives or desired outcomes have been achieved (Patton, 2008). The objective of the third and final phase of the study was to investigate the impact of the educational interventions implemented by addressing the following research questions:

1. What is the immediate impact of each intervention on student nurse knowledge and attitudes towards the ageing process, older people and working with them?
2. What cumulative impact do the interventions have on student nurse knowledge and attitudes towards the ageing process, older people and working with them?
3. What is the overall impact of the interventions, on completion of the programme in relation to student nurse knowledge and attitudes concerning the ageing process, older people and working with them?

These questions are addressed through data collection and analysis of both quantitative and qualitative data. The quantitative data incorporates a longitudinal, multi-cohort approach utilising self-completion questionnaires. Focus groups with one cohort (cohort four) at different time points provides the qualitative data. Both data collection methods allow for the investigation of change over time in relation to the interventions and the exploration of the dynamics involved in student nurses' educational experience in relation to ageing and older people.

A summary and overview of the research design are provided in Figure 4-1, which outlines the phases of the research, the data collection methods and how these inform subsequent phases. Table 4-1 outlines the timeline of the various data collection processes and the implementation of the educational interventions.

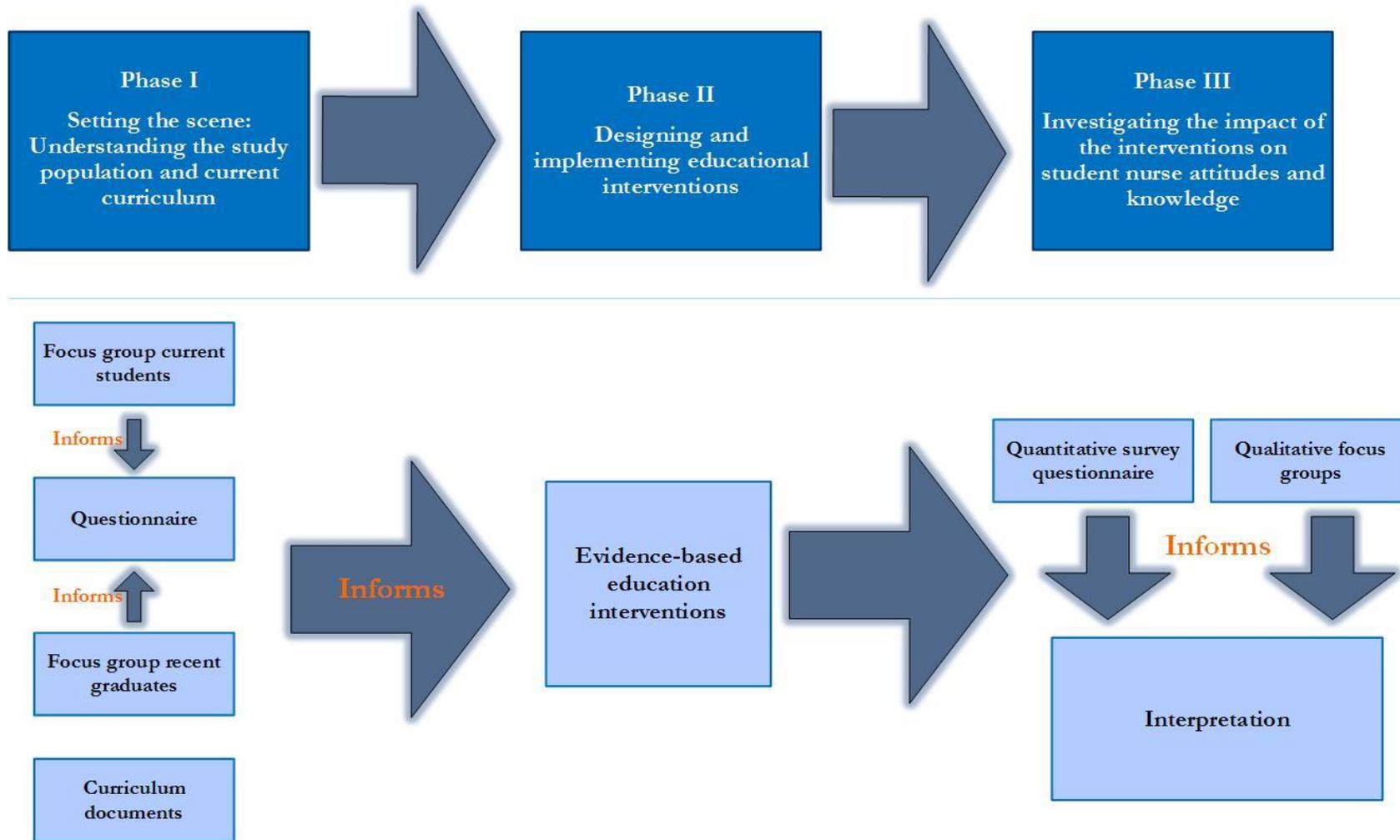


Figure 4-1: Research design

**Table 4-1: Data collection summary**

Data collection method	2011 semester one	2011 semester two	2012 semester one	2012 semester two	2013 semester one	2013 semester two	2014 semester one	
<b>Focus groups</b>	Cohort 3 Newly enrolled students	Recent graduates		Cohort 4 End of year one		Cohort 4 End of year two	Cohort 4 End of semester one year three	
<b>Questionnaire</b>		Cohort 1 End of programme						
		Cohort t2 Mid way through programme	Cohort 2 End of semester one year three	Cohort 2 End of programme				
		Cohort 3 Start of the programme	Cohort t3 End of semester one year two	Cohort 3 End of semester two year	Cohort 3 End of semester one year three	Cohort 3 End of programme		
				Cohort 4 Start of the programme	Cohort 4 End of semester one year two	Cohort 4 End of semester two year two	Cohort 4 End of semester one year three	
<b>Document analysis</b>	Current guidelines	Curriculum documents						
<b>Interventions</b>	N201 Living with a long-term condition: A person-centred focus							
					N202 Beyond the hospital: Community care clinical placement			
						N105 First exposure and reflections on ageing and older people		
							N301 Intergenerational group chat and virtual client	

## **Data collection**

### **4.4 Focus groups**

Focus groups were used as a data collection method in both phase I and phase III of the study. In total five focus groups were conducted, two in phase I and three in phase III of the study. Table 4.1 outlines when the focus groups were conducted and the participant group. Demographic information relating age, sex, ethnicity and highest educational qualification were collected from all focus group participants. In appreciation and acknowledgement of participants' time and contribution to the study, all focus group participants were provided with light refreshments during the focus group discussions and a small token of appreciation (koha) in the form of a gift voucher was provided. Due to the academic relationship the researcher had with the participants an independent researcher, experienced in conducting focus groups, was enlisted as the focus group facilitator for the newly enrolled student focus group and all three of the evaluation focus groups. All focus group discussions were audio recorded, with the consent of the participants, for ease of data transcribing and analysis.

#### **4.4.1 Focus group with newly enrolled students**

A focus group with newly enrolled students was conducted as part of the phase I data collection methods. In semester one 2011, an initial invitation to participate in a focus group was sent to all students from cohort three via the year one course web page. The invitation included some brief information regarding the nature of the focus group and research along with the email address of an administrator who would further liaise with those who were interested in participating. Participants were provided with an information sheet (PIS) and consent form to read before consenting to participate. A copy of the PIS and consent form is in Appendix 1.

A discussion guide was designed (available in Appendix 3) to explore the participants' current knowledge and attitudes towards ageing, older people, and working with older people. Themes identified from the literature about student nurses in relation to ageing and older people were used to construct the discussion guide.

These themes included:

- (i) Perceptions of ageing in general and their own ageing;
- (ii) Beliefs and perceptions about nursing including their aspirations for their future nursing career and;
- (iii) Previous experiences and attitude development in relation to ageing / older people.

The focus group discussion guide was reviewed / piloted by two second year students and also by the independent researcher who would be facilitating the focus group discussion. This was to ensure the information gathered from the focus group would address the objectives of the focus group. Following this process, additional prompt questions were added to the discussion guide to help elaborate and 'tease out' the information if participants required further clarification of what was being asked.

#### **4.4.2 Focus group with recent graduates**

As part of phase I of the research design a focus group with recent graduates from the BNurs programme was conducted. An email invitation to participate in a focus group discussion was sent to the 2010 cohort of graduate students from the School of Nursing. A PIS and consent form, which can be found in Appendix 2, was attached to the email to ensure those being recruited had a clear understanding of both the research and focus group processes. Those interested were asked to respond via email with their phone contact details so the researcher could then make further contact to arrange the time for the focus group.

The researcher facilitated the focus group. As the participants were no longer students within the undergraduate programme, there was no conflict of interest. Also, as the researcher has extensive knowledge of the programme, it enabled the ability to prompt and engage the participants during the discussion and clarify points.

The overall aim of this focus group was to gain feedback on how the current undergraduate programme influenced the learning experiences of students in relation to older people and ageing. For this reason, the semi-structured interview guide designed for the newly enrolled student focus group was modified to enable the

exploration of potential barriers or facilitators of positive student learning experiences in relation to ageing and older people. These included:

- (i) The amount of exposure to older people and the type of older people exposed to, e.g. frail, unwell and /or disabled and highly dependent or active, robust and independent older people;
- (ii) Exposure to positive academic and clinical role models and experiences
- (iii) Perceived status of older people and older people's health and;
- (iv) Areas that participants thought could be improved especially given they were now registered nurses.

While no specific questions addressing students' actual capabilities in relation to older people were asked in the focus group, it was anticipated that information demonstrating this would emerge from the discussion. A copy of the focus group guide is in Appendix 3.

#### **4.4.3 Evaluation focus groups**

As part of the phase III data collection methods, three focus groups were conducted with participants recruited from cohort four. The focus groups occurred at the end of year one (2012) and year two (2013) of the BNurs programme and again at the end of semester one in year three of the programme (2014). The timing of the focus groups was aimed to facilitate the evaluation of the impact of the educational interventions implemented as this cohort progressed through the BNurs programme.

The process for recruiting these participants was the same as that employed for the recruitment of the newly enrolled student focus group for phase I. An initial invitation to participate was sent to cohort four students via the course web page at each of the focus group time points. The email included a PIS and consent form which can be found in Appendix 1. Due to the difficulty found in trying to coordinate a convenient time for student focus groups in phase I, it was decided to advertise the focus group at a set lunch time that was coordinated around student's existing class timetable. This process aimed to maximise rather than limit the number of available participants.

As with the other focus groups in this research, a semi-structured interview guide (available in Appendix 3) was utilised. Aspects relating to pedagogical processes within the programme, both new and existing, and participants learning experiences, including both theoretical and clinical components of the programme were included in the focus group discussion guide.

## **4.5 Curriculum analysis**

An evaluation of the current curriculum was conducted by the researcher, who has both knowledge and experience working in all courses within the BNurs programme. This process involved document analysis of course outlines, timetables, assignments, assessment and examinations across all three years of the programme. This method is similar to a curriculum mapping process, which is a curriculum design methodology that captures data about curricular elements such as content, outcomes, teaching, assessment strategies and the relationship among these elements (Armayer & Leonard, 2010). A curriculum map attempts to assess what is currently offered against an ideal or desired set of capability outcomes. Therefore, it was necessary to identify a set of core capabilities for graduating student nurses in relation to older people.

### **4.5.1 Developing the core capabilities**

Establishing core capability expectation statements that outlined the requirements of graduate nursing students was needed to provide a framework on which the current curriculum could be analysed. These core capabilities would also provide a directional context for the design of educational intervention strategies in phase II. To establish core capabilities applicable to the current nursing programme, the existing guidelines, competencies and curriculum objectives highlighted in the literature review were analysed. Content from these documents was then grouped and clustered by statements and outcomes which followed similar themes. The outcomes and statements were then analysed in relation to the BNurs programme objectives, university graduate profile and the New Zealand Nursing Council competencies for registered nurses to establish a list of core capabilities required by graduating nursing students to safely and effectively meet the health needs of older people. Table 4.2 presents these capabilities

**Table 4-2: Core capabilities for graduate students working with older people**

BNurs Capability	Older people specific capability for graduating student nurses
Analytical practice	<p>Recognise own and others' attitudes, values, and expectations about aging and the impact these have on care of older people and their health and wellbeing.</p> <p>Analyse the impact of an aging society on the health care system and nursing practice.</p>
Competent practice	<p>Demonstrate sound knowledge of the ageing process</p> <p>Demonstrate knowledge pertaining to the complex interaction of acute and chronic co-morbid conditions common to older adults.</p> <p>Recognise and manage syndromes common to older people.</p> <p>Perform a comprehensive assessment of an older adult that incorporates the functional, physical, cognitive, psychological, social, and spiritual aspects of older people</p> <p>Incorporate into daily practice valid and reliable tools to assess the older adult</p> <p>Minimise risk factors that contribute to functional decline, impaired quality of life for older people</p> <p>Incorporate evidence-based assessment and care management of the older people across a variety of healthcare environments</p>
Interpersonal practice	<p>Communicate effectively, respectfully, and compassionately with older people and their families.</p> <p>Modify communication skills to suit the communication needs of individual older people</p>
Collaborative practice	<p>Incorporate older people's individual (and family) strengths, goals and skills when planning and delivering care to older adults.</p> <p>Facilitate communication with older person, family and health agencies through transition across and between home, hospital and care services.</p> <p>Engages and facilitate interdisciplinary team participation when caring for older people.</p>
Legal ethical practice	<p>Assist older people, families and caregivers to understand and balance autonomy and safety decisions.</p> <p>Apply ethical and legal principles to the complex issues that arise in care of older people.</p> <p>Facilitate older people's participation in all aspects of their own health care.</p>
Culturally safe practice	<p>Apply the concept of individualised (person-centred) care and where appropriate family centred care with older adults.</p> <p>Provide culturally safe care to older people through the acceptance of different attitudes, roles, language, culture, race, religion, gender and lifestyle in care of older people.</p>
Professional practice	<p>Demonstrate quality care for older people</p> <p>Apply evidence-based standards to screen, immunise and promote health in older people.</p> <p>Educate the older adult and when appropriate, family, friends, and assistive staff in implementing best practices for older people.</p> <p>Demonstrate the ability to apply appropriate models of care to an older person (includes palliative, restorative, health maintenance, person-centred and family centred models of care).</p>
Evaluative practice	<p>Explore the effectiveness of community resources in assisting older people and their families to retain personal goals, maximize function, maintain independence and live in the least restrictive environment.</p>

#### **4.5.2 Design of the curriculum analysis tool**

The established core capabilities presented in table 4-2 were utilised to evaluate elements of the programme to identify strengths, gaps and areas within the curriculum that educational interventions could be implemented. An initial exploration of the first year course documents highlighted that there were aspects in the course that provide important foundation theory that linked to the core capabilities but were not specific to ageing or older people. In addition, it also became evident that there were aspects of the current curriculum that could negatively influence student nurses knowledge and attitudes towards ageing, older people and working with them. Following this process a document analysis tool was developed to analyse the course documents utilising the following criteria:

- i. Incorporates specific older person ageing content that links to the capability;
- ii. Includes content relevant to the overall capability but no specific ageing or older person focus;
- iii. Assessment relevant to capability;
- iv. The potential for negative influence in relation to the capabilities and;
- v. Areas that could be utilised to include content to facilitate the capabilities.

#### **4.6 Survey questionnaire**

Questionnaire data collection was conducted with students enrolled in the BNurs programme during the 2011 to 2013 period. In addition, data collection for cohort 4 continued through to the end of semester one 2014 to capture data from this cohort following exposure to all of the interventions. In total there were five data collection time points for the collection of the questionnaire data. These time points were established based on the initial data collection in 2011, which aimed to capture both beginning level students, before any nursing education exposure, students' mid-way through and at the end of the programme. These time points were continued for repeated data collection. A summary of the time points and cohorts included in data collection are outlined in Table 4-3.

**Table 4-3: Phase III data collection time points**

Time point and year of questionnaire data collection	Cohort 1 (C1)	Cohort 2 (C2)	Cohort 3 (C3)	Cohort 4 (C4)
Time point 1, beginning of semester two, 1st year of the programme				
Year of data collection			2011	2012
Time point 2, end of semester one, 2nd year of the programme				
Year of data collection			2012	2013
Time point 3 end of semester two 2 <sup>nd</sup> year of the programme				
Year of data collection		2011	2012	2014
Time point 4, end of semester one 3 <sup>rd</sup> year of the programme				
Year of data collection		2011	2013	2014
Time point 5, end of semester two, 3 <sup>rd</sup> year of the programme				
Year of data collection	2011	2012	2013	

Participants were approached in a lecture theatre environment at a time negotiated with the year level course coordinator. The questionnaire, which is located in Appendix 5, with an attached PIS, which is in Appendix 4 was administered to students who were in the class at the time of data collection. Information about the research and the questionnaire was provided verbally to the students and it was explained that completion of the questionnaire was voluntary and anonymous. Brief instructions on how to fill out the questionnaire were also provided. An administrator from the School of Nursing was enlisted to undertake this process due to the academic relationship the researcher had with students. It was highlighted on the PIS that consent forms were not required as completion and submission of the questionnaire was deemed as consent to participate. Secure boxes were placed by the doors of the lecture theatre to collect the questionnaires; students were instructed to deposit the questionnaires in these boxes as they left the room should they wish to participate. A bowl of chocolate bars was placed by the collection boxes as a token of appreciation for participation in the research.

#### **4.6.1 Design of the questionnaire tool**

For the purpose of this study, the questionnaire was developed utilising themes identified in the literature and the findings from the focus group conducted with newly enrolled students. This enabled the questionnaire to relate specifically to nursing students, nursing capabilities and current terminology in relation to older people, nursing and healthcare. The format of the questionnaire borrowed from the format of established tools, but incorporated statements and questions built around the findings highlighted in the focus group discussion and literature.

The first part of the questionnaire focussed on demographic information including age, gender, ethnic identity and educational qualifications. Leading on from the demographic information, the questionnaire focused on the respondent's previous experiences with older people, including family and /or friends and work experiences, as both the literature and focus group findings indicated that this could have a significant impact on shaping students' perceptions and attitudes about ageing and older people. A question asking those students who did know older people (e.g. grandparents) asked respondents to describe these older people utilising a tick box made up of successful ageing and traits that are negatively associated with ageing. The purpose of this question was to provide data on the impact of previous experiences with older people in relation to knowledge, attitudes and desire to work with older people. Identifying areas participants wished to work following nursing registration was also included in the questionnaire. A recurrent theme in the literature pertaining to nursing students attitudes about older people indicates that nursing students' desire to work with older people remains low even after improved scores on attitudes and knowledge scales. This suggests that changes in attitudes and knowledge may not translate into changes in behaviour and warrants further investigation and exploration. A list of potential work environments was provided with tick boxes for participants to identify desired work areas. The next part of the questionnaire was divided into sections that each addressed a specific theme. These sections of the questionnaire required participants to respond to a variety of both positive and negative statements related to the themes. The scales aimed to address the research focus which relates to student nurse knowledge and attitudes about the ageing process, older people and

working with them. The questionnaire scales, the associated abbreviation and theme they were addressing is summarised in Table 4-4.

**Table 4-4: Questionnaire scales**

Likert scale themes	Abbreviation	Variable being measured
Reactions to ageing	RTA	Attitudes about the ageing process
Perceptions of older people	POP	Attitudes about older people
Knowledge of ageing	KOA	Knowledge about ageing and older people
Perceptions of working with older people	PWOP	Attitudes about working with older people
Knowledge of the nursing role (skills required)	KNR	Knowledge about working with older people
Perceived level of confidence *	PLOC	Self-efficacy in relation to nursing care and skills for working with older people
Perceived level of experience *	PLOE	
Perceived level of skill*	PLOS	
Perceived level of knowledge*	PLOK	

Notes. \*Included after the analysis of recent graduate focus group

The RTA, POP and PWOP scales required participants to rate their level of agreement with positive and negative statements relating to their own ageing, older people and working with older people. A five point Likert scale ranging from strongly agree to strongly disagree, with a neutral response in-between. Was employed to determine responses to such questions. The KOA scale required participants to identify if a statement about ageing or older people was true or false. The change in scale structure aimed to keep participants from becoming disengaged due to repetitive question format. The final section of the questionnaire aimed to capture participants' awareness of the skills required by nurses in relation to working with older people. This section requested participants to rate whether a specific task was a 'nursing responsibility', 'partly a nursing responsibility' or 'not a nursing responsibility'.

The questionnaire was piloted and reviewed by two second year nursing students and the independent researchers to assess for readability, content reliability and validity. Feedback from this process highlighted the use of clinical nursing language in some of the questions that may be unfamiliar particularly to the first year student participants. Punch (2003) notes that in the design of questionnaires jargon should be avoided, however in this study the clinical and nursing terminology were retained in the questionnaire as an indication of learning as participants progressed through the programme.

An additional section was added to the questionnaire following the focus group with recent graduates, which occurred following the initial administration of the questionnaire to cohorts 1 to 3 in 2011. The purpose of the additional section was to capture participant perceived level of self-efficacy in relation to skills required to work with older people because during the with recent graduate focus group participants had indicated that aspects such as confidence, and the perceived complexity of working with older people could result in avoidance to working with older people. Therefore, an exploration of students' self-efficacy in relation to working with older people would enable further analysis of potential variables associated with learning, actual knowledge and attitudes. The design of this part of the questionnaire built on the trans-cultural self-efficacy tool (Jeffreys, 2000), which utilised a 10 point rating scale.

As this is a validated tool for measuring self-efficacy, a range of nursing skills in relation to the care of older were applied to this existing scale. This tool required participants to rate their perceived level of confidence, experience, skills and knowledge. As this section was not included in the questionnaire until 2012, the only cohort to have baseline data for this section is cohort 4.

## **Data analysis**

### **4.7 Qualitative analysis**

The analysis of the focus group discussions involved a general inductive process to provide a systematic method of analysis. Data arising from the audio-recorded focus groups were transcribed verbatim into transcripts to ensure the accuracy of data. The analysis aimed to look for common categories or patterns within the texts of each focus group data set. This process required multiple readings of the transcribed data which were repeatedly scrutinised and re-examined until elements of similarity were identified to establish data clusters or codes. These codes were grouped into categories which were then continually refined in areas of commonality which could be grouped to form major themes.

The process of document analysis is also classified as qualitative analysis. Course outlines, timetables; including theory, clinical skills and clinical placements, and course assignments and assessments are readily accessible via the School of Nursing computer files. Due to the length of some of the course documents the process was only completed on those sections that pertained to course learning outcomes, the overall structure of the course; the theory and clinical components, content (as per timetables) and assessment and assignments information.

Data analysis occurred simultaneously with the data collection. That is, the document analysis tool enabled the research to analyse and record the content of the documents alongside the established analysis criteria. Any areas of uncertainty relating to content were then discussed with course coordinators or staff involved in the teaching process. The analysis enabled the identification of key themes identified in the course documents.

### **4.8 Quantitative analysis**

The raw data from the questionnaires were entered to an excel spreadsheet. Demographic data were translated to number codes for ease of analysis. Number scores for the Likert style responses were derived by attaching a number value with

higher (positive) numbers reflecting more positive attitudes or knowledge and lower (negative numbers) reflecting poor or negative knowledge. If a response was neutral, this was allocated a number that fell between the positive and negatives scores. The scales for perceived level of confidence, experience, skills and knowledge applied a ten point scale ranging from one to ten and hence these numbers were entered to the spreadsheet without the need for data cleaning. Following this initial data cleaning process, the data generated from the survey questionnaire were analysed using the statistical software SPSS. Both descriptive and inferential statistical analysis were conducted for phase I and phase III of the research design.

For this initial phase of the research process, descriptive analysis of the demographic and experiential profile of participants was conducted. A descriptive analysis of the data pertaining to participants' future career preferences was also conducted to identify participants' interest in working with older. Participants could provide multiple responses to this question; therefore, analysis of this information involved calculating the percentage of responses for different career interests.

#### **4.8.1 Phase I quantitative analysis**

For this initial phase of the research process, descriptive analysis of the demographic and background profile of participants was conducted to establish an overview of the student population that could be utilised to tailor educational interventions. Also, as a means to investigate the multidimensional nature of attitude formation and the construction of knowledge, multivariate analysis was conducted with cohort three and four mean scores on each questionnaire scale with demographic variables to identify any relationships. Cohort one and two were not included in this analysis as the focus was to establish influencing factors prior to educational exposure. Also included in the multivariate analysis was the mean scores from the other measures to identify if responses in one measurement scale were predictive of scores in another.

Before the multivariate analysis, individual univariate analyses with demographic and experiential variables were completed in conjunction with the mean scores from the outcome measures. Also included in this analysis was the other outcome measures to

identify if responses in one measurement scale were predictive of scores in another. The variable of age was divided into two categories rather than the four categories from the questionnaire. This was due to the small number of participants over the age of 20 years. The two age categories were 20 and under and 21 and over. Also included in this analysis was participants' description of older people which could either be positive, negative or a combination of positive and negative descriptors. Table 4-5 provides the variables included in the univariate analyses.

**Table 4-5 Variables included in the univariate analysis:**

Demographic and background variables
Age ( < 20 or >20)
Identified gender
Ethnicity
Education level
Previous work experience with older people (PEWOP)
Previous experience living with older people (PELOP)
Mean scale scores cohorts 3 and 4
Attitudes towards ageing (RTA)
Perceptions of older people (POP)
Knowledge of ageing (KOA)
Perceptions of working with older people (POWOP)
Knowledge of the nursing role (KNR)
Description of older people
Mean scale scores cohort 4
Perceived level of confidence (PLOC)
Perceived experience (PLOE)
Perceived skills (PLOS)
Perceived knowledge (PLOK)

The level of significance for the initial univariate analysis was evaluated at the 20% threshold. Bursac, Gauss, Williams, and Hosmer (2008) suggest this allows for a purposeful selection process to identify variables that, while not significantly related to the outcome scores, may make a contribution in the presences of other variables. Any variables that fell within this parameter were included in a multivariate analysis. The statistical significance parameter applied to the multivariate analysis adhered to the

more traditional level of  $p \leq 0.05$ . A summary of this analysis process to identify any relationships between demographic and outcome variables is presented in figure 4-2.

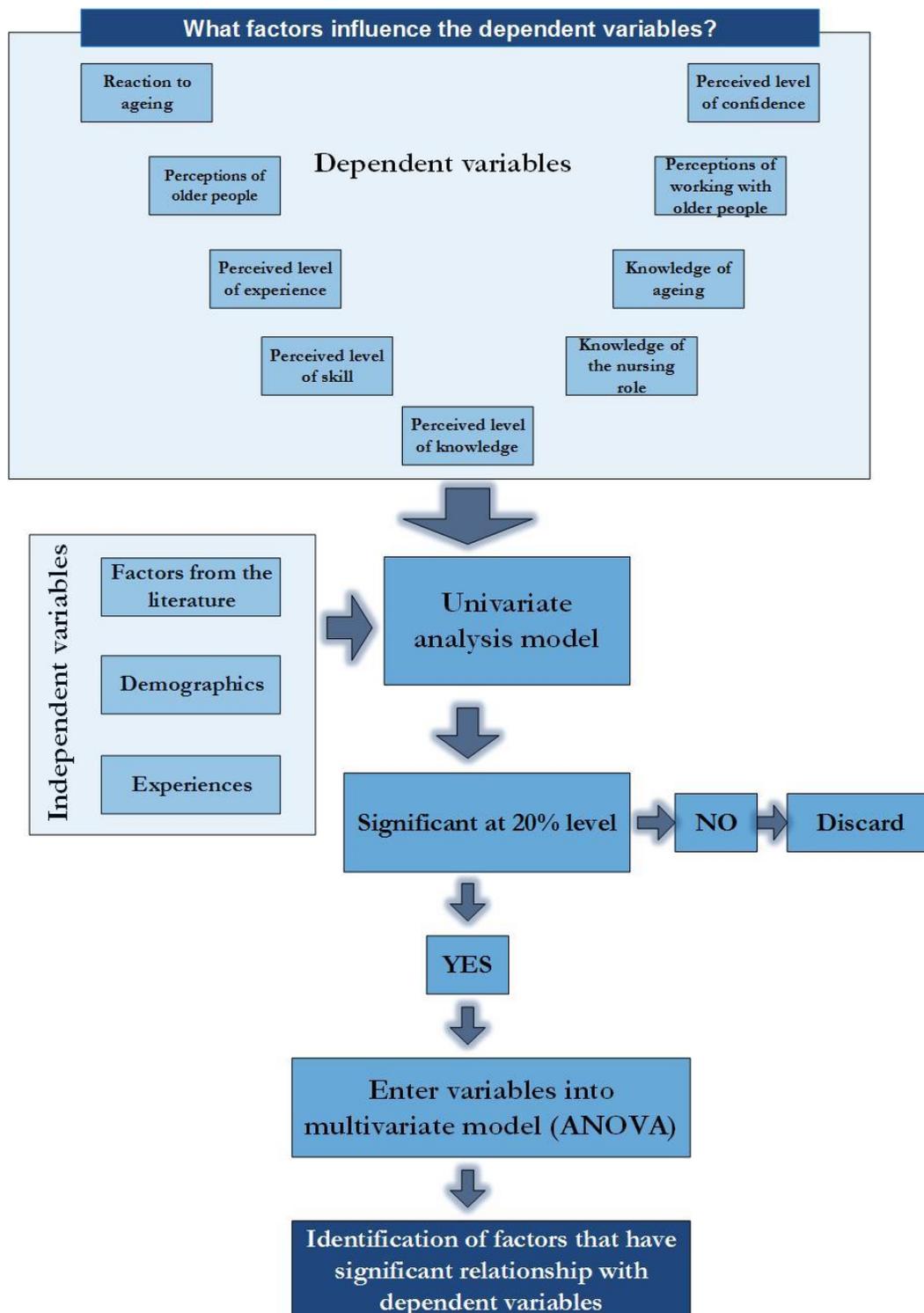
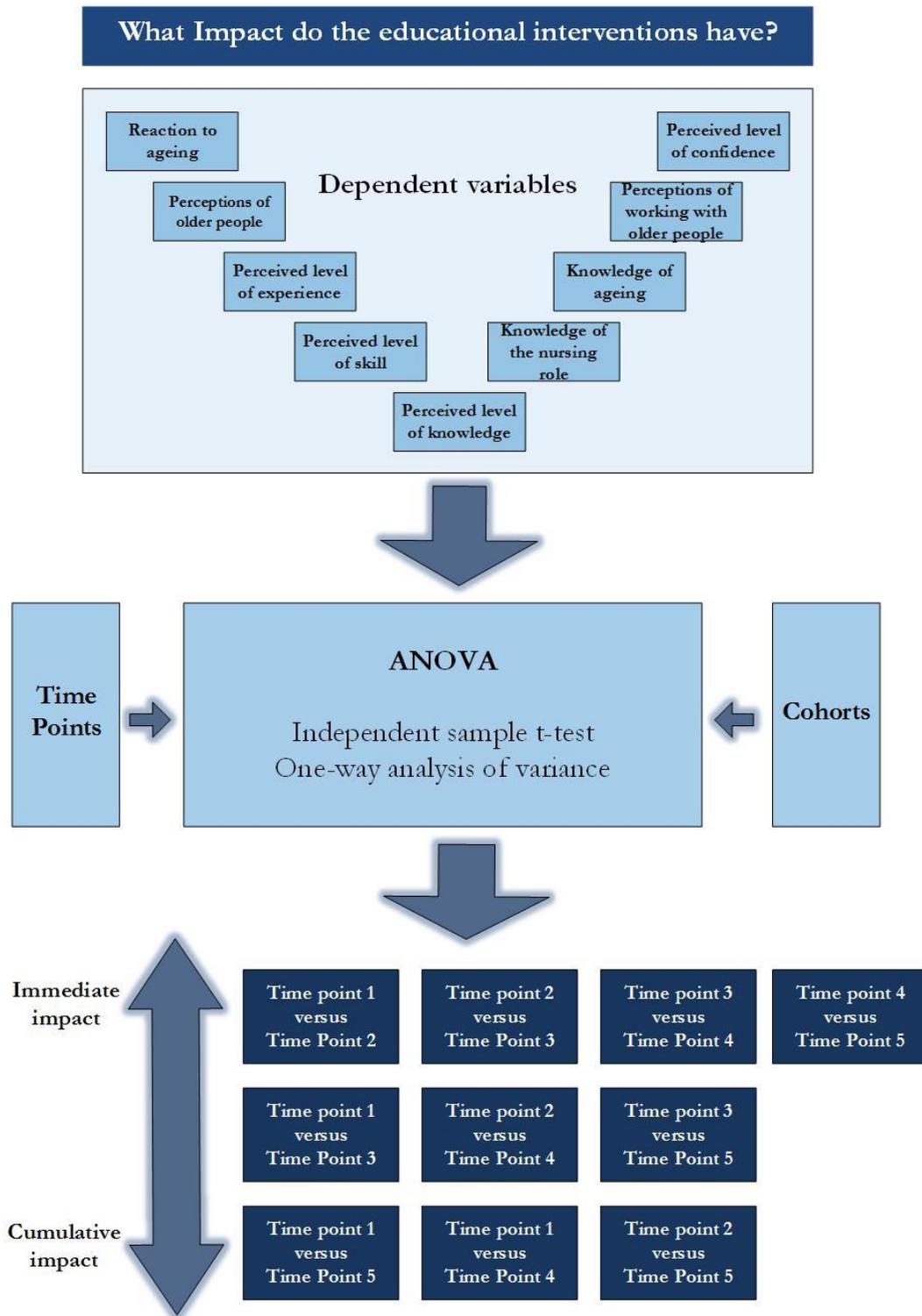


Figure 4-2: Quantitative analysis summary for phase I of the research design

#### **4.8.2 Phase III quantitative analysis**

For this phase of the research, a combination of descriptive statistics and Analysis of Variance (ANOVA) were employed for the analysis of the questionnaire data. ANOVA is used to determine if there are any statistically significant differences between the means of different groups. An independent sample t-test, which is a type of ANOVA was used to determine statistically significant differences both within and across cohorts at different time points. The independent sample t-test was used as opposed to a single sample t-test because it could not be guaranteed that the cohort sample would be the same within individual cohorts at different time points. A one-way ANOVA was used to compare mean scores across three or more cohorts at the same point. Utilising ANOVA, the mean cohort scores across the time points were used to allow for intra-cohort and inter-cohort comparisons to investigate the individual, cumulative and overall impact of the implemented educational interventions. Figure 4-3 provides an overview of the statistical analysis process for phase III of the research, which enables for the analyses of change over time within and across cohorts.



**Figure 4-3: Quantitative analysis summary for phase III of the research design**

## **4.9 Credibility and trustworthiness**

Content validity is a demonstration that the items being measured are drawn from the domain being measured, that is that the data collection tool measures what it is supposed to. The questionnaire design incorporated a set of statements of attitudes, knowledge and skills that emerged from phase I of this research, therefore providing congruency between the measurement tool and the items being measured. The items and questions were evaluated through expert judgments by the researcher and research supervisors whom all had expertise in gerontology and educational research methods. Pretesting with two students to ascertain their ability to respond to the questions provides further evidence of validity. In addition, the structure of questions in the questionnaire applied the format of standardised, psychometrically tested measures, further enhancing both the validity and reliability of the research data.

Participant bias is a potential threat to the validity and reliability of this study. While participants were assured their responses had no relationship with their academic performance or progress in the programme, students may have anticipated what might be an appropriate response for a student nurse, as opposed to what they truly felt. In addition, the longitudinal pre-post-implementation design meant participants were aware of the aims of the study because of repeated exposure to the questionnaire (re-test bias). However, the incorporation of a mixed methods approach provides an additional dataset in which to evaluate the level of bias that may be present in the questionnaire data.

Researcher bias can occur particularly in qualitative research where the researcher is the data collecting instrument and creator of the analytical process (Polit & Beck, 2013). Clear reporting of the researcher's background and peer review of the data collection and analysis process facilitate trustworthiness and credibility of qualitative findings the findings. The researcher is a registered nurse with clinical experience working with older people. Currently the research is employed as a Teaching Fellow with in an undergraduate nursing education programme. All aspects of data analysis within this study was undertaken by the researcher. Quantitative analysis was checked with a statistician and qualitative analysis was reviewed by an independent research.

#### **4.10 Ethics**

It is imperative that researchers adhere to ethical practices and minimise potential or perceived risk to participants. In this study, the participants are known to the researcher through her role within the BNurs programme. This relationship could be viewed as a power relationship by participants and therefore steps were taken to minimise any feelings of coercion participants may feel in relation to their consent to participate. Although questionnaires were distributed and collected in a lecture theatre setting (for ease of data collection) an administrator who had no role in student teaching or assessment processes was used, with no involvement from the researcher or other teaching staff. In addition, participants were informed both verbally and via the PIS, prior to the questionnaire being administered, that participation was voluntary and that their decision to participate or not had no affiliation with the course they were enrolled in or on their academic performance in the course. Additionally, a secure collection box was placed at the back of the classroom for participants to submit their questionnaires (either completed or not) to assist in maintaining anonymity and possible coercion. Students who wished to participate in the focus groups approached an administrator voluntarily.

The conflicting role of the researcher was also acknowledged as a potential issue for focus group participants in relation to lack of anonymity, feelings of coercion and the perceived power relationship due to the academic relationship the researcher had with the participants. To minimise these potential concerns an independent researcher, experienced in conducting focus groups, was enlisted as the facilitator. As focus groups were audio-taped, confidentiality was compromised due to the group interview setting. This was explained to participants prior to the commencement of the focus group discussion and was also addressed in both the PIS and consent form.

Ethical approval for this study was sought from the University of Auckland Human Participants Ethics Committee and was granted on 21/02/11 (Reference No: 2010/622). Further approval for the use of the questionnaire was obtained on 14/07/11. Due to the longitudinal nature of the data collection, additional ethics approval was required for the final data collection in 2014 (Reference number 7307).

Approval letters from the University of Auckland Human Participants Ethics Committee are provided in Appendix 6.

#### **4.11 Chapter summary**

This chapter has outlined the research methods employed to undertake this study. The study aims to develop, implement and evaluate educational interventions designed to facilitate knowledge and positive attitudes about the ageing process, older people and working with them, within the student nurse population. To address this research aim, a multiphase, mixed method, longitudinal design was used. The study population includes student cohorts from the BNurs programme over a four year period. Both quantitative and qualitative data collection methods and analysis were applied to address the specific aims and research questions. The findings from the first phase of the research design are presented in the following chapter.

## **Chapter five: Findings, setting the scene**

*Education is not preparation for life; education is life itself.*

John Dewey (1859-1952)

### **5.1 Introduction**

Students are central stakeholders in the teaching and learning process. Understanding the student population, their prior experiences and how these may influence current knowledge and attitudes is vital to the development of educational interventions. This chapter sets the scene by providing insight into the study population, the current curriculum and the learning experience of students in relation to the ageing process, older people and working with them.

The findings presented in this chapter relate to phase I of the research design, which involved multiple data collection sources to address the following research questions:

1. What are student nurses' current knowledge, skills and attitudes about ageing, older people and working with them?
2. What factors influence student nurses' current knowledge and attitudes about the ageing process, older people and working with them?
3. What role does the existing curriculum have on student knowledge and attitudes about the ageing process, older people and working with them?

The findings associated with each data collection method are presented in the order in which they were conducted. The perceptions of current students were gathered first through a focus group with newly enrolled students. From this, an initial quantitative questionnaire was developed and administered to provide baseline and comparative data. The baseline demographic and experiential profile of the study population is presented in this chapter which offers valuable insight into the study population and influencing factors relating to attitudes and knowledge about the ageing process, older people and working with them. The next set of findings presented in this chapter, focus on the current curriculum and includes the findings from a focus group with recent graduate students. This provides insight into the student experience within the

programme. The final set of findings are from a curriculum document analysis, which offers further insight and understanding of the current curriculum, its potential influence and where best to embed interventions aimed at positively influencing student knowledge and attitudes about the ageing process, older people and working with them.

## **5.2 Newly enrolled student focus group**

Understanding the prior experiences, knowledge and attitudes of students provides the base from which educational interventions can be targeted and developed. Therefore, the rationale for the focus group interview was to gain an indication of the knowledge and attitudes that could be expected from current students in relation to ageing, older people and working with them. Participants for this focus group were recruited via an email advertisement to all first-year students enrolled in the 2011 Bachelor of Nursing (BNurs) programme. While 11 students responded, only six could attend. The focus group occurred in April, a month into the start of semester one and was facilitated in a meeting room within the School of Nursing by a research assistant employed by the school, but with no affiliation with the BNurs programme. Lunch was provided for participants and a gift voucher was given as a token of appreciation for their contribution.

### **5.2.1 Demographics**

The focus group consisted of all female students, five of whom were under 20 years of age with one participant falling within the 21-25 age range. All participants had completed NCEA level III<sup>1</sup> and for five of the participants, this was their highest educational qualification. One participant had completed a Bachelor of Science degree. Four of the participants identified as New Zealand European and the other two participants identified as Asian.

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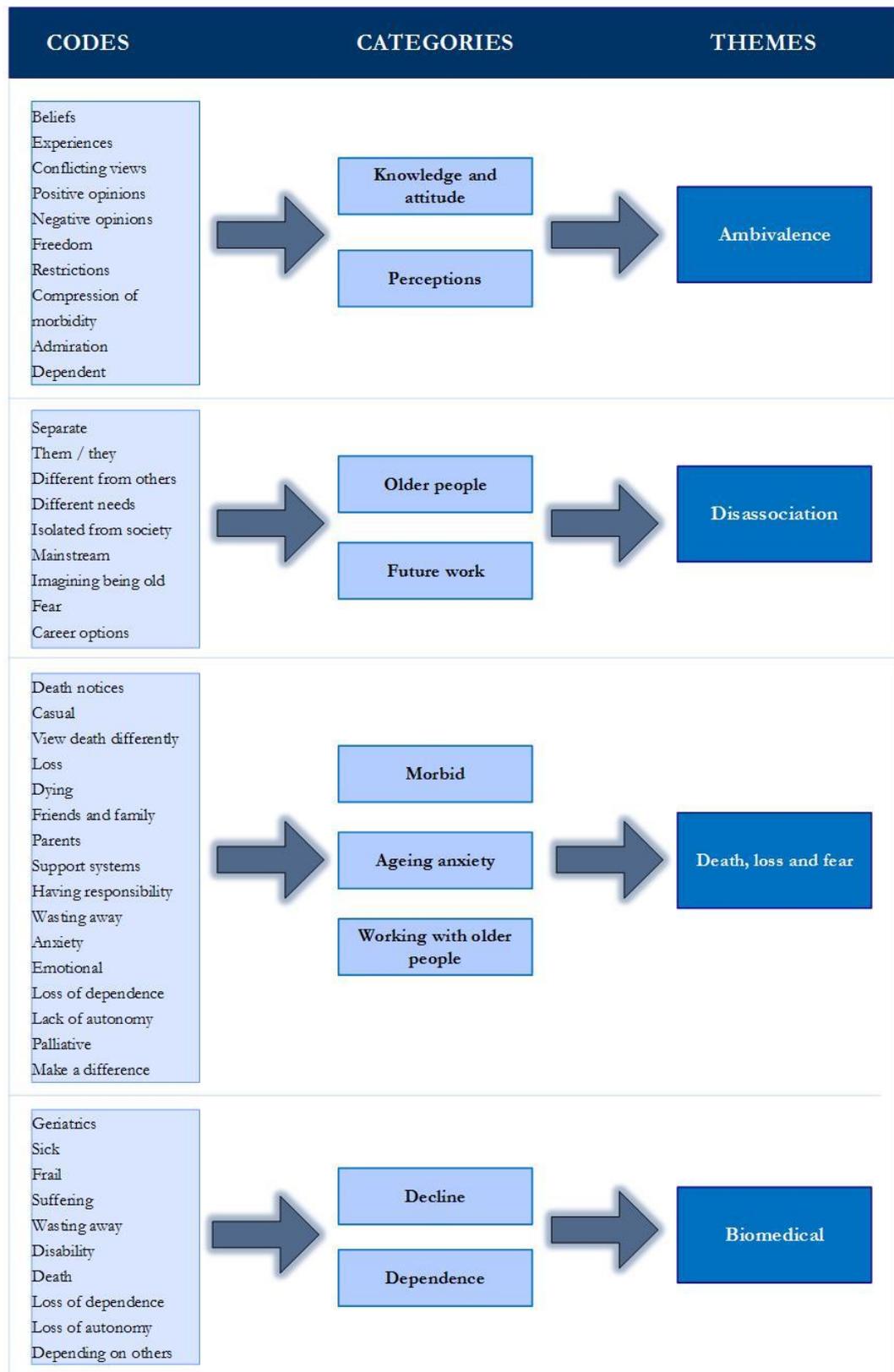
<sup>1</sup> NCEA stands for National Certificate of Educational Achievement and is the national qualification system for secondary school students in New Zealand. Level III is the highest level secondary school qualification and is usually studied in the final year, years 13.

### **5.3 Findings from the newly enrolled student focus group**

A summary of the thematic analysis of the transcribed focus group data with the newly enrolled students is provided in Table 5-1, which shows the establishment of the key themes:

- i. Ambivalence;
- ii. Disassociation;
- iii. Death, loss and fear and;
- iv. Biomedical perspective.

**Table 5-1: Analysis and themes from the newly enrolled student focus group**



### 5.3.1 Ambivalence

This theme relates to contradictions, evident during the focus group discussion, relating to participants' knowledge and attitudes towards ageing and older people. An underlying contradiction between positive and negative attitudes both between and within participants emerged. The beliefs of most participants concerning ageing and older people derived from experiences they had observed with family members or the family members of friends. Based on this, participants had conflicting attitudes about ageing and older people.

*My granddad travels to Bali once a year*

*My Grandma is full of life and full of spirit, I don't even think of her being old*

Having an independent, fit and well grandparent led to more favourable views of older people, ageing and one's own ageing. In contrast, being exposed to sick, frail and dependent older people led to negative views about older people and one's own ageing.

*My nana can't do anything for herself anymore, I find it really depressing seeing her, she always tells me don't get old*

While some participants saw old age as a time of freedom (from work, study and general responsibilities) others saw it as a time of lost freedom due to the restrictions of illness and dependency on others.

*I was studying for a test and I started thinking why can't I be retired?*

*Restricted in their ability to walk and get around or in their ability to understand*

The group demonstrated some knowledge in relation to ageing, in particular, the differentiation between ageing and disease processes. Participants recognised that the population was ageing and there was an awareness of a compression of morbidity and the changing nature of ageing.

*60-year-olds don't seem as old as what 60-year-olds were in the past*

*As long as you look after yourself you can still enjoy independence in old age*

Participants acknowledged that there was a wide variety of older people. Despite this awareness attitudes about older people tended to be inconsistent in that there were both positive and negative perceptions highlighted throughout the discussion.

While older people were referred to as *kind, warm, available* and *interested*, they were also identified as being *fragile, weak and vulnerable*. Participants recognised that there was variation across older people in relation to wellness and independence yet they also associated *old* and *ageing* with *disease, illness* and *dependency*. The idea that older people seemed interested in what was happening in other people's lives was discussed and identified as a positive factor. However, an additional comment that '*older people like to tell you how it was in their day*' was followed by laughter and agreement from the group, indicating a negative undertone about older people.

Despite the laughter at older people wanting to share their life experiences, there were admirable traits that participants acknowledged. In particular, this was discussed in relation to driving, communication and socialising with confidence, something the participants felt they themselves had yet to achieve.

*They don't have the social barriers that we have as youths; they are comfortable talking to anyone and everyone*

*They are often better drivers than people our age; they've got lots more road experience*

The discussion about older people suggested participants perceived a division between themselves, as younger people, and older people. This concept leads to the next theme of disassociation.

### **5.3.2 Disassociation**

A disassociation between participants and older people, older people and society, participants and their own ageing and working with older people was evident through the focus group discussion. Throughout the group discussion, there was an underlying demarcation of older people as if they were separate from other people. The frequent use of the term *they* or *them* when referring to older people reinforced this.

*They are weaker and more fragile than other people*

*They have different needs to people of our age*

It was noted that being old did not align with the dominant youth culture of society and that older people were isolated from modern society in general because they were more traditional in their thinking or not part of mainstream society.

*Old is not considered attractive by popular culture*

*They are always wanting to know what society is doing nowadays*

*They are usually in nursing homes so they don't really know what is going on*

Overall participants found it difficult to imagine themselves as old.

*How I think about getting old is just getting to my thirties, I can't see myself as older than thirty at the moment so I will worry about the rest later*

For participants, the thought of their own ageing was associated with feelings of anxiety, worry and fear.

*It's scary cause it is coming up so fast, I just finished high school last year and those five years went really quickly, it will happen before you know it*

*The thought of getting old makes me feel physically ill*

*Sometimes I find a grey hair and it freaks me out*

Despite the participants' awareness of an ageing population they did not seem to identify this as significant to their future nursing career. Three of the six participants identified paediatrics or neonatal care as the area they wanted to work in the future, one participant found psychology of interest and felt mental health was an attractive area, while the other two participants were interested in intensive care, cardiac nursing or emergency nursing. In general, the participants felt that they would not have much contact with older people in the areas they wished to work.

*I don't think you get many older people in cardiac areas or emergency care*

There was a general consensus from participants that working with older people was associated with death. This leads to the next themes of death, loss and fear.

### **5.3.3 Death, loss and fear**

Aspects of death, loss and fear were associated with older people, ageing and working with older people. There was a strong agreement between participants that older people themselves tended to be morbid and focus on death and dying. A few participants concurred that their grandparents read the death column in the newspapers regularly and that older people lost their friends and loved ones to death.

*My grandparents are always checking the newspapers to check if anyone they know has died*

*I guess when you get older that's what happens people start dying*

Participants felt it was unusual that older people had a relaxed attitude towards people they know dying. However, there was also a casualness towards older people dying expressed by participants that indicated a lack of value for older people or their life.

*They just seem really casual about it – who's died since yesterday' it's really weird*

*With older people, they're older so their death isn't so much of a big deal as it would be for like a younger person*

Although participants minimised the death of older people the concept of older people dying was closely linked to working with older people and a rationale for not wanting to work with older people which were seen as scary, and emotionally upsetting.

*I would be really scared about working with older people because there would be a lot of death*

*It would be upsetting seeing people wasting away and dying*

Others felt that the palliative nature of working with older people did not provide the challenging, traumatic, surprising, or dramatic work environment which they envisaged themselves to be in one day.

*I'm really looking for something more traumatic where I can make a difference for people*

Fear of participants own death but also the death of friends and family members was a concern for participants.

*I am scared of getting old and dying*

*If you are getting older so are your friends and family and you know you are going to lose people that is probably the scariest aspect of getting old*

*I am scared about my parents getting old because when I grow up I don't want to lose them*

While some participants worried about their parents getting old because of a fear of losing them. Others elaborated further that losing their parents support or the

possibility of changing roles in which they may have to support or care for their parents was a concern.

*If something goes wrong they're the ones you call, the ones who have the answers and then one day they call you and you are supposed to have the answers*

*Going from them looking after you, to you looking after them*

Participants also acknowledged the loss of dependence, autonomy and lifestyle as being associated with ageing and being old.

*Not being able to do the things you used to do and being dependant on those that used to depend on you*

*Having your choices made for you*

*She can't physically live in her own home anymore*

The fears and losses associated with ageing and older people reflect a biomedical view of ageing that is associated with illness and decline.

#### **5.3.4 Biomedical perspective**

A number of times during the focus group discussion participants referred to older people or the care of older people as *geriatrics*, a medicalised term, despite the facilitator always using the term older people. This suggested a negative and biomedical view of ageing and older people.

*My friend's mother works in geriatrics; she says it is tough work*

*I have not really thought about geriatrics as a career option*

Even those participants who had described positive ageing role models still equated ageing and older people as being frail and sick.

Working with older people was also viewed in relation to illness and decline with older people "suffering from mental or physical disability". The type of work associated with caring for older people was viewed as hard work physically, psychologically and emotionally. The emotional aspect related back to the theme of death while the physical element related to the lifting of fragile patients. The psychological part related to cognitively impaired older people who constantly asked the same questions. The

participants took the view that working with older people related to an illness model in which older people were *sick, fragile, dependant* and *wasting away* while they *waited to die*.

### **5.3.5 Summary of newly enrolled student focus group**

The purpose of the focus group discussion was to inform the educational interventions to be implemented in phase II of the research and to support the design of the quantitative questionnaire. The focus group suggests that there are some uncertainty and contradictions evident in the knowledge and perceptions of beginning student nurses in relation to older people. Overall the focus group indicated that the student nurse participants held a medicalised view of older people and ageing which was further related with fear due to the concepts of death and loss associated with ageing.

## **5.4 Cohort profiles from the questionnaire data**

This section presents the demographic and experiential information gathered from the survey questionnaires of participants in each of the four cohorts. Table 5-2 provides a summary of the information gathered. For cohorts two and three this occurred at the beginning of semester two, 2011. This time point coincided with the beginning of the core first year nursing course for cohort three and the beginning of the year two, semester two course for cohort two. Data collection for cohort one occurred at the end of semester two, 2011. This time point aligned with the end of the third year and the completion of the BNurs programme. Cohort four data was not collected until the beginning of semester two 2012 and the core first year nursing course for this cohort.

**Table 5-2: Demographic and background profile of participants**

Descriptor	Cohort 1 (C1) n= 64	Cohort 2 (C2) n= 70	Cohort 3 (C3) n= 85	Cohort4 (C4) n=90
<b>Age band count (% , column total)</b>				
Under 20	14 (21.9)	35 (50.0)	64 (75.3)	69 (76.7)
21 to 25	35 (54.7)	25 (35.7)	18 (21.2)	12 (13.3)
26 to 30	10 (15.6)	3 (4.3)	1 (1.2)	3 (3.3)
31+	5 (7.8)	6 (8.6)	2 (2.4)	5 (5.6)
Missing data		1 (1.4)		1(1.1)
<b>Gender count (% , column total)</b>				
Female	59 (92.2)	65 (92.9)	82 (96.5)	79 (87.8)
Male	5 (7.8)	5 (7.1)	3 (3.5)	11 (12.2)
Missing data				
<b>Ethnic count (% , column total)</b>				
European	31 (48.4)	32 (45.7)	48 (56.5)	51 (56.7)
Māori	1 (1.6)	4 (5.7)	0 (0)	5 (5.6)
Pacific	2 (3.1)	4 (5.7)	4 (4.7)	4 (4.4)
Asian	28 (43.8)	29 (41.4)	32 (37.6)	27 (30)
African	2 (3.1)	0 (0)	1 (1.2)	3 (3.3)
Missing data		1 (1.4)		
<b>Highest Education level count (% , column total)</b>				
NCEA level III or equivalent	37 (57.8)	51 (72.9)	72 (84.7)	71 (78.9)
Bachelor Degree	24 (37.5)	9 (12.9)	8 (9.4)	13 (14.4)
Post Graduate	2 (3.1)	1 (1.4)	4 (4.7)	2 (2.2)
Trade or other qualification	1 (1.6)	91(2.9)	1 (1.2)	4 (4.4)
Missing data				
<b>Experience living with older people</b>				
No experience	35 (54.7)	35 (50.0)	48 (56.5)	58 (64.4)
Experience	29 (45.3)	33 (47.1)	37 (43.5)	32 (35.6)
Missing data		2 (2.9)		
<b>Relationship of older people lived with count (% , column total)</b>				
Grandparent	26 (89.7)	30 (90.9)	34 (91.9)	31 (96.9)
Parent	2 (6.9)	3 ( 9.1)	1 ( 2.7)	
Other*	1 (3.4)		1 (2.7)	1 (3.1)
Missing data			1 (2.7)	

Table 5-2 continued

Descriptor	Cohort 1 (C1) n= 64	Cohort 2 (C2) n= 70	Cohort 3 (C3) n= 85	Cohort 4 (C4) n=90
<b>Time spent living with older people count (% , column total)*</b>				
Less than 6 months	13 (20.3)	8 (11.4)	14 (16.5)	14 (15.6)
7 to 12 months	0	2 (2.9)	3 (3.5)	3 (3.3)
1 to 5 years	3 (4.7)	5 (7.1)	7 (8.2)	7 (7.8)
Greater than 5 years	11 (17.2)	14 (20.0)	11(12.9)	6 (16.7)
Missing data	2 (3.1)	4 (8.6)	1 (2.4)	2 (2.2)
<b>Experience of working with older people count (% , column total)</b>				
No experience	1 (1.6)	3 (4.3)	58 (68.2)	66 (73.3)
Experience	63 (98.4)	66 (94.3)	27 (31.8)	24 (26.7)
Missing data		1 (1.4)		
<b>Type of work experience count (% , column total)*</b>				
Aged residential care	12 (18.8)	15 (21.4)	20 (23.5)	18 (20.0)
Family	3 (4.7)	1 (1.4)	4 (4.7)	1 (1.1)
Other***	1 (1.6)	2 (2.9)	2 (2.4)	2 (2.2)
School work	0	0	0	2 (2.2)
Clinical placement	45 (70.3)	48 (68.6)	1 (1.2)	0
Missing data	2 (3.0)	1 (1.4)	0	1 (1.1)
<b>Spend time with older people count (% , column total)*</b>				
Time with older people	45 (70.3)	48 (68.6)	59 (69.4)	66 (73.3)
No time with older people	19 (29.7)	19 (27.1)	26 (30.6)	24 (26.7)
Missing data		3 (4.3)		
<b>Description of older people count (% , column total)</b>				
Negative	11 (17.2)	7 (10.0)	14 (16.5)	14 (15.6)
Mixed	29 (45.3)	31 (44.3)	44 (51.8)	53 (58.8)
Positive	22 (34.4)	30 (42.9)	24 (28.2)	23 (25.6)
* % calculate from total cohort numbers				
** Other includes: Relatives other than a parent or grandparent, or an older friend				
*** Other includes: Working in a gym, retail, reception and telemarketing in which older people are customers.				

The demographic data presented in Table 5-2 align with the profile of students enrolled in the programme. The majority of participants fall within the age ranges of 20 and under, or between the ages of 21 to 25. There are more participants at the start of the programme (cohort 3 and 4 at time point 1) who fall in the under 20 age range and at the end or mid-way through the programme, a greater number of participants start to appear in the 21 to 25 age range (cohort 1 at time point 5 and cohort 2 at time point 3). Given the small number of males enrolled in the nursing programme, the low number of male participants reflected in Table 5-2 is expected. Participants' ethnicity is fairly consistent across the cohorts with a high proportion of participants identifying as New Zealand European. The second highest ethnic group is Asian. The category of Asian includes Filipino, Indian, Korean, and Chinese students. Consistent with programme enrolment numbers, there is a low number of Māori and Pacific participants. While African was not an ethnicity included in the questionnaire, there was an option for participants to state their ethnicity if it was not listed. Across all cohorts and time points, African was the only other ethnicity identified by participants and has therefore been included.

The majority of participants reported NCEA level III (or an equivalent), as their highest educational qualification. Many of the students enrolled in the BNurs programme come directly from secondary school and therefore, NCEA level III is the minimum qualification required to gain entry into the programme. There are also some participants who gain entry following some time in a tertiary institution, completion of a previous degree or postgraduate qualification; however, these are a minority, as presented in Table 5-2. A small number of participants reported a trade or other qualification however, the specifics of these were not provided. It is likely that some participants from cohort five, given that they were at the completion of their BNurs programme indicated their highest qualification as degree level. This would provide an explanation for the higher number of degree level students in this cohort, which is much higher compared with the other cohorts.

Table 5-2 also provides information about participants' experiences in relation to living or working with older people. Those who responded yes to the experience of living with older people were asked about the relationship of the older person they lived with

and for how long they lived with them. The majority of participants who have experience living with an older person reported this as being a grandparent, with a small number reporting the older person as a parent. There was a range of time frames reported in regards to the length of time participants lived with an older person as evident in Table 5-2. A large number of participants reported having work related experience with older people. This is particularly evident in the later stages of the programme (cohort 1). A high portion of participants reported their work experience with older people to be part of their BNurs programme. A number of participants reported work experience in Aged Residential Care (ARC) settings. This number tends to increase as participants move through the programme. Participants were also asked to report if they spent time with older people and to describe the older people using the list of words provided. As shown in Table 5-2, a high proportion of participants reported spending regular time with older people. The responses to this section in the questionnaire are presented based on whether participants picked negative, positive or a mixture of negative and positive descriptors in relation to older people.

#### **5.4.1 Overall scores**

A summary of the overall scores for cohort 3 and cohort 4 participants at the beginning of the programme are provided in Table 5-3, which also provides the maximum and minimum score attainable on each of the questionnaire scales. The overall mean scores suggest that participants have some accurate knowledge and slightly positive attitudes about the ageing process, older people and working with them. However, it is important to note that there was a high proportion of neutral responses made on the scales for Reactions to Ageing (RTA), Perceptions of Older People (POP) and Perceptions of Working with Older People (PWOP). A neutral score was allocated a numerical value of three and therefore participants' neutral responses could shift the mean outcome scores in a positive direction on these scales. Also of note in Table 5-3 is the fairly low scores, in relation to the maximum score attainable, for Perceived Level of Confidence (PLOC), Perceived Level of Experience (PLOE), Perceived Level of Skill (PLOS), and Perceived Level of Knowledge (PLOK).

**Table 5-3: Overall scores for Cohorts 3 and 4 at the start of the nursing programme**

Measurement scale	Count	Mean	SD	Maximum scale score	Minimum scale score
Reactions to Ageing (RTA)	174	24.80	5.19	45	9
Perceptions of Older People (POP)	175	33.03	3.78	50	10
Knowledge of Ageing (KOA)	171	24.88	2.62	30	15
Perceptions Working with Older People (PWOP)	174	39.83	4.13	55	11
Knowledge of the Nursing Role KNR	170	42.38	4.70	48	12
Perceived Level Of Confidence* (PLCOP)	85	29.15	12.15	60	6
Perceived Level Of Experience* (PEOP)	85	22.28	12.42	60	6
Perceived Level Of Skills* (PSOP)	85	23.14	12.22	60	6
Perceived Level Of Knowledge* (PKOP)	85	24.53	11.88	60	6
*Data only available for cohort 4					

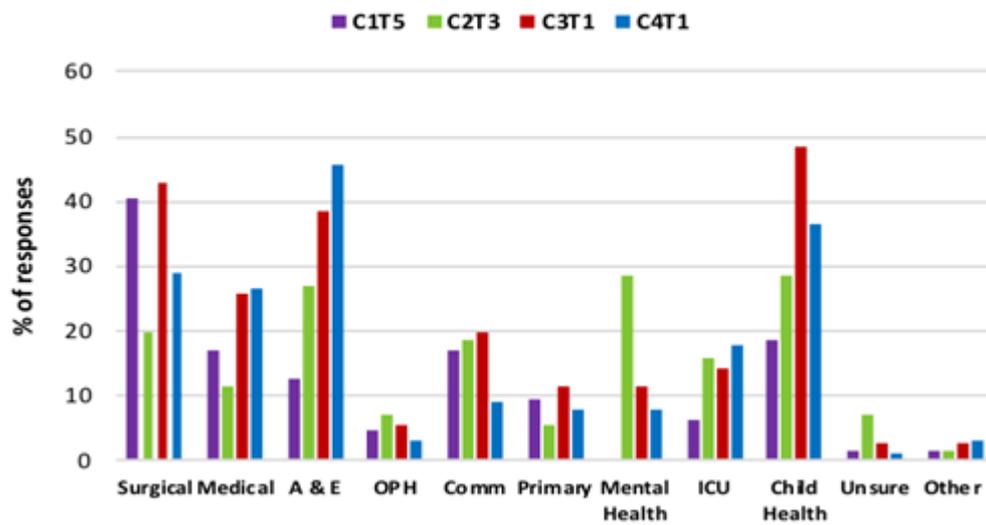
#### 5.4.2 Career preferences

The final item of background information collected from participants related to the areas they would like to work at the completion of the BNurs programme. Table 5-4 provides a summary of this information. Participants were able to choose more than one clinical area. Given the opportunity for multiple responses, it is difficult to determine if student choices change over the course of the programme. However, the data does provide information about highly and not so highly favoured employment areas. Those at the start of the BNurs programme (cohort 3 and 4) tended to pick multiple areas, typically three or four with some participants picking up to nine preferences. Multiple choices were not so typical in respondents further through or at the end of the programme (cohort 2 and cohort 1). Table 5-4 provides the percentage calculation for each clinical area based on the number of total responses provided by each cohort.

**Table 5-4: Work preferences for all cohorts**

Percentage of total responses for each clinical area				
Cohort	C1 T5	C2 T3	C3 T1	C4 T1
<b>Total responses</b>	<b>83</b>	<b>121</b>	<b>157</b>	<b>172</b>
Surgical	31.3	11.6	19.1	15.1
Medical	13.3	6.6	11.5	14
A & E	9.6	15.7	17.2	23.8
Older Person	3.6	4.1	2.5	1.7
Community	13.3	10.7	8.9	4.7
Primary	7.2	3.3	5.1	5.8
Mental Health	0	16.5	5.1	4.1
Intensive care	4.8	9.1	6.4	9.3
Child health	14.5	16.5	21.7	19.2
Unsure	1.2	4.1	1.3	0.6
Other/Research	1.2	1.7	1.3	1.7

Of particular note in Table 5-4 is the area of older people's health. A small number of participants noted this as an area they would be interested in, it was never the sole choice of any participants across all cohorts. Figure 5-1 further highlights the low interest by participants in the area of Older People's Health (OPH), which is consistently lower than any other clinical area except mental health, in which no participants from cohort one chose this as an option. The majority of participants, regardless of cohort, did not include working with older people as a future career option. Only three to four participants per cohort included it as one of their multiple options in this section of the questionnaire.



**Figure 5-1: Work preferences all cohorts**

The descriptive analysis of the cohort profiles highlights that the participants across all four cohorts show equitable demographic characteristics, therefore the study population is made up of fairly homogenous cohorts. However, within each cohort, there is variation among participants in relation to experiences of living with or working with older people. As noted previously, there remains some debate in the literature about the influence demographic and experiential variables have on student nurse knowledge and attitudes about ageing, older people and working with them. Knowing what factors may influence the current study populations' attitudes and knowledge about ageing, older people and working with them will provide a valuable insight into tailoring appropriate educational interventions for students. The next section presents the findings from a multivariate analysis to identify influencing or predictor variables associated with participants' attitudes and knowledge of the ageing process, older people and working with them.

## 5.5 Influencing factors

The initial questionnaire data gathered from cohorts 3 and cohort 4 at the start of their first core nursing course were used for this analysis to identify baseline influences or predictors prior to exposure to any form of nursing education. A univariate analysis was conducted with each questionnaire scale in relation to demographic, other

background variables and the mean scores of the other outcome scales from the questionnaire. The factors included in the univariate analysis are presented in Table 4.5 in the previous chapter. The findings from the univariate analyses are presented in Appendix 7. The following section presents the findings from the multivariate analysis for each outcome scale from the questionnaire.

### 5.5.1 Reaction to ageing

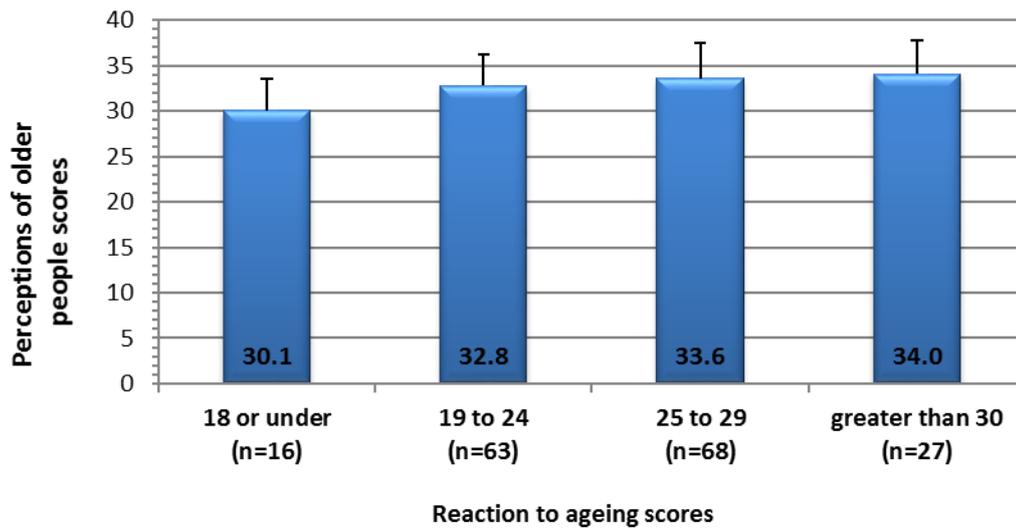
The demographic variables of ethnicity ( $p=0.063$ ) and living with older people ( $p=0.159$ ) and the measurement scales perception of older people ( $p<0.001$ ), knowledge of ageing ( $p=0.058$ ), perceptions of working with older people ( $p=0.069$ ) and descriptions of older people ( $p=0.057$ ) were included in the multivariate analysis. As presented in Table 5-5, the only statistically significant factor associated with reactions to ageing scores is perceptions of older people scores ( $p<0.001$ ).

**Table 5-5: Multivariate analysis of reaction to ageing scores**

Variables	Count III	Type Sum of Squares	df	Mean Square	F	Sig.
Ethnicity	42.05		1	42.06	1.53	0.22
Living experience with OP	49.76		1	49.76	1.81	0.18
POP	290.13		1	290.13	10.53	>0.001*
KOA	19.84		1	19.84	0.72	0.40
PWOP	100.73		1	100.73	3.36	0.07
KNR	56.72		1	0.15	56.72	2.06
Descriptions of older people	42.34		1	42.34	1.54	0.22

Note. \* Significant at the 5% level

The relationship between reactions to ageing scores and perceptions of older people scores highlighted in Table 5-5 is shown in Figure 5-2, which demonstrates lower mean score for reaction to ageing is associated with lower mean scores for perceptions of older people. Those participants with higher reaction to ageing scores also show a corresponding increase in their perceptions of older people scores.



**Figure 5-2** Reaction to ageing in relation to perceptions of older people (error bars = 1 SD)

Knowledge of ageing in relation to descriptions of older people

### 5.5.2 Perceptions of older people

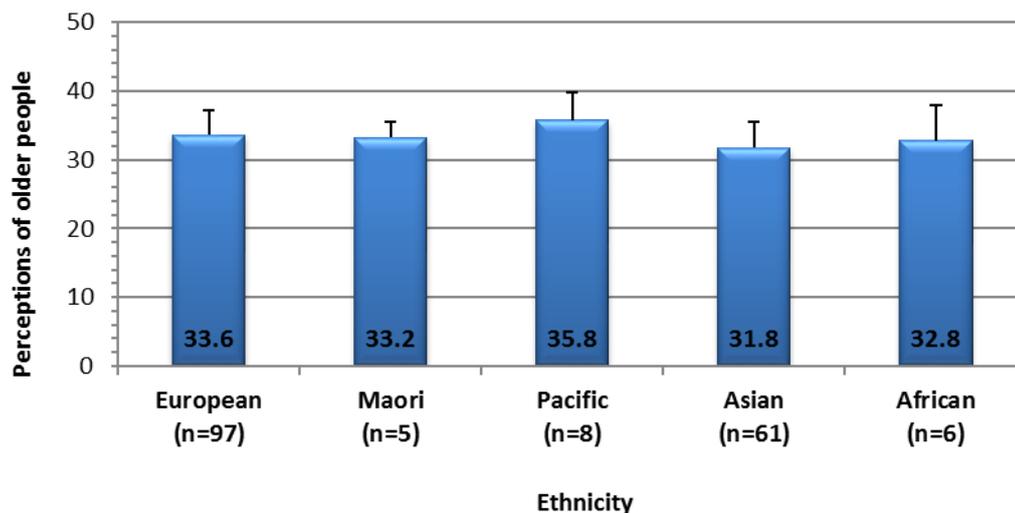
The univariate analysis identified ethnicity ( $p=0.019$ ) and level of education ( $p=0.032$ ) as variables of interest in relation to perceptions of older people. A significant association was also found with descriptions of older people ( $p=0.002$ ), reactions to ageing scores (presented in the previous section) and knowledge of ageing scores ( $p=0.001$ ). The findings from the multivariate analysis conducted with these variables is presented in Table 5-6, which shows ethnicity ( $p=0.012$ ), descriptions of older people ( $p=0.044$ ), and knowledge of ageing ( $p=0.04$ ) as significant variables in relation to participants perceptions of older people scores. Also significant is reaction to ageing scores ( $p=0.001$ ) which has already been presented in Figure 5-2.

**Table 5-6: Multivariate analysis for perceptions of older people**

Variables	Count Type III Sum of Squares	df	Mean Square	F	Sig.
Ethnicity	77.94	1	77.94	6.41	0.01*
Education level	1.40	1	1.40	0.12	0.74
RTA	129.42	1	129.42	10.65	<0.001*
KOA	51.92	1	51.92	4.27	0.04*
PWOP	14.52	1	14.52	1.20	0.28
Descriptions of older people	50.32	1	50.32	4.14	0.04*

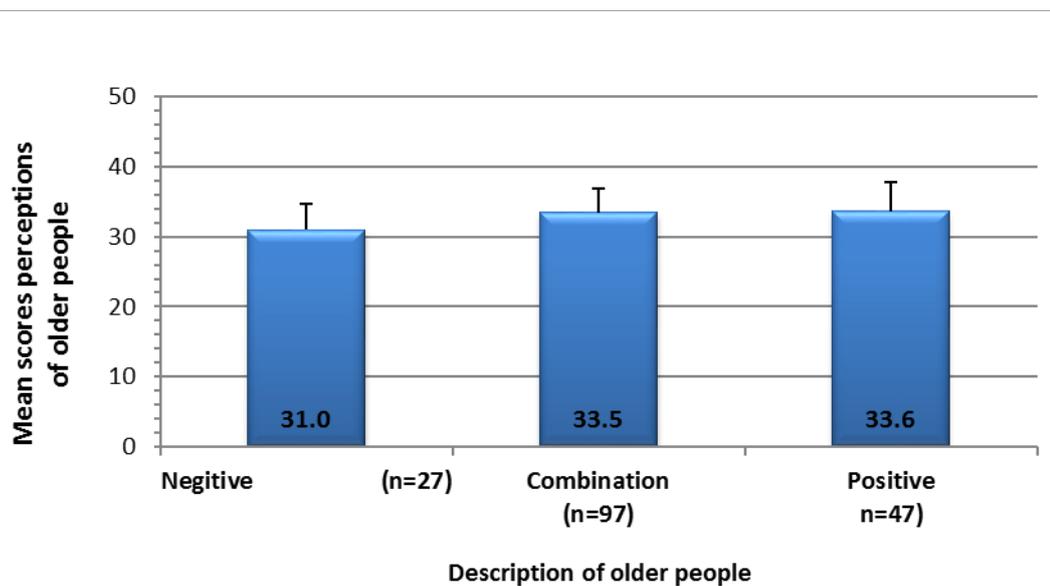
Note. \* Significant at the 5% level

The statistically significant findings from Table 5.6 are presented in Figures 5.3, 5.4 and 5.5. The mean scores for perceptions of older people by ethnicity are provided in Figure 5-3 which shows Asian participants had lower scores indicating more negative perceptions of older people, while Pacific participants scored higher in comparison to the other ethnic groups. The small number of Māori, Pacific and African participants do not provide a clear indication of the influence of ethnicity on perceptions of older people. However, of note in Figure 5-3 is the small standard deviation evident within the different ethnicities, depicting the low variability within groups.



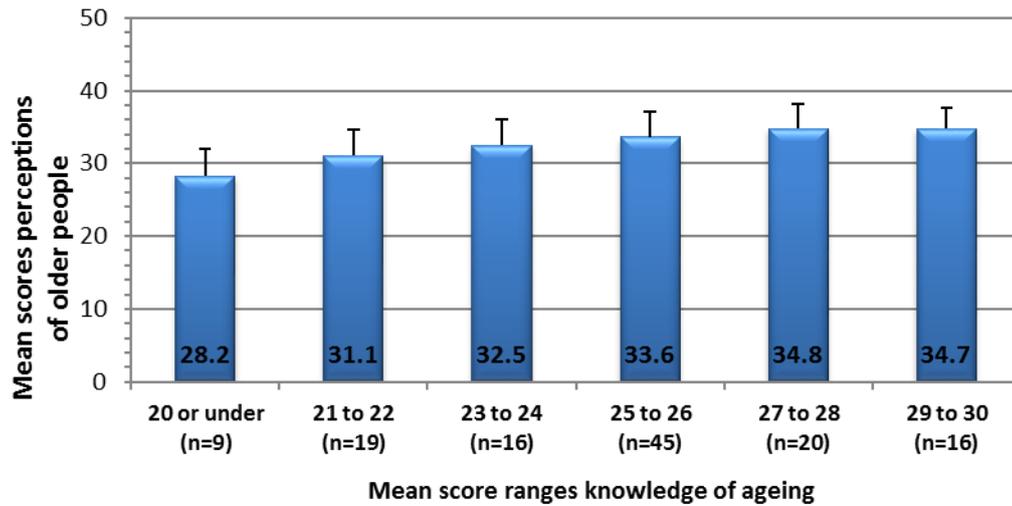
**Figure 5-3: Participants identified ethnicity in relation to perceptions of older people (error bars = 1 SD)**

Figure 5-4 shows the relationship between perceptions of ageing scores and descriptors of older people. Participants who chose only negative descriptors had a lower mean score for perceptions of older people compared to those who chose only positive or a combination of positive and negative descriptors. It is also evident in Figure 5-4 that the bulk of participants used a combination of positive and negative descriptors of older people (n=97).



**Figure 5-4** Perceptions of older people in relation to description of older people (error bars = 1 SD)

Perceptions of older people scores and knowledge of ageing scores were found to have a statistically significant association ( $p=0.04$ ). Figure 5-5 shows participants that scored lower on the knowledge scale also scored lower on the perceptions of older people scale. As participants knowledge scores increased so did their scores on perceptions of older people.



**Figure 5-5: Perceptions of older people in relation to knowledge of ageing (error bars = 1 SD)**

### 5.5.3 Knowledge of ageing

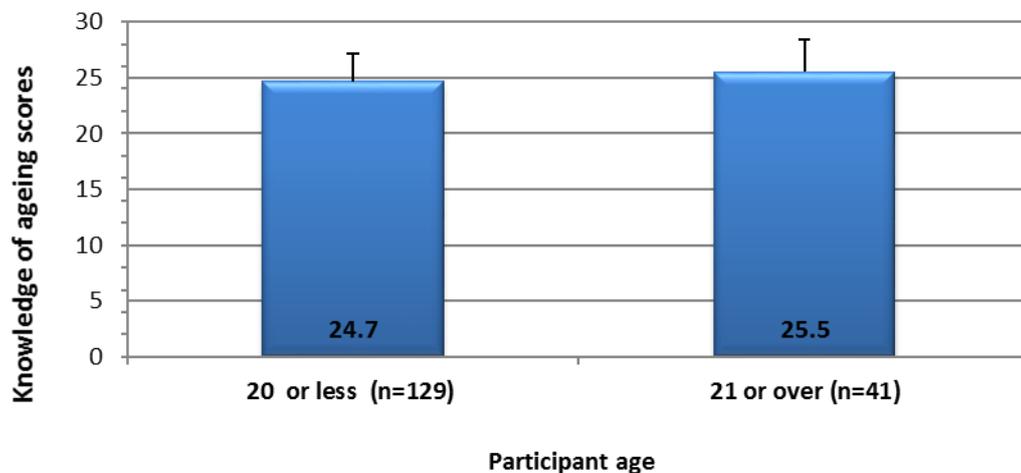
The only demographic variable indicating an initial association with knowledge of ageing in the univariate analysis was age ( $p=0.062$ ). However, other outcome scales of interest included descriptions of older people ( $p=0.005$ ), reaction to ageing ( $p=0.058$ ) and perceptions of older people scores ( $p=0.001$ ). These variables were included in the multivariate analysis which is presented in Table 5-7, which shows a relationship between age ( $p=0.029$ ), descriptions of older people ( $p=0.032$ ) and perceptions of older people ( $p=0.024$ ) with knowledge of ageing. The association between knowledge of ageing and perceptions of older people has already been presented in Figure 5-5.

**Table 5-7: Multivariate analysis of knowledge of ageing scores**

Variables	Count Type III Sum of Squares	df	Mean Square	F	Sig.
Age	76.83	1	76.83	4.87	0.03*
RTA	9.60	1	9.60	0.60	0.44
POP	82.35	1	82.35	5.15	0.02*
PWOP	23.66	1	23.66	1.48	0.23
Descriptions of older people	74.64	1	74.64	4.67	0.03*

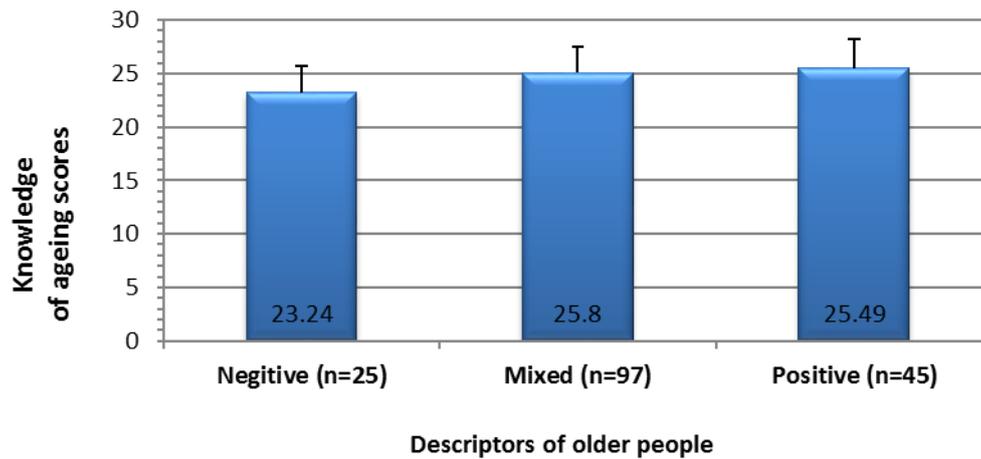
Note. \* Significant at the 5% level

Figure 5-6 presents the mean scores for knowledge of ageing in relation to participant age. While the findings suggest younger participants have a lower score on knowledge of ageing, the uneven distribution of ages between the two age categories of under and over 20, make it difficult to attribute age as a significant variable.



**Figure 5-6: Participants age in relation to mean scores for knowledge of ageing (error bars = 1 SD)**

The mean scores for knowledge of ageing in relation to descriptors of older people are presented in Figure 5-7 presents. Participants who applied only negative descriptors for older people were more likely to have lower knowledge of ageing scores.



**Figure 5-7: Knowledge of ageing in relation to descriptions of older people scores (error bars = 1 SD)**

#### 5.5.4 Perceptions of working with older people

The initial univariate analysis did not yield findings to indicate any demographic or experiential variables had an influence on perceptions of working with older people scores. However, reactions to ageing ( $p=0.069$ ), perceptions of older people ( $p=0.110$ ) and knowledge of ageing ( $p=0.120$ ) were included in a multivariate analysis. Table 5-8 shows the findings from this analysis, of which there were no statistically significant findings.

**Table 5-8: Multivariate analysis of perceptions of working with older people**

Variables	Count Type III Sum of Squares	df	Mean Square	F	Sig.
RTA	30.59	1	30.59	1.83	0.18
POP	13.31	1	13.31	0.79	0.37
PWOP	20.23	1	20.23	1.21	0.27

#### 5.5.5 Perceptions of skills required to work with older people

Age ( $p=0.099$ ), ethnicity ( $p=0.058$ ) and education level ( $p=0.194$ ) were all identified as potential variables of interest in the univariate analysis for knowledge of the nursing role scores. There was no statistical evidence to suggest any of the other outcome

scores were of interest. The multivariate analysis of the three demographic factors noted above, yielded no statistically significant findings as presented in Table 5-9.

**Table 5-9: Multivariate analysis of perceived skills for working with older people**

Variables	Count Type III Sum of Squares	df	Mean Square	F	Sig.
Age	7.82	1	7.82	0.36	0.55
Ethnicity	26.79	1	26.79	1.22	0.27
Education level	0.08	1	0.08	0.00	0.95

### 5.5.6 Perceived level of confidence

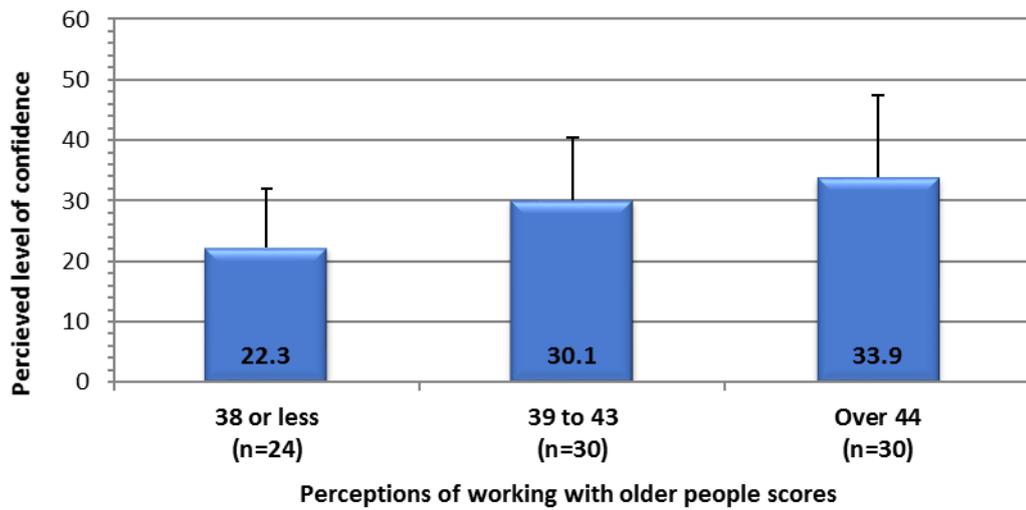
The analysis exploring influencing or predictor variables in relation to the questionnaire scores for Perceived Level of Confidence (PLOC), Experience (PLOE), Skills (PLOS) and Knowledge (PLOK) for working with older people were only collected from cohort four (N=90 n=85) as this section was not included in the original questionnaire administered in 2011 to cohort three. The initial univariate analysis for perceived confidence for working with older people revealed participant age ( $p=0.085$ ), ethnicity ( $p=0.010$ ), experience working with older people ( $p=0.106$ ) and experience living with older people ( $p=0.047$ ) were variables of interest. In addition, a significant relationship was identified with other reactions to ageing ( $p=.001$ ), perceptions of working with older people ( $p=0.002$ ) and self-reported perceptions of experience, skills and knowledge which all have a  $p$  value of  $p<0.001$ . Table 5-10 shows the findings from the multivariate analysis conducted with these variables of interest. The significant influencing variables for perceived level of confidence are perceptions of working with older people.

**Table 5-10: Multivariate analysis of perceived level of confidence for working with older people**

Variables	Count Type III Sum of Squares	df	Mean Square	F	Sig.
Age	26.31	1	26.31	0.61	0.44
Ethnicity	57.85	1	57.85	1.34	0.25
Work experience with OP	48.64	1	48.64	1.12	0.29
Living experience with OP	20.05	1	20.05	0.46	0.50
RTA	125.69	1	125.69	2.90	0.09
PWOP	186.62	1	186.62	4.31	0.04*
PLOE	122.63	1	122.63	2.83	0.10
PLOS	1.36	1	1.36	0.03	0.86
PLOK	344.11	1	344.11	7.95	0.01*

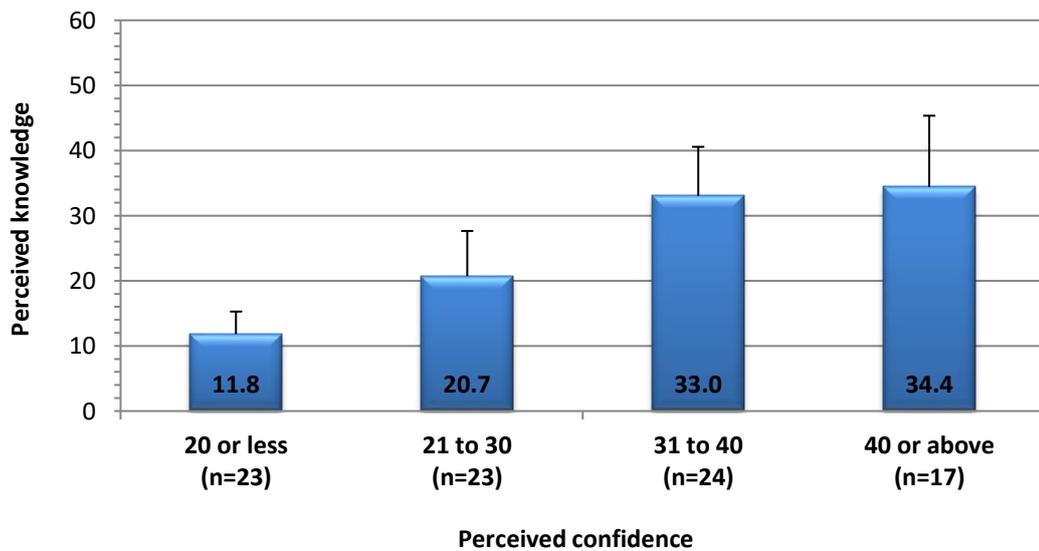
Note. \* Significant at the 5% level

The significant relationships identified in Table 5-10 are presented in Figure 5-8 and Figure 5-9. Figure 5-8 shows that participants with lower scores for perceptions of working with older people also had a lower self-reported level of confidence score. As perceptions of working with older people become more positive (increases) the level of self-reported confidence also increases. However, the standard deviations for these findings are high, suggesting the range of scores within each group are varied with a high level of deviation from the mean score.



**Figure 5-8: Perceived level of confidence in relation to perceptions of working with older people (error bars = 1 SD)**

Figure 5-9 presents the association between perceived level of confidence and perceived level of knowledge scores. As perceived confidence scores increase so do participants' perceived level of knowledge



**Figure 5-9: Perceived level of confidence in relation to perceived level of knowledge (error bars = 1 SD)**

Figure 5-9 also shows that for the group of participants with low confidence a correspondingly low knowledge score is evident with a low standard deviation  $SD=3.5$ . However, as mean scores increase there is an increasing deviation from the mean,  $SD$  6.9, 7.5, and 10.9 respectively.

### 5.5.7 Perceived level of experience

The demographic and experiential variables of interest following the univariate analysis for perceived level of experience scores are age ( $p=0.023$ ), ethnicity ( $p=0.001$ ), education level ( $p=0.155$ ), work experience ( $p=0.010$ ) and living experience ( $p=0.002$ ). Further, reaction to ageing ( $p=0.005$ ), perceptions of working with older people (0.016) and perceived level of confidence skills and knowledge scores all have a  $p$  value  $< 0.005$ . Table 5-11 provides the findings from the multivariate analysis, which shows ethnicity ( $p=0.028$ ) and level of education ( $p=0.042$ ) as significant demographic factors. Perceived level of skill ( $p=.004$ ) and perceived level of knowledge ( $p=0.007$ ) are significant, while perceived level of confidence ( $p=0.085$ ) is not.

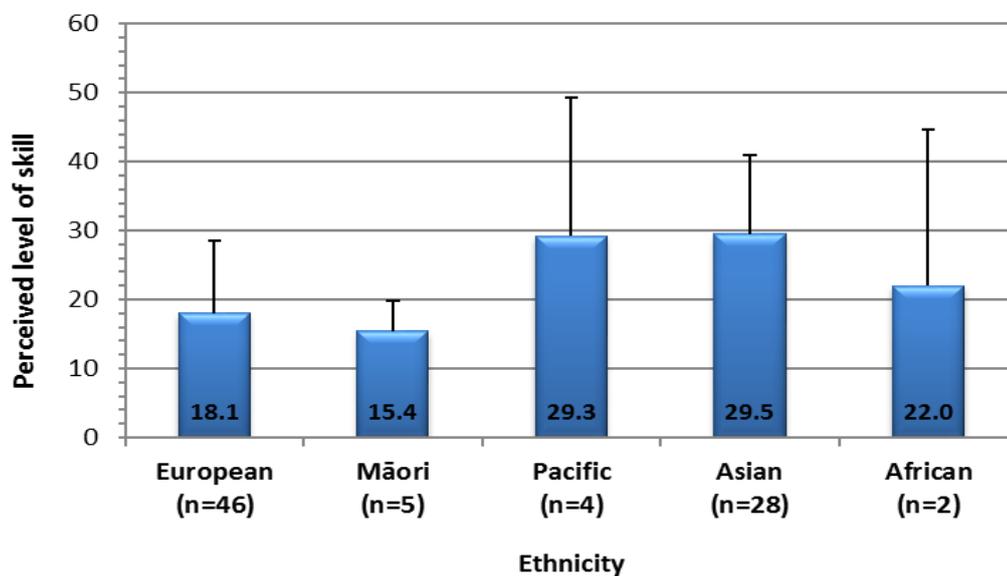
**Table 5-11: Multivariate analysis of perceived level of experience for working with older people.**

Variables	Count Type III Sum of Squares	df	Mean Square	F	Sig.
Age	43.80	1	43.80	2.37	0.13
Ethnicity	92.39	1	92.39	4.99	0.03*
Level of education	78.80	1	78.80	4.26	0.04*
PEWOP	46.27	1	46.27	2.50	0.12
PELOP	36.97	1	36.97	2.00	0.16
RTA	1.87	1	1.87	0.10	0.75
PWOP	24.17	1	24.17	1.31	0.26
PLOC	56.34	1	56.34	3.05	0.09*
PLOS	161.67	1	161.67	8.74	<0.001*
PLOK	144.20	1	144.20	7.79	0.01*

Note. \* Significant at the 5% level

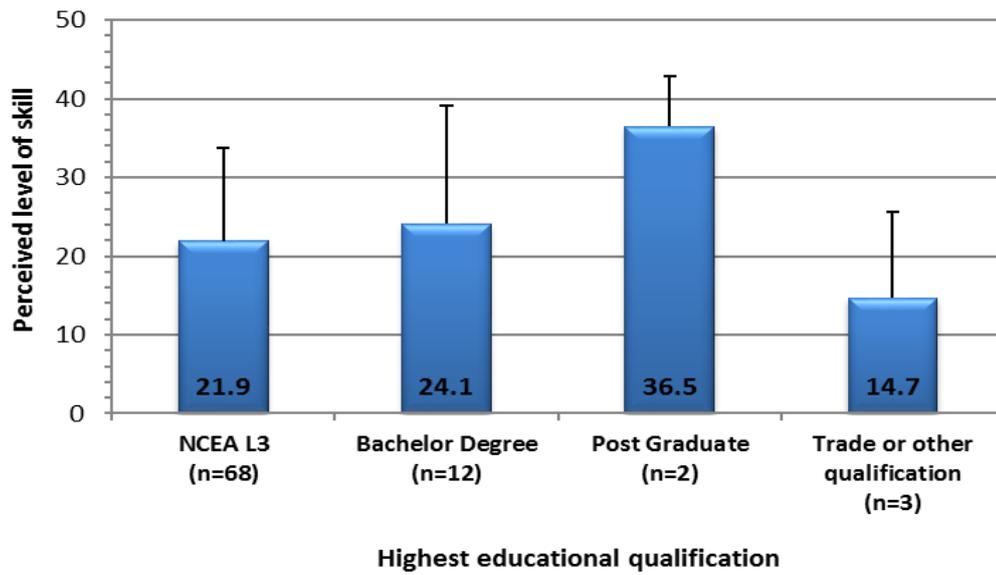
The significant findings shown in Table 5-11 are presented in Figure 5-10 and 5.11. The relationship between ethnicity and perceived level of experience is provided in Figure 5.10, which shows Pacific and Asian participants have a significantly higher

mean score for perceived level of experience. However, Figure 5.10 also shows the very low sample size for Māori, Pacific and African ethnic groups and the high SD found across all but the Māori participants. Also evident in Figure 5.10 is that New Zealand European as the largest ethnic group, have comparably lower scores than the next largest ethnic group Asian, who have the highest mean score for perceived experience of working with older people.



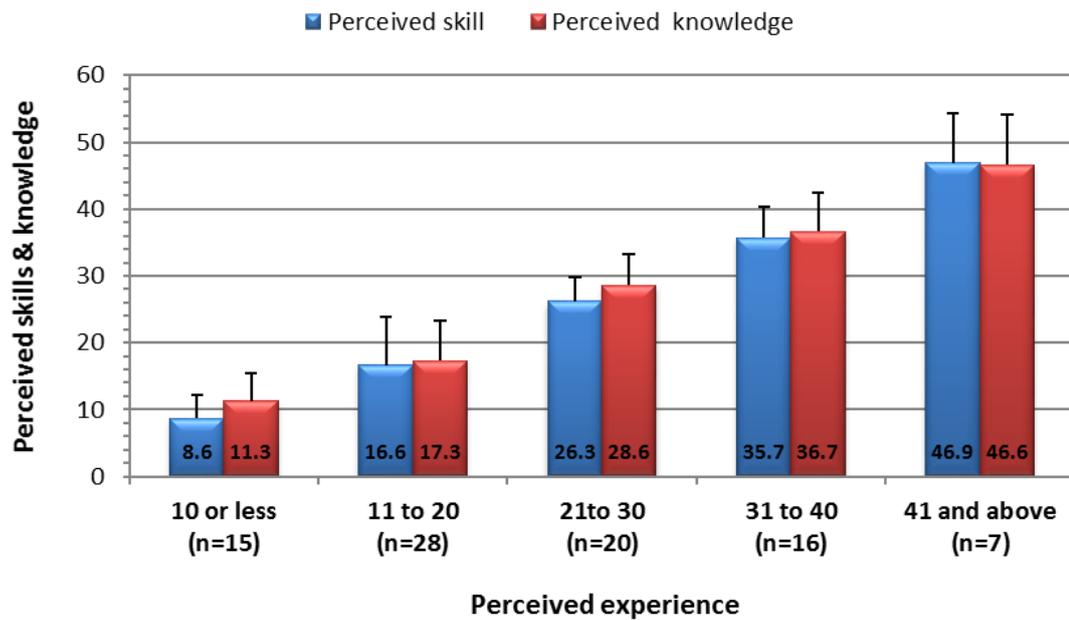
**Figure 5-10: Participants identified ethnicity in relation to perceived level of experience (error bars = 1 SD)**

Figure 5-11 presents the findings for level of education and perceived level of experience. A significant relationship was identified in the multivariate analysis in which participants with completed degrees or post-graduate qualifications scored highly for perceived level of experience, the small sample sizes in the categories other than NCEA level III and high SD across the categories makes it difficult to draw conclusions from this finding. Those with tertiary level qualifications are also likely to be older however, age did not show as a significant variable in the multivariate analysis.



**Figure 5-11: Participants level of education in relation to perceived level of experience (error bars = 1 SD)**

The final graph relating to perceived level of experience provides the relationship this outcome score has with participants' perceived skills and knowledge scores. This relationship is presented in Figure 5-12.



**Figure 5-12: Perceived level of experience, in relation to perceived level of skill and perceived level of knowledge (error bars = 1 SD)**

Figure 5.-12 shows the scores for perceived level of experience, skill and knowledge follow a similar pattern. Participants with low scores for experience also have low scores for skills and knowledge. As perceived level of experience scores increase, there is a corresponding increase in scores for perceived skill and knowledge.

### 5.5.8 Perceived level of skill

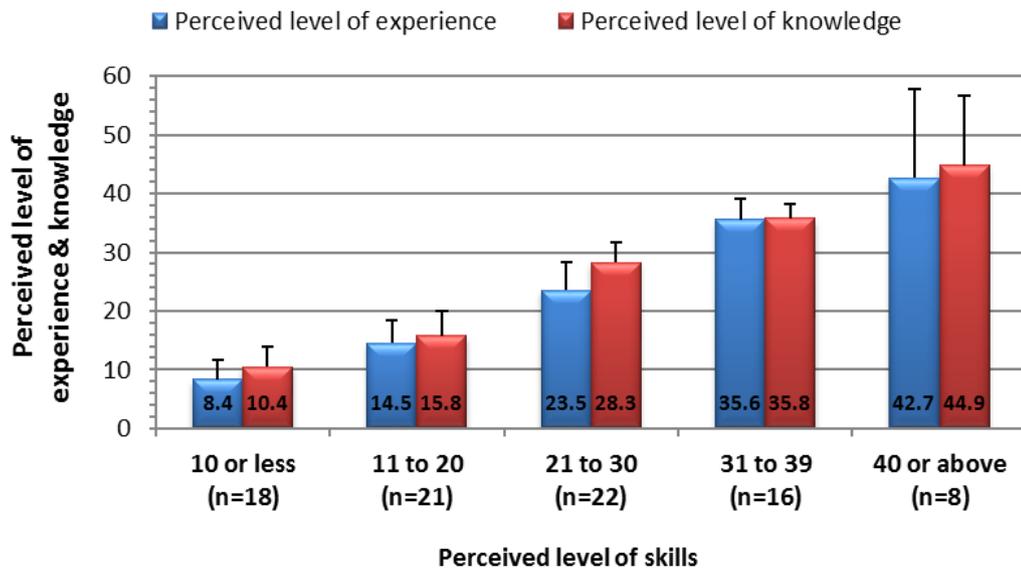
The findings from the univariate analysis for perceived level of skills for working with older people yielded similar findings as the analysis conducted for perceived level of experience. The demographic and experiential variable of interest included age ( $p=0.015$ ), ethnicity ( $p=0.013$ ), previous work experience ( $p=0.016$ ) and living experience ( $p=0.007$ ). The outcome scores reactions to ageing ( $p=0.006$ ), perceptions of working with older people ( $p=0.047$ ) and perceived confidence, experience and knowledge ( $p$  values of  $<0.005$ ) were also included in the multivariate analysis. As shown in Table 5-12. The only two significant findings from the multivariate analysis were with the outcome scores perceived level of experience ( $p=0.004$ ) and perceived level of knowledge ( $p < 0.001$ ).

**Table 5-12: Multivariate analysis of perceived level of skill for working with older people**

Variables	Count Type III Sum of Squares	df	Mean Square	F	Sig.
Age	3.86	1	3.86	0.31	0.58
Ethnicity	4.72	1	4.72	0.38	0.54
PEWOP	0.23	1	0.23	0.02	0.89
PELOP	0.84	1	0.84	0.07	0.80
RTA	6.57	1	6.57	0.53	0.47
PWOP	4.00	1	4.00	0.32	0.57
PLOC	0.39	1	0.39	0.03	0.86
PLOE	108.39	1	108.39	8.74	0.00*
PLOK	823.65	1	823.65	66.40	<0.001*

Note. \* Significant at the 5% level

The significant findings from Table 5.12 are displayed in Figure 5-13 which shows a relationship between perceived level of skills, experience and knowledge is evident. As perceived level of skill increases so do perceived level of experience and knowledge. While the SD remains low across the different score categories in both experience and skills, the SD for higher scores shows a marked increase.



**Figure 5-13: Perceived level of skill in relation to perceived level of experience and perceived level of knowledge (error bars = 1 SD)**

### 5.5.9 Perceived level of knowledge

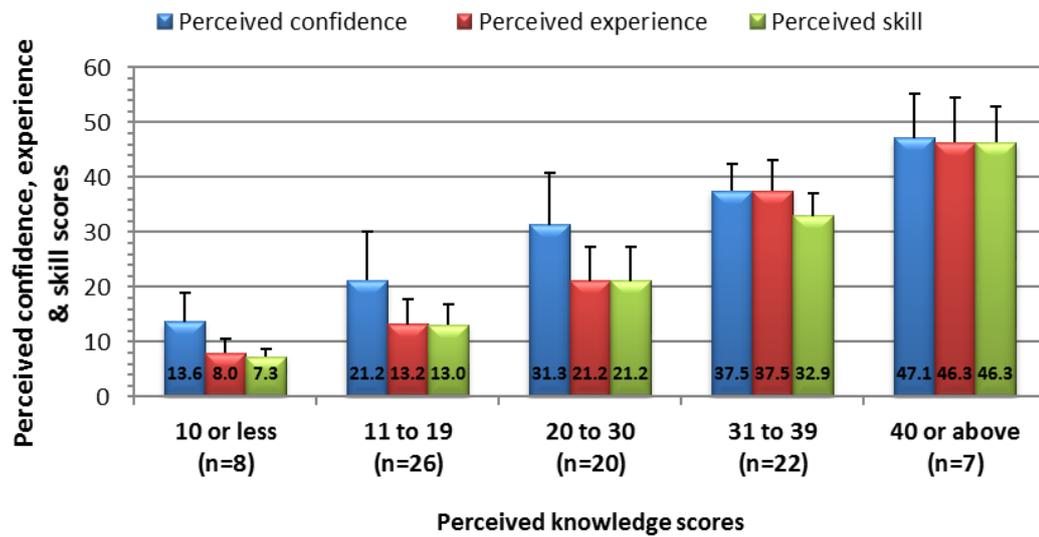
The final univariate analysis conducted was for perceived level of knowledge for working with older people. Again, similar findings as those found for perceived skills were identified, with the demographic and experiential variables of age ( $p=0.012$ ) ethnicity ( $p=0.005$ ), work experience ( $p=0.012$ ) and living experience ( $p=0.010$ ) are included in the multivariate analysis. In addition, and similar to the findings for perceived skills, the outcome scores of reactions to ageing ( $p=.010$ ), perceptions of working with older people ( $p=0.041$ ) and perceived confidence, experience and knowledge ( $p$  values of  $<0.0001$ ) were also of interest and included in the multivariate analysis. Table 5-13 shows the findings from the multivariate analysis in which only perceived level of confidence, experience and skills show as statistically significant ( $p$  values  $< 0.005$ ).

**Table 5-13: Multivariate analysis of perceived level of knowledge for working with older people**

Variables	Count Type III Sum of Squares	df	Mean Square	F	Sig.
Age	1.92	1	1.92	0.18	0.67
Ethnicity	0.55	1	0.55	0.05	0.82
Work experience with OP	2.17	1	2.17	0.20	0.65
Living experience OP	1.22	1	1.22	0.12	0.74
RTA	9.79	1	9.79	0.92	0.34
PWOP	4.01	1	4.01	0.38	0.54
PLOC	84.56	1	84.56	7.95	0.01*
PLOE	80.37	1	80.37	7.56	0.01*
PLOS	706.27	1	706.27	66.40	<0.01*

Note. \* Significant at the 5% level

The final figure in this section, Figure 5-14, presents the relationship between perceived level of knowledge with perceived level of confidence, experience and skills for working with older people. This figure suggests that skills, experience and knowledge scores are more closely aligned in the lower score ranges than confidence. However, as scores become higher confidence aligns more closely with the other scores.



**Figure 5-14: Perceived level of knowledge, in relation to perceived level of confidence, perceived level of experience and perceived level of skill (error bars = 1 SD)**

### 5.5.10 Summary of findings from the multivariate analysis

This section has presented the findings from a multivariate analysis which aimed to identify influencing or predictor variables on student nurse knowledge, and attitudes towards ageing, older people and working with them. Overall, the findings did not show strong evidence for the influence of demographic and experiential variables. However, the findings did provide evidence of links between participant knowledge, attitudes and perceived level of confidence, experience, knowledge and skill, that could be considered when developing educational interventions.

## 5.6 Recent graduate focus group

A focus group with nurses who had recently graduated from the University of Auckland School of Nursing programme was undertaken to identify their perspectives of the programme in relation to ageing, older people and working with them. An email invitation to participate was sent to all newly graduated nurses. While ten responded to the invitation, it was difficult to find a suitable time that would accommodate all participants due to the majority of them working shifts. The focus group discussion was conducted in July 2011, with six participants.

### **5.6.1 Demographics**

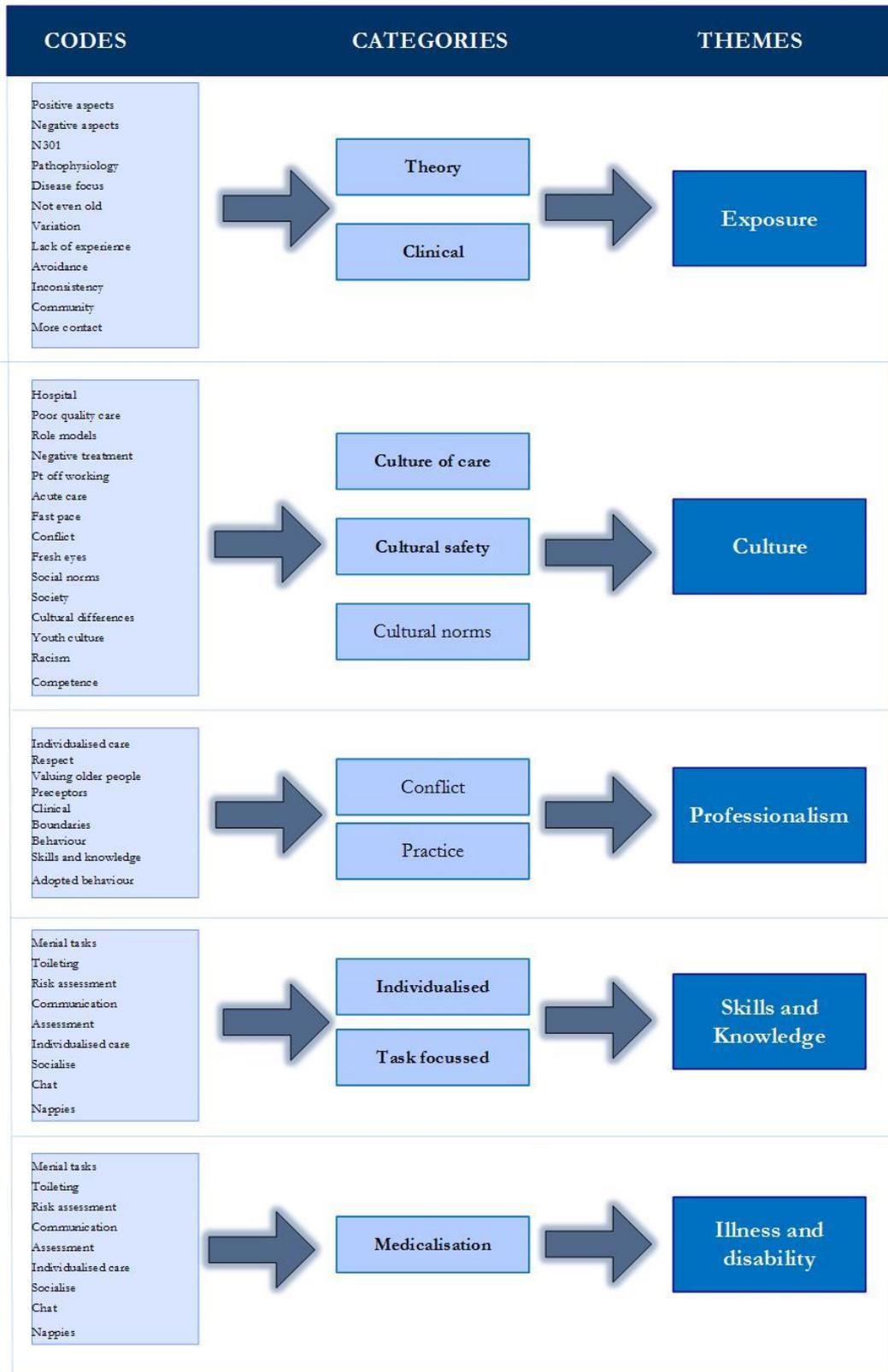
All participants were female, aged between 21 and 25 years and had completed the BNurs programme at the University of Auckland in 2010. Three participants identified as New Zealand European, two as Asian and one identified as other, which she further clarified to be Indian. Five of the six participants were currently working as registered nurses in the following areas; adult mental health, acute orthopaedics, acute general medicine (two participants) and OPH assessment, treatment and rehabilitation. The other participant had obtained nursing registration via Nursing Council but was completing her Honours degree and currently was not employed as a registered nurse.

## **5.7 Findings from the recent graduate focus group**

A thematic analysis of the transcribed data from this focus group revealed five broad themes in relation to attitudes and knowledge about ageing, older people and working with them. Within these themes, sub-themes were evident, of which some traverse across more than one theme. Table 5-14 provides a summary of the analysis of the emerging themes which were:

- i. Exposure;
- ii. Culture;
- iii. Professionalism;
- iv. Skills and knowledge and;
- v. Illness and disability.

**Table 5-14 Summary analysis and themes from recent graduate focus group**



### 5.7.1 Exposure

The need for more exposure to older people and OPH throughout undergraduate training was stressed by all participants. This included both the theory and clinical components of the course. Participants also discussed the exposure they had during the programme both favourably and unfavourably.

Participants highlighted some particular theory sessions they had during their N301 OPH component of the programme that provided them with the opportunity to gain knowledge and insight into older people.

*That lecture on sexuality, it was like, of course they would, but I had just blocked that thought beforehand*

*There was that session where we had to put on glasses and gloves and try to do things; you got an idea of what it might be like to be old*

While the older person theory content received in the third year was perceived favourably, students felt more emphasis and exposure to content relating to older people was needed throughout the programme. In particular, this related to the first year course and the pathophysiology course in the second year.

*201 was so focused on disease, I know we had case studies but we didn't think about the people just the disease Pathophys was obsessed with the acute; we needed more about chronic, through the lifespan not just stopping at 60*

The focus group participants felt they needed more exposure and interaction with older people who were ageing positively and this should be throughout the programme as the focus tended to be on sick older people. Participants referred to *Bob* (pseudonym), who came to talk to them in N301 and how *he wasn't even old* (Bob was 84). This also highlights that overall the students' view of older people tended to link the concept of old with being sick and frail as they did not perceive Bob as old, which links into the theme of illness and disability.

The need for more exposure to older people was also discussed in relation to clinical placement. It was highlighted how some students did not get an older people's placement during their training and felt disadvantaged.

*You might get placed in 105 or you choose to do it in 302, so I never really had the exposure*

Participants discussed their N301 clinical component and thought an actual placement rather than just going into the wards to complete their assignments would have been beneficial. The current process of N301 clinical was described as “*a bit scary*” and it was “*difficult*” to go onto the wards independently.

*We would have a few hours with that patient, so it was hard to know what you do for them in a ward*

The focus of the N301 clinical placement is around discharge, transition, wellness and community. With the aim of enabling students to recognise that hospitalisation is only a very small aspect of older people's healthcare. Participants wanting ward time for an older person's placement also links with the theme of illness and medicalisation of older people.

In contrast, some participants suggested a community placement during 301, with exposure to well older people, would be beneficial. The advantage of a community placement in relation to being exposed to older people was highlighted by one participant who described her pre-registration placement at a GP clinic.

*You were not seeing sick, older people; it was more about follow up and maintenance*

Discussion around community placements lead to the recollection of their community project in N201 and N301 and it was suggested that these could focus specifically on an older person (N201) and an aged care agency (N301). While some students are exposed to an older person living in the community with a chronic condition but the focus of the assignment is chronic conditions and hence not all students interact with an older person. Similarly, in N301 some students have the opportunity to be involved in an age-related community service but the actual focus is on community agencies, not older people.

Inconsistencies of exposure to older people by individual students within the programme became evident. One participant had her medical-surgical placement on an OPH ward and felt that this gave her a good grounding of experience for working with older people. Another participant highlighted she had an elective surgery

placement, where the bulk of patients were older people. However, it was acknowledged by participants that during their clinical placements within the programme, they sought younger patients to work with and undertake their client assessments on. There was a general consensus from the group that this was typical student behaviour, with students, in general, perceiving younger patients as easier and a less complex option than older patients. Therefore, students have some control and choice about the amount of exposure and experience they get with older people during the clinical placement learning components of the programme.

While inconsistencies about the amount and type of exposure were highlighted, participants all reported consistency in relation to being exposed to poor role modelling in the care of older adults in the hospital setting.

*There is heaps of ageism in hospital*

This aspect of exposure will be discussed in relation to the theme culture as it relates to the culture of the hospital environment.

### **5.7.2 Culture**

The theme of culture came through in the focus group discussion in relation to the hospital environment, society, cultural conflict, cultural differences between older people and the participants, and providing culturally safe care to older people.

There was a clear consensus by participants that the role-modelling by nurses in the hospital setting portrayed a negative culture in relation to older people. Examples of staff ignoring the call bells of older people were relayed, along with witnessing humiliating and degrading treatment in relation to body exposure and continence management of older people in the hospital. These aspects also link to the theme of professionalism.

*On the ward there was always a common ignorance when her call bell was on, it was always me that went to help her*

The culture of care observed by participants was highlighted as a reason for not wanting to work with older people, as it was perceived that it was too difficult to provide quality care to older people within the hospital setting.

*Get put off working with older people because of the things I have seen and heard and the culture of the nurses.*

*It's not the older people but that culture that surrounds older people*

The participants also highlighted how the culture and nature of the hospital environment made it difficult to provide quality care to older people; this was related to the busy nature of hospital wards and time constraints on care provision.

*You want to be able to give them more time and deliver care at their own pace, but because of all the time pressures it's hard to do that*

The culture of nursing older people and the restraints of the hospital culture created internal conflict for participants in relation to providing quality of care and what they wanted to achieve in their role as a new graduate nurse.

*Older people get the worse quality care, as a New Grad you want to push yourself, but people around you say don't worry about that stuff with them.*

Only one participant discussed the role of new graduates in changing and challenging these cultures.

*We need to come in with fresh ways of doing things*

With other participants there were underlying signals that they had adopted aspects of the existing care and hospital culture, this will be discussed more under the theme of professionalism.

Participants identified ways in which the hospital culture tended to treat all older people the same regardless of their level of function.

*It's like everyone over 65 gets offered a continence product, except the nurses call it a nappy*

It was acknowledged how offensive and disempowering this could be for a person who wasn't really 'old'. This led onto discussions around the individual nature of ageing which will be explored more under the theme of knowledge and skills.

Ageism and social norms within our society were also discussed as were the ways this impacted on students' perceptions about older people. The media was named as portraying negative attitudes about ageing and old people. The participants felt that the role of the BNurs programme was to challenge this culture and provide students with experiences that would build a positive culture in relation to older people and working with older people. This links back into the theme of exposure.

Cultural differences between the participants and older people were identified. Language in relation to some of the language and sayings of older people were not always familiar to the younger participants. However, the participants did not discuss this in relation to the possibility that older people may not understand youthful terminology; suggesting an acceptance of the dominance of youth culture in our society. In relation to their own ageing, participants did not identify themselves as being similar to the current cohort of older people. Participant's related increased knowledge of the determinants of disease would mean when they were older, older people would be healthy and more independent. Increasing technology was linked to minimising social isolation as the participants' aged.

*It will be different for us when we are old, email and Skype will mean there won't be the same sense of loneliness.*

Participants also identified the racist nature of some older European people as being in direct contrast to New Zealand's multicultural population and their own beliefs and values. Working with older people who voiced racist views was identified as challenging and uncomfortable at times for all participants, regardless of their ethnic background. It was acknowledged that this was just "*part of the culture that older people grew up in;*" however, all participants felt more guidance on how to deal with racism from older people would be beneficial for student nurses.

Participants also discussed the difficulty they had experienced with providing culturally safe care to older people from different ethnic backgrounds than themselves. Culturally competent care was deemed by the participants to be much harder with older people than younger.

### 5.7.3 Professionalism

Aspects relating to professionalism were identified in relation to clinical experience; both from clinical nursing preceptors and the participants. Conflict between professional boundaries and providing care to older people was also highlighted.

All participants reported incidents, during their clinical placement as students, in which they witnessed unprofessional behaviour in relation to the nursing care of older people. Examples of neglect and a lack of respect for dignity and privacy were highlighted within the hospital setting. While participants acknowledged unprofessional behaviour from the registered nurses they worked with, there was also underlying evidence from the discussion that as students or new graduate nurses that some of the participants had adopted similar patterns of unprofessional practice. The discussion not only provided examples of unprofessional practice but also indicated poor knowledge of the skills required to meet the needs of older people.

*I think they like company, which is why they keep pressing the bell... I chose not to answer the bell because I know she is going to ask me to do something menial.*

*They don't need professional nurses just someone reliable to fold their clothes or tidy up the bed for them*

In contrast, other participants did highlight the incorporation of professional concepts when working with older people. These included respect, individualised care and valuing older people's strengths and promoting autonomy.

*Treat them as an individual; you can't make comparisons because they are all so different*

*Sometimes we think we know a lot more but in fact, they know what they need and how to manage*

An acknowledgement of internal conflict in relation to the care provision that was able to provide within the restraints of the hospital environment was also touched on.

*Sometimes you feel like you are being hard on them because you can't spend as much time with them as they would like*

The other sub-theme that related to professionalism was around the conflict participants felt in relation to what had been impressed upon them during their undergraduate training around professional boundaries and the nurse-client

relationship, and actual practice of working with older people. It was identified that communication with patients should be focussed on the patient yet older patients want to *talk about you*. That is, older patients often showed a general interest in wanting to know and hear about the lives of the student nurse.

*They like to know who you are and who is caring for them.*

*You are inclined to tell them more, they listen and are interested*

#### **5.7.4 Knowledge and skills**

Throughout the discussion some evidence of appropriate knowledge relating to older people was evident, there were however, also indications of poor knowledge about the ageing process, older people and their health needs. There was also a tendency to 'dumb down' the skills required when working with older people. Participants also discussed the skills and knowledge that they thought was important for undergraduate students to learn. Many of these highlighted the perception of older people as frail, sick and disabled.

During the focus group discussion, participants repeatedly demonstrated a fundamental general knowledge and understanding around age-related changes and the impact of chronic conditions on older people. Risks for older people were identified such as falls, malnutrition and constipation. Knowledge in relation to professional aspects of care have been discussed previously and included the importance of individualising care, respect and autonomy. They recognised that ageing was an individualised process, yet in contrast to this, they also employed stereotypes to describe older people portraying them as *nagging, repetitive, lonely, nice* and *always wanting to talk to you*. Throughout the discussion, there were further comments that indicated a lack of knowledge and stereotypical thinking in relation to older people and their healthcare needs. Some examples are:

*They are just like babies but at the other end of the spectrum*

*Even though their memory is usually quite bad*

*I told him it was OK, that's what happens when you get old (an example of a conversation with a patient who was incontinent)*

Communication was acknowledged as challenging but recognised as being a crucial skill when working with older people. There was a general consensus from the group that older people were not as forthcoming with information. Therefore, ensuring you ask the right questions and follow up on cues was vital for gathering information and assessment data from older people.

*Knowing how to ask the right questions.*

*You need to probe and know how to probe.*

Communication in relation to socialising was also highlighted in relation to what older people want and need.

*To socialise with them and be there with them*

*They just want to talk, and when I am free I do that*

There was almost a ‘dumbing down’ of the nursing skills required for working with older people, in that older people only required menial tasks such as tidying of their bed space and someone to talk to. One participant provided a task-focused example of care. There was no discussion within the focus group of comprehensive or proactive care.

*I would go in and check on her medications and toileting needs*

Task-focused care was also evidenced by the skills the group thought should be incorporated into training and would be beneficial for students. These included how to change a nappy with dignity and watching for falls. These tasks also link into the next theme, which is the illness and disability image of older people.

### **5.7.5 Illness and disability**

Throughout the focus group discussion, it was evident that the participants linked older people with illness and OPH with hospital care. The adjectives they used to describe older people included: Dependant; Bed-ridden; Ill; Deaf; Blind and; Slow. These adjectives support a view that older people are ill, disabled and fragile.

*Sometimes you are nervous that you might bruise them when you take a BP, they are so fragile*

The examples of experiences with older people during their training were almost all in relation to the hospital setting and hence very much of the focus of the discussion was in relation to older people and hospital care. This was further reinforced through the identification of skills perceived to be needed by nurses working with older people, which included managing issues such as incontinence and pressure area cares. There was a lack of discussion exploring concepts such as restorative care, health maintenance or the needs of older people in the community. Discussions around the groups nursing education highlighted the weighting of the hospital environment for clinical placements. Participants wanted the opportunity to have a placement on an OPH ward, viewing this setting as reflecting older people's healthcare.

### **5.7.6 Summary of recent graduate focus group findings**

The findings from this focus group suggest the current curriculum does not go far enough in facilitating the development of knowledge and attitudes about the ageing process, older people or working with them. The participants demonstrated analytical practice in relation to an awareness of ageism and its impact, aspects of competent, cultural, collaborative and interpersonal practice were also touched on during the discussion. However, there were also examples of ageist views or actions by the participants. Individualised care was discussed by participants however there was also an overtone that participants viewed ageing, older people and working with them through a medical lens which associates ageing and older people with illness and disability. The focus of working with older people was predominantly in an acute inpatient setting and there was evidence of poor knowledge and the application of menial skills in relation to working with older people.

## **5.8 Analysis of curriculum documents**

To capture data concerning key curricular elements such as content, outcomes, teaching and assessment in relation to the ageing process and older people, an analysis of curriculum documents was undertaken in July 2010. This process included document analysis of course outlines, timetables; including theory and clinical components, assignments, assessment and examinations across all three years of the programme. The document analysis was undertaken by the researcher who had both

knowledge and experience working in all courses within the BNurs programme. The analysis utilised the core capabilities for graduate nurses, which are outlined in Table 4-2 in the previous chapter, and a document analysis tool to minimise the potential for subjectivity in this process. The curriculum analysis tool was used to analyse course documents in relation to the core capabilities utilising the criteria:

- i. Incorporates specific older person ageing content that link to the capability;
- ii. Includes content relevant to the overall capability but no specific ageing or older person focus;
- iii. Assessment relevant to capability;
- iv. Potential for negative influence in relation to the capabilities and;
- v. Areas that could be utilised to include content to facilitate the capabilities.

### **5.8.1 Findings from the curriculum document analysis**

Key findings from the curriculum document analysis highlighted the biomedical focus of the curriculum, the heavy weighting of the acute care environment for clinical placement and exposure to older people and the limited inclusion and hence visibility of an ageing or older people focus in the curriculum, except in the dedicated four week component, older people's health, in year three. Aspects relating to the core capabilities were found to be present throughout the curriculum, however these were generic and not older person specific. The analysis also provided identification of aspects in the curriculum that could be improved and areas that interventions could be easily integrated into the existing curriculum structure. A summary of the findings from the curriculum mapping document analysis process are presented in Table 5-16, which provides a snapshot of the existing undergraduate curriculum in relation to the capabilities for graduating student nurses

**Table 5-15: Summary of curriculum document analysis**

Course	Specific older person theory content and clinical exposure to older people	Includes concepts and capabilities relevant but not specific to older people	Assessment related to capability	The potential for negative influence	Scope for intervention
N105	Older adult and ageing in place lectures (2hrs) Links to concepts related to OP Hospital visit –interview with an older patient Two weeks clinical in an acute care environment	Content structured around the eight BNurs capabilities Case studies with disease focus but incorporating older adult	Exam question –short answer or multi-choice based on concepts relating to older people	First programme exposure to older people is in the acute care environment with sick older patients	Exposure to positive ageing role models Preparation for clinical Reflection on own ageing Reflection on older people in the clinical environment
N201	No dedicated theory content Some case studies with people over 65 years of age 8 week clinical placement in an acute care environment	Content structured around the eight BNurs capabilities Case studies with system focus but incorporating older people (medical/ illness model)	None	A biomedical focus of theory and clinical Older people underrepresented in theory despite the prevalence in the clinical environment	Inclusion of more person-centred focus and living with long-term conditions Closer linking of theory to clinical realities
N202	A lecture on older adult and mental health Exploration of vulnerability and older abuse	Concepts structured around a social model of care, functional ability and person-centred care Four week placement mental health placement	None	Older people not included in disability theory or clinical placements despite the prevalence of older people living with a disability or mental health problems	Incorporate a lifespan approach to mental health and disability Include a clinical placement with older people
N301	Older people's component One week of theory which includes the practice of physical assessment with older people volunteer Three weeks access to acute care older people's health ward to identify an appropriate person for assessments. Able to attend interdisciplinary team meeting as an observer	Specific Older person learning objectives:	Client discharge analysis assessment Comprehensive Assessment of an older person Pathophysiology assignment Reflection assignment Older people's health	Self-directed Growth and development workbook focussed on ageing and decline The focus is on an older person with complex health needs Pathophysiology assignment uses older person but the focus is on disease process Older people not included in the course title	Include positive ageing role models Include a wellness focus for assessment and theory Provide an opportunity to apply core capabilities to the care of older people
302	Consolidation of nursing skills, knowledge, evidence-based, providing individualised care for people in relation to clinical area chosen				

## **5.9 Chapter summary**

The aim of this chapter was to present the findings from phase I of the research design, which incorporated a range of data sources. The findings provide insight into the study population, the current curriculum and the student learning experience of the BNurs programme in relation to attitudes and knowledge about the ageing process, older people and working with them. The following chapter will discuss these findings and what they mean in relation to informing phase II; the design and implementation of educational interventions into the BNurs programme.

## **Chapter six: Informing the interventions**

*I cannot teach anybody anything. I can only make them think.*

Socrates (470 – 399 BC)

### **6.1 Introduction**

An essential aspect of implementing educational interventions is an understanding of both the learner and the learning environment. This chapter pulls together the findings from phase I of the study to accomplish phase II of the study. The aim of phase II was to design and implement a series of tailored and evidence-based educational interventions into the current nursing curriculum. Key findings from phase I in conjunction with relevant literature will be discussed in relation to informing the design of the interventions. In part 2 of this chapter, the four interventions that were developed and implemented into the Bachelor of Nursing (BNurs) programme as phase II of this study, are presented and described

## **Part 1: The study population and current curriculum**

To ensure the development and implementation of educational interventions in this study aligned to the needs of the study population and the current curriculum, phase I of the study aimed to gain an understanding of the student population and factors that influence their attitudes and knowledge about the ageing process, older people and working with them. To gain insight into the current curriculum and the learning experience of students in relation to their attitudes and knowledge about the ageing process, older people and working with them.

### **6.2 The student population**

The findings from the quantitative survey show that the study population are predominantly young females of European or Asian ethnicity, with NCEA level III as their highest educational qualification. Both the survey and the newly enrolled undergraduate student focus group demonstrate that the students have varied previous experiences of living and /or working with older people and also varied attitudes and knowledge about the ageing process, older people and working with them. While the majority of students entering the programme do not report prior work experience with older people, this changes as students progress through the programme, with 94 percent of year two and 96 percent of year three students reporting previous work experience with older people. The literature on the influence of work experience with older people is conflicting, with some findings revealing a positive influence on attitudes (J. Brown et al., 2008; Henderson et al., 2008; Holroyd et al., 2009; Neville & Dickie, 2014). Others have found working with older people prior to and or concurrently with nursing education has a negative influence on students' attitudes about older people (Happell, 2002) and interest in working with older people (Stevens, 2011). It is important that nursing education recognise the potential influence of work experience with older people and to facilitate opportunities to minimise this impact.

Both the quantitative and qualitative findings from phase I suggest students have varied attitudes and knowledge about ageing and older people and that as individuals, students have ambivalent and mixed attitudes about ageing and older people. This finding is consistent with the literature, which highlights multiple sub-stereotypes and

attitudes exist that are either negative, positive, or ambivalent (Cuddy et al., 2005; Harwood et al., 2005) and therefore the attitudes the participants have about older people are not one-dimensional.

The high number of neutral responses to the questionnaire sections on Reactions to Ageing (RTA), Perceptions of Older People (POP) and Perceptions of Working with Older People (PWOP) may relate to the theme of disassociation in the focus group findings with newly enrolled students which suggests students do not identify with or think about ageing or older people. The social identity theory of ageism highlight a disassociation by younger people towards older people. Hagestad and Uhlenberg (2005) suggests this is due to the institutional and spatial age segregation within current society which does not facilitate socialisation across age groups in which younger people do not know or think about older people who are often perceived as a separate and unimportant group from the mainstream youth culture (Chater, 2002).

Notwithstanding this, the Terror Management Theory (TMT) links dissociation towards older people as being an ego protective function related to anxiety or fear of ageing (Nelson, 2011). The focus group findings also identified participants associated ageing and older people with death and decline and an underlying anxiety of ageing related to a biomedical association of ageing with frailty and decline. Intergroup contact has been found to reduce negative attitudes and anxiety associated with ageing and older people (Bousfield & Hutchison, 2010). An increasing body of literature points to intergroup contact in the form of intergenerational interactions with well, older people as a key educational intervention to counteract ageing anxiety and facilitate positive attitudes and knowledge about the ageing process and older people (Chonody, 2015; P. Gallagher & Carey, 2012; Redfield et al., 2016)

While the findings revealed variation in student attitudes and knowledge towards the ageing process and older people, findings relating to working with older people were highly consistent in both the focus group and survey findings, which revealed only a small percentage of students reported older people's health (OPH) as a future career option. This finding was consistent with students across all three years of the programme and aligns with the literature relating to nursing student career preferences

which indicate working with older people is regularly rated as the least preferred career option with nursing students (Abbey et al., 2006; C. A. Brown et al., 2011; Happell, 2002; Henderson et al., 2008; Moyle, 2003; Stevens, 2011). The focus group findings suggest this might be related to the perceptions students have of working with older people who were described as scary, emotional and not challenging or meaningful in relation to their perception of nursing. Similar findings are highlighted in the literature where student nurses are reported to describe working with older people as lacking excitement, boring, frustrating, unpleasant, physically heavy and requiring a limited range of work and skill requirements. Students have also been reported to express fear of, and discomfort about working with older people because they do not want to deal with suffering, death and dying (Happell, 2002; Henderson et al., 2008; Stevens, 2011).

### **6.3 Strengths and gaps of the current curriculum**

To identify strengths and gaps in the current nursing programme, a document analysis of the existing curriculum and a focus group with recent graduate students were conducted to capture both the formal and informal aspects of the curriculum in relation to student experiences and learning. The core capabilities established to guide the course document analysis also provide a useful tool for considering the recent graduate focus group findings.

An apparent strength of the BNurs programme relating to ageing and older people is the focused four week component in semester one of the third year. The focus group findings from the recent graduates indicated that this component of the programme was viewed favourably and provided them with the opportunity to gain knowledge and insight into older people and working with them. The importance of including a dedicated component relating to an older person's health in nursing programmes, has been identified in the literature which reports that it provides clear visibility of this population and their health needs supporting students to more readily apply theoretical knowledge when working with older people (Baumbusch et al., 2012; Grocki & Glenn, 2004; King et al., 2012). In addition, the literature also supports the inclusion of an independent course focussed on care of the older person in the final year of the nursing

programmes as a means to improve nursing students' attitudes and interest in working with older people (Kloster et al., 2007; Koehler et al., 2016; Koskinen et al., 2015).

While there are strengths related to an independent course, the document analysis and focus group findings identified that this component is essentially the only part of the programme which included OPH theoretical content. The limited curriculum time related to ageing and older people. Is also well documented in the literature (Swanlund & Kujath, 2012; Wesley, 2005). However, this is from an academic educator perspective. The current study has also highlighted that as the learner, graduate students also hold the view that there is limited coverage relating to older people in the curriculum, with a clear finding from the recent graduate focus group highlighting that participants wanted more exposure to well older people and ageing content throughout the curriculum. The curriculum document analysis revealed there was scope for the integration of OPH content and experiences within the existing curriculum framework. Integrating OPH content and experiences within the programme and maintaining the dedicated four week component would address the student need identified from the focus group and the literature.

The biomedical focus of the curriculum was evident in the curriculum document analysis and also highlighted by the focus group. A medicalised view of older people and ageing was also evident during the focus group discussion by the underlying perceptions associated with older people and working with them. Individualised care was discussed by participants; however, there was also an overtone that participants viewed ageing, older people and working with them through a medical lens, which associates ageing and older people with illness and disability. A curriculum that prioritises acute care based on cure as opposed to caring will reinforce and shape students perceptions of ageing and older people as biomedical problems (Chan & Chan, 2009; Xiao et al., 2008). In contrast, a curriculum grounded in person-centred care helps students to move from stereotypical images of older people to an appreciation of them as individuals as opposed to biomedical categories (Koh, 2012). The focus of working with older people in the current curriculum in this study was predominantly in an acute hospital setting and there was evidence that the participants

had inadequate knowledge and the application of menial skills in relation to working with older people.

The heavy weighting of acute care placements was noted by both participants and the curriculum document analysis. Clinical placement, as a significant aspect of the curriculum, played a key role in the focus group discussion relating to the type of older people participants were exposed to, the culture of care and negative experience of observing unprofessional behaviour towards older patients, resulting in negative experiences in relation to care of older people. Similar findings associated with the acute care learning environment has also been highlighted in the literature which reports students witnessing poor standards of care, age based discrimination, marginalisation of care needs, patronising behaviour and infantilisation of older people (J. Brown et al., 2008a; Dobrowolska et al., 2017; McLafferty & Morrison, 2004). The culture of care observed by the recent graduate focus group was linked as a reason for not wanting to work with older people by all but one of the participants. This finding aligns with literature relating to impoverished environments of care, in which students witness poor standards of care and negative attitudes towards older people, resulting in negative attitudes towards older people and working with them (Mike Nolan et al., 2006).

Participants also identified situations that occurred during their clinical placement that they felt ill prepared for, indicating a mismatch between theory preparation and the realities of clinical placement. A mismatch was also highlighted in the curriculum document analysis in both year one and two of the programme, where minimal theory relating to ageing or older people is provided despite students being exposed to acutely ill older people from their first clinical placement in an acute care setting. Brand and McMurry (2009) indicate the risks associated when students feel a lack of preparedness for clinical placements in which students are required to provide personal cares for older people. Given the nature of the acute care older population, it is highly likely that both first and second year students are required to support older people with personal cares without adequate preparation. Therefore, it is not surprising that similar feelings were expressed in the focus group with recent graduates, in which older people were perceived as frail and participants expressed concerns / fears of injuring older

people during the care process. The need to better equip students for the realities of clinical placement, older people, and dealing with experiences of unprofessional practice is an essential focus for nursing curriculum if nursing education is to minimise the negative influence these experiences can have on student nurses knowledge and attitudes about ageing, older people and working with them. Another key finding identified in both the graduate focus group and curriculum document analysis was the need for a more extensive range of clinical placements where students could experience working with older people beyond the acute care environment.

It was discussed in the recent graduate focus group, that as students, it was common to avoid working with older people in the clinical setting and opting to work with younger patients. This was explained in relation to the perception that older people were too complex and difficult to work with. It is unclear whether this was a form of contact anxiety or related to a lack of perceived confidence, experience, skills or knowledge to provide the level of care required. Bandura's (1986b) social learning theory suggests individuals who doubt their ability to be successful do not take on tasks they perceive to be difficult. Therefore, students who do not feel comfortable and hence confident with older people may be less likely to attend to opportunities to work with or learn older people. This finding highlights the importance of nursing curriculum facilitating opportunities for students to develop confidence in their ability to work with older people and to minimise potential contact anxieties associated with older people.

While the graduate focus group findings suggested anxiety or lack of confidence in working with older people, there was no evidence in the discussion that the participants experienced any anxiety related to ageing, unlike the findings from the newly enrolled student focus group findings. The recent graduates perceived that their knowledge and understanding of the determinants of health would equip them and support the maintenance of their health and independence in their old age. This suggests that increased knowledge of how to promote positive ageing can influence levels of anxiety related to ageing. Therefore, the promotion of learning experiences that provide examples of positive ageing are an important aspect for educational interventions.

The analysis of the curriculum document with the core capabilities identified that the curriculum addressed the capabilities. However, they were not always specifically applied to ageing or older people. This was reflected in the findings from the recent graduate focus group, which suggest the current curriculum did not fully facilitate the students meeting these capability expectations. The participants demonstrated analytical practice in relation to awareness of ageism and its impact, along with aspects of competent, cultural, collaborative and interpersonal practice. However, there were also examples that suggested the participants had not achieved all of the specific capabilities for working with older people such as aspects of professional, legal, ethical and competent practice.

#### **6.4 Influences and predictors of attitudes and knowledge**

Demographic variables such as age, sex, ethnicity, and level of education have all been explored in the literature relating to attitudes toward the ageing process and older people. The influence of these variables remains largely contested, however, there are numerous studies indicating that younger people hold negative attitudes towards the ageing process and older people (Hayslip et al., 2012; Kite & Wagner, 2002; Koder & Helmes, 2008; Söderhamn et al., 2001; Stahl & Metzger, 2013), this is also reflected in student nursing populations (Holroyd et al., 2009; Neville, 2015; B. Williams et al., 2007). Despite the fairly conclusive evidence in the literature, the findings from this current study did not find age to be a significant influencing factor towards knowledge or attitudes about the ageing process, older people or working with them. This may be related to the fairly homogenous age range of the participants. The literature does indicate that younger people seem to be highly susceptible to negative attitudes about ageing and older people and therefore, the young age of the study population is an important consideration for educational interventions.

Student ethnicity was identified as an influencing variable with perceptions of older people and perceived level of experience of working with older people. Those of Pacific ethnicity had the highest scores for perceptions of older people and level of experience. However, the small number of Pacific participants make it difficult to draw firm conclusions or generalisations. Within the two dominant ethnicities of New

Zealand European and Asian, it was Asian students who had significantly lower scores on perceptions of ageing as compared to New Zealand European participants. New Zealand European participants had significantly lower scores on perceived level of experience for working with older people.

Participant levels of education were also found to influence perceived level of experience, showing that those with tertiary level education rated their level of experience higher than those with school leaver or trade qualifications. Similar to the findings relating to age and ethnicity, the limited number of participants with tertiary level qualifications make it difficult to draw conclusions or generalise about this finding.

The findings from the multivariate analysis in the current study revealed that those participants that applied positive descriptors about the older people they interact with, also had higher scores on the POP and KOA scale, suggesting more positive attitudes and greater knowledge about ageing and older people. The literature relating to family contact and attitudes suggests that the influence of contact and experience with older family members is more about the quality of the contact as opposed to the quantity (Harwood et al 2005; Bousfield and Hutchinson, 2010). While the questionnaire failed to capture whether or not the contact included positive or negative feelings or associations, the focus group findings provided evidence that quality contact with grandparents influenced attitudes towards ageing and older people in a positive direction. Also, a significant association between knowledge of ageing and perceptions of older people was found in the multivariate analysis, suggesting that positive experiences with older people may influence both knowledge and attitudes.

The study findings also showed that attitudes about the ageing process and attitudes towards older people were found to have a significant association in the multivariate analysis of RTA and POP scores. As RTA scores increased so did POP scores. The focus group findings suggest a possible explanation of this trend, with ageing anxiety, noted as a significant sub-theme. Findings from the literature further corroborate that higher levels of anxiety about one's own ageing contribute to increased negative

attitudes about older people (Allan & Johnson, 2009; Boswell, 2012; Harris & Dollinger, 2001).

Perceptions of working with older people (PWOP) was found to have a significant association with perceived level of confidence (PLOC). Those participants who reported higher levels of confidence also reported positive perceptions of working with older people. Koren et al. (2008) found that perceived comfort and confidence with older people correlated with nursing students' intent to pursue further knowledge suggesting confidence acts as a catalyst for further interest and abilities. In the current study, the findings revealed a statistically significant association between perceived level of confidence and knowledge and perceived level of knowledge with perceived level of skills and experience. It is likely that a change in one of these constructs could result in corresponding changes with the others and therefore indirectly influence perceptions or attitudes about working with older people.

## **6.5 Informing the interventions**

The findings from phase I, in conjunction with the literature, suggest experiences with older people play a significant role in relation to the formation of attitudes and knowledge about the ageing process and older people. Participants who described older people they knew with positive traits, reflected higher scores on the questionnaire, indicating more accurate knowledge and more positive attitudes. This suggests both knowledge and attitudes are closely linked. The role of experiential learning, in the form of clinical placement experience, was also highlighted as having a significant influence on perceptions and knowledge in the graduate focus group findings,, This suggests that educational interventions should be developed utilising experiential learning as an underlying framework.

Both the newly enrolled student focus group and questionnaire data highlighted a link between participants' attitudes toward their own ageing and their perceptions towards older people. A level of anxiety in relation to personal ageing was apparent in the focus group with newly enrolled students. This anxiety about the ageing process was closely linked to working with older people which was perceived as scary, and emotionally

upsetting and associated with death and dying, suggesting an underlying anxiety associated to working with older people. Anxiety about working with older people was also evident in the graduate focus group which seemed to be related to a lack of confidence, experience, skills and/ or knowledge to provide the level of care required for acutely ill older people. The constructs of anxiety and confidence can influence attention, information processing, persistence, effort and choice of task which in turn influences the development of new knowledge and attitudes (Bandura, 1986b; Harwood et al., 2005). Reducing anxiety associated with the ageing process and working with older people and facilitating confidence in students' abilities for working with older people are an essential focus for the educational interventions. Intergroup contact has been found to reduce negative attitudes and anxiety associated with ageing and older people Bousfield and Hutchison (2010). An increasing body of literature points to intergroup contact in the form of intergenerational interactions with well, older people as a key educational intervention to counteract anxiety related to ageing and facilitate positive attitudes and knowledge about the ageing process and older people.

The findings indicate that students come into the programme with mixed and neutral views of ageing and older people. The first experience students have with older people in the nursing programme is in the hospital setting. The exposure of student nurses to unwell older people early in the programme has been reported in the literature to negatively influence students about ageing, older people and working with them. (Garbrah et al., 2017; Kloster et al., 2007). In contrast, exposure to well community dwelling older people has been found to positively influence student attitudes and knowledge (Aud et al., 2006; Blais et al., 2006; Ryan et al., 2007). Providing exposure to well, high functioning, socially engaged older people early in the programme, could serve to challenge any existing negative attitudes and reinforce positive attitudes.

While students report mixed or neutral views early in the programme; there was an underlying biomedical view of the ageing process and older people reported in the focus group with newly enrolled students. This view is reinforced and maintained through the current curriculum, where the content focus is on disease management and students are predominantly exposed to older people in an acute care environment.

While person-centred care is an underlying value of the BNurs programme, this is not clearly reflected in relation to the older person. The inclusion of older people in the classroom would provide students with an opportunity to be exposed to the personalised, lived experiences of individual older people, facilitating an opportunity to challenge any existing stereotypes, recognise the wide range of experiences of ageing and to develop a more patient-centred approach to care (Towle & Godolphin, 2013) that balances the biomedical focus of the current curriculum.

The dominant utilisation of acute care placements within the current curriculum reinforces and aligns ageing, older people and working with them to an acute hospital service, which is only a small slice of the range of health services accessed by older people. Identifying alternative clinical placements where students can experience working with older people in a community setting would broaden the scope of students understanding in relation to working with older people. Given that both the literature and graduate focus group findings highlighted witnessing poor standards of care towards older people in the acute care environment the importance of facilitating a clinical experience in which students experience positive care provision and staff role models in association to care of older people can influence attitudes positively (Nolan 2006).

The introduction of a clinical placement that better aligns to the concepts portrayed in nursing theory has the potential to support the process of professionalism for nursing students in relation to attitudes and care provision for older people. Lave and Wenger (1991) highlight the importance of communities of practice in relation to professional socialisation, in which learners become acquainted and familiarised with the tasks, language, tools, routines, and ways of being and knowing of the community's practitioners, nurses. In addition, the conflicting messages presented in theory with that observed in clinical practice can cause internal conflict for students and therefore impact negatively on their interest in working with older people.

While students will still require acute care clinical placements in the BNurs programme, it is important to recognise the negative influence exposure to sick and frail older people and the observation of ageist behaviours and attitudes by other health

professionals, can have on students' attitudes. Incorporating opportunities to reflect on their experiences can support students to construct their own beliefs and judgements rather than assimilating the beliefs and judgements of others (Kolb, 1984). The recent graduates talked about feeling ill prepared to work with older people in the acute care environment and how to challenge poor standards of care they observed. This is also a common theme evident in the literature where ensuring students are well prepared for the realities of clinical and supported to address confronting issues have been found to be successful in minimising the negative impact of the clinical environment on student nurses attitudes towards ageing and older people (McGarry et al., 2009; Robinson & Cubit, 2005; Thomson, 2007). Incorporating a preparation for clinical theory session may help to bridge the gap between theoretical learning and the realities of practice. Students who feel more comfortable and less anxious about a situation are more likely to be open to learning opportunities.

An underlying devaluing of older people is present in the current curriculum through the limited amount of content students are exposed to in the first two years of their nursing education. Integrating opportunities for students to have both didactic learning and exposure to older people would that the curriculum, school and nursing profession value older people, their health needs and care provision and align to and portrays the core capabilities associated with the care of older people.

The demographic data indicates the student population for this programme have varied social and cultural backgrounds, attitudes and knowledge. One common aspect of similarity is the young age of the students. The susceptibility of younger people to negative attitudes about the ageing process and older people, suggests the importance of utilising innovative and youth friendly teaching and learning strategies such as online technology. Altpeter and Marshall (2003) report that utilising online interactive technologies is an effective method of captivating younger, computer age students interest and dispel the notion that learning about older people is boring.

## **6.6 Section summary**

Phase I of this research has provided findings from a range of data sources aimed at identifying the current student population characteristics and what this might mean in relation to attitudes and knowledge about the ageing process, older people and working with them. An investigation of the current nursing curriculum, within the study context, was undertaken to identify strengths and gaps in relation to teaching and learning about the ageing process, older people and working with them. This section has discussed the findings from phase I in relation to current literature and theories of learning as a means of informing the development and implementation of the educational interventions which aimed to facilitate positive attitudes and knowledge about the ageing process, older people and working with them. The next section of this chapter presents the educational interventions that were developed and implemented in the BNurs programme.

## **Part 2: The interventions**

This section describes the interventions that were designed and implemented in response to the findings and recommendations from phase I of this study. The overall aim of the interventions was to deliver a curriculum that reflected the established core capabilities for graduate nurses. The design of the interventions applied both experiential and didactic learning opportunities to facilitate positive experiences, while also recognising the role of self-efficacy in relation to reducing potential anxieties that may impact on learning and the influence of communities of practice in relation to professional socialisation. Theories of ageism such as the social identity and terror management theory were also considered in the design of the interventions and in particular, the application of intergroup contact for reducing ageism and ageing anxiety. A summary of the interventions and where they were implemented into the BNurs programme are provided in Table 6-1.

**Table 6-1: Interventions and rationales**

Intervention	Rationale
<b>Year one, N105</b>	
First exposure well older people	Positive experience with positive ageing role models Promote confidence in interactions with older people
Clinical preparation	Reduce anxieties associated with older people in the acute care environment
Reflections on ageing and older people	Identify heterogeneity of the ageing process and older people and a person-centred approach
Theory content	Increasing the visibility and valuing of care for older people in the curriculum
<b>Year two, N201</b>	
Theory content and learning objectives	Increasing the visibility and valuing of care for older people in the curriculum
Older people in the classroom	Person-centred view of long-term conditions and ageing Positive ageing role models
<b>Year two, N202</b>	
Community focussed clinical placement	Exposure to clinical setting other than acute care Alignment of clinical and programme values
Theory incorporating lifespan approach to disability	Increasing the visibility of older people in the curriculum
<b>Year three, N301</b>	
Older people as people	Opportunity to offset negative experiences from previous acute care exposure
Online older person module	A learning tool to appeal to young students Opportunity for students to build confidence in caring for older people and apply the core capabilities to a case scenario

While each intervention outlined in Table 6-1 offers an individual strategy, it was also anticipated that collectively they would provide an integrated and incremental approach to the care of older people within the BNurs programme. The inclusion of the interventions was planned in conjunction with the existing teaching and course structure to promote continuity rather than a disjointed learning experience for students. Educational interventions and curriculum modifications were designed for four of the five core courses within the BNurs programme. No changes were planned for the final course N302, Transition to practice as this course is predominantly clinically based, with students choosing from a variety of clinical areas. The educational designs were presented and approved by the undergraduate Curriculum

Committee and Board of Studies<sup>2</sup>. These forums provided an opportunity for both internal and external review of the interventions.

A staggered approach to implementation was employed to minimise the potential for disruption to the overall delivery of the nursing programme which may have occurred if several changes were rapidly initiated into the programme. Furthermore, the structure of the programme, which traverses two semesters, was not conducive to the simultaneous implementation of the intervention. Table 6-2 summarises when implementation of the interventions occurred.

**Table 6-2: Implementation summary of main interventions**

Year and course implemented	Intervention
2012, 2013 Semester one N201	Living with a long-term condition: A person-centred focus
2012, 2013 Semester two N202	Beyond the hospital: Community care clinical placement
2012 Semester two N105	First exposure and reflections on ageing
2013, 2013 Semester one N301	Older people as people and virtual client

Alongside the main interventions outlined in Table 6-2, additional modifications to the theoretical components of each course occurred in order to support embedding and

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<sup>2</sup> The BNurs Curriculum Committee and Board of Studies provides oversight of the strategic development of the undergraduate curriculum and quality standards of teaching, assessment and student performance. All curriculum changes must be approved by the committee, which includes members internal and external to the School of Nursing.

integrating the delivery of the main interventions within the programme and to address all of the aspects identified from phase I. These will be presented within the discussion of each intervention which will be presented in the order students experienced them as opposed to the order of implementation.

## **6.7 First exposure and reflections on ageing**

There is a wealth of literature reporting on the importance of early exposure of students to well, active older people as a means to promote positive attitudes towards older people. In applying a constructivist learning approach knowledge gained from an early positive learning encounter with an older person, can facilitate the application of the knowledge gained into future learning encounters a student may have with an older person. (Biggs & Tang, 2007). Furthermore, the social group theory of ageism highlights age as a fundamental dimension of social categorisation, with younger individuals identify with their own age group, resulting in younger people disassociating themselves from older people (North & Fiske, 2013). However, the role of a nurse requires the ability to associate and interact with a range of people; including those of a different generation. These aspects were considered in the design of the main year one educational intervention, which were implemented into the 30-point N105 course in the second semester of 2012 and employed an experiential classroom based intergenerational learning opportunity.

Well, active older (70+) community volunteers were recruited via an active ageing gym programme at three gyms around the Auckland area. An advertisement was posted on gym notice boards and emailed to gym members. The local hospital volunteer coordinator also forwarded the advertisement to the hospital volunteer group. The recruitment process took on a snowball effect in that many people, who saw the original advertisement, passed it to others. The activity occurred within a number of classrooms within the faculty. Volunteers were transported to and from the activity by taxi vans from a central pickup location and a \$20 Westfield voucher and refreshments were provided as a token of appreciation for their time and contribution to student learning. On the day of the activity, students were paired with a volunteer to undertake a health assessment interview and practice their communication skills.

This enabled the activity to integrate into the existing course structure, as communication skills and health assessment / history were key concepts addressed within the didactic theory content and course outcomes. This one on one interaction aimed to promote the personalisation of an older person and challenge any existing negative attitudes or misconceptions about older people held by students.

The one-on-one interactions lasted for 30 minutes and then students would rotate through supplementary learning activities, which included small group facilitated debriefing and reflection session about the experience and stereotypes and bias towards older people. Another activity involved students thinking about their own ageing and reflecting and sharing within a small group their feelings about their own ageing. The findings from the newly enrolled student focus groups highlighted the anxieties associated with personal ageing that can impact on attitudes about older people and working with them.

The encounter with a well older person in the first exposure intervention was also utilised for reflective purposes during the students' first clinical placement at the end of the semester. Students were asked to compare and contrast the older patients they were observing in the hospital with the older person they meet earlier in the semester and whether they might have perceived the well older person if they had been in a hospital bed or gown when they first met them. During the first year, clinical placement students were also required to write a short reflection on their observed interactions between health professionals and older people as a means of creating a dialogue with their clinical lecturer about possible conflict relating to nursing theory, observations in practice and the students personal, professional ideals. As a means of minimising the impact of challenging clinical situations students may be confronted with, a two hour session utilising case scenarios and team based problem solving was conducted before the year one clinical placement.

## **6.8 Living with a long-term condition: A person-centred focus**

Implementation of this intervention began in semester one 2012, which coincided with the delivery of the programmes second year course, N201, Nursing clients with a pathophysiological problem. This is a 60 point full semester course that consists of six weeks of didactic theoretical and clinical skills learning, followed by eight weeks of clinical placement in an acute care, hospital setting. The theory content in this course uses didactic teaching methods, small group case-based learning activities and hands on / kinaesthetic based clinical skills laboratories.

A biomedical framework is used to structure the theory content, with each theory week focussing on a particular body system. Students are presented with information relating to disease process and care management based on single disease presentation with typical signs and symptoms. The findings from the recent graduate focus group indicated that the acute medical focus of this course did not address the older population and situations they confronted in the clinical practice setting. Hence, there was a misalignment between the clinical and theoretical components of the course. Furthermore, the omission of older people from the theoretical teaching and learning experiences reflected a professional ethos that ignored, devalued, and marginalised older people and their care needs.

The need for students firstly to understand single disease processes to enable them to build on and apply their knowledge to the more complex situations associated with older people is recognised, and for this reason, the overall structure of this course remained unchanged. However, to create an older person inclusive curriculum, additions and modifications to the existing content, teaching tools, learning outcomes and assessment were implemented into the course. These included: Inclusion of didactic lecture content relating to older people; Modifications to case studies to provide an older person context; Course and weekly older person specific learning outcomes; Inclusion of older person examination question and; Client perspective sessions.

### **6.8.1 Client perspective sessions**

An older (70+) guest speaker with a long-term condition (relating to the appropriate body system focus for the theory week) came to talk to the students. These speakers were recruited via community agencies such as Diabetes New Zealand and the Parkinson's Association. All speakers were provided with a guide sheet to assist them in their presentation and the opportunity to meet with a lecturer before their presentation for support. The sessions were 30 minutes long and held in a lecture theatre environment. At the end of each session, a lecturer-facilitated opportunity was provided for student clarification of the information presented and to reflect on what they had learnt from the guest speaker.

As noted in the literature, exposing students to older people who challenge traditional stereotypes of illness and dependency is an effective means of facilitating positive attitudes towards older people. (Adelman et al., 2007; Chonody, 2015; P. Gallagher & Carey, 2012). This learning activity exposed students to older people who are living and ageing successfully in the community, despite long-term health conditions. The speakers were all physically and socially active to provide a contrast stereotypical images of older people and may challenge students existing negative attitudes or serve to reinforce positive attitudes. The client perspective sessions also reflected the concepts of holistic and person-centred care, which moves beyond the medical model of disease and cure, to that of quality of life, health and wellbeing, which are fundamental concepts of the core capabilities. Student evaluation of the sessions was very positive with 52 out of the 53 students who completed the evaluation reporting they found these sessions to be a valuable learning experience.

### **6.9 Beyond the hospital: Community care placement**

N202 is a 60-point nursing course provided in the second semester of the second year of the BNurs programme. This course includes two components; mental health and disability. The curriculum mapping process indicated that the mental health theory module included an older person focus. Also, the clinical practice settings of mental health offered a variety of placement options that ranged across the lifespan. That is, some students would have the opportunity to encounter older people who are

experiencing mental health issues. In contrast, the disability component of the course had a narrower focus in both the theory and clinical components, which included children and younger adults experiencing intellectual or physical disability. Older people were invisible in this module of the programme even though the percentage of people living in the community with a disability increases with age. The omission of older people from the disability component of N202 further reinforced a professional ethos of ignoring, devaluing, and marginalising older people and their care needs.

Supplements to the existing theory component of the course were developed to incorporate a lifespan approach to disability that extended to and included older people. In addition, a new clinical placement was established to provide students with the opportunity to be involved in home based health and disability support services to people living in the community. Findings from literature (Higgins et al., 2007; Lovell, 2006; McLafferty & Morrison, 2004) and preliminary phase of this study highlight the negative attitudes of clinical staff towards older people in the acute care setting. The aim was to establish a new clinical partnership that provided a culture of care congruent with both the core capabilities, established in phase I, and the professional person-centred philosophy of care presented in the theoretical components of the programme.

A clinical placement partnership was developed with a private organisation that fulfils contracts for District Health Boards (DHB), the Ministry of Health (MoH) and the Accident Compensation Corporation (ACC) to provide community-based health and disability support. This organisation supports people of all ages; children through to older people, with care needs ranging from complex medically fragile to simple short-term injury-related community support. The organisation's philosophy incorporates concepts such as client-centred care, health maintenance and where appropriate, a restorative model of care is utilised. This philosophy was congruent with the professional nursing ideals of the BNurs programme. Significant time was taken to work collaboratively with the organisation to plan the placement. Students were provided with an orientation and welcomed on the first day of their placement and clinical and teaching staff kept in close communication to promote a student friendly learning experience that demonstrated continuity and alignment across the theoretical and clinical components of the course. A total of 32 students requested this placement

over the two year period of the study. While not all students were exposed to this particular intervention, they were exposed to the theoretical modifications in the course. It is also recognised that within the social group theory of ageism, peer attitudes can challenge and influence change in others.

## **6.10 Older people as people and virtual client**

The course N301 occurs in the first semester of year three. This is a 60 point nursing course that is made of four different components: Community; Child health; Maternal and infant and; Older people's health. The OPH component comprises one week of theory and a three week clinical based experiential opportunity. While the focus of the N301 OPH component endeavours to promote a person-centred and restorative care approach to older people, there remains an underlying biomedical focus in the theory content that addresses the complexity of care, the clinical component, which focuses on hospital discharge and an assignment that focus on disease pathophysiology. The complexity of care and care transition are still important skills and knowledge required of graduate nurses if they are to provide quality care to older people across different care setting and therefore the general structure of this course was unchanged with the inclusion of assessment modifications and an experiential learning activity with positive ageing role models.

The pathophysiology assignment was modified to a case study assignment which required students to explore the complexity of age related changes in combination with disease processes with a focus on an older person's functional ability. The reflection assignment was modified to incorporate a critical analysis of ageism in the healthcare setting. Students' experience of older people during this course, involves an in-patient assessment, treatment and rehabilitation setting, where many of the clientele experience poor health, frailty and dependency. To reinforce the heterogeneity of ageing and further integrate the theme of positive ageing and social engagement with older people, an intergenerational activity was introduced during the theoretical learning week.

Older community volunteers were recruited from the pre-established volunteer data base established during the year one intervention. The volunteers came into the classroom and alongside students; they were split into small groups of six people (four students and two volunteers) for an intergenerational guided discussion. The discussion guide included the following prompts:

- I. Introductions (e.g.name, where born and if comfortable when).
- II. How do you spend your time (Describe a typical day)?
- III. Identify what things are meaningful to you in your life?
- IV. What activities do you enjoy doing or get satisfaction from?
- V. What do you do to relax?
- VI. What (if anything) causes you to worry?
- VII. How do you maintain health and wellness?

The groups were given approximately 40 minutes for the activity, following which, a guided group reflection on what students learnt. The reflection highlighted that the activity had provided students with insight into the lives of an older person and that while there were some differences between themselves and the older people, students observed a number of similarities between themselves and older people. Other modifications to the theoretical content included addressing some of the misconceptions and poor knowledge identified in the phase I findings. An example of this was the inclusion of a continence across the lifespan session, which explored continence problems and challenged the common misconception that all older people are incontinent.

The final intervention for N301 was an online, case-based teaching and learning module which was implemented into the N301 older person's health module. Gonçalves (2009) highlights that learning in gerontology is more efficient when it is problem based. The review of the literature identified examples case studies have been effectively used as a means to facilitate student learning about ageing and older people (Tan et al., 2010) note that a virtual client case scenario can provide a dynamic learning experience for students to apply knowledge and extend their learning. A virtual case scenario was designed based around the core capabilities for graduate students which

were designed to support the curriculum evaluation tool in phase I and to guide the aims of the interventions.

This online module presented students with an unfolding case study that aimed to provide the opportunity to build, learn and apply existing knowledge and skills about the nursing care of older people. The case begins by presenting a well older couple, in which a fall related injury results in hospitalisation and discharge of one of them. Through the online platform, students are required to take on the role of the nurse in the emergency department and then the discharging nurse at the end of the hospital stay. Davis et al. (2008) note the importance of enabling students to view the older adult in the context of change over time to facilitate students recognising the changing nature of health and the health services needs of older people. For this reason, the case then unfolds to the death of a spouse, changing health status, and family tensions relating to living arrangements. In each situation, the student assumes the role of a nurse with opportunity to both apply and build on their existing knowledge and skills in relation to:

- i. Assessment of an older person;
- ii. Critical thinking about the nursing care of an older person;
- iii. The role of the inter-professional team (inpatient and community);
- iv. The concept of loss for older people;
- v. Legal-ethical principles in the care of an older adult and;
- vi. Care and support options available in the community.

The non-threatening environment of an online virtual client enables students the opportunity to practice their clinical skills, apply, and build their knowledge and clinical confidence in a controlled non-threatening environment (Tan et al., 2010). Evaluation of the online module as a teaching and learning tool was very positive with the majority of students reporting that it facilitated their application of knowledge, enabled them to build on previous learning and was relevant to their future nursing practice.

## **6.11 Chapter summary**

This chapter has discussed the findings from phase I of the study which aimed to inform the design and implementation of education strategies into the BNurs

curriculum. These interventions form phase II of this study and incorporate an increase in the didactic inclusion of ageing and older person content throughout the curriculum, but predominantly apply experiential learning opportunities in which to provide students with positive examples and experiences of older people and working with them. Interventions for four of the five core nursing courses were introduced to the BNurs programme. The details of each intervention have been described in this chapter. The next chapter provides the evaluation of these interventions in relation to student nurse knowledge and attitudes about the ageing process, older people and working with them.

# Chapter seven: Findings, establishing the impact of the interventions

*The only person who is educated is the one who has learned how to learn and change.*

Carl R. Rogers (1902-1987)

## 7.1 Introduction

The overall aim of this study was to design and implement evidence-based educational interventions that would positively influence student nurse knowledge and attitudes about ageing, older people and working with them. This final findings chapter relates to phase III of the research design, which focusses on the research objective that concerns evaluating the educational interventions. The specific research questions associated with this phase are:

1. What is the immediate impact of each educational intervention on student nurse knowledge and attitudes toward the ageing process, older people and working with them? In relation to:
  - a. First exposure and reflections on ageing
  - b. Living with a long-term condition: A person-centred focus
  - c. Beyond the hospital: Community care clinical placement
  - d. Older people as people and virtual client
2. What is the cumulative impact of the educational interventions on student nurse knowledge and attitudes towards the ageing process, older people and working with them (*changes over time*)?
3. What is the overall impact of the educational interventions in relation to student nurse knowledge and attitudes concerning the ageing process, older people and working with them (*changes on completion of the programme*)?

The methods employed to address the research questions incorporate quantitative and qualitative data analysis. The findings from both of these data sources will be

presented in this chapter. The chapter is structured in relation to the research questions. Part one investigates the impact of each of the individual interventions, Part two presents the findings from the two intervention cohorts at each time point and hence the investigation of change over time and the incremental and cumulative impact of the interventions. Part three compares the impact of the interventions on students, compared with non-intervention students and therefore provides insight into the overall impact the interventions had. In this chapter the abbreviation T will be used when presenting and comparing the data relating to the specific data collection time points, which are: Time point 1 (T1); Time point 2 (T2); Time point 3 (T3); Time point 4(T4) and; Time point 5 (T5). A summary of the data collection time points in relation to the interventions and Bachelor of Nursing (BNurs) is provided in Table 7.1

### **7.1.1 Data summary**

The quantitative dataset comprised a total of 965 self-completion questionnaires. The questionnaires were administered during class time, to participants enrolled in the BNurs programme from semester two in 2011 through to the end of semester one in 2014. There were five data collection time points that occurred throughout the three years of the BNurs programme, with four student cohorts included in the study. An overview of the demographic data for each of the cohorts has been presented in Table 5.1, chapter five. Additional demographic information of each cohort at each individual time point is available in Appendix 8. Table 7-1 provides a summary of the data collection time points and the participating cohorts. The year of data collection, year level, the number of questionnaires returned and the percentage of returned questionnaires in relation to the total number of enrolled students is provided. As reflected in Table 7-1 there was a high return rate (over 70%) across the cohorts and time points except for cohort 3 at T2.

**Table 7-1: Summary of data collection time points and cohorts**

Summary information	Cohort 1	Cohort 2	Cohort 3	Cohort 4
<b>Time point 1, beginning of semester two, 1<sup>st</sup> year of the programme</b>				
Year of data collection			2011	2012
Number of participants			70	90
% of total student number			78.0%	72.6%
<b>Time point 2, end of semester one, 2<sup>nd</sup> year of the programme</b>				
Year of data collection			2012	2013
Number of participants			45	84
% of total student number			45.0%	84.8%
<b>Time point 3 end of semester two 2<sup>nd</sup> year of the programme</b>				
Year of data collection		2011	2012	2014
Number of participants		70	73	77
% of total student number		77.8 %	83.9 %	77.8 %
<b>Time point 4, end of semester one 3<sup>rd</sup> year of the programme</b>				
Year of data collection		2011	2013	2014
Number of participants		70	80	75
% of total student number		77.8 %	95.2%	80.6%
<b>Time point 5, end of semester two, 3<sup>rd</sup> year of the programme</b>				
Year of data collection	2011	2012	2013	
Number of participants	64	72	78	
% of total student number	71.9%	81.8%	89.7%	

Across all cohorts and time points, there were instances where submitted questionnaires did not have all questions completed. These questionnaires have remained as part of the data set, with the instances of missing information noted in the

reporting of the findings. In the sections involving Likert style responses, in which the analysis involves the mean scores, any missing data from the scale responses resulted in the exclusion of the participants' data from the mean scale analysis as this would cause a falsely low mean cohort score. The different scales from the questionnaires and associated abbreviations utilised for presentation in this chapter are provided in Table 7-2.

**Table 7-2: Questionnaire outcome scales**

Quantitative scale	Abbreviation
Reactions to ageing	RTA
Perceptions of older people	POP
Knowledge of ageing	KOA
Perceptions of working with older people	PWOP
Knowledge of the nursing role	KNR
Perceived level of confidence working with older people	PLCOP
Perceived level of experience working with older people	PLEOP
Perceived level of skills working with older people	PLSOP
Perceived level of knowledge working with older people	PLKOP

In conjunction with the quantitative data, focus groups comprising of participants from cohort 4 were conducted. The first focus group occurred at the end of semester two 2012, following this cohorts exposure to the year one intervention, first exposure and reflections on ageing and older people. Focus group two occurred at the end of semester two 2013 following the year two interventions, living with a long-term condition and beyond the hospital, community care placement. At the end of semester one 2014, focus group three was conducted following the final intervention, intergeneration group chat and virtual client. The demographic profile of the focus groups is presented in conjunction with the focus group findings in part one of this chapter.

## Part 1: The impact of the individual interventions

This section presents findings in relation to the impact of the individual interventions utilising quantitative pre and post intra-cohort data or cohort comparison data from the questionnaires. Findings from the cohort focus groups are also included in this section as part of the evaluation of the interventions. The findings relating to the individual interventions will be presented in order of where they are placed in the programme, starting with the first year intervention.

### 7.2 First exposure and reflections on ageing

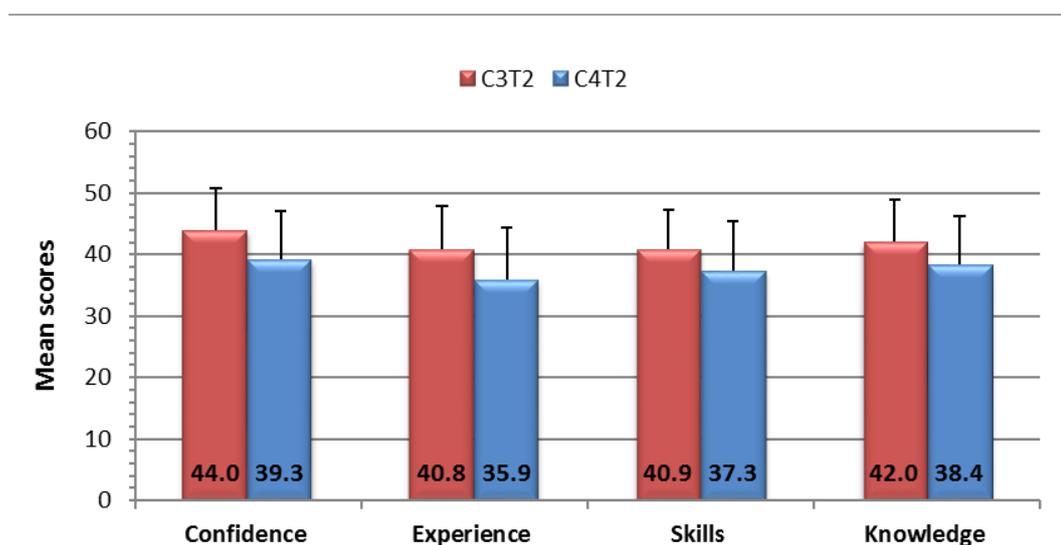
This intervention was introduced in the first year of the Bachelor of Nursing (BNurs) programme with cohort 4 in semester two, 2012. To identify the impact of this intervention a cohort comparison was conducted between cohort 4 and cohort 3 at T2. Cohort 3 experienced one intervention; intervention two, whereas cohort 4 has experienced both interventions one and two and therefore any differences between the cohort scores should reflect the impact of intervention one. An independent sample t-test was conducted between the mean outcome scores. The findings from this analysis are presented in Table 7-3.

**Table 7-3: Mean scores for cohort 3 and cohort 4 at time point two**

Scale	C 3			C 4			ANOVA	
	Count	Mean	SD	Count	Mean	SD	Mean diff.	Sig.
RTA	45	26.91	5.48	85	25.40	4.99	1.51	0.13
POP	45	33.76	3.69	83	34.49	3.81	-0.74	0.29
KOA	43	26.23	2.67	82	26.52	2.55	-0.29	0.56
PWOP	45	41.40	5.06	84	42.08	5.06	-0.68	0.47
PLOC	43	43.98	6.73	83	39.28	7.81	4.70	<0.0001*
PLOE	43	40.79	7.16	83	35.88	8.59	4.91	<0.0001*
PLOS	43	40.93	6.42	83	37.27	8.07	3.67	0.01*
PLOK	43	42.02	6.82	83	38.40	7.85	3.63	0.01*
KNR	45	44.91	3.13	84	44.71	3.43	0.20	0.74

Note. \* Significant at the 5% level

Table 7-3 shows cohort 3 has higher mean scores than cohort 4, with statistically significant differences on the mean scores for perceived confidence ( $p < 0.001$ ), experience ( $p < 0.001$ ), perceived skills ( $p = 0.01$ ), perceived knowledge ( $p = 0.01$ ). Higher mean scores are evident for cohort 4 in the scales for perceptions of older people and perceptions of working with older people. However, these differences are not statistically significant. The significant differences shown in Table 7.3 between cohort 3 and cohort 4 mean scores at T2 are presented in Figure 7.1, which shows the scores for perceived level of confidence, experience, skills and knowledge about working with older people for each cohort. Despite experiencing the intervention, cohort 4 has significantly lower scores than cohort 3.



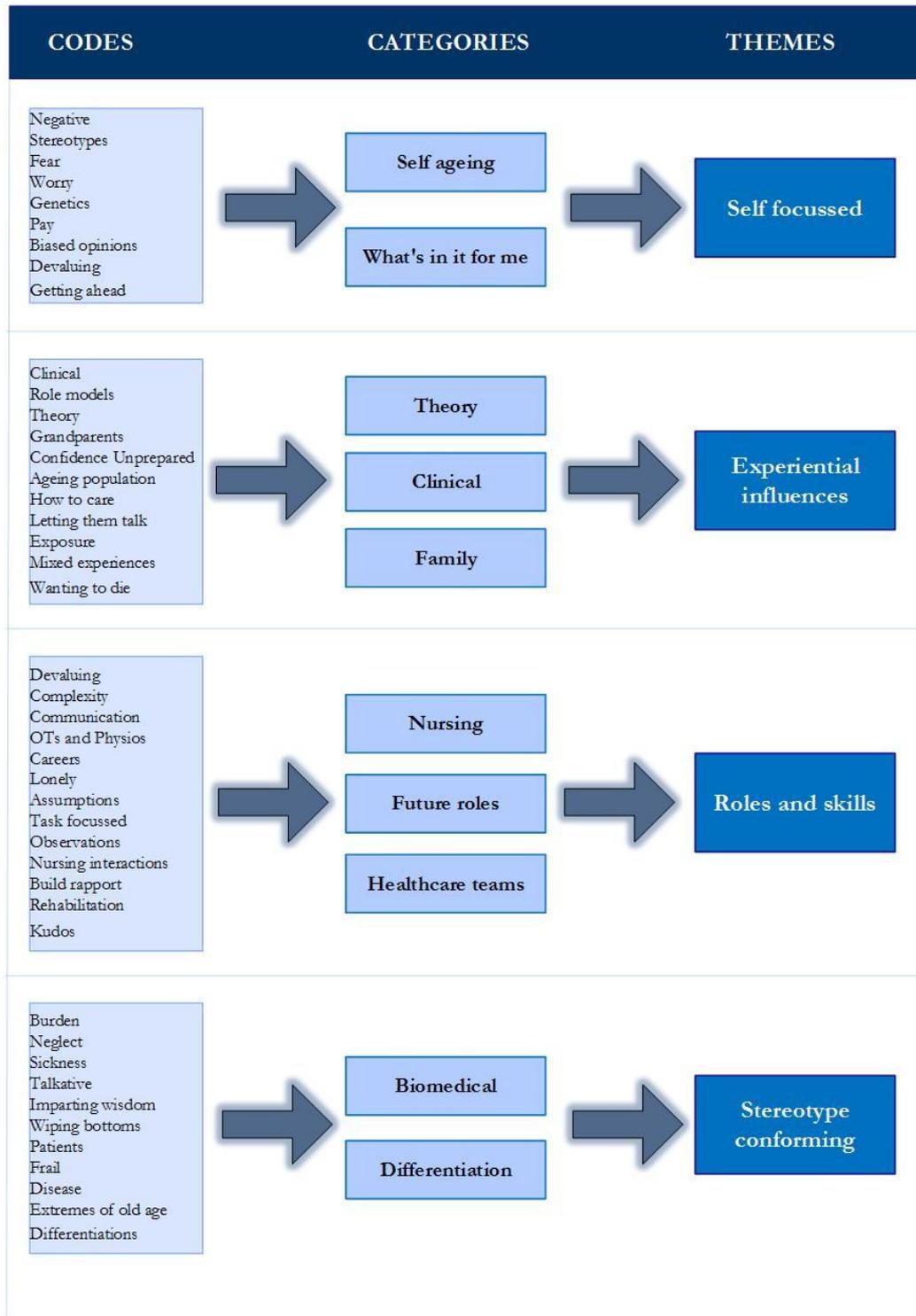
**Figure 7-1: Perceived level of confidence, experience, skills and knowledge for cohort 3 and 4 at T2 (error bars = 1 SD)**

### 7.2.1 Focus group one

This focus group consisted of seven participants from cohort four at the end of the first year of the programme. Of the seven participants, one was male, four participants were under 20 years and the other three participants were between the age ranges of 21 to 25. Five participants reported their ethnicity as New Zealand European and two as Asian. The highest education level for six of the participants was NCEA level III

and one participant had a completed degree. Table 7-4 presents a summary of the analysis of the focus group discussion and the four themes which emerged. The themes and underlying sub-themes from the analysis are presented in the following section.

**Table 7-4: Summary analysis and themes from evaluation focus group one**



As presented in Table 7-4 the four themes that emerged from focus group one were:

- i. Self-focused;
- i. Experiential influences;

- ii. Roles and skills and;
- iii. Stereotype conformity.

These themes and the underlying sub-themes are discussed in the following section.

### **7.2.1.1 Self-focused**

A prominent theme from this focus group was an egocentric focus y in relation to self-ageing and in relation to working with older people. Participants discussed ageing in relation to their future selves. Worry and fear about their own ageing was evident and based on negative stereotypical aspects of ageing and being old.

*What scares me the most is being alone*

*I worry about old age and the sickness that comes with it*

Alongside fears of social isolation and poor health, other negative aspects of their own ageing included financial hardships, being vulnerable and taken advantage of, being dependant on other people and being a burden on others, particularly family. Some awareness of healthy ageing was noted; however, this did not help to ease the worry associated with self-ageing.

*I'm trying to eat healthily and exercise, but I am worried genetically for my sake*

It was evident that concerns about their own ageing related to observations and experiences. Participants identified things they had seen either with family or during the two weeks of clinical placement they had experienced as part of their first year of the BNurs programme.

*I did see that in clinical and it's got me really worried; I don't want to get old now*

*With my Dads parents, I think the insecticide they used caused neurological atrophy in their old age*

Experiences also helped to shape aspirations for when they did become old. Being knowledgeable, altruistic and family and community focussed were positive aspects associated with their own ageing.

*That's what I want to be like when I am old; someone who has a lot of wisdom*

*I want to be like that; someone who is kind of there. When I retire I want to be there for people*

*I had a really doting grandmother and she was such a huge part of my life –I'm looking forward to retiring and being able to focus on my grandkids as she did*

The participants' observations and experiences with grandparents and older people during their two week clinical placement clearly played a part in influencing their perceptions about their own ageing but also their perceptions about older people and working with them.

Despite older people's health not being a desired career pathway for participants, many noted they would consider working there if the employment package was right. This 'what's in it for me attitude' was expressed in relation to competitive financial retribution and advantageous career progression pathways.

*If I knew I could progress and get ahead professionally*

*If I would get more money; at this point in my life I think I would go with the money*

*If I was offered a job in OPH, the money would have to be good*

Some participants linked their perception of the nursing role in relation to the care of older people (observed during clinical placement) as a rationale for not wanting to work with older people. An underlying self-focus was also evident, in which participants wanted to be 'more than what they had observed.

*The nurses weren't 'the people on the ward' it was the physios and OTs –they were the big deal- not even the doctors*

*I want to be more involved than that- and I think a more acute care setting would be more appropriate for me*

The perceived lack of involvement and kudos of nurses in the care of older people clearly influenced some participants. The influence of clinical placement will be further discussed under the themes of experiential influences and roles and responsibilities.

### **7.2.1.2 Experiential influences**

Influences was an underlying theme in the focus group discussion and can be divided into three sub categories; family, clinical and theory.

As already noted, participants linked their views about ageing to grandparents. Those that had seen grandparents who aged positively had a more positive approach to their own ageing and older people in general.

*My Granddad is perfectly fine, he can do everything, and he's 83*

Conversely, those who had grandparents who did not experience good health or longevity tended to have a more negative view of their own ageing and ageing in general.

*None of my grandparents made it past 70. The older you get, you get sick and your body slows down*

In relation to the nursing programme, it was evident from the focus group discussion that the participants did not perceive the theoretical content they had received had a notable influence on them in regards to ageing and older people. While the year one intervention was mentioned by participants, it was noted that the focus was more on communication than ageing and that the volunteers weren't really old.

*There is not a lot of ageing stuff (content). We did some communication with older people and there was a lecture on the theory of ageing, but clinically you do get the experience; you can't avoid it*

*Those people we did the communication with weren't really old they were still very active and able*

The group consensus was that all they got from theory was “*there is an ageing population*”, but information of how to deal with this clinically was not provided, despite being exposed to old people during their clinical placement. The perceived lack of theory was noted in relation to feeling unprepared for clinical and that participants wanted theory that addressed how to care for older people.

*I don't think anything in N105 could have prepared me [for clinical placement]*

*We have learnt about conditions in other course so when it comes to nursing we want to learn how to nurse them*

The type of clinical area, patient's and nurse's participants were exposed to during their two week clinical placement also influenced perceptions about ageing, older people and working with them. For some who observed older people on medical or surgical areas, their perceptions of older people tended to be more positive.

*Most of the older people I worked with were still full of life and really pleasant people*

*I didn't have heaps of experience but the older people I did see, well they just wanted to talk and impart wisdom*

The perception that nursing older people has a lot to do with 'letting them talk' was highlighted by the majority of participants. This sub-theme will be discussed in more detail under the theme roles and responsibilities.

Participants who completed their clinical placement on an Older People's Health ward tended to express negative or mixed experiences in relation to the older people they worked with.

*I got to see both extremes; some were young at heart and some had extreme dementia and Alzheimer's disease with a lot of medical problems and fully dependent*

*A lot of them were not very functional and really restricted physiologically*

*They talked to me about how they would be pleased to see their death certificates in the paper*

What these participants observed during their clinical placements served to confirm pre-existing stereotypes that older people are frail, dependent, sick and waiting to die.

*I think that when you get old you become dependent. I saw quite a bit of this and it made me worry*

Clinical also influenced perceptions about working with older people which will be discussed under the next theme of roles and responsibilities.

### **7.2.1.3 Roles and skills**

The theme of roles and skills incorporates skills participants related to working with older people, how participants perceived the role of nurses and other team members when working with older people, and how participants viewed their future career roles.

As noted previously, giving older people time to talk and impart their wisdom was agreed upon by all participants as an important skill and role that nurses had when working with older people. This tended to be associated with the fact that older people were lonely and "they sprung at the opportunity" to have someone to talk to.

*I also found them very talkative; I guess they don't have as many interactions as we would have in our everyday lives*

*To just stop and chat with them, which is the easiest thing to do but for them, it might be the highlight of their day*

Communication was linked to the ability to build rapport with older people and there was a consensus from the group about the importance of building rapport. Participants referred to examples where they had observed different nurses' interactions with older people and the impact that could make.

*Seeing how responsive an older person was towards them was a huge difference – they open up a bit more and you find out about their life outside of the hospital which can add to your care plan*

The skill of maintaining respect and dignity of the older person through appropriate and non-patronising communication was also discussed in regards to witnessing the interactions and skills of other nurses during clinical placement.

*One (nurse) treated the older people like they were simple minded and one treated them like they were a normal person and I could see the different reactions and how the patient responded*

The importance of not making assumptions about older people was a skill that was also highlighted. However, there were also comments that suggested the participants still applied assumptions based on stereotypes such as lonely or cognitively impaired.

*I think you have to be open-minded and not just assume because they're old there is no more to life*

*You still need to be conscious to speak to them a bit slower or interact with them a bit differently*

A variety of views emerged about the nursing role in relation to working with older people during the focus group discussion. While some participants perceived the nursing role as menial task focused work, others identified the complexity associated with the care of the older person.

*It's not too hard or complex, just wiping bottoms and stuff like that*

*It's not simple; it's not just one thing, it is a million and one things wrong with them*

The complexity of care associated with older people made some participants feel out of their depth in regards to the nursing role, knowledge and skills required to meet the care needs of older people

*You're dealing with all these different problems. How do you deal with that? I have no idea*

*I was lost, even the nurses on my ward didn't have a clue how to do it*

The importance of rehabilitation in working with older people was identified by the majority of participants; however, nurses were not perceived to have a role in the rehabilitation process. In contrast, the role of other health professionals was deemed as significant for making a difference to patients' rehabilitation. While participants expressed an interest in being involved in rehabilitation care, they perceived the health care team to work in silos in and felt uninvolved in this aspect of patient care.

*They (nurses) weren't really involved in the rehab process*

*It felt like the nurses were just there to make sure they (patients) are taking their medications*

*I get the picture that the people involved in rehab are the physios and OTs and the nurses are on the side*

Participants expressed they were not specifically opposed to working with older people; it was however, not an area they were passionate about or desired to work in. The discussion highlighted an underlying devaluing and naivety about the role, skills and knowledge involved in working with older people by both participants themselves and other people.

*People say its easy nursing or not a lot of nursing*

*I had an RN tell me she works in OPH because she couldn't progress any further; she didn't have any leadership capabilities or confidence and this is the only job she deemed suitable for her level of skills*

Much of what the participants observed on clinical placement served to reinforce stereotypical assumptions about ageing, older people and working with them.

#### **7.2.1.4 Stereotype conformity**

Stereotype conformity has been an underlying thread through all of the themes. In particular, participants regularly conformed to a biomedical focus that associates ageing and older people with physical illness, functional decline and frailty.

*Old is someone who can't do their ADL's, but that's because of their age as opposed to a disease that has caused it in a younger person*

*The older you get, you get sick and your body slows down*

However, while stereotypical views were evident throughout the discussion, it was also evident participants recognised not all older people are the same, with participants identifying a differentiation between high functioning older people and dependent sick older people.

*For someone to be old they have to be frail*

*The people we did our communication session with weren't really old, they looked old but they were not really old*

*I got to see both extremes of what old age constitutes*

This differentiation was also recognised in relation to the nursing role and tended to support negative perceptions associated with working with older people.

*It is a totally different kind of nursing working with an 85 year old in a rest home or working with one who is in the hospital following surgery*

#### **7.2.1.5 Summary of focus group one**

Overall the findings from the first year focus group suggested a fairly negative perception of ageing, older people and working with them. Participant's perceptions related to experiences with family and their two week clinical experience which was noted they felt unprepared for despite the inclusion of a two hour preparation for clinical session. Intervention one did not seem to be a key feature in their theoretical experience. However it is interesting to note that participants did not view the older people who were involved in this session as old. A lack of understanding of the role of the nurse in the care of older people was also evident.

### 7.3 Living with a long-term condition: A person-centred focus

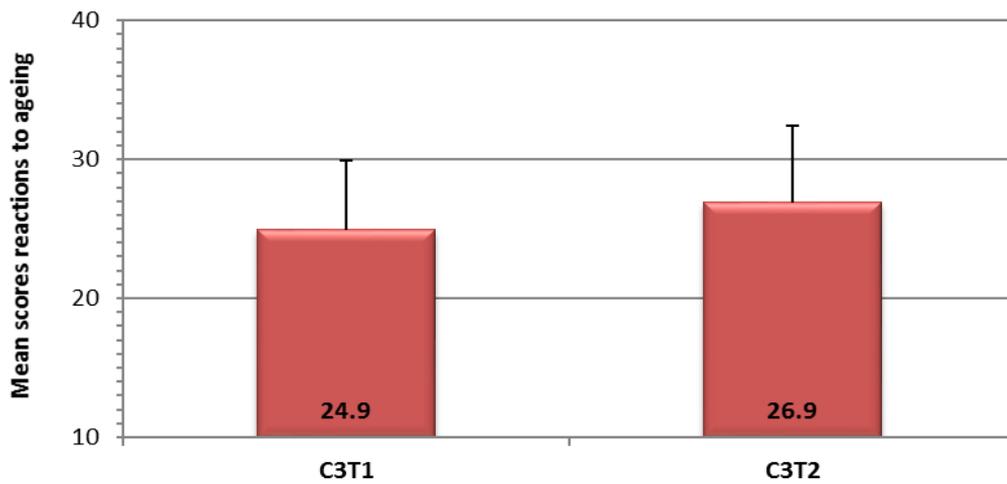
This intervention was the first to be implemented into the BNurs programme in the first semester of 2012 in the course N201. The first cohort to experience this intervention was cohort 3. The evaluation of this intervention uses the pre and post measurement scores for cohort three at data collection T1 (pre-intervention) and two (post-intervention). This section does not include a comparison of the responses relating to participants perceived confidence, experience skills and knowledge working with older people as this information was not collected at T1 with this cohort. An independent sample t-test analysis was conducted to identify any significant changes in mean scores pre and post the intervention. The results of this analysis are presented in Table 7-5, which shows an increase in the mean scores from pre and post intervention across all measurement scales. A statistically significant difference was evident in all scales except perceptions about older people.

**Table 7-5 Comparison of mean scores for cohort 2 at T1 and T2**

Scale	C 2T1			C 2T2			ANOVA	
	Count	Mean	SD	Count	Mean	SD	Mean diff.	Sig.
RTA	84	24.94	4.99	45	26.91	5.48	1.97	0.048*
POP	85	32.89	4.05	45	33.76	3.69	0.86	0.224
KOA	83	25.13	2.69	43	26.23	2.67	1.10	0.031*
PWOP	84	38.18	3.02	45	41.40	5.06	3.22	<0.001*
PLOC	84	42.63	4.45	45	44.91	3.13	2.28	0.001*

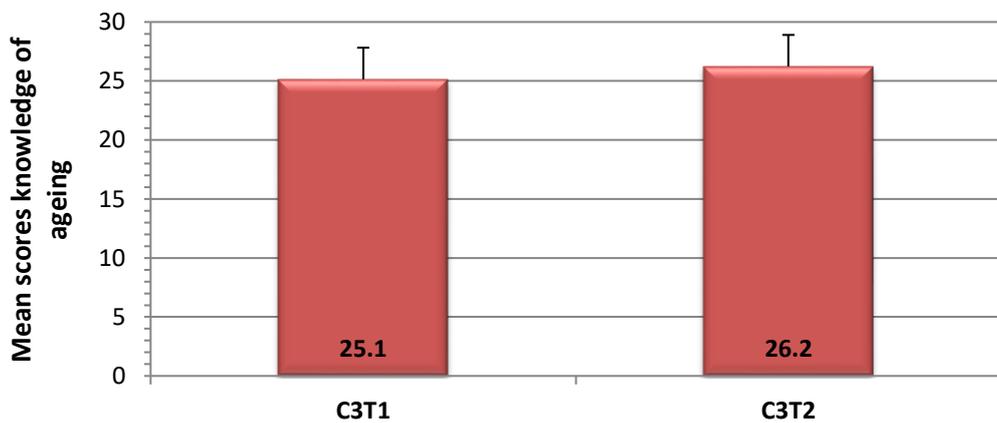
Note. \* Significant at the 5% level.

The statistically significant differences at T1 and T2 for cohort 3 are further illustrated in Figures 7-2 to Figure 7.5. The difference for attitudes towards ageing scores are presented in Figure 7.2 which shows the mean scores for cohort 3 at T1 (pre-intervention) and at T2 (post intervention). The independent sample t-test found this difference to be statistically significant ( $p=0.004$ ), revealing higher scores post intervention at T2.



**Figure 7-2: Attitudes towards ageing scores for cohort 3 at T1 and T2 (error bars = 1 SD)**

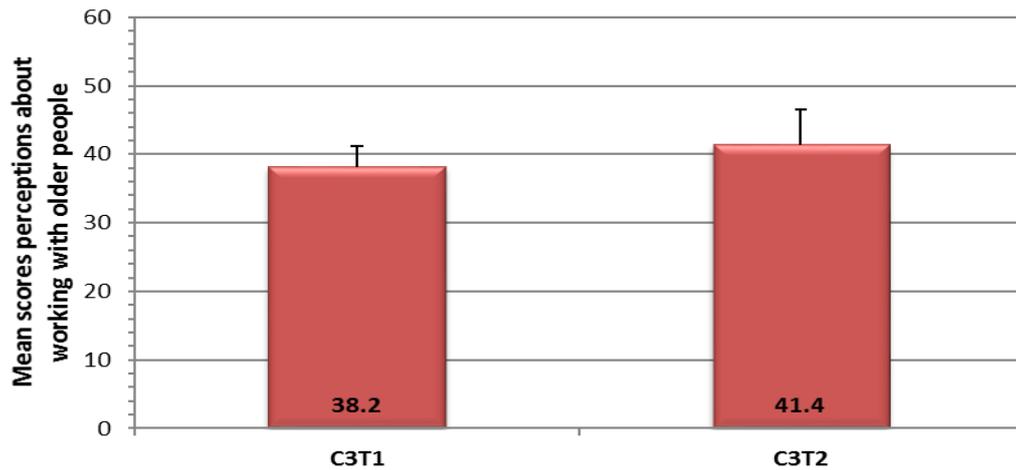
Significant differences were also found for knowledge of ageing scores between T1 and T2 for cohort 3. This is represented in Figure 7-3 which shows a higher score for knowledge of ageing post intervention at T2. Despite the small increase in mean scores, the differences were found to be significant ( $p=0.031$ ) at the 5% level.



**Figure 7-3: Knowledge of ageing scores for cohort 3 at T1 and T2 (error bars = 1 SD)**

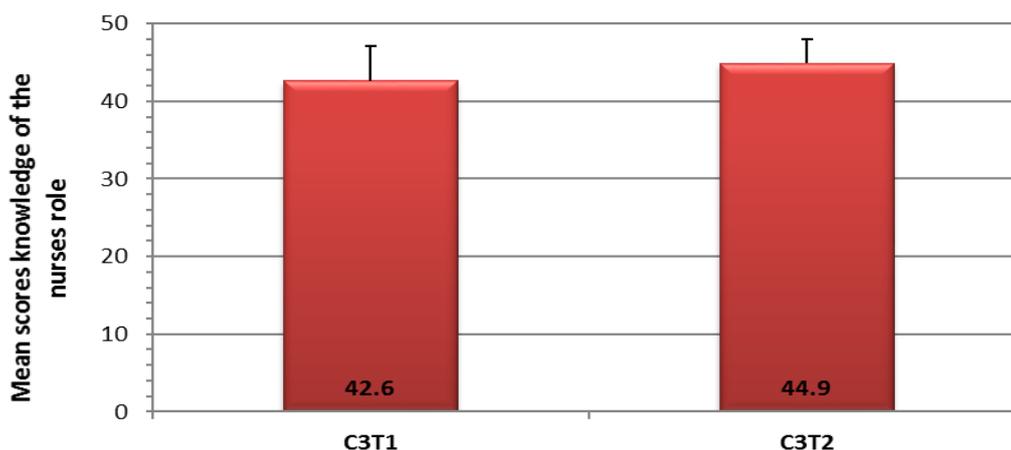
Figure 7-4 presents the difference in mean scores for cohort two pre and post intervention two for perceptions about working with older people. The increase in the

scores was statistically significant at the 5% level ( $P < 0.001$ ). Also of note in Figure 7.4, is the increasing standard deviation at T2, which suggests an increasing range of scores at this time point. There is a noticeable increase in the standard deviation at time point two which suggests a wide range of scores at this time point.



**Figure 7-4: Perceptions about working with older people scores for cohort 3 at T1 and T2 (error bars = 1 SD)**

The difference in mean scores for knowledge of the nursing role with older people is presented in Figure 7.5, which also shows a statistically significant ( $p = 0.031$ ) and higher mean score at T2, post intervention



**Figure 7-5: Knowledge of the nursing role scores for cohort 3 at T1 and T2 (error bars = 1 SD)**

In addition, Figure 7.5 shows a decreased standard deviation at T2, suggesting less individual deviation from the mean score at this time point.

### **7.3.1 Focus group findings**

Focus group two addresses both interventions two and three and therefore, the findings from this focus group will be presented following the quantitative findings for intervention three. Specific to intervention two participants discussed this intervention in relation to gaining insight and empathy. It was also noted how the older people's theory content in N201 felt like it was tagged onto the end of the lecture.

## **7.4 Beyond the hospital: Community care placement**

This intervention was implemented in semester two of the second year of the programme in the course N202. Both cohort 3 and cohort 4 experienced this intervention while cohort 2 did not. The analysis to identify the impact of this intervention involved an analysis of variance (ANOVA) to compare the mean outcome scores of the three cohorts at T3. As the data from the measurement scales relating to the perceived level of confidence, experience, skills and knowledge for working with older people was not collected for cohort 2 at T3, these are not included in the analysis.

Table 7-6 presents the findings from the ANOVA, in which the only outcome measure to show a significant difference in mean scores was perceptions of older people

**Table 7-6 Comparison of mean scores for cohort 2, 3 and 4 at T3**

Scale	Sum Squares	of df	Mean Square	T-test F	Sig.
RTA	3.97	2	1.99	0.07	0.929
POP	473.74	2	236.87	16.49	0.001*
KOA	19.01	2	9.51	1.63	0.198
PWOP	41.56	2	20.78	0.85	0.431
KNR	43.85	2	21.92	1.60	0.204

Note. \* Significant at the 5% level.

Independent sample t tests comparing cohort 2 with cohort 3, cohort 2 with cohort 4 and cohort 3 with cohort 4 were conducted to identify which cohort s the significant difference pertained to. the findings from the independent sample t-test analysis are presented in table 7-7 which shows there was no significant difference between the mean score for perceptions about older people between cohort 2 (no intervention) and cohort 3 and cohort 4 who experienced the intervention. A significant difference in mean scores occurs between the two intervention cohort s, cohort 3 and cohort 4, with cohort 4 having a higher mean score ( $p=<0.001$ ). Also of note in table 7-7 is that, while not statistically significant, cohort 2 (no intervention) has a slightly higher mean score than cohort 3 despite the intervention.

**Table 7-7: Mean scores perceptions of older people for cohort 2, 3 and 4 at T3**

	Count	Mean	SD		Count	Mean	SD	ANOVA	
								Mean diff.	Sig.
Cohort 2	69	33.93	3.37	Cohort 3	73	31.38	3.65	0.90	0.16
Cohort 2	69	33.93	3.37	Cohort 4	77	34.83	4.25	0.90	0.16
Cohort 3	73	31.38	3.65	Cohort 4	77	34.83	4.25	3.45	<0.001*

Note. \* Significant at the 5% level.

The mean scores for all three cohort s for perceptions of older people at T3 are presented in Figure 7-6, which shows the only statistically significant difference in

mean scores is between the two intervention groups, cohort 3 and cohort 4 with cohort 4 having a significantly higher mean score than cohort 3 ( $p < 0.001$ ).

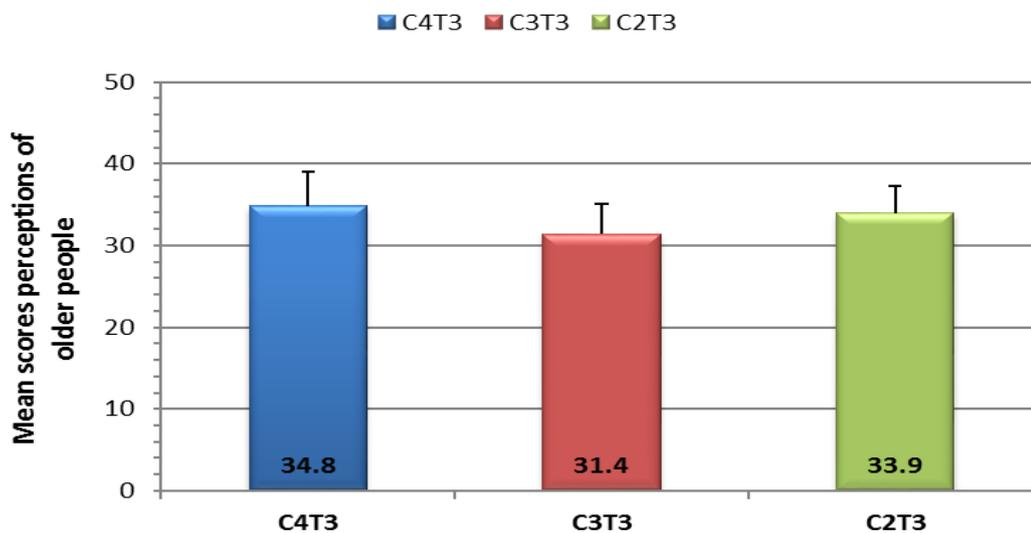
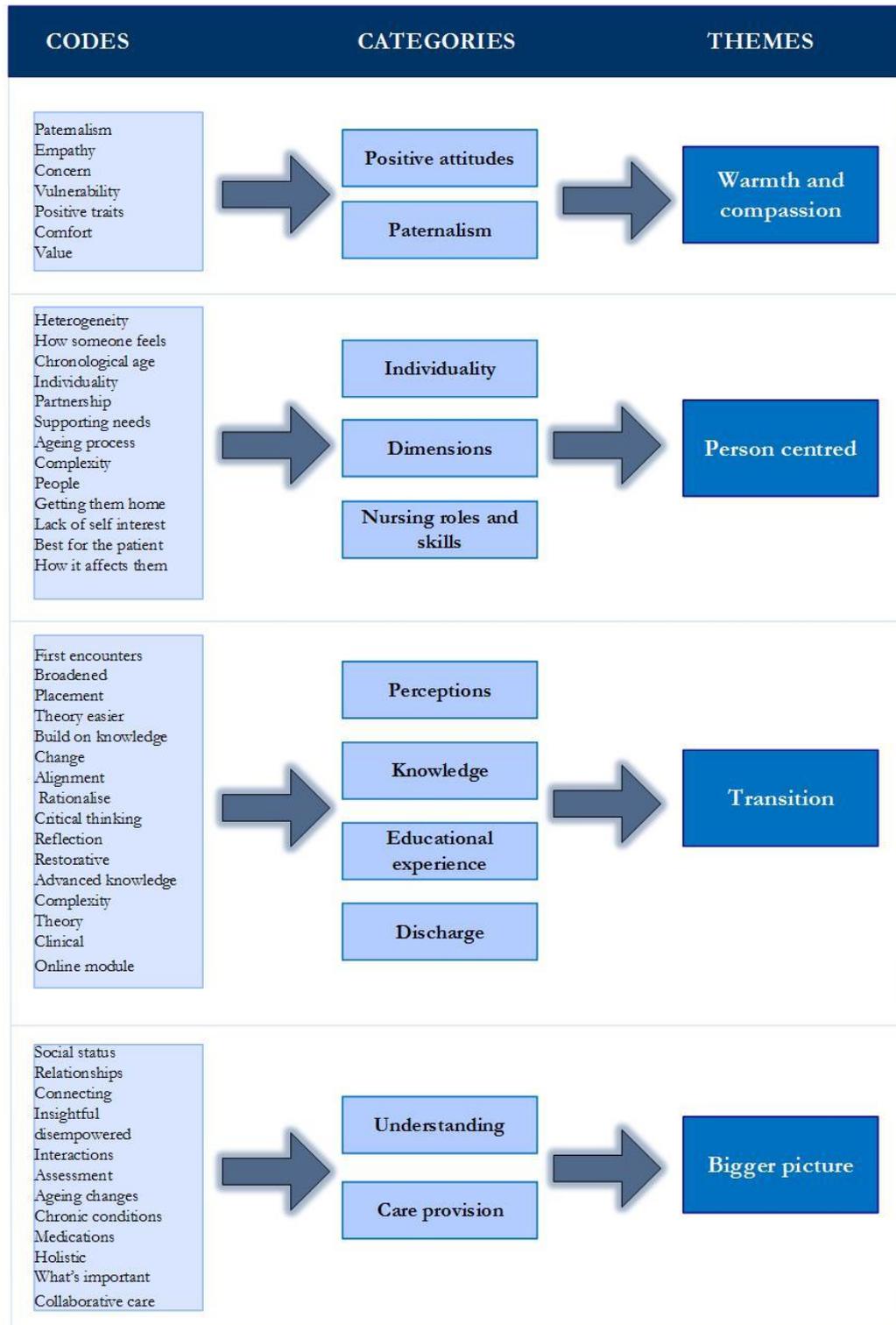


Figure 7-6: Perceptions of older people scores for cohorts 2, 3 and 4 at T4 (error bars = 1 SD)

### 7.4.1 Focus group two

Focus group two occurred at the end of the second year of the programme with participants from cohort 4. All participants had been exposed to intervention one and two. In addition, four of the seven participants had also experienced the clinically focussed placement of intervention three where they had been involved in providing in-home care and support to people living in the community. Of the seven participants, one was male and the rest were female. All but one participant were aged 20 or under. The remaining participant was in the age range of 26 to 30. Two participants identified as Asian while the rest of the participants were New Zealand European. NCEA level III was the highest reported educational qualification for all but one participant who had completed a university degree. Table 7-8 presents a summary of the analysis and emerging themes from focus group two.

**Table 7-8: Summary analysis and themes from evaluation focus group two**



The four key themes that emerged from focus group two were:

- i. Diversity;
- ii. Barriers and facilitators;
- iii. Care provision and;
- iv. Awareness.

These themes and associated sub-themes will be discussed in the following section.

#### **7.4.1.1 Diversity**

The theme of diversity was an overarching theme that was evident within the other themes. Diversity encompassed how participants' perceived ageing and older people and the experiences participants had during the BNurs programme. There was a recognition by most participants that diversity exists within the older population.

*It's like trying to describe any population – they're all different*

*For some people its 50 and for some they are still young and spry at 90*

*There are a lot of older people who are sick and disabled*

*But there is also all the people who never go into hospital in the first place*

The diversity of opinions were also evident among the participants in relation to their descriptions of older people. However, there was also evidence suggesting some participants held stereotypical perceptions which were challenged at times by other participants perceptions about ageing with some participants identifying negative aspects of ageing such as wrinkly, declining, lonely and isolated, while others focussed on more positive attributes such as wise, resilient and friendly. Diversity of experience was evidenced in the examples provided by participants about their clinical placements or client encounters and the influence these had on attitudes towards working with older people.

*It depends very much on where you went on placement. I went to ED (Emergency Department), there was some older people stuff but the vast majority of it was accidents and young people*

*I might go with something else that's similar to my clinical experience because I know the expectations*

*She hasn't done the placement but I've done a placement now, so I know how to [work with older people]*

Those who had completed the healthcare NZ placement described community based experiences while those who had not completed this placement were limited to acute care and inpatient examples. However, despite the diversity of placement experiences, participants did share similar perceptions in relation to care provisions for older people. This will be discussed in more detail under the theme models of care. The diversity of older people's attitudes and the impact this could have on health outcomes was also noted.

*Some of them try to get out and go for walks and then there are some who just stay in bed and you can see a move towards rehabilitation for one and towards decline for the other*

Older people who were seen as motivated to get well were viewed admirably by participants. Motivation was identified as a trait participants would like to have when they are old. Unlike focus group one, the main discussion about participants own ageing related to generational differences such as music, dancing, recreational activities and living arrangements.

*If you got all of us in a rest home, like, the music we'd be listening to and the dancing we would be used to would be quite different from older people today*

The perceived difference in mind set between participants and older people is part of the sub theme cultural diversity, which incorporates the participants own culture, the generational cultural diversity evident between themselves and older people and the culture of care, observed during placement.

Participants felt their own culture and that of older people to be different based on life experiences.

*They might have certain attitudes that came with their generation or something*

*There is an age cultural gap; they grew up very differently than I have.*

This was an area in which participants felt they needed more knowledge or understanding about in order to provide appropriate care to older people.

*More teaching on their culture – what was the norm or norms back in the day – then  
I can be better and more appropriate to their generation*

Participants recognised variations in the culture of care across care settings. With a number of negative aspects identified about the acute care setting

*They weren't like oh we'll just leave them as they do on some wards*

There was also evidence of participants witnessing negative care cultures and a developing awareness of how these did not align with their own personal culture of care.

*The moment a patient acts out, the patient is seen as a bad patient kind of thing*

*I've seen nurses getting patients up from the bed and saying Oh good boy! Good boy!  
I think we should show more respect and more empathy*

#### **7.4.1.2 Awareness**

Recognising negative care cultures overlaps into the theme of developing awareness. This theme includes participants beginning recognition of institutional culture within the acute care setting, the prevalence of negative attitudes directed towards older people and reflections on what their own attitudes may have been. Participants also showed an awareness of the holistic aspects of a person including the significance of family for care delivery.

For those participants who had attended the clinical placement, there was a critical awareness of the acute care setting in contrast to care in the community.

*I think that when people have been working in a hospital for a long time they forget  
that it's an institution*

*When a patient comes inside the hospital nearly all aspects besides their physical  
wellness is stripped from them – your identity your personality*

*In community nursing, you get to see the patient as a person, not a hospital number*

Participants also had a critical awareness of the attitude of other students towards older people or educational experiences relating to the care of older people.

*Eugh, I'm placed in geriatrics and it was really quite negative [relaying a conversation with medical students]*

*A lot of people said I'm not going to go to those lectures [client perspective sessions] it's not examinable, it's not important to go to those. It didn't make sense, these are the people we are going to see when we get out in the real world.*

In recognising others negativity towards educational activities relating to the health of older people, some participants reflected on having a similar attitude in the past.

*When I started nursing I might've felt the same way*

*If I hadn't done that placement I would think like "oh maybe its boring cos it is slow or just lots of heavy lifting" ... stuff like that,*

*I had my own bias opinion ... like attitude towards older people ... like, you know they can be really grumpy ... my perception towards older people have changed, they're actually very nice, you know?*

A developing awareness of a holistic approach towards older people and their care was evident particularly in those participants who had completed the clinical placement. Providing care for people in their homes had provided opportunity to gain insight and awareness of people beyond the hospital living their lives.

*In the hospital it's like a tiny little part of their life and I think people forget that*

*This is the important stuff. This is people living with their conditions*

Participants were starting to distinguish the multifaceted dimensions of a person and their health. Family was recognised as an integral part of an older person's life, health and wellbeing.

*She's mentally not old, she's just physically really old*

*I still cry when they died cos they're still such a part of their family*

*They're involved in their children's' lives and their grandchildren's' and they're still like a person worthy of life and worthy*

*Like seeing when their family comes in and how involved they are*

Family was also recognised as being an important part of care provision. There was also an increasing awareness that providing care for older people would be part of their future role regardless of where they chose to work.

*The population that we are going to be nursing are generally over 65, it doesn't really matter where I go*

*I'm going to go into surgery and see all these cool things and then you're like oh it's like a lot of hip fractures and stuff like that*

### 7.4.1.3 Care provision

The theme of care provision encompasses specific models of care associated with older people, perceptions of working with older people and the role of communication for working with older people.

Two distinct types of care provision were related to working with older people. Palliative care and rehabilitation. Palliative care or older people dying was a reoccurring theme throughout the discussion.

*Makes sense that the older you are the less chance you are going to recover*

*As you get older you're going to die but it's not all old people sort of thing*

While there was discussion that palliative care was not specific to older people and spanned any age group, participants still viewed palliative care as a feature of working with older people. This perspective seemed to be associated with expectations prior to clinical placement or related to observations from clinical placement

*People often said to me before I went "oh you know, it will be all right if older people die they've had, you know a life, they're old"*

*Because I've seen more palliative care aimed at older people maybe that's where my opinion comes from*

*My Gen Med ward had way more older people dying and I was not expecting that*

The contrasting nature of palliative care with rehabilitative care was highlighted by participants. For those participants who had experience in a rehabilitation care setting the positive care focus and being able to see improvement in patient's functional abilities contributed to favourable perceptions of working with older people.

*Whereas in older people's health I found the focus was getting them well and getting them back to living as independently as possible*

*Seeing people bed bound get up and walking and just that sparkle in their eyes*

*I did older peoples' health in my first ever placement and I loved it*

Despite rehabilitation being viewed positively, there was a consensus among participants about the hard work associated with caring for older people which encompassed both physical and mental challenges. Participants acknowledged the highly physical and busy nature of working with older people to meet fundamental care needs such as showering, dressing and eating which reflected a mental perspective of working with older people.

*It was hard work and sometimes it was physically hard work but it was more mentally hard work*

*It is a horrendous job – I mean I loved it but it is such hard work – you do not stop for 8 hours. You do not sit down for 8 hours – all you do is feed, wash, shower...*

*The important stuff, at least for me, was some of the communication side; and some of the basic manual work and learning how to shower people in a respectful way*

The participants who had completed the healthcare NZ placement acknowledged similarities between the work they had been involved with on placement and the role of the support worker to that of a care assistant in a rest home. The lack of support in the community such as equipment and other staff on hand was noted.

*You see the support workers doing the same job out in community without the hoists and the specialist bath things*

*There is a kind of an overlap of people who are in an elderly care facility to people who are in their homes who are as unwell as each other, but they just don't want to go into a facility*

This experience of care provision did not induce participants to work with older people; however, it did instil a great deal of respect and admiration for the people who did this type of work.

*I don't know if I would be able to do that day in and day out, but it gave me a lot of respect for the people who do*

*I had a lot more respect for people who are doing the groundwork*

Respect for older people as a requirement for care provision was also noted by participants and in particular the need for respectful non-patronising communication.

*There are ways sometimes that some people relate to older people that I think is kind of patronising*

While participants recognised the value of non-patronising communication with older people, their solution was to not treat older people like older people, suggesting a negative or infantile status of older people in general.

*We need to respect them; not treating them like an older person*

*I think one of the most important things for me is not treating an older person like an 'older person' – like a baby*

Communication that motivated, encouraged and put a positive spin on everything were considered important when communicating with older people as was educating them about the benefits of maintaining mobility and activity.

*Being able to motivate some people like saying oh if you do this it will help you with everything else; if you get out of bed it's going to help with your bowel movements.*

Participants also highlighted the need to communicate, educate and involve families in care the provision of older people, acknowledging the role family had in facilitating care and health maintenance for the older person.

*I definitely think communicating with family and relatives as well*

*You could say they often have a bigger influence on the patients than we do and if they understand why it's important for mum to get up*

The importance of listening to older people was highlighted by a number of participants. This was something they were exposed to as part of intervention two, the client perspective sessions. These sessions were highlighted as a positive experience that facilitated a greater awareness of older people and living with chronic conditions.

*I feel like all the patients that came in and talked to us said they just needed to be heard and any time when they had felt like they'd been mistreated was when they weren't listened to*

*The biggest thing I've gotten out of all the people coming to talk to us is it's reminded me to stop and listen*

#### **7.4.1.4 Barriers and facilitators**

The final theme that emerged from focus group two, relates to barriers and facilitators for learning which includes, positive role models, clinical and theoretical exposure and level of comfort. Positive ageing role models or positive encounters that participants had been exposed to during the nursing programme were identified by participants. These role models facilitated a positive attitude towards participants own ageing and older people or facilitated confidence in interacting with older people or providing care. Positive clinical role models such as nurses facilitated positive attitudes towards working with older people as did positive care encounters in which improvements in patients' abilities were evident.

*Because you've seen the really healthy 90 year old sort of thing and think I can do that too!*

*They would be talking about how they are still riding their bike and running up and down the stairs*

*The nursing staff were so passionate about older people*

Encounters with patients that made the participant feel comfortable, praised or confident in their nursing abilities facilitated positive perceptions about older people.

*How enthusiastic they are for student nurses like "oh my gosh you've just taken my blood pressure beautifully today or that was an amazing shower!"*

*Everyone else has been very kind and very grateful to us. So they are quite receptive to us I've found*

Participants' exposure to older people occurred across both the theoretical and clinical aspects of the programme. However, participants noted the value of both the intervention one in regards to confidence and intervention two in relation to learning about and understanding the patient in order to be able to empathise with them.

*We meet with a patient and asked about their health and chatted to them for about 20 minutes. I learnt about older people and just generally communicating with older people that I hadn't really thought about before*

*Like learning about a condition is all well and good but it's about seeing how it affects someone*

*It was good to get an understanding of how patients may be feeling so we can empathise more*

Experiential learning opportunities either in clinical or theory were viewed by participants as facilitating or cementing their learning. Participants recalled aspects of theoretical knowledge but felt they did not fully understand it or conceptualise it until they had experienced it in the clinical setting.

*I think you have to experience it. I don't think you can teach patient perspective in any other way than having the patients come in and talk to us*

*Like you can hear stuff in theory, do you take it in, in terms of Older People Health, but it is it not till you're in a situation with an older person and you think obhh now that makes sense*

*You could see it in a textbook if you went and read it more but it didn't quite conceptualise in your mind until you went and had that experience*

Participants noted the overwhelming amount of theory they were exposed to in the pathophysiology course at the beginning of year two of the BNurs programme. This was perceived as a barrier to learning but not in relation to older person content but rather pathophysiology theory. The vast amount of theory in this course resulted in participants feeling the older person content was 'sneaked in'.

*There was a lot of theory before you got to placement and you're like I've got all these things floating around in my head and then you get out there and it's like oh ok that's relevant, and that's relevant... that's really important*

*The lecture would have generally been dedicated to someone between 20 – 65 and then at the end, they'd be like different physiological considerations in the older adult*

While the amount of theory may be perceived as a barrier to learning participants noted that alignment in theory and practice promoted or reinforced learning and the value of both. When this did not occur it could impact on the perceived value of the clinical learning experience.

*Hearing oh everyone in the hospital is generally over 65 and when you actually get on the ward and it like oh yup everyone is pretty much over 65 so yea...you know the theory but it gets like, that its actually right*

*But the nursing medical theory side wasn't necessarily applicable to that placement itself*

The clinical area students are placed on is perceived by participants as a significant facilitator or barrier to learning about older people. As noted already there was diversity in where participants have experienced placement and this impacted on

perceptions of working with older people. When participants were not exposed to aspects of care it was noted that peer learning was a useful alternative to experience.

*It does depend on where you go; what sort of exposure you get*

*I wouldn't necessarily know that ward or the expectations or what happens with older people*

*I did older peoples' health in my first ever placement and I loved it and I think that would really influence it*

*I haven't seen that yet but someone else has... so when you talk to people you cement those experiences as well*

#### **7.4.1.5 Summary of focus group two**

The findings from the year two focus group show an increasing understanding and positive perceptions of ageing, older people and working with them. While some misconceptions and negative perceptions are evident there is also evidence of participants developing an increasing awareness and ability to reflect and think about situations. All three interventions were noted in relation to participants learning and how they have contributed to student perceptions alongside other educational experiences.

## 7.5 Older people as people and virtual client

The final intervention was implemented into the first semester of year three of the BNurs programme as part of the course N301. Both cohort 3 and cohort 4 experienced this intervention while cohort 2 did not. An ANOVA to compare the mean scores of these cohorts at T4 was conducted. The findings from this analysis are presented in Table 7-9 which shows significant differences are evident across the cohorts for perceived level of confidence ( $p=0.042$ ), experience ( $p=0.001$ ), skills ( $p=0.002$ ) and knowledge ( $p=0.007$ ) for working with older people.

**Table 7-9 Mean scores for cohort 2, 3 and 4 at T4**

Scale	Sum Squares	of df	Mean Square	ANOVA F	Sig.
RTA	38.12	2	19.06	0.76	0.467
POP	46.45	2	23.23	1.68	0.189
KOA	5.58	2	2.79	0.74	0.477
PWOP	4.08	2	2.04	0.08	0.921
PLOC	195.23	2	97.62	3.22	0.042*
PLOE	610.34	2	305.17	7.69	0.001*
PLOS	404.54	2	202.27	6.33	0.002*
PLOK	288.91	2	144.45	5.01	0.007*
KNR	6.42	2	3.21	0.47	0.624

Note. \* Significant at the 5% level.

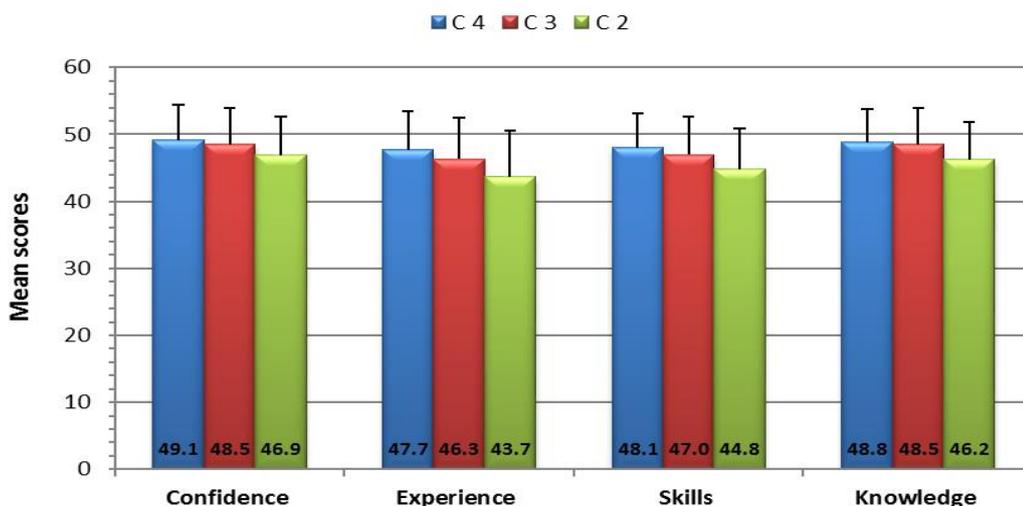
Following the ANOVA, independent sample t-tests were conducted to identify which cohorts the significant difference identified in Table 7-9 related to. The findings from this analysis are presented in Table 7-10, which shows both cohort 3 and cohort 4 had higher mean scores across all measurement scales as compared to cohort 2. There is a significant difference in mean scores between cohort 2 and cohort 3 for perceived level of experience ( $p=0.015$ ), skills ( $p=0.023$ ) and knowledge ( $p=0.012$ ) for working with older people. Cohort 4 also has significantly higher mean scores compared to cohort 2 for perceived level of confidence ( $p=0.016$ ), experience ( $p=0.001$ ), skills ( $p=0.001$ ) and knowledge ( $p=0.005$ ) for working with older people. No significant difference was found between cohort 3 and cohort 4 although cohort 4 did have slightly higher mean scores compared to cohort 3.

**Table 7-10: Mean scores perceptions of older people for cohort 2, 3 and 4 at T4**

Scale	Cohort 3			Cohort 2			ANOVA	
	Count	Mean	SD	Count	Mean	SD	Mean diff.	Sig.
PLOC	79	48.51	5.42	71	46.87	5.81	1.63	0.078
PLOE	79	46.33	6.23	71	43.66	6.96	2.67	0.015*
PLOS	79	46.99	5.67	71	44.77	6.12	2.21	0.023*
PLOK	79	48.52	5.4	71	46.23	5.67	2.29	0.012*
Scale	Cohort 4			Cohort 2			ANOVA	
	Count	Mean	SD	Count	Mean	SD	Mean diff.	Sig.
PLOC	74	49.12	5.29	71	46.87	5.81	2.25	0.016*
PLOE	74	47.7	5.68	71	43.66	6.96	4.04	<0.001*
PLOS	74	48.05	5.15	71	44.77	6.12	3.28	0.001*
PLOK	74	48.8	5.04	71	46.23	5.67	2.57	0.005*
Scale	Cohort 3			Cohort 4			ANOVA	
	Count	Mean	SD	Count	Mean	SD	Mean diff.	Sig.
PLOC	79	48.51	5.42	74	49.12	5.29	0.48	-0.615
PLOE	79	46.33	6.23	74	47.7	5.68	0.16	-1.374
PLOS	79	46.99	5.67	74	48.05	5.15	0.22	-1.067
PLOK	79	48.52	5.40	74	48.8	5.04	0.74	-0.278

Note. \* Significant at the 5% level.

The mean scores for perceived level of confidence, experience, skills and knowledge for all three cohorts at T3 are presented in Figure 7-7. The higher mean scores for both cohort 3 and cohort 4, the intervention cohorts, when compared to cohort 2, the non-intervention cohort are evident in figure 7-7. These differences are all statistically significant except for perceived level of confidence scores between cohort 3 and cohort 2. Also evident in Figure 7-7, despite both experiencing the intervention, cohort 4 has slightly higher mean scores than cohort 3 across all measures.



**Figure 7-7: Mean scores perceived level of confidence, experience, skills and knowledge for cohort 2, 3 and 4 at T4 (error bars = 1 SD)**

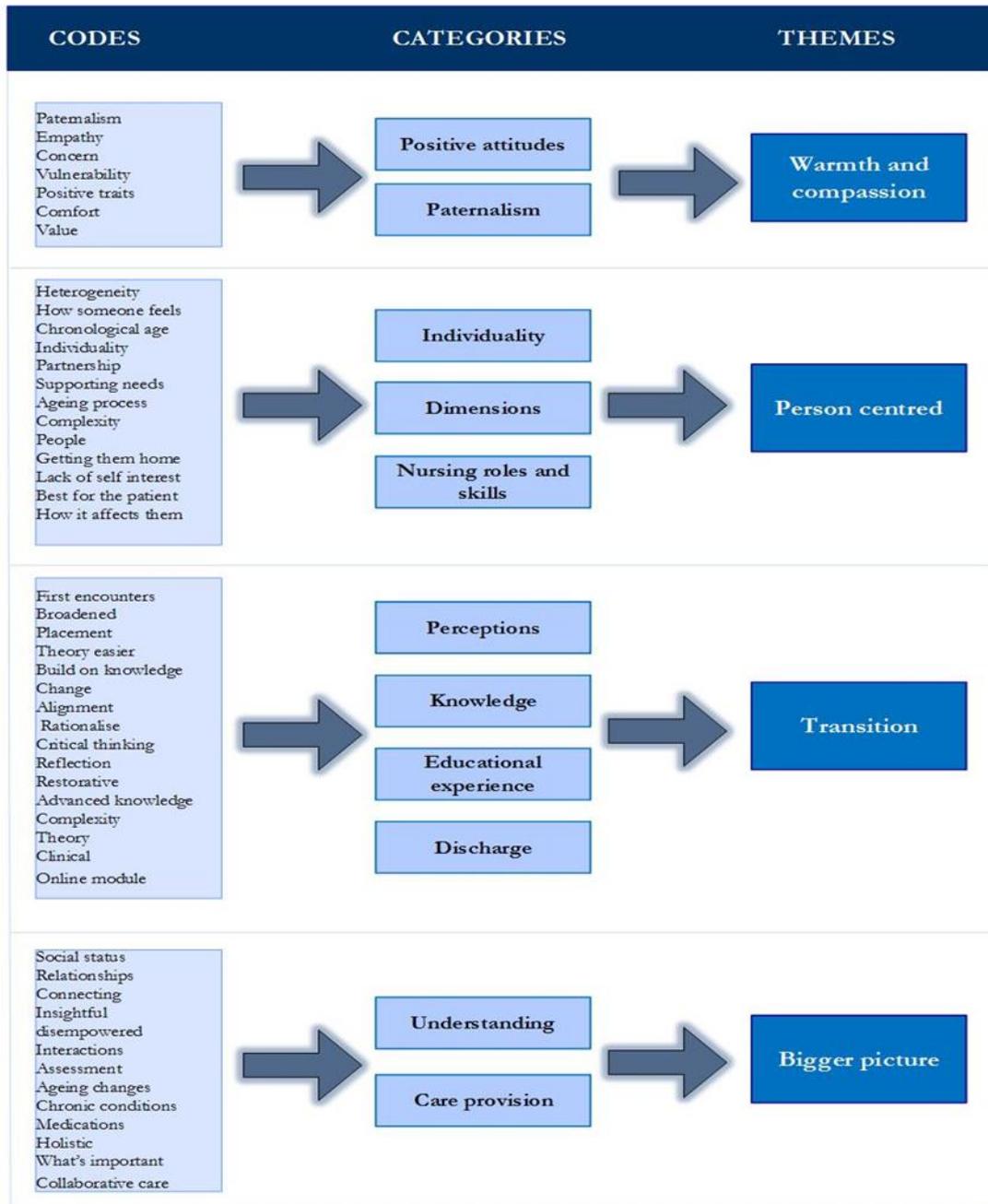
### 7.5.1 Focus group three

The final focus group was conducted with cohort 4 at T4 which coincides with the completion of N301 in the third year of the programme. As part of N301, all students complete an older people's health component that includes a week of theory specific to older people, and then undertake a discharge process and follow through assignment with an older person in the hospital. Introduced into this section of the course was intervention four which included a group activity with active older people and an online learning module. There were six participants in this focus group. All were female and fell within the age range of 21 to 25. NCEA level III was the highest reported educational qualification for all participants. The ethnicity of the participants was five New Zealand Europeans and one Asian. The four themes that emerged from focus group three will be discussed in the following section. The themes were:

- i. Warmth and compassion;
- ii. Person-centred;
- iii. Transition and;
- iv. Bigger picture.

The analysis and emerging themes from this focus group discussion. Are outline in Table 7-11.

Table 7-11: Summary of analysis and themes for evaluation focus group three



### **7.5.1.2 Warmth and compassion**

Participants expressed positive perceptions about older people throughout the focus group discussions. While generalisations were made, they were not derogatory but rather implied a genuine warmth, respect, admiration and fondness for older people in general but also towards older people they had encountered during their training.

*They've always got so much to talk about because they've done so much in their lives*

*They are so personable*

*She was so determined to get back home, I really admired that determination*

*I had a lady who was 94 years old but it was her first time in the hospital because she fell off a horse and broke her hip!*

Compassionate concern was expressed towards some older people in relation to the way participants had observed them being treated.

*Because she was older and couldn't talk, I think people just kind of thought she was like, nobody almost*

*They were just leaving him in the back room*

Compassion and warmth were also evident in relation to nursing care with older people (patients). The importance and value of nursing care, while rewarding for participants, was focussed on the difference it could make for the older person such as their comfort, independence and satisfaction.

*One of the biggest things is having a comfortable bed or making someone comfortable*

*It makes them value themselves more; as opposed to being completely dependent on you*

*Seeing their smiles when they've done something independently*

*You can see the improvement and the difference it makes to the person*

There was also evidence of the ability of participants to empathise and understand a patient's feelings; to see the bigger picture behind the person and not judge people based on behaviours or experiences.

*He wasn't really grumpy, it was just that nobody was taking the time to come and talk*

There was also a focussed discussion highlighting the vulnerability of older people to abuse and neglect both in the community setting but also as a patient in the hospital. This discussion highlighted a paternalistic concern for the general safety and wellbeing of older people. While paternalism can result in over protectiveness or infantilisation of older people, this was not evident in the discussion. The importance of empowering older people in the hospital setting was noted.

*As a population, they are very vulnerable. People can take advantage of them really easily*

*Abuse isn't just physical abuse. There's also neglect*

*And they won't speak up. They'll just lie there*

Despite some of the generalisations made in relation to older people, there was an underlying theme of individuality evident that reflected a person-centred approach towards older people and their care needs. In addition, the focus of the discussion remained on older people and did not deviate to discussions about the participants own ageing.

### **7.5.1.3 Person-centred**

Person centeredness was evident in the focus group discussion in relation to the individuality of older people and in participants perceptions about the nursing role and skills required to provide care for older people.

The heterogeneity of the older population was recognised by participants with a number of discussion points highlighting the individual nature of older people and the complexity of the ageing process that made the defining of old age difficult.

*You get people that are really independent then people who aren't that independent and all that variety*

It was noted that for statistics and data recording purpose, old age is defined at 65 years and above; yet participants acknowledge that there was a difference between defined ages and how someone feels. Age or old age was a concept participants felt could not be *pinned down to a chronological number* and was dependant on the individual view of the older person.

*It's how old they think they are*

*It depends on what the other person really defines –you know, the older person*

The importance of treating each (older) person as an individual and not making assumptions based on their age was highlighted.

*You should treat each person as a blank slate and just start from there every single time*

Some participants noted how they don't utilise age as a defining characteristic when working with people.

*I don't think about if a person as old. I looked at their sex, their ethnicity their physical condition.*

*I don't really put people into the age box, I think everyone is so different*

However, a couple of participants did note that physical changes influenced their perception of whether they viewed someone as old. This was met with agreement from other participants.

*I only ever really see someone as old if their skin is that paper skin*

*If their skin is still good and they're relatively fit it won't even occur to me what their age*

The role of the nurse and other health professionals focussed on supporting the needs wants and abilities of the person, suggesting a partnership of care in which the older person is at the centre.

*Everybody supporting her in her goal to get home..... Everyone had different tasks but they were all about getting her home, getting her independent*

*They want to go home and it's our job to help them get there*

The importance of maintaining or restoring independence for older people was evident. Although the term restorative care was not used by participants, the discussions in relation to the nursing role and skills for working with older people demonstrated an understanding of and aligned with this care philosophy.

*It's easier to do something for the patient but if you help the patient and support them to do it then they get better and faster at it*

*Giving them time to do the stuff they can do so they can feel a sense of accomplishment*

Other nursing responsibilities aimed at promoting independence included promoting autonomy or choices, empowering and education.

*Giving them some independence and choices asking them Oh would you like a shower now or would you like it a bit later?*

*Yeah maybe someone doesn't know why it's important to start mobilising. We need to give them that knowledge that's how you empower people, giving them some independence and choices*

There was also a lot of discussion by participants about needing to see the whole person and the importance of holistic assessment of the older person, which further aligns with an individualised person-centred approach to nursing care. These points will be discussed further under the theme transition and the bigger picture.

#### **7.5.1.4 Transition**

The theme of transition relates to the process of transition or discharge that participants referred to during their discussion and also the changes participants recognised in their own perceptions, knowledge and understanding about older people and their care needs.

Participants expressed how their perceptions about older people had changed during their time in the BNurs programme. Participants recognised that previously they had conformed to stereotypical beliefs and misconceptions about older people.

*I think the more nursing I've done the more it has changed*

*If I think back to what we thought before we started our nursing training I would describe a stereotypical older person*

In addition, this change was not only in relation to the participants but was extended to include the whole class.

*Thinking now; at our general nursing class' mentality towards working with older people, it's quite interesting to see after our OPH experience how much our opinions have changed*

A change was acknowledged in relation to what they had learnt in both the theoretical and clinical components of the programme. The older person theory that participants

experienced in the third year of their programme were viewed as a catalyst for this change.

*The older person's health theory that brought it all together incorporating all the aspects we have learnt over the past couple of years*

*The stuff we covered definitely helped us going into OPH [clinical]*

While not outwardly stated, participants eluded to the theoretical component having relevancy or aligning to what they had previously covered in the programme and the skills they felt aligned with their future careers. In addition, participants felt the theory component had prepared them to feel confident for their time in the clinical component of the older person course.

*I think that the theory that we are learning now is easier to understand because we are relying on our previous experiences so we're actually using what we already know*

*I think this made me feel much more confident about going to the OPH ward*

The online component was noted to be particularly valuable for participants in regards to building confidence in relation to their nursing knowledge and skills. Participants also liked how the online module provided a link between the theory and practice of nursing and related to previous learning and experiences.

*It was like applying theory to practical*

*It pulled together the topics we covered in class with my previous knowledge from experience in my nursing so far*

The ability to draw on previous knowledge and experience was identified by participants as being supportive to the development of new knowledge and levels of understanding and was related to the online module but also previous clinical and theoretical experiences.

*We are relying on our previous experiences so we're actually using what we already know*

*I think that the theory that we are learning now is easier to understand because we are relying on our previous experiences so we're actually using what we already know*

The other interventions from year one and two of the programme were briefly mentioned by participants; although, these were not specifically linked to their current understanding and knowledge.

Transition in the participants' knowledge and understanding of the nursing role was also evident in the focus group discussions. Nursing care of older people was not related to menial tasks but rather, more advanced skills such as holistic assessment, risk identification and patient education. Understanding the complexity associated with older people's health was also evident

*I was able to think about potential risks for the person, and what assessments needed to be done for the person, the nursing interventions around it*

The clinical aspect of the older person component enabled participants to develop a better understanding of the older person they were assigned to. Participants also got to see the older person as a hospital patient, but also as a person in their own home following discharge.

*When she was in the hospital, I didn't picture that she spends the majority of her day in the garden*

Participants' experiences in clinical also supported changes in their level of confidence and perceptions. For some participants, this was having the opportunity to engage, talk and get to know older people. For others, the positive aspect of seeing changes in older people was significant.

*So having met and talked to older people has changed my view and I guess it's made it easier to talk to more older people*

*You can see the improvement and the difference it makes to the person*

Transition in relation to older people's improving function or independence and their subsequent transition from the hospital to home was an underlying sub-theme. The opportunity to be involved in the discharge planning of an older person facilitated new insights into the role of the nursing and nursing knowledge.

*When we have been on other placements it's like this persons for discharge, they are going home or they are going to a rest home and you make sure they have their paperwork and all their belongings. But there is so much more you need to know and do*

Recognising that there is more to the role and knowledge of nursing than was previously thought by participants, extends into the next theme of the bigger picture.

#### **7.5.1.5 Bigger picture**

The ability of the focus group participants to demonstrate a bigger worldview or understanding in relation to older people and care provision was evident in the focus group discussion. There was a notable absence of discussion in this focus group about fundamental physical tasks often associated with older people in the hospital setting. Instead, the participants highlighted aspects of nursing care such as patient and family education, holistic assessment, and medication management which highlights an understanding of the complexity of care associated with older people.

*Educating them about risk and health maintenance*

*Holistic assessment stuff and thinking about the whole person, planning for the future and keeping the family involved*

Participants also recognised the bigger picture in relation to the multifaceted aspects and complexity of care that can be associated with older people.

*That whole complexity of interactions not just with medications but age related changes and chronic conditions*

*Going through the whole process helped me to understand how all the assessments and interventions inter-relate and the develop my understanding of the complexity of caring for older people*

As noted previously, participants felt the older people's health component in the programme helped them to draw together previous knowledge. Some participants described this in relation to widening or providing them with the whole picture.

*It helped me think of care on a more holistic and whole-picture scale*

*It was helpful for me to widen my knowledge of collaborative care*

A lot of the discussion in the focus group was dominated by an acute care focus. However, the participant recognised the value of, and need to see beyond the hospital setting to the community, family and the older person at home once they are discharged.

*I think it's good to know what happens when they go home so you can make that whole picture complete*

*You have a better perspective of this person who is going home and what needs to be set up for them to be able to go home*

*The patients have to go somewhere when they leave hospital. All people see is them leaving; going off into this mystical ethos out there ...*

Two participants expressed a desire to work in older people's health at the completion of the BNurs programme. These participants related their interest as stemming from a social and political perspective indicating a bigger world view of older people's health.

*My viewpoint was always don't work older people's health. But then I learned about Ageing in Place, it completely changed my aspect*

*It's not just about the mental status or physical health. Like their social status, their relationships with other families and other political reasons*

While the other participants did not express a desire to work specifically with older people they did express how knowing about what happens when a patient goes home as being valuable for their future roles.

*Even if you want to be a hospital nurse, even if you want to do surgical or theatre or something it's good to know what happens when people go home so you can make that whole picture complete*

Participants also recognised that despite where they intended to work on graduation, it was likely older people would be the core business. They understood the implications of population ageing on their future work

*I want to go into the community, into GP practice which will have a vast amount of older people's health*

An area of understanding that some participants felt they lacked was the different care settings for working with older people. Aged residential care as a potential clinical placement was discussed by some participants as an opportunity to further develop their experiences and hence understanding of community health services for older people. This was an area participants felt they had no experience of.

*This is from my perspective, what would be equally valuable is doing a placement actually in elderly care in a rest home or hospital. Just to go in there and get an idea of what it is like*

This idea was challenged by other participants who felt it would promote negative attitudes towards older people and working with them.

Participants talked about the importance of knowing the whole person, which links with the themes person-centred and compassion

*A lot of the whole grumpy thing is because people just dismiss them and don't give them the chance to explain*

As part of their paternalistic concern for older people, the participant's highlighted flaws in current health service provision beyond the individual nurse-client relationship to bigger systems level issues.

*I think a big thing is that people are too busy to spend the time*

*People like us; nurses, and other health workers not living up to the standards they should*

*With the medications, there is very little follow up*

Despite identifying issues within the system, participants focus related to the hospital environment and discharge process, which reflected the limitations of their experiences.

#### **7.5.1.6 Summary of focus group three**

The findings from the year three focus group indicate positive perceptions about older people and working with them. The discussions in this focus group supported the concept of a person-centred approach to care and an understanding of the individual and sometimes complex aspects associated with the health of older people. A transition is evident in the participants' ability to reflect and think critically about their own practice and healthcare provision for older people in relation to acute care for older people and their discharge back into the community.

## **7.6 Part one summary**

This section has presented the findings relating to the individual interventions and the impact they had on the mean scores of the various outcome measures utilising either

pre and post intra cohort data, cohort comparison data and focus groups. The quantitative findings do not provide substantial evidence of any significant impact of the individual interventions on increasing knowledge and positive attitudes towards ageing, older people and working with them. There is evidence that following the year three intervention participants had higher levels of perceived confidence, experience, skills and knowledge of working with older people compared to the control cohort, cohort 2. The focus group findings indicate changes over time which could relate to the cumulative impact of the interventions. The next section investigates the cumulative impact of the interventions on outcome scores by exploring change over time for the cohorts.

## **Part 2: Cumulative impact of the interventions**

This section provides the findings from independent sample t-tests conducted on both cohort 3 and cohort 4 to identify changes over time for the intervention cohorts. This section is structured utilising the questionnaire outcome measures with the mean scores for each of the two cohorts compared at each time point. In this section, due to the number of times the term ‘time point’ is included, the abbreviation ‘T’ will be used for presenting the findings.

### **7.7 Reactions to ageing**

A comparison of scores for reaction to ageing at each time point for both cohort 3 and cohort 4 are presented in Table 7-12. Between T1 and T2, cohort 4 shows no significant difference in scores; however, cohort 3 with exposure to only one intervention, has a significant difference ( $p=0.048$ ). Although not statistically significant, there is a decrease in the mean score between T2 and T3 for cohort 3, with the mean score increasing again at T4 with significant differences evident for cohort 3 between T1 and T4 ( $p=0.027$ ). There is also a statistically significant difference evident at T5 with T1 ( $p=0.008$ ) for cohort 3. In contrast and despite being exposed to all four interventions, the only significant difference in reaction to ageing scores for cohort 4 is between T1 and T4 ( $p=0.006$ ). As data collection stopped at T4 for this

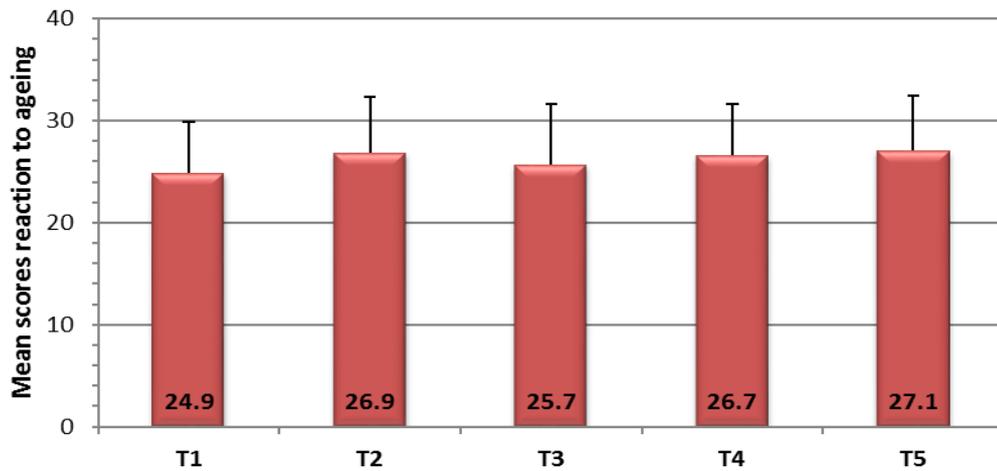
cohort it is unknown if a significant difference would be maintained at T5 for cohort 4.

**Table 7-12 Reaction to ageing scores cohort 3 and cohort 4 across the time points**

Cohort 3				ANOVA					
Time point	Count	Mean	SD	Time point	Count	Mean	SD	Mean diff.	Sig.
<b>T1</b>	84	24.94	4.99	<b>T2</b>	45	26.91	5.48	1.97	0.048*
<b>T1</b>	84	24.94	4.99	<b>T3</b>	73	25.74	5.92	0.80	0.366
<b>T1</b>	84	24.94	4.99	<b>T4</b>	80	26.68	4.97	1.73	0.027*
<b>T1</b>	84	24.94	4.99	<b>T5</b>	78	27.14	5.35	2.20	0.008*
<b>T2</b>	45	26.91	5.48	<b>T3</b>	73	25.74	5.92	-1.17	0.277
<b>T2</b>	45	26.91	5.48	<b>T4</b>	80	26.68	4.97	-0.24	0.812
<b>T2</b>	45	26.91	5.48	<b>T5</b>	78	27.14	5.35	0.23	0.822
<b>T3</b>	73	25.74	5.92	<b>T4</b>	80	26.68	4.97	0.94	0.294
<b>T3</b>	73	25.74	5.92	<b>T5</b>	78	27.14	5.35	1.40	0.13
<b>T4</b>	80	26.68	4.97	<b>T5</b>	78	27.14	5.35	0.47	0.572
Cohort 4				ANOVA					
Time point	Count	Mean	SD	Time point	Count	Mean	SD	Mean diff.	Sig.
<b>T1</b>	90	24.67	5.39	<b>T2</b>	85	25.40	4.99	0.73	0.351
<b>T1</b>	90	24.67	5.39	<b>T3</b>	77	25.82	5.44	1.15	0.173
<b>T1</b>	90	24.67	5.39	<b>T4</b>	75	26.97	5.18	2.31	0.006*
<b>T2</b>	85	25.40	4.99	<b>T3</b>	77	25.82	5.44	0.42	0.612
<b>T2</b>	85	25.40	4.99	<b>T4</b>	75	26.97	5.18	1.57	0.053
<b>T3</b>	77	25.82	5.44	<b>T4</b>	75	26.97	5.18	1.16	0.182

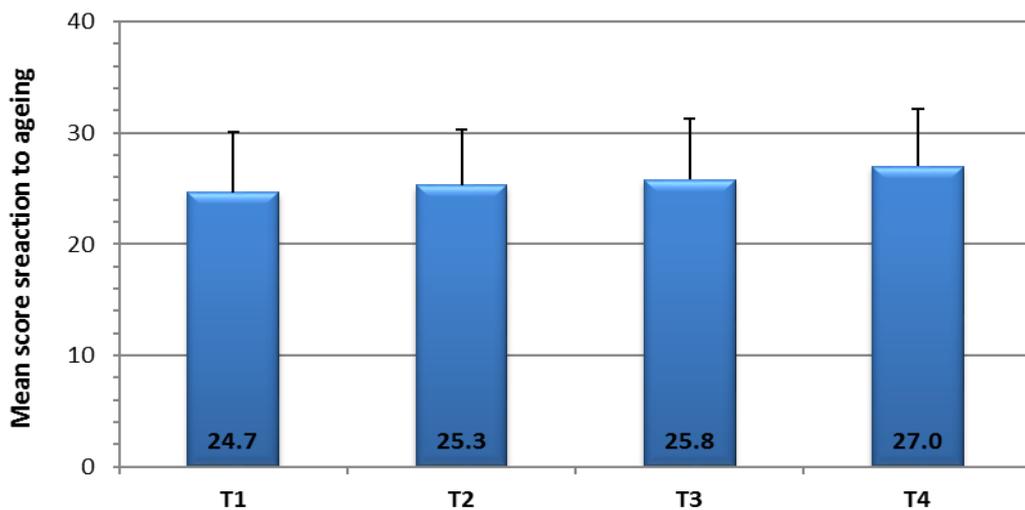
Note. \* Significant at the 5% level.

The reaction to ageing mean scores provided in Table 7-12 are further illustrated for each cohort and time point in Figures 7-8 and 7-9. The mean scores for cohort 3 are presented in Figure 7-8, which highlights the decrease in scores between T2 and T3.



**Figure 7-8: Reaction to ageing scores for cohort 3 at time points 1 to 5 (error bars = 1 SD)**

Figure 7-9 shows the scores for cohort 4, although not significant, increasing at each successive time point. As can be seen in Figure 7.8 and 7.9, both cohort 3 and cohort 4 present similar mean scores and SD at each of the time points.



**Figure 7-9 Reaction to ageing scores for cohort 4 at time points 1 to 4 (error bars = 1 SD)**

## 7.8 Perceptions of older people

The differences in mean cohort scores for perceptions of older people across the time points for cohort 3 and cohort 4 are provided in Table 7-13.

**Table 7-13: Perceptions of older people scores cohort 3 and cohort 4 across the time points**

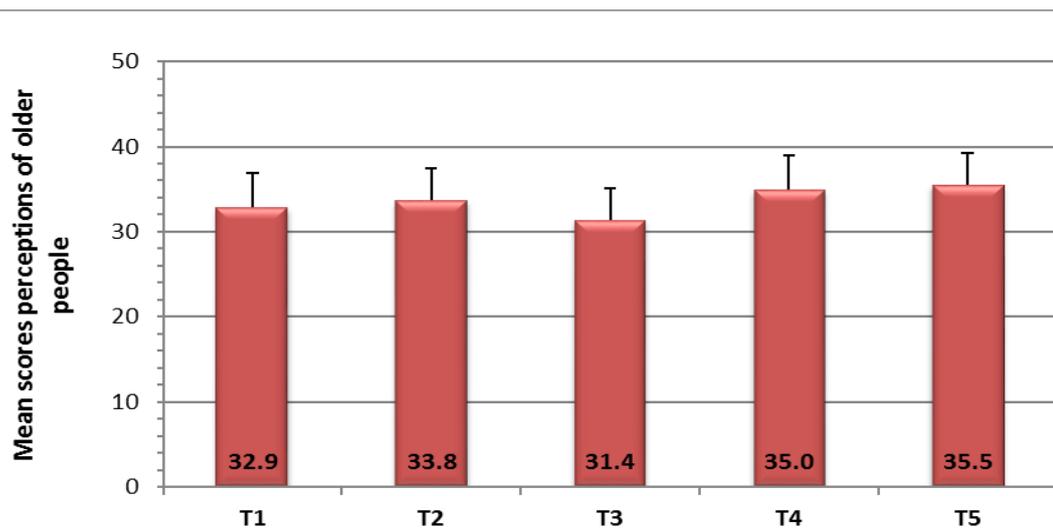
Cohort 3				ANOVA					
Time point	Count	Mean	SD	Time point	Count	Mean	SD	Mean diff.	Sig.
<b>T1</b>	85	32.89	4.05	<b>T2</b>	45	33.76	3.69	0.86	0.224
<b>T1</b>	85	32.89	4.05	<b>T3</b>	73	31.38	3.65	-1.51	0.015*
<b>T1</b>	85	32.89	4.05	<b>T4</b>	80	34.95	3.98	2.06	0.001*
<b>T1</b>	85	32.89	4.05	<b>T5</b>	78	35.46	3.83	2.57	<0.001*
<b>T2</b>	45	33.76	3.69	<b>T3</b>	73	31.38	3.65	-2.37	0.001*
<b>T2</b>	45	33.76	3.69	<b>T4</b>	80	34.95	3.98	1.19	0.094
<b>T2</b>	45	33.76	3.69	<b>T5</b>	78	35.46	3.83	1.71	0.017*
<b>T3</b>	73	31.38	3.65	<b>T4</b>	80	34.95	3.98	3.57	<0.001*
<b>T3</b>	73	31.38	3.65	<b>T5</b>	78	35.46	3.83	4.08	<0.001*
<b>T4</b>	80	34.95	3.98	<b>T5</b>	78	35.46	3.83	0.51	0.411
Cohort 4				ANOVA					
Time point	Count	Mean	SD	Time point	Count	Mean	SD	Mean diff.	Sig.
<b>T1</b>	90	24.67	5.39	<b>T2</b>	85	25.40	4.99	0.73	0.351
<b>T1</b>	90	24.67	5.39	<b>T3</b>	77	25.82	5.44	1.15	0.173
<b>T1</b>	90	24.67	5.39	<b>T4</b>	75	26.97	5.18	2.31	0.006*
<b>T2</b>	85	25.40	4.99	<b>T3</b>	77	25.82	5.44	0.42	0.612
<b>T2</b>	85	25.40	4.99	<b>T4</b>	75	26.97	5.18	1.57	0.053
<b>T3</b>	77	25.82	5.44	<b>T4</b>	75	26.97	5.18	1.16	0.182

Note. \* Significant at the 5% level.

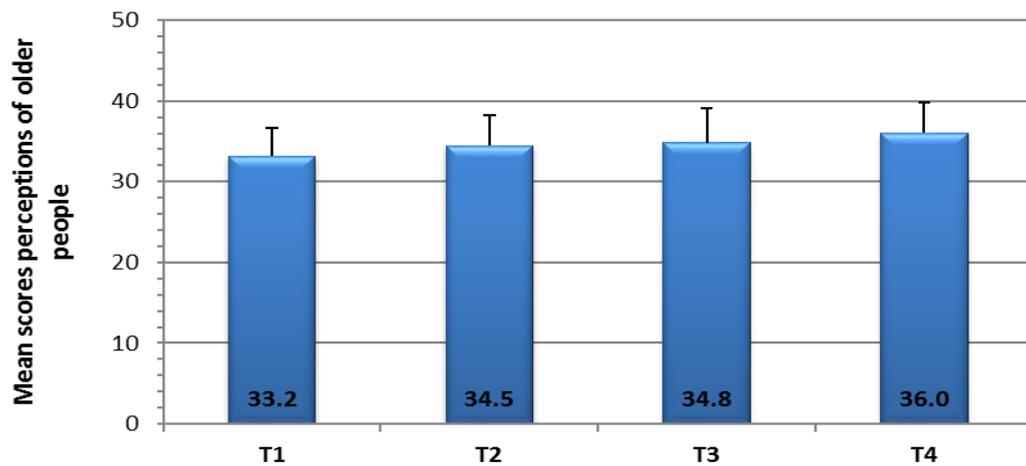
A statistically significant negative difference can be seen between the scores at T2 and T3 ( $p=0.001$ ) for cohort 3 in Table 7-13, which is followed by a statistically significant

positive difference between T3 and T4 ( $p < .0001$ ). While cohort 3 shows increases in scores between T1 and T2 and T4 and T5, these differences are not statically significant. The findings for cohort 4 in Table 7-13 show that mean scores increase at each time point. However, these are not sequentially significant between time points, with the only significant difference evident between T1 and T4 ( $p = 0.006$ ).

The mean scores presented in Table 7-13 for perceptions of older people scores are further illustrated in Figures 7-10 and 7-11. Figure 7-10 shows the mean scores for cohort 3 at T1 to T5, evident in this figure is the decrease in score between t2 and t3. The scores for cohort 4 at T1 to T4 is presented in Figure 7.-11, which shows the scores successively increasing with each time point, although the differences in scores between the consecutive time points are not significant.



**Figure 7-10: Perceptions of older people scores for cohort 3 at time points 1 to 5 (error bars = 1 SD)**



**Figure 7.11: Perceptions of older people scores cohort 4 at time points 1 to 4 (error bars = 1 SD)**

## 7.9 Knowledge of ageing

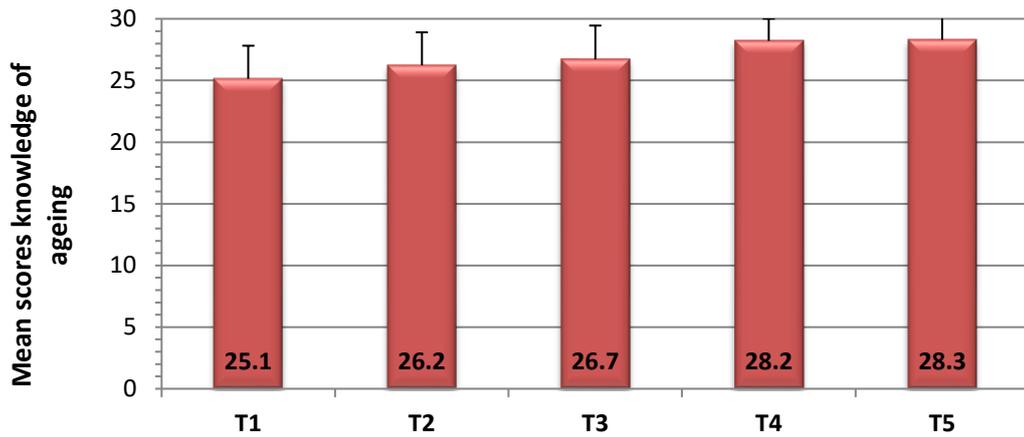
The mean differences in knowledge of ageing scores across all time points for cohort 3 and cohort 4 are shown in table 7-14. Statistically significant differences in scores are evident for cohort 4 between each consecutive time point. In contrast cohort 3 only has significant differences between T1 and T2 ( $p=0.031$ ), and T3 and T4 ( $p=<0.0001$ ). The differences between T2 and T3, and T4 and T5 are positive though not statistically significant.

**Table 7.14: Knowledge of ageing scores for cohort 3 and cohort 4 across the time points**

Cohort 3				ANOVA					
Time point	Count	Mean	SD	Time point	Count	Mean	SD	Mean diff.	Sig.
<b>T1</b>	83	25.13	2.69	<b>T2</b>	43	26.23	2.67	1.10	0.031*
<b>T1</b>	83	25.13	2.69	<b>T3</b>	72	26.71	2.74	1.58	<0.001*
<b>T1</b>	83	25.13	2.69	<b>T4</b>	79	28.22	1.80	3.08	<0.001*
<b>T1</b>	83	25.13	2.69	<b>T5</b>	77	28.30	2.12	3.17	<0.001*
<b>T2</b>	43	26.23	2.67	<b>T3</b>	72	26.71	2.74	0.48	0.363
<b>T2</b>	43	26.23	2.67	<b>T4</b>	79	28.22	1.80	1.98	<0.001*
<b>T2</b>	43	26.23	2.67	<b>T5</b>	77	28.30	2.12	2.07	<0.001*
<b>T3</b>	72	26.71	2.74	<b>T4</b>	79	28.22	1.80	1.51	<0.001*
<b>T3</b>	72	26.71	2.74	<b>T5</b>	77	28.30	2.12	1.59	<0.001*
<b>T4</b>	79	28.22	1.80	<b>T5</b>	77	28.30	2.12	0.08	0.791
Cohort 4				ANOVA					
Time point	Count	Mean	SD	Time point	Count	Mean	SD	Mean diff.	Sig.
<b>T1</b>	88	24.64	2.55	<b>T2</b>	82	26.52	2.55	1.89	<0.00*1
<b>T1</b>	88	24.64	2.55	<b>T3</b>	75	27.31	2.27	2.67	<0.001*
<b>T1</b>	88	24.64	2.55	<b>T4</b>	74	28.45	1.91	3.81	<0.001*
<b>T2</b>	82	26.52	2.55	<b>T3</b>	75	27.31	2.27	0.78	0.044*
<b>T2</b>	82	26.52	2.55	<b>T4</b>	74	28.45	1.91	1.92	<0.001*
<b>T3</b>	75	27.31	2.27	<b>T4</b>	74	28.45	1.91	1.14	0.001*

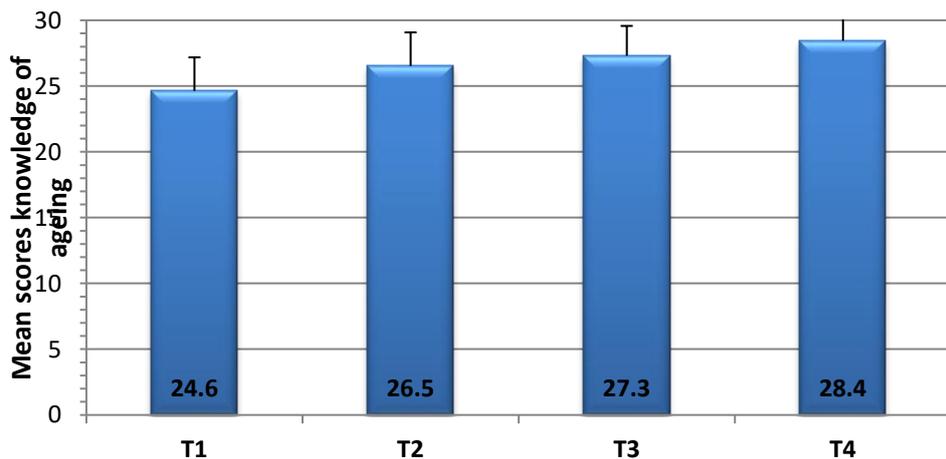
Note. \* Significant at the 5% level.

The mean scores for knowledge of ageing at each time point shown in Table 7.14 are further illustrated in Figures 7.12 and 7.13 which provide the mean scores for cohort 3 and cohort 4.



**Figure 7.12: Knowledge of ageing scores for cohort 3 at time points 1 to 5 (error bars = 1 SD)**

Figure 7-12, shows the scores increasing at each time point, although the increase is minimal between T2 and T3 and T4 and T5 for cohort 3. Figure 7.-13 shows a steady increase in knowledge through each progressive time point for cohort 4. The scores across time points for both cohorts remain similar.



**Figure 7-13 Knowledge of ageing scores for cohort 4 at time points 1 to 4 (error bars = 1 SD)**

## **7.10 Perceptions of working with older people**

Table 7-15 shows the mean scores and differences in scores for cohort 3 and cohort 4 across the time points. The findings from cohort 3 for perceptions of working with older people are similar to those found with knowledge of ageing scores, with significant difference apparent between T1 and T2 ( $p < 0.0001$ ), and T3 and T4 ( $p = 0.003$ ). The differences between T2 and T3 and T4 and T5 are positive, but not significantly different. The findings for cohort 4 also show positive differences in scores at each successive time point, although the only significant difference for consecutive time points occurs between T3 and T4 ( $p = 0.006$ ).

**Table 7-15 Perceptions of working with older people for cohort 3 and cohort 4 across the time points**

Cohort 3				ANOVA					
Time point	Count	Mean	SD	Time point	Count	Mean	SD	Mean diff.	Sig.
<b>T1</b>	84	38.18	3.02	<b>T2</b>	45	41.40	5.06	3.22	<0.001*
<b>T1</b>	84	38.18	3.02	<b>T3</b>	72	41.97	5.12	3.79	<0.001*
<b>T1</b>	84	38.18	3.02	<b>T4</b>	80	44.45	5.00	6.27	<0.001*
<b>T1</b>	84	38.18	3.02	<b>T5</b>	78	44.59	4.79	6.41	<0.001*
<b>T2</b>	45	41.40	5.06	<b>T3</b>	72	41.97	5.12	0.57	0.555
<b>T2</b>	45	41.40	5.06	<b>T4</b>	80	44.45	5.00	3.05	0.002*
<b>T2</b>	45	41.40	5.06	<b>T5</b>	78	44.59	4.79	3.19	0.001*
<b>T3</b>	72	41.97	5.12	<b>T4</b>	80	44.45	5.00	2.48	0.003*
<b>T3</b>	72	41.97	5.12	<b>T5</b>	78	44.59	4.79	2.62	0.002*
<b>T4</b>	80	44.45	5.00	<b>T5</b>	78	44.59	4.79	0.14	0.858
Cohort 4				ANOVA					
Time point	Count	Mean	SD	Time point	Count	Mean	SD	Mean diff.	Sig.
<b>T1</b>	90	41.37	4.43	<b>T2</b>	84	42.08	5.06	0.72	0.323
<b>T1</b>	90	41.37	4.43	<b>T3</b>	74	42.53	4.90	1.16	0.117
<b>T1</b>	90	41.37	4.43	<b>T4</b>	75	44.16	4.38	2.79	<0.001*
<b>T2</b>	84	42.08	5.06	<b>T3</b>	74	42.53	4.90	0.44	0.577
<b>T2</b>	84	42.08	5.06	<b>T4</b>	75	44.16	4.38	2.08	0.006*
<b>T3</b>	74	42.53	4.90	<b>T4</b>	75	44.16	4.38	1.63	0.034*

Note. \* Significant at the 5% level.

The mean scores for perceptions of working with older people presented in Table 7-15 for cohort 3 at T1 to T5 and T1 to T4 for cohort 4 are presented in Figure 7-14 and Figure 7-15. Figure 7-14, which shows the scores for cohort 3, illustrates that while the scores increase between each consecutive time points the increase in scores between T2 and T3 and T4 and T5 is minimal. A similar trend is evident for cohort 4 in Figure 7-15, where the only significant difference between consecutive time points occurs between T3 and T4.

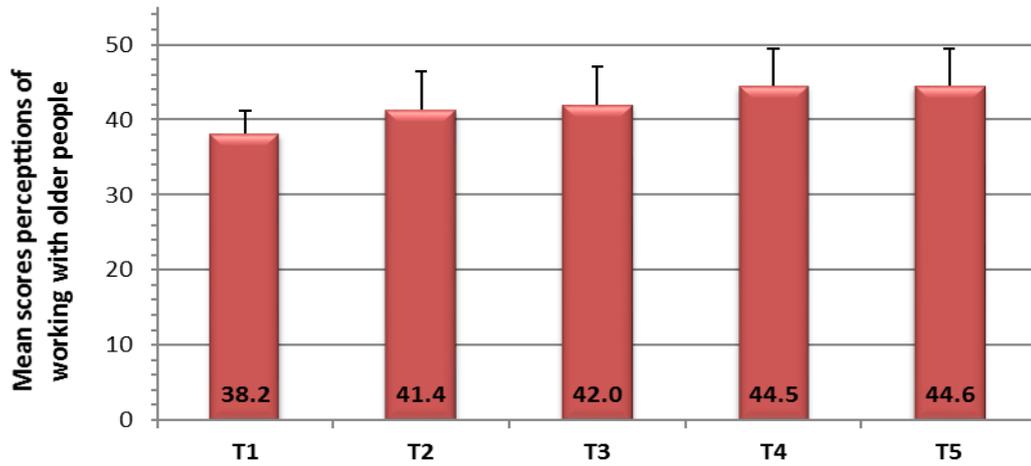


Figure7-14: Perceptions of working with older people scores for cohort 3 at time points 1 to 5 (error bars = 1 SD)

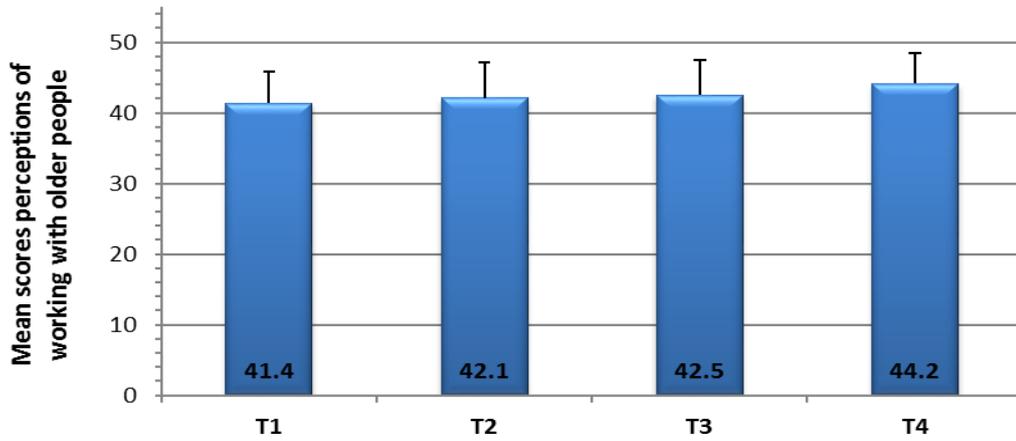


Figure 7-15: Perceptions of working with older people scores for cohort 4 at time points 1 to 4 (error bars = 1 SD)

## 7.11 Knowledge of the nursing role

The mean scores and differences in mean scores for knowledge of the nursing role for all time points for cohort 3 and cohort 4 are presented in Table 7-16.

**Table 7-16: Knowledge of the nursing role for cohort 3 and cohort 4 across the time points**

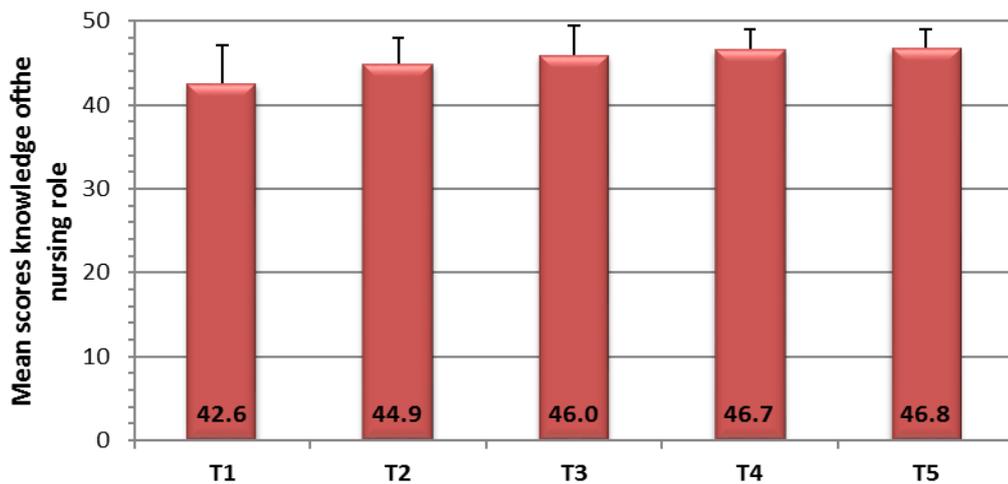
Cohort 3				ANOVA					
Time point	Count	Mean	SD	Time point	Count	Mean	SD	Mean diff.	Sig.
T1	84	42.63	4.45	T2	45	44.91	3.13	2.28	0.001*
T1	84	42.63	4.45	T3	72	45.97	3.43	3.34	<0.001*
T1	84	42.63	4.45	T4	80	46.69	2.26	4.06	<0.001*
T1	84	42.63	4.45	T5	77	46.82	2.15	4.19	<0.001*
T2	45	44.91	3.13	T3	72	45.97	3.43	1.06	0.089
T2	45	44.91	3.13	T4	80	46.69	2.26	1.78	0.001*
T2	45	44.91	3.13	T5	77	46.82	2.15	1.91	0.001*
T3	72	45.97	3.43	T4	80	46.69	2.26	0.72	0.136
T3	72	45.97	3.43	T5	77	46.82	2.15	0.85	0.076
T4	80	46.69	2.26	T5	77	46.82	2.15	0.13	0.711
Cohort 4				ANOVA					
Time point	Count	Mean	SD	Time point	Count	Mean	SD	Mean diff.	Sig.
T1	86	42.13	4.94	T2	84	44.71	3.43	2.59	<0.001*
T1	86	42.13	4.94	T3	75	44.88	4.27	2.75	<0.001*
T1	86	42.13	4.94	T4	74	46.53	2.91	4.40	<0.001*
T2	84	44.71	3.43	T3	75	44.88	4.27	0.17	0.789
T2	84	44.71	3.43	T4	74	46.53	2.91	1.81	<0.001*
T3	75	44.88	4.27	T4	74	46.53	2.91	1.65	0.007*

Note. \* Significant at the 5% level.

Table 7-16 shows the only significant difference found across consecutive time points is between T1 and T2 for cohort 4 ( $p=0.001$ ). This is also reflected in the findings for

cohort 4, which also shows a significant difference between T1 and T2 ( $p=<0.0001$ ). A further significant difference was also found for cohort 4 between T3 and T4 ( $p=0.007$ ).

The mean scores for cohort 3 and cohort 4 shown in Table 7-16 for knowledge of the nursing role are further illustrated in Figures 7-16 for cohort 3 and 7-17 for cohort 4. Figure 7-16 presents an initial significant increase between T1 and T2 for knowledge of the nursing role scores. No significant difference is evident between the other consecutive time points.



**Figure 7-16: Knowledge of the nursing role cohort 3 at time points 1 to 5 (error bars = 1 SD)**

In contrast to the findings in Figure 7-16 for cohort 3, a slightly different trend is presented in Figure 7-17 for cohort 4, in which knowledge of the nursing role shows a significant step up from T1 to T2 and then again at T3 to T4. Although both cohorts show a similar score at T4. Another trend evident in both Figures 7-16 and 7-17 is the decreasing standard deviation evident at both T4 and T5.

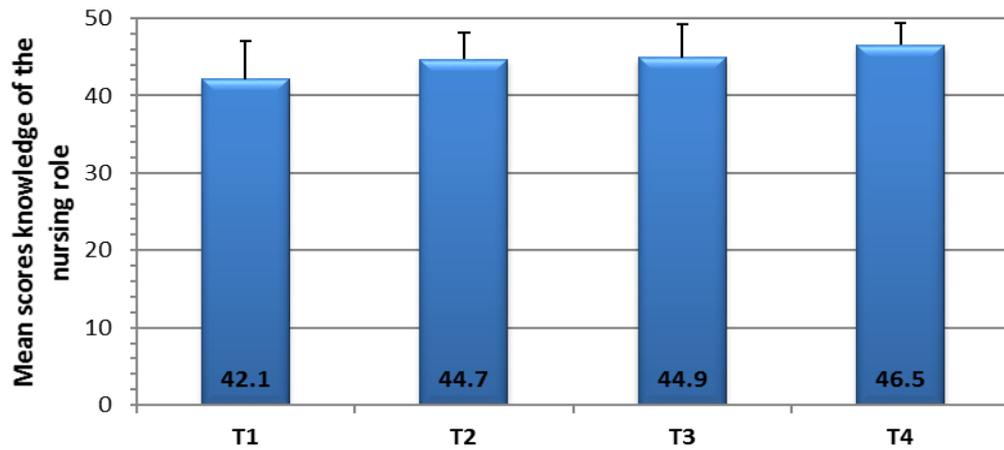


Figure 7-17: Knowledge of the nursing role cohort 4 at time points 1 to 4 (error bars = 1 SD)

## 7.12 Perceived level of confidence

The mean differences across data collection time points for cohort 3 and cohort 4 are presented in Table 7-17. The mean differences for both cohorts between consecutive time point is statistically significant except for cohort 3 between T2 and T3 ( $p=0.151$ ). No data for T1 is available for comparison for cohort 3 as this outcome score. This is the same for the scores relating to perceived level of experience, skill, and knowledge as this data was not collected at this time point for this cohort.

**Table7-17: Perceived level of confidence scores for cohort 3 and cohort 4 across the time points**

Cohort 3				ANOVA					
Time point	Count	Mean	SD	Time point	Count	Mean	SD	Mean diff.	Sig.
<b>T2</b>	43	43.98	6.73	<b>T3</b>	72	45.74	5.48	1.76	0.151
<b>T2</b>	43	43.98	6.73	<b>T4</b>	79	48.51	5.42	4.53	<0.001*
<b>T2</b>	43	43.98	6.73	<b>T5</b>	77	50.96	5.35	6.98	<0.001*
<b>T3</b>	72	45.74	5.48	<b>T4</b>	79	48.51	5.42	2.77	0.002*
<b>T3</b>	72	45.74	5.48	<b>T5</b>	77	50.96	5.35	5.22	<0.001*
<b>T4</b>	79	48.51	5.42	<b>T5</b>	77	50.96	5.35	2.45	0.005*
Cohort 4				ANOVA					
Time point	Count	Mean	SD	Time point	Count	Mean	SD	Mean diff.	Sig.
<b>T1</b>	85	29.15	12.15	<b>T2</b>	83	39.28	7.81	10.12	<0.001*
<b>T1</b>	85	29.15	12.15	<b>T3</b>	74	44.91	7.34	15.75	<0.001*
<b>T1</b>	85	29.15	12.15	<b>T4</b>	74	49.12	5.29	19.97	<0.001*
<b>T2</b>	83	39.28	7.81	<b>T3</b>	74	44.91	7.34	5.63	<0.001*
<b>T2</b>	83	39.28	7.81	<b>T4</b>	74	49.12	5.29	9.84	<0.001*
<b>T3</b>	74	44.91	7.34	<b>T4</b>	74	49.12	5.29	4.22	<0.001*

Note. \* Significant at the 5% level.

Figures 7-18 shows the mean scores for cohort 3 and & Figure 7-19 present the mean scores for perceived level of confidence for working with older people at each time point. As shown in Figure 7-18 perceived level of confidence for working with older people increases at each consecutive time point for cohort 3. A more marked increase in scores across the time points is shown for cohort 4 in Figure 7-19. Also, the scores for cohort 4 remain markedly lower at each time point when compared to cohort 3.

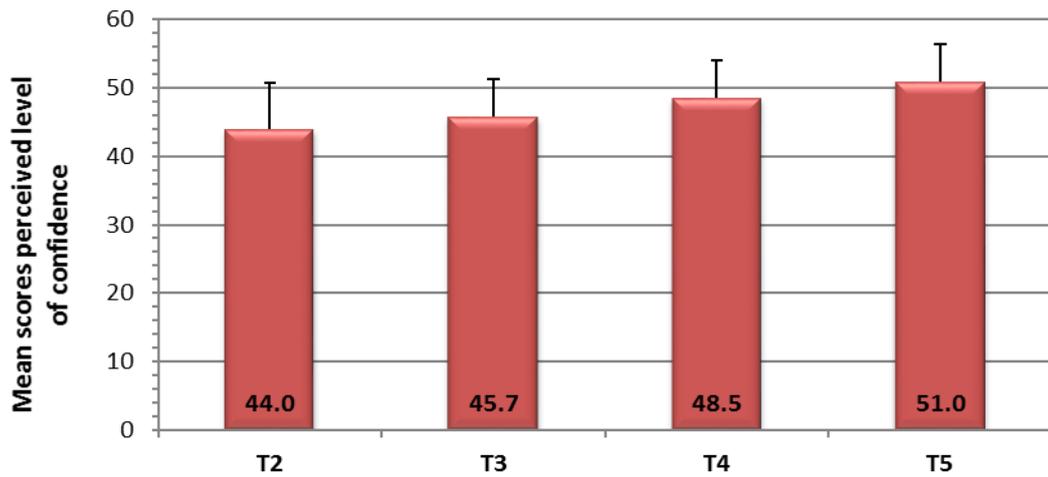


Figure 7-18: Perceived level of confidence scores for cohort 3 at time points 2 to 5 (error bars = 1 SD)

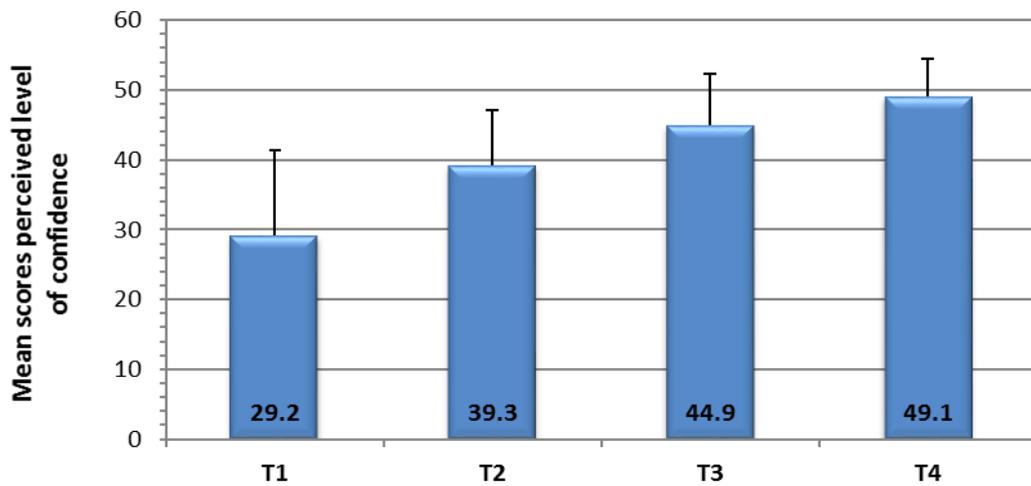


Figure7-19: Perceived level of confidence scores for cohort 4 at time points 1 to 4 (error bars = 1 SD)

### 7.13 Perceived level of experience

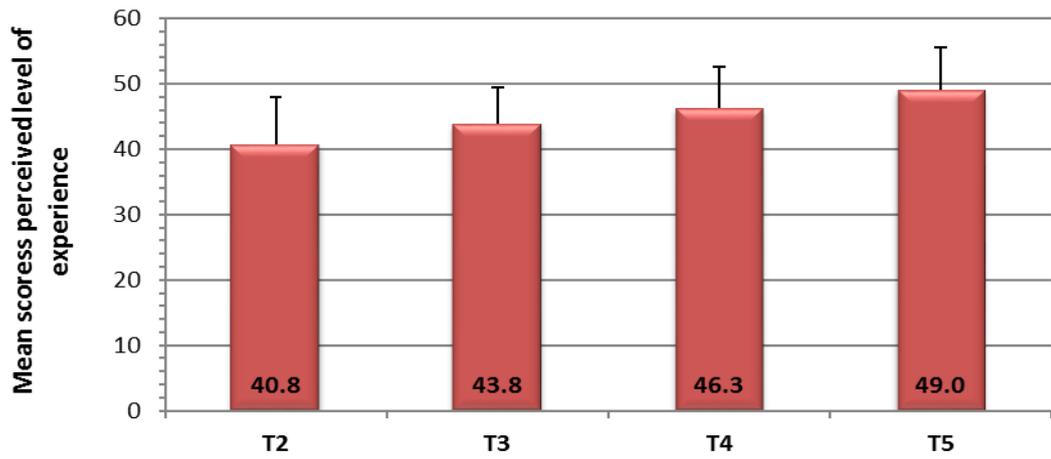
Table 7-18 shows the mean differences for cohort 3 and four t each time point for the outcome score of perceived level of experience for working with older people. Across all time points for both cohort s, significant differences in mean scores are evident.

**Table7-18: Perceived level of experience for cohort 3 and cohort 4 across the time points**

Cohort 3				ANOVA					
Time point	Count	Mean	SD	Time point	Count	Mean	SD	Mean diff.	Sig.
T2	43	40.79	7.16	T3	72	43.81	5.72	3.01	0.021*
T2	43	40.79	7.16	T4	79	46.33	6.23	5.54	<0.001*
T2	43	40.79	7.16	T5	77	49.03	6.58	8.24	<0.001*
T3	72	43.81	5.72	T4	79	46.33	6.23	2.52	0.01*
T3	72	43.81	5.72	T5	77	49.03	6.58	5.22	<0.001*
T4	79	46.33	6.23	T5	77	49.03	6.58	2.70	0.009*
Cohort 4				ANOVA					
Time point	Count	Mean	SD	Time point	Count	Mean	SD	Mean diff.	Sig.
T1	85	22.28	12.42	T2	83	35.88	8.59	13.6	<0.001*
T1	85	22.28	12.42	T3	75	42.95	6.74	20.66	<0.001*
T1	85	22.28	12.42	T4	74	47.70	5.68	25.42	<0.001*
T2	83	35.88	8.59	T3	75	42.95	6.74	7.07	<0.001*
T2	83	35.88	8.59	T4	74	47.70	5.68	11.82	<0.001*
T3	75	42.95	6.74	T4	74	47.70	5.68	4.76	<0.001*

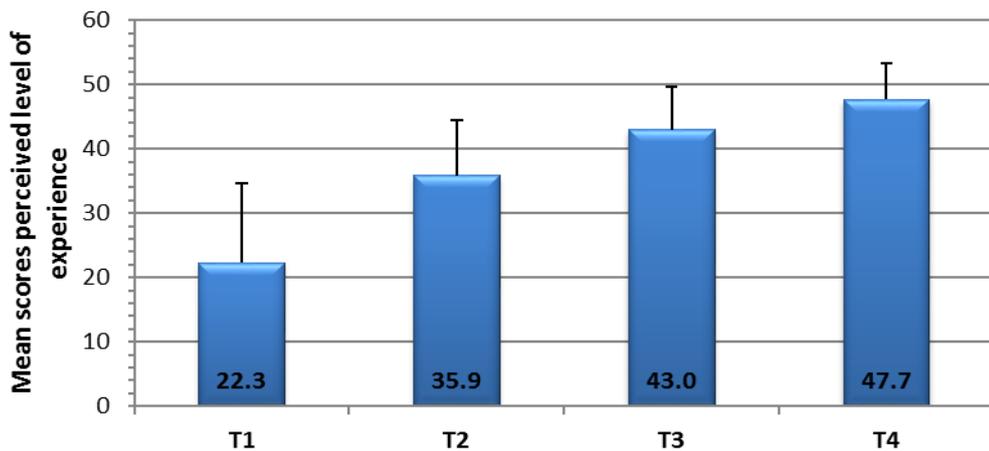
Note. \* Significant at the 5% level.

The mean scores for perceived level of confidence for cohort 3 are presented in Figure 7-20 and for cohort 4 in Figure 7-21. Both figures demonstrate an increasing level of perceived experience for working with older people through the consecutive time points.



**Figure 7-20: Perceived level of experience scores for cohort 3 at time points 2 to 4 (error bars = 1 SD)**

Figures 7.20 and 7-21 shows that while cohort 4 has a significantly lower score at T2 and T3 compared to cohort 3, by T4, cohort 4 demonstrates a higher score than cohort 3.



**Figure 7-21: Perceived level of experience scores for cohort 4 at time points 1 to 4 (error bars = 1 SD)**

### 7.14 Perceived level of skills

Similar to the findings for perceived level of experience presented in Table 7-18, the mean differences between time points for perceived level of skill for working with older people are statistically significant for both cohort 3 and cohort 4. This data is presented in Table 7-19.

**Table7-19: Perceived level of skills for cohort 3 and cohort 4 across the time points**

Cohort 3				ANOVA					
Time point	Count	Mean	SD	Time point	Count	Mean	SD	Mean diff.	Sig.
T2	43	40.93	6.42	T3	72	43.63	5.75	2.69	0.026
T2	43	40.93	6.42	T4	79	46.99	5.66	6.06	<0.001*
T2	43	40.93	6.42	T5	77	49.40	5.82	8.47	<0.001*
T3	72	43.63	5.75	T4	79	46.99	5.66	3.36	<0.001*
T3	72	43.63	5.75	T5	77	49.40	5.82	5.78	<0.001*
T4	79	46.99	5.66	T5	77	49.40	5.82	2.42	0.01*
Cohort 4				ANOVA					
Time point	Count	Mean	SD	Time point	Count	Mean	SD	Mean diff.	Sig.
T1	85	23.14	12.22	T2	83	37.27	8.07	14.12	<0.001*
T1	85	23.14	12.22	T3	75	43.17	6.12	20.03	<0.001*
T1	85	23.14	12.22	T4	74	48.05	5.15	24.91	<0.001*
T2	83	37.27	8.07	T3	75	43.17	6.12	5.91	<0.001*
T2	83	37.27	8.07	T4	74	48.05	5.15	10.79	<0.001*
T3	75	43.17	6.12	T4	74	48.05	5.15	4.88	<0.001*

Note. \* Significant at the 5% level.

The differences in mean scores for perceived level of skill for working with older people across the time points are further highlighted in Figure 7-22 for cohort 3 and Figure &-22 for cohort 4. Illustrated in these figures is that both cohort s demonstrate an increasing level of perceived skill for working with older people through the consecutive time points. While cohort 4 has a significantly lower score at T2 compared

to cohort 3, this evens out by T3. As shown in Figure 7-22, cohort 4 demonstrates a higher mean score compared to cohort 3 at time point 4.

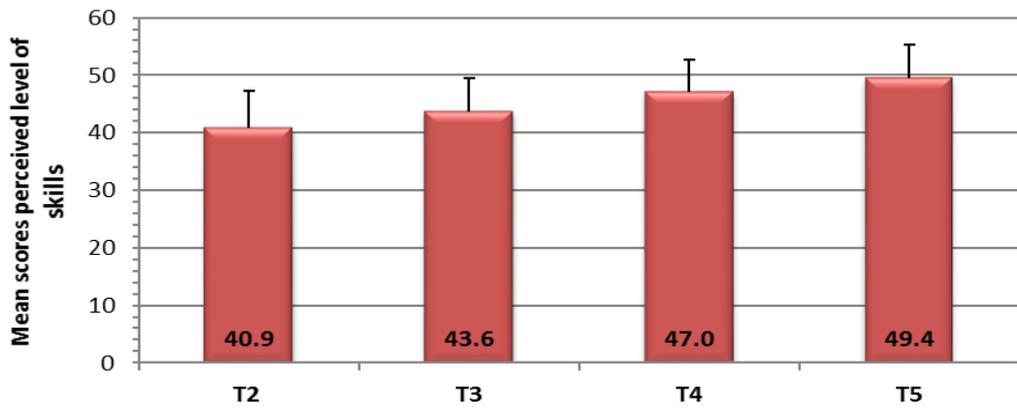


Figure 7-21: Perceived level of skill scores for cohort 3 at time points 2 to 4 (error bars = 1 SD)

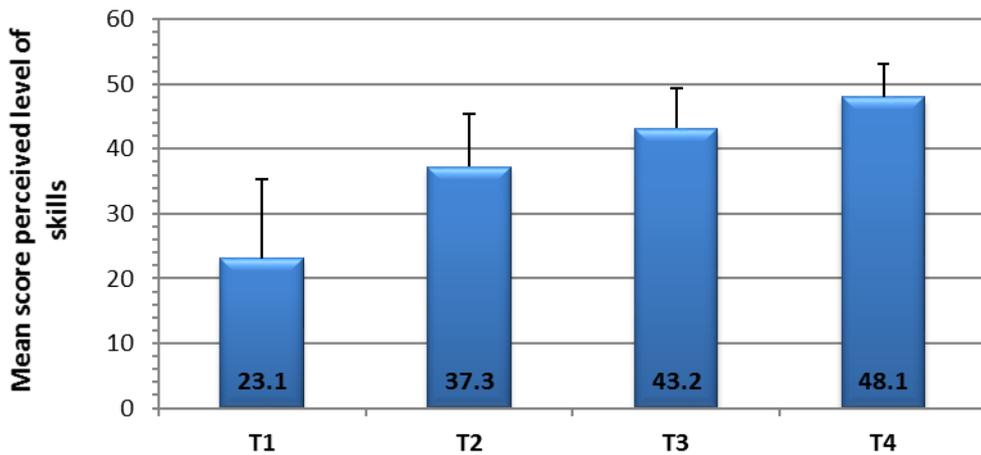


Figure7-22: Perceived level of skill scores for cohort 4 at time points 1 to 4 (error bars = 1 SD)

### 7.15 Perceived level of knowledge

Table 7-20 shows the differences in mean scores across time points for cohort 3 and cohort 4 for perceived level of knowledge for working with older people. Between each consecutive time point, there is a statistically significant difference in scores evident for cohort 4. In contrast, cohort 3 only shows significant differences in consecutive time points scores between T3 and T4 ( $p < 0.0001$ ).

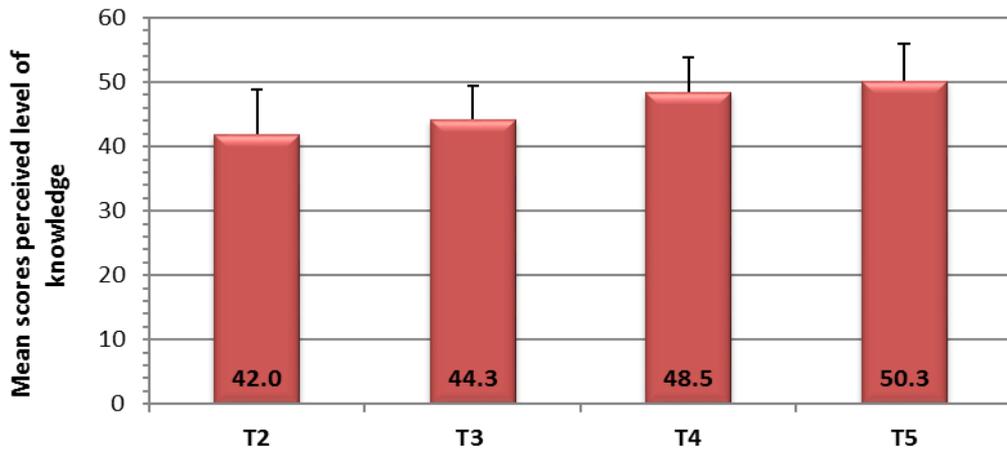
**Table 7-20: Perceived level of knowledge scores for cohort 3 and cohort 4 across the time points**

Cohort 3				ANOVA					
Time point	Count	Mean	SD	Time point	Count	Mean	SD	Mean diff.	Sig.
T2	43	42.02	6.82	T3	72	44.26	5.06	2.24	0.078
T2	43	42.02	6.82	T4	79	48.52	5.40	6.50	<0.001*
T2	43	42.02	6.82	T5	78	50.27	5.78	8.25	<0.001*
T3	72	44.26	5.06	T4	79	48.52	5.40	4.26	<0.001*
T3	72	44.26	5.06	T5	78	50.27	5.78	6.01	<0.001*
T4	79	48.52	5.40	T5	78	50.27	5.78	1.75	0.052
Cohort 4				ANOVA					
Time point	Count	Mean	SD	Time point	Count	Mean	SD	Mean diff.	Sig.
T1	85	24.53	11.88	T2	83	38.40	7.85	13.87	<0.001*
T1	85	24.53	11.88	T3	75	43.72	6.38	19.19	<0.001*
T1	85	24.53	11.88	T4	74	48.80	5.04	24.27	<0.001*
T2	83	38.40	7.85	T3	75	43.72	6.38	5.32	<0.001*
T2	83	38.40	7.85	T4	74	48.80	5.04	10.40	<0.001*
T3	75	43.72	6.38	T4	74	48.80	5.04		

Note. \* Significant at the 5% level.

The perceived level of knowledge for working with older people for cohort 3 is presented in Figure 7-23 and for cohort 4 is presented in Figure 7-24. Figure 7-23 shows cohort 3 demonstrate consecutive increases in mean scores for perceived level of

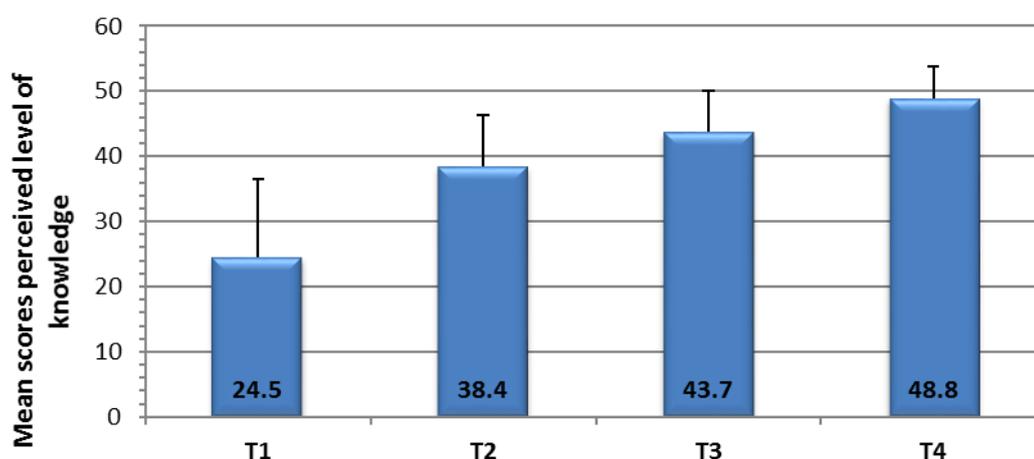
knowledge for working with older people: however, the only statistically significant difference is evident between T3 and T4.



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**Figure 7-23: Perceived level of knowledge scores for cohort 3 at time points 2 to 4 (error bars = 1 SD)**

In contrast, Figure 7-24 shows that while cohort 4 has lower scores at T2 and T3 compared to cohort 3 the cumulative increase seen between each time point is greater compared to cohort 3. By T4 both cohorts display similar scores.



**Figure 7-24: Perceived level of knowledge scores for cohort 4 at time points 1 to T4 (error bars = 1 SD)**

## 7.16 Summary of part two findings

This section has investigated the cumulative impact of the interventions on student nurses knowledge and attitudes about ageing, older people and working with them. The findings demonstrate that both cohort 3 and cohort 4 show a significant increase in scores from baseline T1 to the final time point (T4 for cohort 4 and T5 for cohort 3). Suggesting that the interventions have resulted in a positive cumulative impact. This is also supported from the focus group findings which show an increasing depth of knowledge and positive attitudes in relation to ageing, older people and working with them.

The quantitative findings, do not provide a consistent trend for either cohort that demonstrates significant increases between the consecutive scores across all outcome measures. Despite cohort 4 having exposure to all four interventions, while cohort 3 was only exposed to three interventions the scores at T4 for both cohort s are very similar and show a minimal and non-significant difference between the cohort s across all outcome measures.

A negative trend is shown for cohort 3 between T2 and T3 for both reactions to ageing and perceptions of older people scores. However, for both cohorts there is a significant positive difference evident in all measurement scale scores from time point one, at the start of the BNurs programme to time point four and five in year three of the programme. These findings indicate a positive change in relation to time in the BNurs programme. To determine if this is related to the interventions, an analysis of intervention and non-intervention cohorts was conducted and is presented in part three of this chapter.

### **Part 3: The overall impact of the interventions**

The study was designed to enable a preliminary comparison of the cohorts that received interventions (cohorts 3 and 4) with those that did not (cohorts 1 and 2). Given the nature of the data restrictions, in that non-intervention cohorts were missing baseline observations, only descriptive analysis was intended. However, an ANOVA analysis was conducted with the mean scores for the cohorts at T4 and T5 to identify if any significant differences were evident between the intervention and non-intervention cohorts. This level of comparison is intended to facilitate later discussion and needs to be considered alongside the more rigorous statistical and qualitative analysis. This section is structured utilising the questionnaire outcome measures with the mean scores for each of the cohorts compared at each time point.

Table 7-21 provides the mean scores and standard deviation for each quantitative outcome measure for each cohort and data collection time-points. The shaded areas of table 7-21 signify that data were collected for a cohort at the time point

**Table7-21: Mean scores for all cohorts at across the time points**

Cohort and scale	Time point 1		Time point 2		Time point 3		Time point 4		Time point 5	
	Mean	SD								
<b>Cohort 1</b>										
RTA									26.41	4.15
POP									34.31	3.86
KOA									28.29	1.85
PWOP									41.92	4.39
KNR									46.30	2.51
PLOC										
PLOE										
PLOS										
PLOK										
<b>Cohort 2</b>	<b>Mean</b>	<b>SD</b>								
RTA					25.50	4.04	25.97	4.82	27.03	4.64
POP					33.93	3.37	35.29	3.27	35.82	3.99
KOA					26.66	2.19	28.06	2.11	28.51	1.94
PWOP					43.06	4.85	44.18	5.48	44.47	4.82
KNR					45.39	3.29	46.28	2.63	46.49	2.84
PLOC							46.87	5.81	50.42	5.35
PLOE							43.66	6.96	48.75	6.41
PLOS							44.77	6.12	49.01	5.46
PLOK							46.23	5.67	49.85	5.06
<b>Cohort 3</b>	<b>Mean</b>	<b>SD</b>								
RTA	24.94	4.99	26.91	5.48	25.74	5.92	26.68	4.97	27.14	5.35
POP	32.89	4.05	33.76	3.69	31.38	3.65	34.95	3.98	35.46	3.83
KOA	25.13	2.69	26.23	2.67	26.71	2.74	28.22	1.80	28.30	2.12
PWOP	38.18	3.02	41.40	5.06	41.97	5.12	44.45	5.00	44.59	4.79
KNR	42.63	4.45	44.91	3.13	45.97	3.43	46.69	2.26	46.82	2.15
PLOC			43.98	6.73	45.74	5.48	48.51	5.42	50.96	5.35
PLOE			40.79	7.16	43.81	5.72	46.33	6.23	49.03	6.58
PLOS			40.93	6.42	43.63	5.75	46.99	5.66	49.40	5.82
PLOK			42.02	6.82	49.85	5.06	48.52	5.40	50.27	5.78
<b>Cohort 4</b>	<b>Mean</b>	<b>SD</b>								
RTA	24.67	5.39	25.40	4.99	25.82	5.44	26.97	5.18		
POP	33.16	3.53	34.49	3.81	34.83	4.25	36.03	3.84		
KOA	24.64	2.55	26.52	2.55	27.31	2.27	28.45	1.91		
PWOP	41.37	4.43	42.08	5.06	42.53	4.90	44.16	4.38		
KNR	42.13	4.94	44.71	3.43	44.88	4.27	46.53	2.91		
PLOC	29.15	12.15	39.28	7.81	44.91	7.34	49.12	5.29		
PLOE	22.28	12.42	35.88	8.59	42.95	6.74	47.70	5.68		
PLOS	23.14	12.22	37.27	8.07	43.17	6.12	48.05	5.15		
PLOK	24.53	11.88	38.40	7.85	43.72	6.38	48.80	5.04		

As shown in Table 7-21 scores for the different measurement scales increase across the time points as participants progress through the BNurs programme. At T4, the two intervention cohorts, cohort 3 and 4 have similar mean scores to the non-intervention cohort, cohort 3. A similar finding is also evident at T5 with cohort 3 the intervention cohort having similar mean scores to the two non-intervention cohorts, cohort 2 and 1.

### 7.17 Reaction to ageing

Figure 7-25 shows the mean scores for attitudes towards ageing for all cohorts. Similar scores and trajectory across the time points are evident regardless of whether the cohorts were exposed to the interventions.

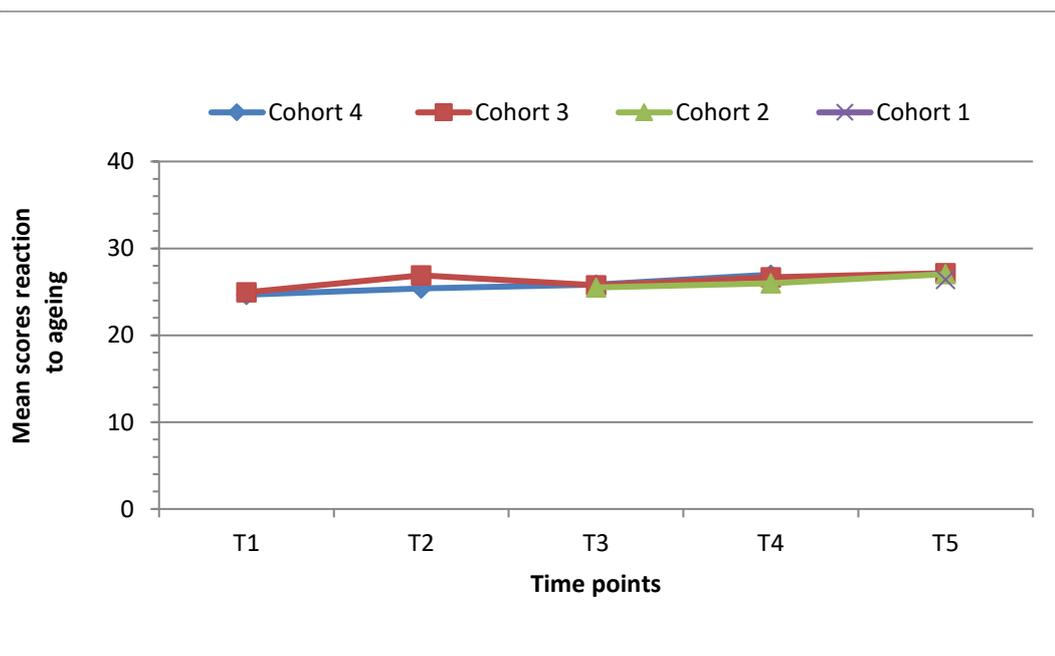


Figure 7-25: Reaction to ageing scores for all cohorts and time points

Plotting mean values over time across the cohorts showed little meaningful differences. When explored statistically using ANOVA, no statistically significant difference in mean scores between cohort 1 and 2 with cohort 3 at T5 ( $p=0.629$ ) or at T4 between cohort 2 and Cohorts 3 and 4 ( $p=0.467$ ), were identified.

## 7.18 Perceptions of older people

The mean scores for perceptions of older people across all cohorts and time points are provided in Figure 7-26. There were no significant differences in mean scores at T5 between cohort 1, cohort 2 and cohort 3 ( $p=0.067$ ). Figure 7-27 also shows the drop in mean perception scores at T3 for cohort 3, which does improve at T4 to re-align with the other cohort scores.

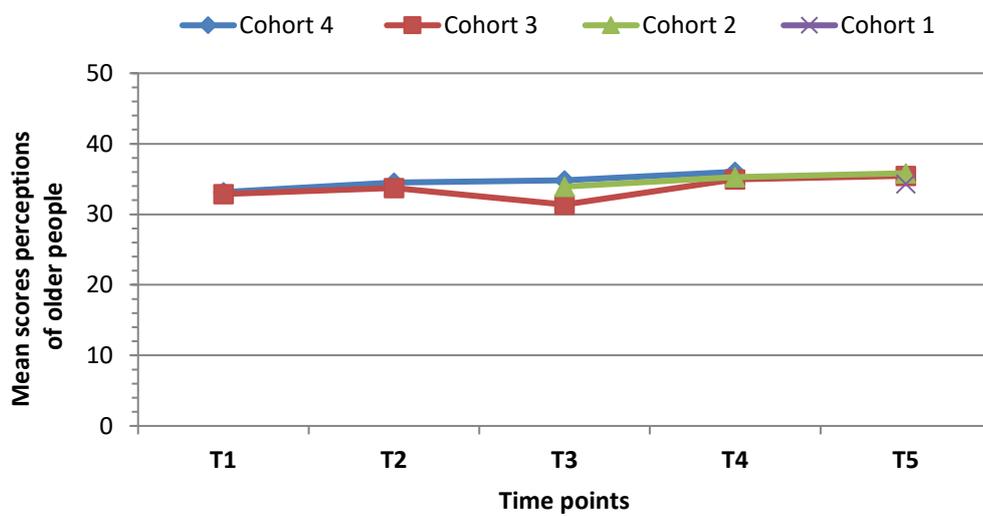


Figure: 7-26: Perceptions of older people scores for all cohorts and time points

## 7.19 Knowledge of ageing

Figure 7-27 shows the mean scores for knowledge of ageing for all cohorts at each time point. No statistically significant differences in mean scores are evident at time T5 ( $p=0.749$ ). There is an increase in scores evident for cohort 2, cohort 3 and cohort 4, between T3 and T4, which then flattens between T4 and T5. Given the maximum score for this outcome measure was 30 it is possible the scores reached a ceiling point at T4.

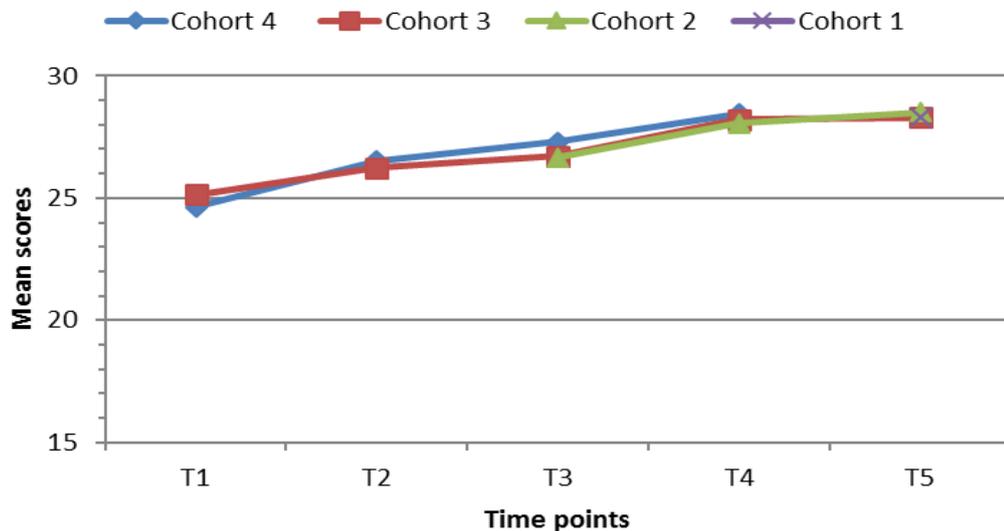


Figure 7.27: Knowledge of ageing scores for all cohorts and time points

## 7.20 Perceptions of working with older people

The mean scores for perceptions of working with older people are presented in Figure 7-28, which highlights a significant difference in mean scores at T5 between cohort 3 and cohort 1 ( $p=0.001$ ) and cohort 2 and cohort 1 ( $p=0.002$ ). Figure 7-28 also shows that while a positive trajectory is evident through to t4, there is a levelling of scores for both cohort 2 and cohort 3 between T4 and T5. No statistically significant differences are evident between cohorts at T4.

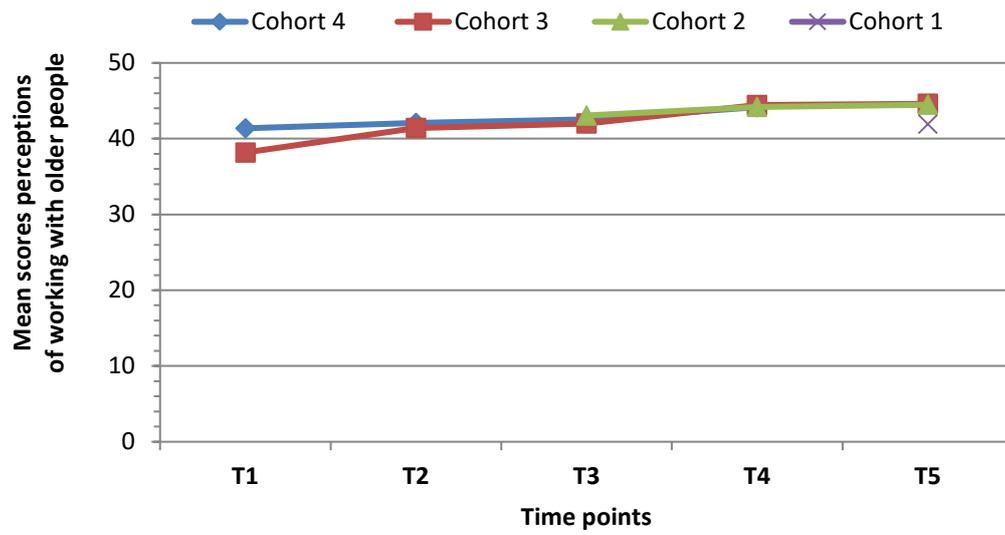


Figure7-28: Perceptions of working with older people scores for all cohorts and time points

## 7.21 Knowledge of the nursing role

Figure 7-29, which presents the knowledge of the nursing role scores for all cohort s, displays a similar levelling of scores between T4 and T5 as that presented for perceptions of working with older people in Figure 7-28. No significant differences were found between the scores of the different cohort s at T3, T4 or T5.

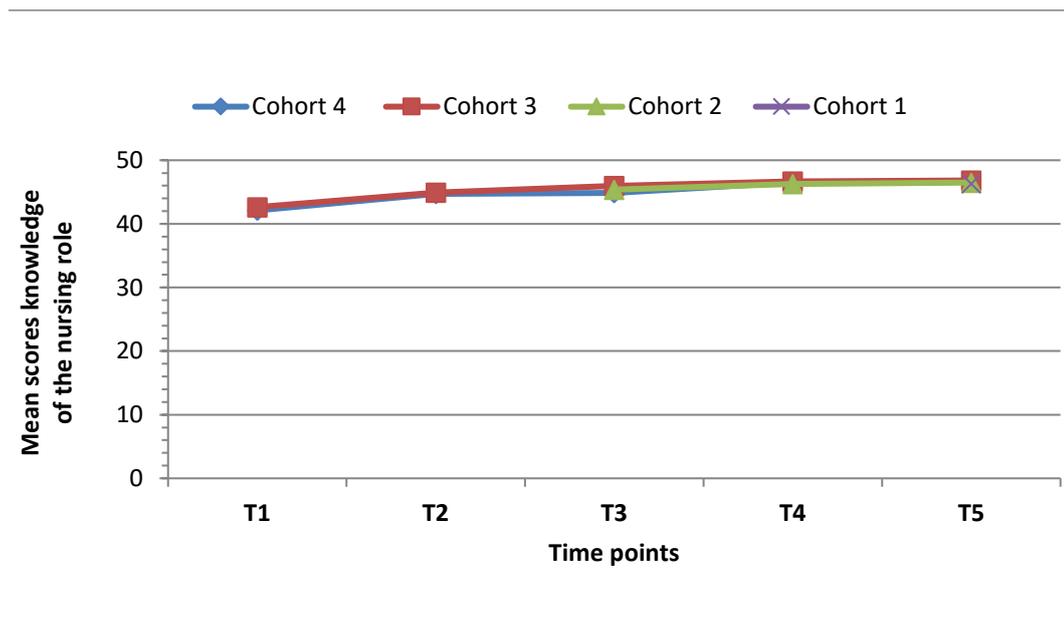


Figure 7-29: Knowledge of the nursing role scores for all cohorts and time points

## 7.22 Perceived level of confidence

Figure 7-30 shows the perceived level of confidence scores for cohort 2, cohort 3 and cohort 4 at the different time points. At T4 there is a statistically significant difference between cohort 4 and cohort 2 ( $p=0.016$ ); however, the difference at this time point for cohort 3 and cohort 2 is not significant ( $p=0.078$ ), nor is there a significant difference at T5 between these two cohorts ( $p=0.536$ ). The trajectory of cohort 4 suggests a significant difference could have occurred at T5 if data were available.

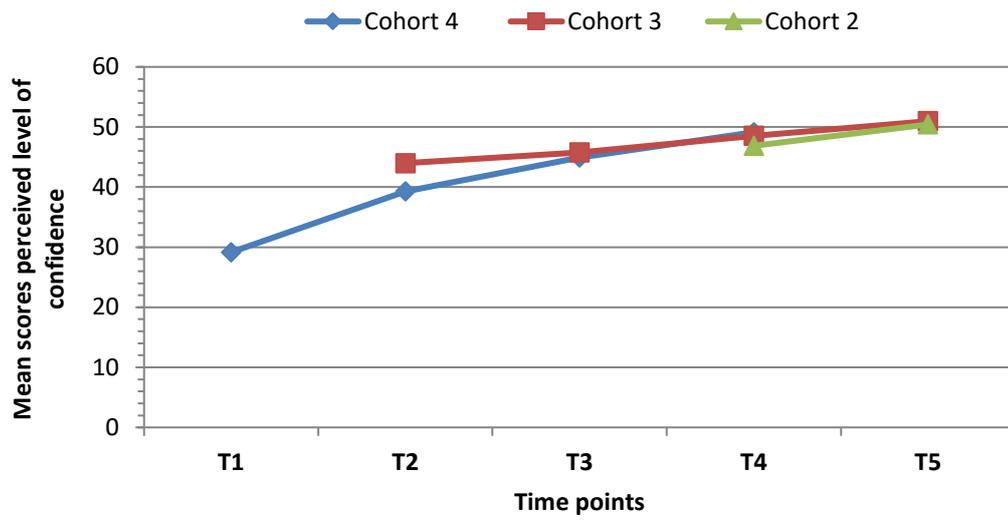


Figure 7-30: Perceived level of confidence scores for all cohorts and time points

### 7.23 Perceived level of experience

Similar findings are evident with perceived level of experience scores, which is presented in Figure 7-31. Both cohort 3 and cohort 4 show a significant difference from the mean score of cohort 2 at T4 ( $p=0.015$ ;  $p<0.0001$ ). However, this difference is not maintained at T5 between cohort 2 and cohort 3 ( $p= 0.796$ ).

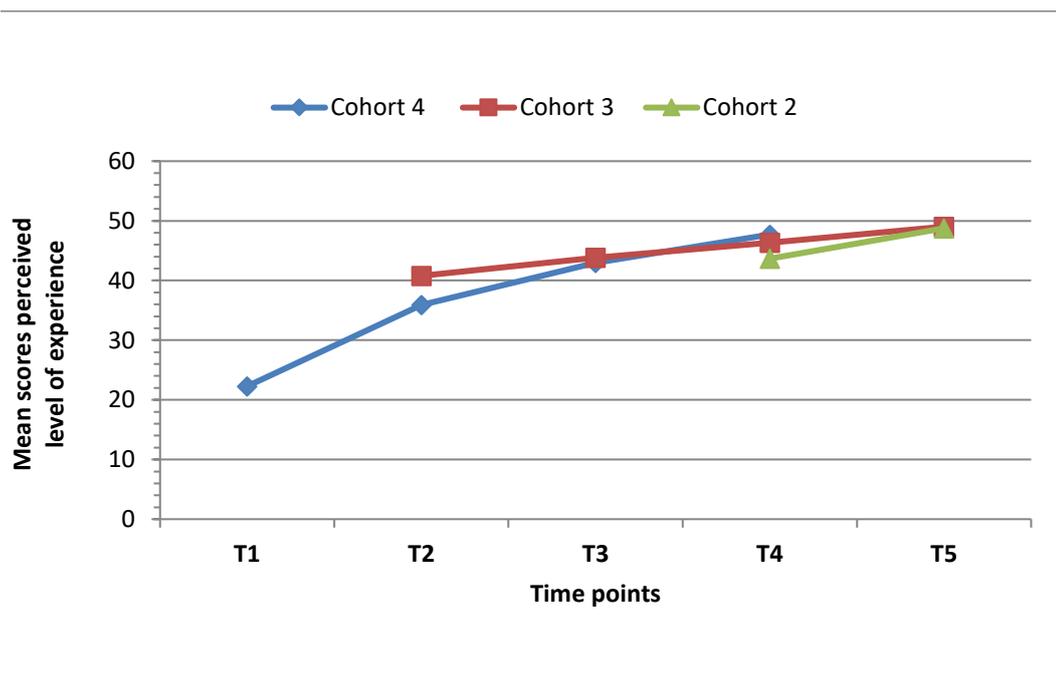


Figure7-31: Perceived level of experience scores for all cohorts and time points

### 7.24 Perceived level of skills

Figure 7-32 presents the mean scores for perceived level of skills. While significant differences are evident at T4 between cohort 3 and cohort 2 ( $p=0.023$ ), and cohort 4 and cohort 2 ( $p=0.001$ ). This difference is not maintained at t5 between cohort 2 and cohort 3 ( $p=0.675$ ).

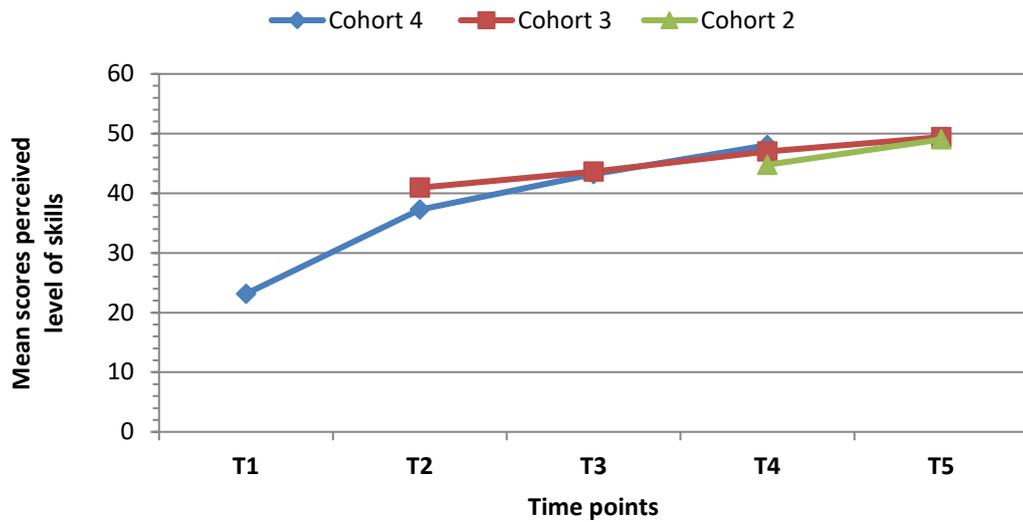


Figure7-32: Perceived level of skill scores for all cohorts and time points

## 7.25 Perceived level of knowledge

The cohort scores for perceived level of knowledge are presented in Figure 7-33, which shows a similar trend as that found with perceived skills and experience scores. Significant differences are evident at T4 between cohort 3 and cohort 2 ( $p=0.012$ ) and cohort 4 and cohort 2 ( $p=0.005$ ); however, this significance is not maintained at T5 between cohort 3 and cohort 2 ( $p=0.437$ ).

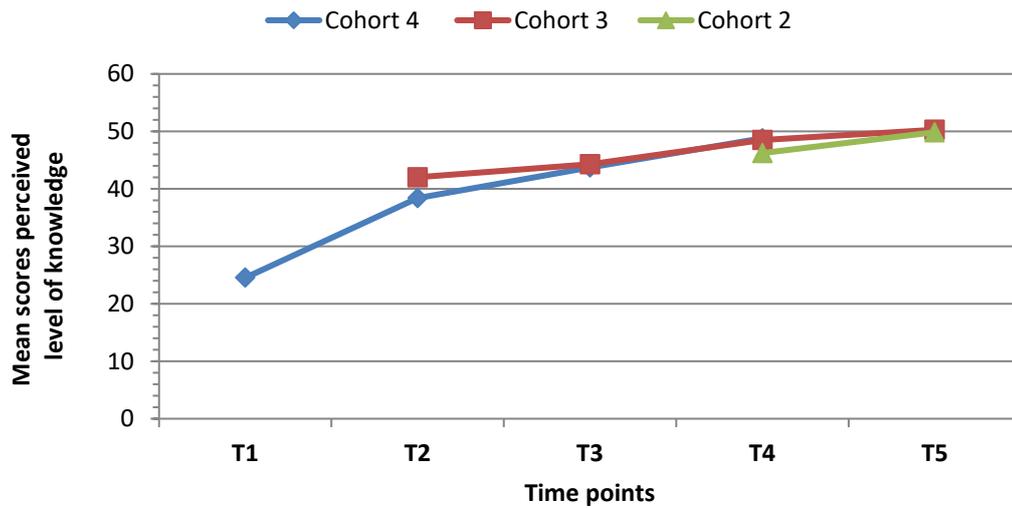


Figure7-33: Perceived level of knowledge scores for all cohorts and time points

## 7.26 Future career choices all cohorts and time points

While not included as an outcome measure, data pertaining to the areas which participants would like to work on completion of the BNurs programme was also collected. Participants were able to make multiple responses to this section of the questionnaire. The data presented in Table 7-22 provides the percentage of total responses at each time point for each cohort. Figure 7-34 presents the percentage of participant responses in relation to working with older people for all cohorts and time points. There are fluctuations evident in both cohort 3 and cohort 4 across the time points. However, there is also an increase in numbers of participants who included older people’s health as a potential career option at the final time-point. While these findings look favourable, it is important to note that older people’s health was not selected in isolation by any participant from any cohort, but instead it was one of many options selected.

**Table 7.22: Career preferences for all cohorts and time points**

Cohort	Time point 1 (%)		Time point 2 (%)		Time point 3 (%)			Time point 4 (%)			Time point 5 (%)		
	C3	C4	C3	C4	C2	C3	C4	C2	C3	C4	C1	C2	C3
Total responses	157	172	93	171	120	241	144	117	152	125	83	102	242
Surgical	19.1	15.1	22.6	14.7	11.6	21.2	13.9	16.2	23	18.4	31.3	24.5	15
Medical	11.5	14	15.1	14	6.7	19.5	9.7	14.5	15.1	12	13.3	10.8	19
A & E	17.2	23.8	14	23.4	15.7	2.9	18.9	9.4	8.6	16	9.6	8.8	10.7
Older People	2.5	1.7	2.1	1.8	4.1	5.8	0	6	5.2	3.2	3.6	3.9	6.6
Community	8.9	4.7	5.4	4.6	10.7	25.3	6.9	9.4	9.2	8	13.3	10.8	8.7
Primary	5.1	5.8	10.8	5.8	3.3	12.5	9	6.8	9.9	8	7.2	9.8	10.7
Mental Health	5.1	4.1	5.4	4	16.5	2.9	8.3	6.8	5.3	4	0	6.9	6.2
ICU	6.4	9.3	2.1	9.4	9.1	1.2	6.9	9.4	5.9	7.2	4.8	2.9	7
Child Health	21.7	19.2	18.2	19.3	16.5	7.9	18	21.5	17.8	20.8	14.5	21.6	16.1
Unsure	1.3	0.6	1.1	1.2	4.1	0	4.2	0	0	0.8	1.2	0	0
Other /Research	1.3	1.7	3.2	1.8	1.7	0.8	4.2	0	0	1.6	1.2	0	0

The responses for older people's health, as a potential career option outlined in Table, are presented in Figure 7-34 which shows the percentage of participant responses in relation to working with older people for all cohorts and time points. There are fluctuations evident in both cohort 3 and cohort 4 across the time points. However, there is also an increase in numbers of participants who included older people's health as a potential career option at the final time-point.

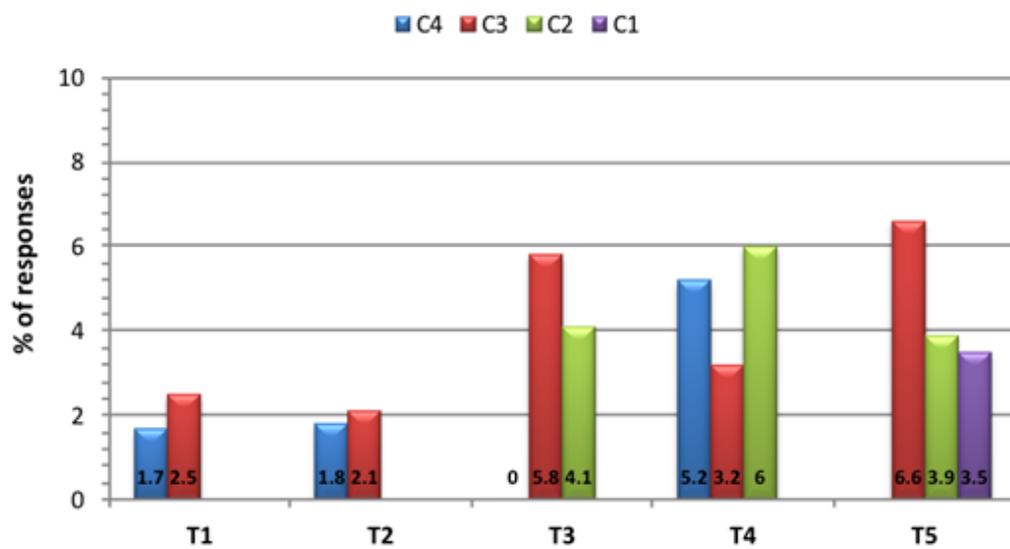


Figure 7-34: Responses for older people's health as a potential career option

## 7.27 Summary of part three findings

Despite having been exposed to interventions aimed at improving student nurse knowledge and attitudes towards the ageing process older people and working them, the findings in this section show that mean outcome scores for both intervention and non-interventions groups are not significantly different except for the outcome scores perceived level of experience, skills and knowledge at T4. However, this difference was not evident at T5 between cohort 3 and cohort 2. Another finding of interest is the number of responses for working with older people as a career choice, in which the number of responses made by cohort 3 at T5, far exceeds the other cohorts.

Therefore, while not captured clearly in the quantitative data, the interventions may exert some influence on students in relation to perceived level of experience, skills knowledge and interest in working with older people.

## **7.28 Chapter summary**

This chapter has presented the findings obtained from the final phase of the research, which aimed to evaluate the impact of the educational interventions implemented in relation to student nurse knowledge and attitudes about the ageing process older people and working with them. The evaluation has included findings from both quantitative and qualitative data collection and analysis processes. Findings relating to the individual impact of each of the four interventions, the cumulative or combined impact of these interventions and finally, the overall impact of the interventions have been presented. The next chapter provides a discussion of these findings, the impact and what they mean for nursing education.

## Chapter eight: Discussion

*The truth of a theory can never be proven, for one never knows if future experience will contradict its conclusions.*

Albert Einstein (1875 to 1955)

### 8.1 Introduction

Nursing curriculum should be evidence-informed, context relevant and unified (Iwasiw & Goldenberg, 2015). The overall aim of this study was to design, implement and evaluate evidence-based teaching and learning strategies aimed at facilitating the necessary capabilities required by graduating nursing students to care for older people.

This chapter, the final chapter in the thesis, is associated with this last phase of the research design, the evaluation of the interventions. Part one provides a discussion of the findings in relation to the research questions. This is followed by part two which discusses the findings and the significance in relation to nursing curriculum. In part three, the study limitations, conclusions and recommendations are presented.

## **Part 1: Research questions**

This first section will discuss the findings concerning the three research questions associated with evaluating the interventions. These research questions aimed to explore the immediate, cumulative and overall impact of the interventions on student nurse knowledge and attitudes toward the ageing process, older people and working with them.

### **8.2 What is the immediate impact of the educational interventions on student nurse knowledge and attitudes?**

The findings related to this research question will be discussed in relation to each of the following interventions:

- a. First exposure and reflections on ageing;
- b. Living with a long-term condition: A person-centred focus;
- c. Beyond the hospital: Community care clinical placement; and
- d. Older people as people and virtual client.

#### **8.2.1 First exposure and reflections on ageing**

The year one intervention, first exposure and reflections on ageing, was not found to have an immediate significant influence on participants knowledge and attitudes towards the ageing process, older people and working with them in either the quantitative or qualitative data. Other studies incorporating intergenerational encounters with high functioning older people have yielded positive results (P. Gallagher & Carey, 2012; Redfield et al., 2016; Ross et al., 2018); however, these studies involved students interacting with older people in a community rather than a classroom setting and had more than one interaction with the older person. Despite the limited interaction offered in the current study, post-intervention, cohort 4, did show slightly higher mean scores for knowledge of ageing, perceptions of older people, and perceptions of working with older people, when compared to the non-intervention group, cohort 3. Nonetheless, these positive differences were not statistically

significant and nor were the differences in scores for cohort 4 at time point 1 and 2, pre and post intervention, further confirming this finding.

Of particular note for this intervention are the measures relating to participants self-efficacy in which participants rate their perceived level of confidence, experience, skills and knowledge. For all of these measures, cohort 3 showed significantly higher mean scores, which could indicate the intervention had no impact or a negative impact on students' perceived confidence, experience, skills and knowledge of working with older people. It is unlikely this relates to intervention one, given the positive associations of the intervention provided in later focus group discussions. This finding is more likely to be a reflection of other confounding variables that can occur during the process of nursing education. In addition, the small sample size in cohort 3 should also be considered as a potential influence on this finding, which may have resulted in higher mean scores for cohort 3.

While the quantitative data does not offer an explanation of the findings relating to this intervention, the qualitative findings offer further insights. The findings from focus group one, following the year one intervention, provide a portrait of the self-focused nature of students at this stage of the BNurs programme. Particularly evident through this self-focussed presentation is participants' anxiety about their own ageing, which is implicitly linked to their medicalised and stereotypical perceptions and knowledge of the ageing process and older people. This finding aligns with the Terror Management Theory (TMT) of ageism, which highlights the relationship of ageing anxiety with attitudes towards ageing and older people. Anxiety and vulnerability associated with one's own ageing manifest as negative feelings and perceptions about older people (Bodner, Bergman, & Cohen-Fridel, 2012; Grefe, 2011; Nelson, 2011). Avoidance of this threat is achieved by perceiving older people through a medicalised lens, in which they are seen as different by clustering them as a group who are sick and frail (Chater, 2002).

Misconceptions, negative attitudes and a self-focused presentation were also evident from the focus group one data in relation to knowledge and attitudes of working with older people. Participants held misconceptions about the role of nursing in the care

of the older person. Consistent with other studies conducted with nursing students (C. A. Brown et al., 2011; Happell, 2002; Stevens, 2011), the data from focus group one indicates participants perceived working with older people as being of low status and not requiring complex skills, just the ability to talk and listen. Participants highlighted the importance of aspects such as social status, financial remuneration and opportunities for career advancement. This finding mirrors that of Herdman (2002) who also emphasises these factors as significant to student nurses for their future career choices. Similar to the quantitative data, the qualitative data also suggest this intervention did not have an immediate significant positive influence on student nurse knowledge and attitudes toward the ageing process, older people and working with them.

### **8.2.2 Living with a long-term condition: A person-centred focus**

This intervention occurred in the first semester of year two of the programme. The main feature of this intervention was the inclusion of older people coming into the class to talk about their experiences living with a long-term condition. Both the quantitative and qualitative findings indicate that this intervention did yield a positive impact in relation to student nurse knowledge and attitudes towards the ageing process, older people and working with them. The quantitative findings comparing cohort 3 at time point 1, no intervention, and cohort 3 at time point 2, post this intervention, showed significant differences for the measurement scores reaction to ageing, knowledge of ageing, perceptions of working with older people, and knowledge of the nursing role. Interestingly, the only measurement score that was not significantly different post intervention is perceptions of older people. This may be because, as identified in focus group one, students seem to differentiate between different types of old people, with only those portraying frailty, dependence or illness as being linked with the term older people. An explanation for this finding could link to the social role theory of ageism in which Kite et al. (2005) found that when additional information such as positive examples of social engagement, physical activity and personal history are provided or shared about the older person, a corresponding positive perception about the older person is established. In addition, Kite et al. (2005) found that the young old are perceived more favourably than the old- old. While, this

intervention incorporated people from the mid-old and old-old age categories, their level of function may not have correlated to student perceptions of what constitutes old.

The data from focus group two further indicates the positive influence this intervention had on student attitudes and knowledge and provides a deeper understanding of the influence of this intervention on student learning. The focus group data identified the value of the positive ageing role models they had encountered during the programme, both the first exposure intervention in year one and the living with a long-term condition intervention in semester one of year two. Participants recognised the positive impact of these interventions on their attitudes towards the ageing process and older people. The learning associated with these experiences align with both the constructivist and reflective theories of learning. As described by Hovey et al. (2017), providing opportunities, such as exposure to successful ageing role models, challenges students existing schemata and facilitates the process of reflection, interpretation and transformation. This process of learning in relation to both the first and second interventions, which involved exposure to positive ageing role models, is supported by data from focus group two. This was found with knowledge and attitudes but also in the participants developing awareness of the diversity of older people and an emerging person-centred focus, in which the impact for the person rather than the disease was significant for working with older people.

### **8.2.3 Beyond the hospital: Community care clinical placement**

The primary intervention for semester two, year two of the programme was a community focussed clinical placement and the incorporation of a lifespan focus to the theoretical content for the disability module. This clinical opportunity, in which students had the opportunity to support and provide care to older people living in the community, was not available to all of the students in the cohort. A selection of students, 32 in total (16 students from cohort 3 in 2012 and 16 students from cohort 4 in 2013) experienced the clinical component of this intervention. The quantitative findings do not indicate that this intervention had an immediate influence on student nurse knowledge and attitudes toward the ageing process, older people and working

with them. No significant differences in mean scores were found in the comparison of the two intervention groups, cohort 3 and 4 when compared with cohort 2, the non-intervention. Of interest in this analysis, is that a significant difference is noted between cohort 3 and cohort 4, the two intervention groups, with cohort 4 having a significantly higher score in perceptions of older people suggesting a cumulative impact of the interventions emerging.

In contrast to the quantitative data, the qualitative findings from focus group two suggest this intervention may have had some impact. Diversity was a key theme; of significance to this intervention and research question is the diversity of attitudes towards the ageing process and older people evident in participants. Those participants who did experience the clinical placement intervention expressed more positive attitudes towards ageing and older people compared to those who did not.

The literature relating to clinical placement and attitudes highlight the importance of enriched environments of care (Nolan et al., 2004; Robinson et al., 2009) where students feel welcome, have a sense of value and purpose. The development of this clinical placement considered these factors along with the influence of establishing relationships with older people living in the community that has been demonstrated in the literature to influence positive student knowledge and attitudes (Adelman et al., 2007; P. Gallagher & Carey, 2012; Redfield et al., 2016). A positive influence was evident in the focus group data of this study, with participants presenting a more holistic understanding or knowledge of older people which linked to the more intimate nature of providing support to people in their own home environment. While overall the clinical intervention seemed to have a positive influence on attitudes and knowledge, with regards to working with older people, the intervention appeared to have a negative influence. The type of work in which participants were exposed to was a deterrent to working in areas specifically for older people. This sentiment was also mirrored by other participants, whose knowledge and attitudes about working with older people were influenced by their previous clinical experiences. Working with older people was perceived to align to both palliative or rehabilitation care, which were viewed as being emotionally and physically challenging, which was off-putting. This sentiment is congruent with the literature that reports student nurses lack of interest

in working with older people is related to their perceived nature of what the work entails. The physically heavy nature of the work and having to deal with suffering and dying are key themes noted in the literature (Happell, 2002; Henderson et al., 2008; Stevens, 2011).

While participants did not want to work solely within an older person care setting, the focus group data did indicate an awareness that older people are found in all care settings and that they would likely work with older people in the future. Positive experiences during clinical where older people were receptive, friendly and encouraging towards students were viewed favourably. This finding indicates the role emotional reactions can have on learning. Previous studies have also identified that students who report previous positive experiences and exposure are more confident and express more positive attitudes (Heise et al., 2012; Jackson et al., 2017). In contrast, negative experiences are associated with negative attitudes (Gould et al., 2012).

#### **8.2.4 Older people as people and virtual client.**

The final intervention was implemented in N301, the first semester course in year three of the BNurs programme. The interventions in this course aimed to complement the existing older people's health module. This intervention included a group chat activity with successful ageing role models and the development of an online learning tool which reflected the core capabilities for student nurses associated with the care of older people, which was established as part of phase I of this study. The quantitative findings investigating the influence of this twofold intervention on attitudes and knowledge towards the ageing process, older people and working with them utilised cohort comparison data between the intervention cohorts 3 and 4, with cohort 2, a non-intervention cohort. The results suggest that these additional learning interventions did not influence student attitudes and knowledge. However, the intervention cohorts did yield higher scores than the non-intervention cohort. Furthermore, a statistically significant positive difference was found with the perceived level of confidence, experience, skills and knowledge of working with older people for both intervention cohorts when compared to the non-intervention group.

Beliefs about one's own capabilities is a key construct of learning in Bandura's (1986a) social cognitive theory, which postulates self-efficacy influence persistence, effort and choice of task which in turn influence behaviour or actions. Jackson et al. (2017) report that students who felt confident in providing care to older people also had an interest in working with this population. Koren et al. (2008) found that students with better knowledge were more confident and therefore more comfortable working with older people. While this study identified a link between knowledge, comfort and confidence, other studies have identified a positive relationship with knowledge and attitudes (Cottle & Glover, 2007). Although there is still some debate in the literature about the relationship between knowledge and attitudes, the findings from focus group three suggest a relationship between attitudes, knowledge and self-efficacy may exist. This is because the focus group data revealed participants had increased confidence, positive attitudes and knowledge about the ageing process, older people and working with them.

Increased confidence with older people was reported by participants who attributed this to the opportunities to engage with older people during both the theory and clinical components of the third year course and BNurs programme. In relation to knowledge about ageing and older people, it was noted that the older people's health theory, clinical and virtual client activity had built on their previous knowledge which helped them to extract, cement and apply this to the nursing care of older people. In particular, the virtual client online module was linked to feeling more knowledgeable and skilful in providing care to older people. This finding illustrates constructivist learning, in which students build on their prior knowledge and experience (Biggs, 2011). Appropriate knowledge about the ageing process and older people was evident in the focus group discussion, as was appropriate nursing capabilities and the skills needed to work with older people.

The focus group participants also expressed positive attitudes about older people which were conveyed through a genuine sense of warmth and compassion towards older people they had encountered. Some of the focus group data indicated a paternalistic focus relating to the vulnerability of older people. While this also

demonstrated compassion and empathy, paternalism can result in behaviours that undermine older people's autonomy (Band-Winterstein, 2013). However, paternalism was only a small aspect of the overall data which reflect positive attitudes about older people and working with them, with two participants expressing an interest in working in an older people's health setting following their graduation.

It is difficult to identify if the finding in focus group three relates specifically to the year three intervention or whether it is the result of a cumulative impact of exposure to all of the interventions. Therefore, the second research question associated with this phase investigates the cumulative impact of the interventions for cohort 3 and 4.

### **8.3 What is the cumulative impact of the educational interventions on student nurse knowledge and attitudes?**

To identify whether the interventions had a cumulative or collective influence on student nurse knowledge and attitudes about the ageing process, older people and working with them, a quantitative analysis of the changes in mean scores between each data collection time point was conducted for the two intervention groups, cohort 3 and cohort 4. This analysis produced mixed findings; however, the qualitative data highlights changing attitudes and knowledge as students progressed through the programme and interventions. This following section discusses the findings from this analysis in four parts: Attitudes and knowledge towards the ageing process; Attitudes and knowledge towards older people; Attitudes and knowledge about working with older people and; Perceived confidence skills experience and knowledge for working with older people.

#### **8.3.1 Attitudes and knowledge about the ageing process**

The quantitative findings revealed a significant positive difference in mean scores for both intervention cohorts at time point 1, the start of the BNurs programme and after the last intervention at time point 4 on the reactions to ageing scale. This indicates students became more positive about the ageing process as they progressed through

the BNurs programme and interventions. While these findings do not support a significant incremental impact at each time point, there is evidence that through the course of the programme a significant positive change in attitudes towards ageing did occur. This is further supported by the qualitative findings, which demonstrate diminishing negativity associated with ageing along with an increased understanding and knowledge of the ageing process occurring with each progressive focus group.

Similar findings about knowledge of ageing were demonstrated in the quantitative findings of this study, which also showed significant positive differences for both intervention cohorts on the knowledge of ageing scale between time point 1 and time point 4. While there is empirical evidence that suggests knowledge of ageing and attitudes towards ageing can have an inverse relationship (Boswell, 2012a) or no significant relationship (Cottle & Glover, 2007; B. Williams et al., 2007) the findings in this study support the findings of Lambrinou et al. (2009) which suggest a positive relationship exists between improved knowledge of ageing and attitudes towards ageing and older people. The findings in the current study may relate to the positive focus on ageing that was incorporated through the interventions. Knowledge which focuses on negative aspects of ageing such as illness and decline has been found to increase ageing anxiety and influence attitudes negatively (Allan & Johnson, 2008; Boswell, 2012a). Ferrario et al. (2007) found that students exposed to a new curriculum that employed positive ageing as a framework resulted in more positive views about ageing. Similar findings are noted in the current study, with both intervention cohorts demonstrating significant differences in mean scores between each successive time point. However, the data did reveal one exception in this trend, which occurred between time point 2 and time point 3 with cohort 3. This finding may be related to the smaller number of participants at time point 2 or the influence of other factors or processes external to the interventions.

### **8.3.2 Attitudes and knowledge about older people**

The findings from the quantitative scale perceptions of older people produced mixed findings. A significant negative difference was seen between time point 1 and time point 3 for cohort 3. This effect was not evident for cohort 4, at this time point. This

finding may be attributed to an influence external to the interventions. Regardless of the cause, it does reveal a possible the inability of the interventions, to counteract any negatively influencing variables. As reported by Levy and Banaji (2002) younger people are highly susceptible to negative stereotypes. Given the young nature of the population in this current study, the need to create not only positive influences relating to older people but also minimising negative influences during the course of nursing education is essential. Holroyd et al. (2009), in their cross sectional study of student nurse attitudes also found a drop in positive attitudes and rise in negative attitudes at the beginning of the second and fourth year as students progressed through the nursing programme, suggesting fluctuations in student attitudes are not uncommon. Furthermore, (Iwasiw & Goldenberg, 2015) postulate that change does not occur in a straightforward linear manner and that often individuals can revert to former stages and then proceed again towards the desired change.

While the findings in the current study do not demonstrate a significant incremental cumulative impact of the interventions, both cohorts demonstrated significant positive differences in mean scores between time point 1 and time point 4, indicating attitudes and knowledge about older people improved positively following the completion of the interventions. This finding is further supported by the focus groups, in which student attitudes and knowledge shifted from a stereotypical and biomedical perception through to a holistic, individualised and person-centred attitude towards older people.

### **8.3.3 Attitudes and knowledge about working with older people**

Attitudes and knowledge towards working with older people were measured through the quantitative scales perceptions of working with older people and knowledge of the nursing role. The results for the intervention cohorts, 3 and 4, show some conflicting findings. For both measures each cohort demonstrates a significant positive difference between time point 1 and time point 4, indicating that through the course of the programme and interventions student attitudes and knowledge about working with older people showed positive improvement.

This improvement in attitudes and knowledge is also supported by the focus group data which shows students reluctance in working with older people, early in the programme, through to an awareness and interest of working with older people in the future. Knowledge of working with older people shifted from basic skills such as talking and performing activities of daily living tasks through to the recognition of the multifaceted complexities associated with older people and the need for comprehensive assessment and health education skills.

This change in attitudes and knowledge about working with older people was also reflected in the data relating to future career choice. While fluctuations are evident through the time points, both cohorts showed an increased interest in older people's health as a potential career choice as students progress through the course of the programme and interventions. In contrast, cohort 2, the non-intervention group, showed a decrease in interest with each successive time point.

However, while there does seem to be some increasing interest in working with older people following the interventions and nursing programme, the number of actual responses identifying older people's health as a potential career option is vastly smaller than other the responses to other areas. Similar to other studies (Abbey et al., 2006; Happell, 2002; Henderson et al., 2008; Moyle, 2003; Stevens, 2011), the findings in this study highlight older people's health is ranked low in relation to career choices whereas, students highly favour areas such as child health, surgical, medical, and emergency care.

#### **8.3.4 Perceived confidence, experience, skills and knowledge**

Student perceptions of their capabilities for working with older people were measured through the scales indicating the perceived level of confidence, experience, skills and knowledge of nursing skills. For both cohorts increases at each successive time point were evident, with all measures showing significant increases except for cohort 3 between time point 2 and time point 3 for confidence and knowledge. Increasing levels of perceived confidence, experience, skills and knowledge were also evident through reflections provided by focus group three. The findings indicate that exposure to the interventions, as students move through the BNurs programme results in

increased levels of perceived confidence, experience, skills and knowledge for working with older people. The opportunity to interact with older people, as provided in the educational interventions, is associated with increased confidence (Garbrah et al., 2017) and reduced contact anxiety (Bousfield & Hutchison, 2010).

#### **8.4 What is the overall impact of the interventions in relation to student nurse knowledge and attitudes?**

Both the qualitative and quantitative data indicate that a significant positive change in student nurse attitudes and knowledge about the ageing process, older people and working with them occurred from the beginning of the nursing programme to the end. To determine whether the identified changes were the result of the interventions or simply maturation associated with nursing education, a comparison of intervention and non-intervention cohort mean scores on the quantitative questionnaire scales were completed.

The findings from this analysis indicated that the mean outcome scores for both intervention and non-intervention groups are not significantly different. The outcome scores perceived level of experience, skills and knowledge at time point 4, did show a statistically significant positive difference for the intervention cohorts but this difference was not evident at time point 5. Therefore, the quantitative data do not suggest that the changes in knowledge and attitudes found in this study are a result of the interventions. Other studies have revealed similar findings (Blais et al., 2006; Holroyd et al., 2009; B. Williams et al., 2007). However, a significant point of differences between this current study and many other similar studies is that in the current study setting, the non-intervention cohorts did experience a dedicated module relating to older people's health. That is, even the non-intervention groups in this study were still exposed to education experiences specifically relating to older people before the development and integration of the interventions. This differs from other studies, where the introduction of educational interventions are implemented into a curriculum that does not already have an older person component. This may explain why the comparison between the non-intervention and intervention cohorts did not produce significant differences in the quantitative outcome measures in this study.

While the quantitative findings do not indicate the interventions provided a significant influence, a comparison of the focus group three data with the data from the recent graduates focus group conducted in phase I of the study, suggest the interventions had a positive influence on attitudes and knowledge towards the ageing process, older people and working with them. This comparison reveals that the focus group three data offers a much broader understanding of the core capabilities required to care for older people. In contrast, some undercurrents of negative attitudes and limited knowledge associated with the care needs of older people were evident in the focus group data with recent graduates who had not been exposed to the interventions.

### **8.5 Section summary**

This section has discussed the impact of the integration of older person-centric educational interventions into a nursing programme and has addressed the specified research questions in conjunction with current literature. Some evidence of the influence of the individual interventions is apparent as are the positive changes in attitudes and knowledge that occurs over time as students progress through their undergraduate nursing education.

The qualitative findings in this study suggest that the inclusion of a number of older person centric curriculum activities throughout the programme in conjunction with a dedicated course, facilitates a broader understanding, more positive attitudes and knowledge of the ageing process, older people and working with them as compared to a single dedicated component on its own. The qualitative findings in this study also offer some valuable insights into the student experience of nursing education that can be applied to future curriculum planning. Finally, the findings from this study show that student attitudes, knowledge and self-efficacy; about caring for older people shift in a positive direction during the course of nursing education.

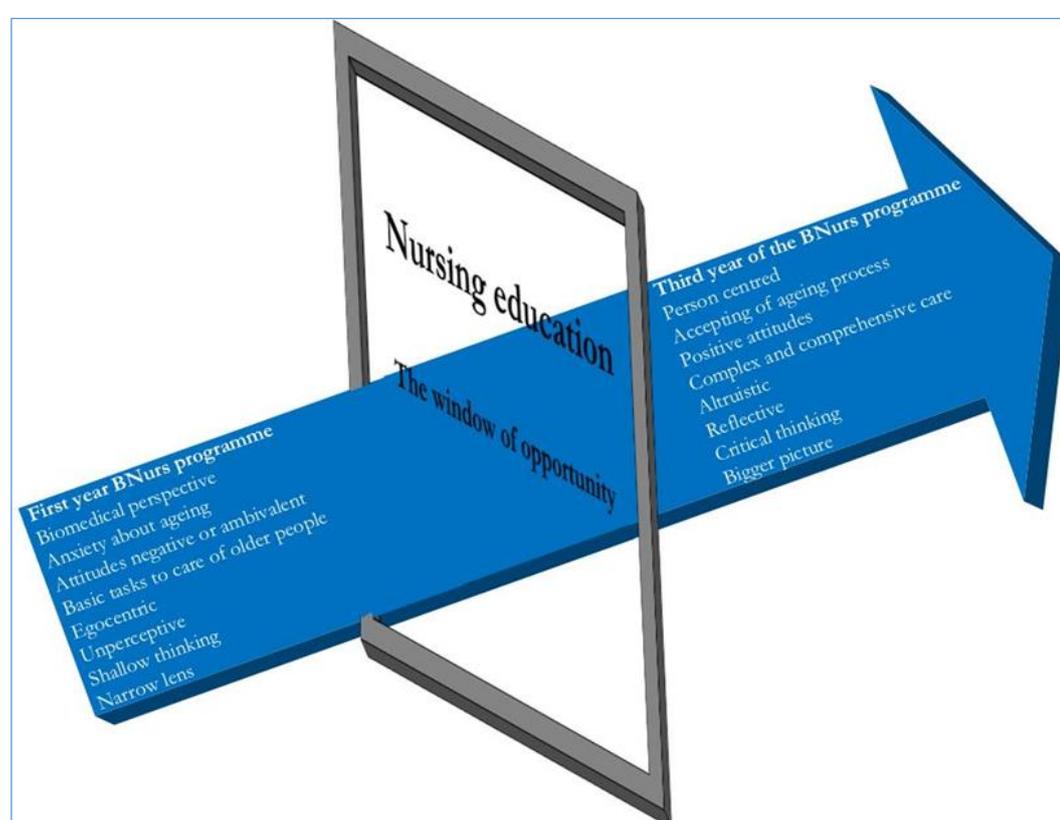
## **Part 2: Maximising the educational window of opportunity**

Irrespective of the impact of the interventions developed and implemented in this study, there did seem to be an overall improvement in attitudes across all groups over time. Further the improvement appeared to be consistent between cohorts, therefore implying that changes in attitudes were ‘time on programme’ influenced in the main, perhaps indicating that the process of nursing education has a positive impact on student nurse attitudes and knowledge; but a point which continues to be debated in the literature (Getting et al., 2002; Lambrinou et al., 2009; McLafferty, 2005; Potter et al., 2013). The findings from this study also confirm the malleable nature of both attitudes and knowledge about the ageing process, older people and working with them through the course of nursing education. This demonstrates the significant window of opportunity nursing education has for making a difference in the healthcare experience of older people.

Such findings are significant as they have the potential to influence how we think about nursing education and how we deliver it. A concept arising from this research is the notion of the ‘educational window’. This next part of the discussion will focus on this opportunity and how it can be used to inform decision making around educational processes. The study findings in conjunction with the literature for maximising this window of opportunity will also be discussed.

As students progress through the nursing programme, significant positive changes are evident across all quantitative measures and aligns with the qualitative data. Of particular note is the transformation evident in the focus group data as students progress through the interventions and BNurs programme. This transformation reflects the core capabilities for the care of older people that all graduate nurses should have and hence the aims of the interventions and this study. The transformations are reflected in students shifting from: A biomedical to a person-centred focus; being anxious to accepting of the ageing process; holding negative or ambivalent attitudes to positive attitudes and; associating basic tasks and skills to complex and comprehensive care.

In conjunction with these shifts, aspects relating to student development towards the role of a registered nurse were also evident in the focus group which demonstrated students transitioning from being: Ego-centric to altruistic; unperceptive to reflective; shallow thinkers to critical thinking and; narrow focused to seeing the bigger picture. These transitions, as students progress through the nursing programme are portrayed in figure 8-1 which demonstrates nursing education as a facilitator of change and window of opportunity for ensuring graduating student nurses possess the necessary capabilities to provide quality care to older people.



**Figure 8-1: Transformation through nursing education**

As demonstrated in figure 8-1, the findings from this study demonstrate nursing education as providing a window of opportunity to facilitate transformations towards the desired capabilities required by nursing students to provide safe and effective care to older people. The findings from this study also offer valuable insights into factors that can best support this window of opportunity for developing core capabilities in the care of older people in the student nurse population. These factors will be discussed in relation to the themes derived from the literature review relating to the

nursing curriculum and student knowledge and attitudes about the ageing process, older people and working with them. These themes are: The content focus or type of exposure to ageing and older people (WHAT); The curriculum structure or sequencing of learning about ageing and older people (WHEN); The instructional method, pedagogical strategies or the environment students learn about ageing and older people (HOW), and; The curriculum goals or objectives (WHY).

## **8.6 The content focus or type of exposure to ageing and older people (The WHAT)**

An overall aim of the interventions in this study was to facilitate positive experiences with older people that challenged typical stereotypes associated with ageing and older people. The nursing education literature highlights the value of early exposure to successful ageing role models (Neville, 2015; Rejeh et al., 2011; Wesley, 2005). However, intervention one, first exposure and reflections on ageing in this study, did not yield initial positive results. This may be because this positive ageing focus did not prepare students for the heterogeneity associated with the older population or prepare students for the complex care needs associated with older people in the acute care environment, where they complete their first clinical placement at the end the end of year one.

The importance of preparation for clinical is well documented and can offset or minimise the influence of negative experiences with older people in the clinical care environment (Brand & McMurray, 2009; Duggan, Mitchell, & Moore, 2013; Gillespie, 2013). In conjunction with the first exposure intervention in year one, a preparation for clinical placement session was also included with the aim of preparing students for the realities of caring for older people in the acute care setting. Despite this, focus group one participants reported feeling unprepared and overwhelmed in their first clinical placement. Identifying strategies to better support students in preparing for the realities of caring for older people needs to be a crucial focus for nursing education in order to maximise positive care experiences for both students and older people.

The interventions implemented in this study occurred in a real world environment. It is evident from the findings that a number of confounding variables also influence student nurse knowledge and attitudes about the ageing process, older people and working with them. Within the study setting, year one students complete biological science and medical science courses that are steeped within the biomedical paradigm. For this reason, it is not surprising that a theme from the focus group one findings is stereotype conforming related to a biomedical view of ageing and older people. Minichiello et al. (2005) note when ageing is viewed from a biomedical approach it promotes negative beliefs and attitudes about ageing and older people. Fundamental to nursing and therefore nursing education is holistic and person-centred care. Koh (2012) postulates that a curriculum grounded in person-centred care can help students move from stereotypical images of older people to an appreciation of them as individuals rather than biomedical categories. Within the setting of this study, in year two and three of the programme, students are only exposed to nursing directed curriculum. The findings from focus group two and three present student attitudes shifting away from a biomedical view of ageing to a more holistic and person-centred perspective. This indicates that the nursing curriculum and implemented interventions, in the current study setting, facilitates transformation in the knowledge and attitudes of nursing students in which they shift from viewing older people as a biomedical group to individual people.

The decrease in scores relating to attitudes that were evident from the quantitative data for cohort 3 between time point 2 and time point 3 further suggests the influence of confounding variables with student attitudes. The highly susceptible nature of young people to negative attitudes about ageing and older people has been reported by (Levy & Banaji, 2002). This also suggests that young students, the vast majority of participants in this study, are also highly susceptible to the influence of other curriculum variables. Data collection at time point 3 occurred following the completion of the course mental health, addictions and disability. While some students were exposed to older people during the disability component as part of the interventions, the majority of students would have worked with younger population groups during their mental health and disability placements. The limited exposure to experiential clinical learning during this course may relate to the drop in attitudes and

therefore suggests the importance of ongoing and integrated exposure to older people throughout the nursing curriculum.

### **8.7 The curriculum structure or sequencing of learning about ageing and older people (The WHEN)**

It has been noted in the literature that integrating experiences with older people into other courses can result in the older person content or focus being lost to students (Holroyd et al., 2009; Kagan & Melendez-Torres, 2015). The focus group findings suggest this may have been the case immediately following the year one intervention. In which the intervention was referred to by the focus group one participants as a communication activity. However, the subsequent focus groups recognised and reflected on the value of this first exposure intervention in relation to their attitudes, knowledge and confidence in working with older people. Indicating that through the experience of the following interventions the aim of the first intervention was recognised. That is, while the influence of the first intervention was not immediately recognised it became more meaningful to students as they progressed through the programme. This finding suggests that the implementation of the interventions model that of a spiral curriculum (Bruner, 2004) in which the revisiting of an older person centric theme serves to reinforce prior experiences and learning. A spiral curriculum is not merely the repetition of a topic, but rather, with each successive encounter, students experience a new, deepening or more complex encounter with the topic. Hence, a spiral structure for implementing older person centric educational interventions supports a constructivist learning approach (Biggs, 2011).

Further evidence of supporting a spiral structure for the implementation of interventions to facilitate positive knowledge and attitudes about the ageing process, older people and working with them is provided in the findings from focus group three in the third year of the programme. This focus group data highlighted the value that participants placed on the opportunity to pull together and build on what they had previously learnt and experience about the care of older people, which illustrates constructivist learning where students build on their prior knowledge and experience. These findings provide valuable information for the debate about integration or

dedicated course that exists in the current literature. This findings from this study align with the literature supporting the inclusion for both integration through the nursing programme and a dedicated stand-alone component in the senior year (Jansen & Morse, 2004; Koren et al., 2008; Koskinen, Salminen, Stolt, & Leino-Kilpi, 2015). This structure has produced both positive transformations and has been recognised by students as an effective way for them to develop, deepen and build on prior knowledge and experiences.

The findings in this study also highlight the need for nurse educators to recognise the influence of other curriculum stressors when planning interventions. Participants from both focus group two and three reflected on feeling overwhelmed with the level of nursing content they experienced early in the programme. It is possible that the lack of an immediate significant impact relating to the first exposure intervention in year one is connected to both the overwhelming nursing content, in which student focus may have been more on self-preservation. For novice students, the act of conducting a health assessment interview with a stranger and the first clinical experience may have resulted in a level of anxiety resulting in a self-centred focus, rather than reflections about the people and situations they experienced. While the focus of the interventions aimed to reduce anxieties associated with ageing or contact anxiety associated with older people, consideration for other anxieties student may be experiencing as a novice student nurse were not accounted for in the planning or structuring of the interventions.

In contrast to intervention one, intervention two did not require the students to perform actively, but rather, provided a non-threatening, lecture style learning opportunity in which they heard about the lived experiences of older people. This experiential twist on a didactic learning process was found, in both the quantitative and qualitative findings, to have a positive influence on students' attitudes and knowledge. This may relate to their level of comfort with this style of learning. Recognising that students experience other anxieties related to their performance or abilities is an important consideration to maximise learning opportunities for future educational interventions. Bandura's (1986) social cognitive theory of learning

highlights the influence self-efficacy and associated stress can have on attention, information processing, persistence and motivation for learning.

A key theme in the literature relates to the timing of interventions and the sequencing of content and exposure to older people. However, the focus of this is predominantly on the sequencing of theoretical and clinical learning experiences (Gould, MacLennan, & Dupuis-Blanchard, 2012; Lowey, 2018; Robinson & Cubit, 2005). A point of difference in this study is that the findings have also highlighted the need for careful sequencing of theory-based experiential learning opportunities and matching these to the students' readiness to engage and their level of confidence. The less threatening experience of intervention two may have been better placed before the first exposure intervention, so students had more time to develop their level of confidence and self-efficacy with focused nursing interactions.

### **8.8 The instructional method, pedagogical strategies and the environment students learn about ageing and older people (The HOW)**

The significance of the clinical setting in relation to the professional socialisation of student nurses is well documented (Brown, Nolan, & Davies, 2008; McGarry, Aubeeluck, Simpson, & Williams, 2009; Thomson, 2007). This was evident in all three focus groups and was closely linked to attitudes and interest in working with older people. The findings from this study are also congruent with the literature that reports students witness discriminatory behaviour towards older people in the clinical learning environment (J. Brown et al., 2008a; Dobrowolska et al., 2017). The development of a community-focussed clinical placement was the main intervention in the second semester of year two and was established as a means to counteract the negative exposure students experience in the acute care environment. The findings from focus group two indicated those who completed the placement demonstrated more positive attitudes and knowledge about the ageing process and older people compared to those participants who did not. However, this placement also negatively impacted on their interest in working with older people. The physically demanding requirements of supporting frail older people within their own homes served to reinforce the belief that

working with older people is physically demanding, a sentiment that is frequently highlighted in the literature (Happell, 2002; Henderson, Xiao, Siegloff, Kelton, & Paterson, 2008; Stevens, 2011). One explanation for this negative influence of working with older people is that the students spent the majority of the placement with care support workers and only one day per week with a nurse care coordinator. Abbey et al. (2006) and Kloster et al. (2007) report that when students are paired with less qualified staff, there is limited opportunity for students to identify with the role of the nurse in caring for older people. Hence it is possible that this intervention reinforced the misconception to students that care of older people involves basic and physically focused tasks. For this reason, the need to forge new clinical partnerships that provide students with dynamic and enriched learning environments with positive nurse role models is essential for making further improvements in student nurse knowledge and attitudes about older people and working with them (M. R. Nolan, Davies, Brown, Keady, & Nolan, 2004; Robinson, Abbey, Abbey, Toye, & Barnes, 2009).

Despite the strong influence of clinical placement on student attitudes about working with older people a positive of this study is the increasing percentage of response indicating older people's health as a future career option. While this was still low when compared with other clinical areas there was an increase noted through the course of the programme for both intervention cohorts and two participants in focus group three indicated they wanted to work with older people on graduation. This suggests the classroom based experiential learning opportunities may have provided a stronger influence for students than the clinical learning setting.

Both focus group two and three identified the value of the classroom based intergenerational interventions for learning in relation to the ageing process, older people and working with them. Furthermore, the interventions did not have a negative influence on attitudes as evidenced by both the quantitative and qualitative data. Therefore, the findings support the growing body of literature for the use of this pedagogical strategy in nursing education (Chonody, 2015; Koh, 2012; Koskinen et al., 2015). One potential obstacle with utilising positive ageing role models was highlighted in the focus group one data that revealed the participants did not associate the older people involved in the first exposure intervention as old, despite the fact they were all

70+ years old. This suggests that students early on, in their nursing programme, associate the concept of old age with biomedical stereotypes. That is, only older people who are frail dependant and ill are identified as old. Similar differentiation between older people and sick, frail older people, has also been found in nurses' perceptions of older patients (Higgins et al., 2007; McLafferty & Morrison, 2004). This finding highlights the multiple dimensions associated with attitudes and perceptions and also the importance that nursing education, in its efforts to challenge negative stereotypes, must not neglect the inclusion of the frail older population.

The inclusion of online interactive technologies offers an additional form of intergenerational experiential learning and have been identified as an effective method of captivating the interest of young students (Altpeter & Marshall, 2003). The online learning module included as an intervention in this study was identified by the focus group three participants as being an effective and efficient teaching and learning tool which provided the opportunity to both learn, build and apply existing knowledge. Similar to the findings from Edwards et al. (2008), the use of the online learning tool was also reported to have promoted student confidence in working with older people.

## **8.9 The curriculum goals or objectives (The WHY)**

Participants from both focus group two and three noted the importance of confidence about working with older people and acknowledged the roles of the interventions in developing their confidence when working with older people. The need for students to feel confident in their capabilities was further evidenced by the data from focus group two, in which participants' relayed positive experiences of when older people were encouraging and supportive towards them in the clinic setting. This suggests students have a need for positive reinforcement about their capabilities to boost their confidence and also that this positive reinforcement received from older people about their capabilities as a nurse provided them with a positive experience with older people because they made them feel better about their abilities. Research suggests that students who report rewarding experiences with older people are more confident and interested in working with this population group (Heise, Johnsen, Himes, & Wing, 2012; Jackson et al., 2017). This suggests that encounters aimed at developing student

confidence along with attitudes and knowledge should be included as an overall curriculum goal.

While core capabilities were established as part of phase I of this study, to direct the design of the educational interventions, these were not openly shared with students. In the focus group one data, participants referred to the first exposure intervention activity, which required them to undertake a beginning health assessment with older people, as a communication activity. The overall aim of this experience seems to have been missed. This may have contributed to the absence of a significant immediate influence of this intervention. The inclusion of older person specific learning objects were included in the course outlines of the year two courses, given the nursing courses are 60 point full semester courses these specific objectives may have been lost in a long list of learning outcomes.

The hidden curriculum is characterised by the conveyance of subtle messages that are a function of the learning institution, clinical learning environment and society in general (Billings & Halstead, 2015). When older people and their care are not visible in the formal curriculum process, such as curriculum goals or objectives, students will implicitly value the knowledge and care of younger individuals over those who are old (Kagan & Melendez-Torres, 2015). The importance of having visible and specific learning outcomes associated with the care of older people will help to ensure students recognise care of the older person is equally important, valued and recognised in the nursing profession and curriculum as is the care of any other population group.

## **Part three: Study limitations, conclusions and implications**

This section presents the limitations identified from this research process. It is important that these limitations be considered when drawing conclusions and identifying the implications of the study for the nursing profession and nursing education, which will also be presented in this final section.

### **8.11 Limitations of the research process and the current study**

This study was conducted in a real world setting, as opposed to a controlled environment and involved investigating the influence of educational interventions but could not control for other confounding variables. Nursing education does not occur in a vacuum and it is acknowledged that multiple variables beyond student exposure to the interventions shape and influence student learning. The inclusion of qualitative focus group data aimed to further elaborate on the process and experience of student learning as a means to try and identify both the influence of the interventions and also other possible influencing factors. However, focus group participants represent a small part of the student nurse cohort and therefore may not adequately represent the student population in this study.

The original intention for this study was that the quantitative data analysis would include a repeat measure design, in which the same subjects would be able to be tested at the different time points as they progressed through the programme. Unfortunately, the data collection method relied on participants being in class the day and time the data were collected and filling in the unique identifier on the questionnaire form. Furthermore, the unique identifier proved not always to be unique. It was discovered that a number of participants had the same first and last two numbers of their student ID making it difficult to match and track individual participants through the data collection time points. Only 25 participants from Cohort 3 and 4 could be tracked across all data collection time points. For this reason, the analysis in this study could

only provide a between group analysis as opposed to a repeat measure design which would have offered a more robust quantitative analysis process.

A further difficulty with the setting and context in this study is the relationship between the researcher and the study population. This required reliance on people external to the research for administering the questionnaire and focus groups. Some misinterpretation of instructions resulted in a low dataset for Cohort 3 at time point 2 and missing demographic data at time point three for cohort 3 and time point 2 for cohort 4. The administration and collection of questionnaire data were conducted in a classroom setting and therefore was dependant on which students were in class on that day and time. These are some of the pitfalls of conducting research in a real world setting as opposed to a controlled environment.

The participants in this study were obtained using a convenience sampling method, which included students at a single school of nursing who are predominantly young females of European or Asian ethnicity. Therefore, the findings cannot be readily generalised to more diverse student nurse populations or different educational settings.

The research questionnaire was designed from the findings from a focus group consisting of members of the study population to ensure relevance. However, the generalisability of focus group data to reflect the study population can be influenced by volunteer bias. That is, self-selection to participate in a focus group may occur because an individual has an expressed interest or strong perceptions about the subject.

The questionnaire aimed to ensure specificity to nursing practice, with the design of the measurement scales based on the style of validated psychometric tools. Although the questionnaires were piloted with a sample from the study population, they were not psychometrically tested for validity and reliability. A possible ceiling effect was evident on the measurement scales at time point 4 and 5. This suggests that a measurement instrument with better sensitivity may have been better able to detect changes or improvements in knowledge and attitudes. A more rigorous assessment of the measurement scales utilised, in conjunction with scores from pre-existing standardised tools would have strengthened the methodological quality of the study.

The process of questionnaire data collection resulted in some data gaps. The collection of initial baseline data in phase I dictated the data collection points for phase III. This resulted in no quantitative data collection at the end of year one. This impacted on the ability to investigate the individual impact of intervention one which could only be investigated in conjunction with intervention two at the end of semester one in year two. Also, the focus group time points, which were at the end of each year of the programme, limited the depth of exploration relating to intervention two, which occurred in the first semester of year two.

There is a potential for response bias for both the questionnaire and focus group data. Social desirability bias, in which participants misrepresent their opinions in the direction of what is deemed a socially appropriate response (Polit & Beck, 2013) may be heightened in this study due to the setting in which the participants are also students enrolled in an educational programme. In addition, concerns about how responses may influence progression in the programme could influence responses. While assurances were provided in the participant information sheet related to anonymity and that participation or responses had no bearing on their academic performance or progress, the focus group participants were not anonymous to their class peers. Also, as student nurses, it is possible many participants were aware of what their responses should be in their professional role and therefore responded as they thought they should rather than how they truly felt. Finally, a limitation of repeat measure designs is that participants become aware of the aims of the study, and therefore participants can become sensitised to the questions which may also bias their responses.

## **8.12 Conclusions**

Despite the limitations presented, this study contributes to the existing body of knowledge relating to nursing education and student nurse knowledge and attitudes towards the ageing process, older people and working with them. The overall aim of this study was to design, implement and evaluate evidence-based teaching and learning strategies to facilitate the necessary capabilities required by graduating nursing students to care for older people. These interventions were designed using information about

the student cohort and the nursing curriculum, which was gathered in phase I of the study and in conjunction with the existing literature.

As part of phase I in this study, an analysis exploring influencing demographic and background variables with student knowledge and attitudes were conducted. The fairly homogenous population in this study did not yield any consistent significant findings. Although a positive relationship between perceived level of confidence, experience, skills and knowledge were identified and suggests the need for more exploration of the role of self-efficacy in relation to student attitudes and knowledge about the ageing process, older people and working with them. Phase II included the design and implementation of four teaching and learning strategies which were integrated into the nursing curriculum. The evaluation of these in relation to their immediate effect found that not all of the interventions produced an immediate impact. However, an analysis of both intra-cohort and inter-cohort quantitative data revealed that through the process of nursing education, student nurse knowledge and attitudes about the ageing process and older people, shifts in a positive direction. Furthermore, for those in the intervention cohorts, there is also a positive shift in student interest in working with older people.

Such findings highlight the significant window of opportunity nursing education is in relation to facilitating positive attitudes and knowledge about ageing, older people and working with them. This is further supported by the qualitative findings which provide evidence of student learning as they progress through the programme. Also, the qualitative data in this study provided valuable insights about the interventions and other educational factors that contribute to the emerging body of knowledge associated with this field of research.

### **8.13 Implications for the nursing profession and nursing education**

Population ageing means that older people are the core business of health care. For this reason, nurses and other health professionals must be equipped with essential core capabilities to provide sufficient quality care to this population group. An essential

element to these capabilities is the development of accurate knowledge and positive attitudes towards the ageing process, older people and working with them. This study shows that student nurses' attitudes and knowledge shift in a positive direction during the course of nursing education and therefore, nursing education and nurse educators have a critical role to play in the health and healthcare experience of older people.

Key recommendations for nursing education that have been identified in this study are summarised in Table 8-1, which relate to factors for consideration in the planning and designing of teaching and learning strategies associated with the nursing care of older people.

**Table 8-2: Recommendations for nursing education**

Recommendations
1. Integration older people's health content and experience throughout the programme in conjunction with a dedicated component in the final year of study to enable students to connect all they have learned during the programme to the care of older people
2. Utilisation if a spiral approach to content and exposure to maximise the construction of new knowledge
3. The inclusion of opportunities to build student confidence about their capabilities in relation to the care of older people
4. Development of clinical partnerships that offer positive nursing role models and person-centred care philosophy for student clinical learning experiences
5. The inclusion of opportunities for positive experiential learning experiences that provide examples of positive ageing and challenge stereotypical perceptions.
6. Facilitating positive contact experiences with a heterogeneous range of older people to ensure students are prepared for the realities of clinical placement
7. Identify and minimise student anxieties and stressors that can impact on student learning and engagement with older people's health content
8. Apply innovative teaching and learning tools such as virtual reality technology, which aligns with the learning needs and capabilities of a young student cohort
9. Visible and well defined learning outcomes associated with the care of the older person

The summary of recommendations outlined in Table 8-1 relates specifically to nurse educators based on the findings from this study. The study also highlights the need for nursing as a profession to challenge ageism and discrimination towards older people in the healthcare setting. Nurses, as the most substantial professional body in the health sector, have the potential to facilitate change both within the health system and also the wider society. Nurses need to advocate for older people and encourage society to develop a new understanding and meaning of ageing and older people that are not based on outdated assumptions and misconceptions.

The introduction of standards of practice at a regulatory body level and essential core capabilities for nursing education programmes would raise the profile of older people and their care needs. Standards of practice associated with the care of the older person may also help to offset the existing substandard practice experienced by older people, which has been highlighted in the literature and noted by the participants in this study. Formalised standards can be utilised to challenge and re-direct practice that does not adhere to the expectations.

Finally, the need for more nursing research to further inform nursing education is vital to ensuring the health needs of older people are effectively addressed and managed.

## **8.8 Future research**

Nursing and health professional education is key to ensuring quality and effective health service interactions for older people. The need to continue to build on the existing body of knowledge relating to educational interventions and influencing factors relating to knowledge and attitudes about the ageing process older people and working with them is vital for informing evidence-based teaching practice and ensuring older people receive quality healthcare.

The limited demographic diversity of participants in this and similar studies highlights the need for multi-site, large sample studies to further clearly identify the impact of gender, culture and ethnicity in relation to ageing, older people and working with them.

Multi-site research would also support the generalisability of findings which is limited in this single site study.

An essential aspect of any interventions aimed at facilitating changes in attitudes and knowledge is whether or not the change is maintained and sustained. While a wealth of literature reports on the positive changes in attitudes and or knowledge of student nurses following educational interventions (Flood & Clark, 2009; Lambrinou et al., 2009; Potter et al., 2013), a gap evident in the literature is identifying sustainability of changes in attitudes and knowledge that occur during nursing education. Longitudinal studies that include post-graduation data would be valuable to identify if changes in knowledge and attitudes are sustained or change over time. Given that nursing education has been identified as a window of opportunity, more research relating to the sustainability of any changes made is essential to guarantee an enduring quality level of care is provided to all older people.

# **Appendices**

**Appendix 1** Participant information sheet and consent form for student focus groups

**Appendix 2** Participant information sheet and consent form for recent graduate focus group

**Appendix 3** Focus group discussion guides

**Appendix 4** Participant information sheet for the student survey questionnaire

**Appendix 5** Survey questionnaire

**Appendix 6** Ethics committee approval letters

**Appendix 7** Univariate analysis tables

**Appendix 8** Demographic data for all cohorts at all time points

## Appendix 1: Participant information sheet and consent form for focus group with students



### 1. SCHOOL OF NURSING

Faculty of Medical & Health Sciences

#### PARTICIPANT INFORMATION SHEET

*(Newly enrolled and evaluation focus groups)*

Research Project: Aligning undergraduate nursing education to meet the health service needs of an ageing population.

*Investigator: Lisa Stewart, PhD Candidate, Senior Tutor, School of Nursing, The University of Auckland Private Bag 92019 Auckland Ph: (09) 9235346 E-mail: [lisa.stewart@auckland.ac.nz](mailto:lisa.stewart@auckland.ac.nz)*

My PhD research involves identifying capabilities required by nursing graduates to ensure quality care for the ageing population, implementation of educational strategies to facilitate learning in these capabilities and then evaluate the educational strategies utilised. The research will be undertaken in different phases.

You are invited to participate in this phase of the research which involves focus group interviews with nursing students to explore knowledge and attitudes pertaining to older people and their health, and also the experiences and influences on these. The focus group interviews will be conducted in a group setting at the University of Auckland, with a total of 8-10 newly enrolled nursing students and will take approximately an hour to complete. The resultant data will be analysed to inform curriculum design and educational strategies to ensure nursing students are adequately prepared to face the challenges of nursing the rapidly ageing population.

Your participation in the research is entirely voluntary and has no affiliation with the academic course you are enrolled in. The Head, School of Nursing has given assurance that your participation or non-participation will not affect your grades or relations with the University. If you agree to participate in the study, please send an email to Sarah Dayal [s.dayal@auckland.ac.nz](mailto:s.dayal@auckland.ac.nz) to indicate your willingness to take part and to enable arrangements for participation.

If you do agree to be involved in the study, you are free to withdraw at any time, without having to give a reason. You do not have to answer all the questions posed, and you may leave the focus group interview at any time. However, because of the discussion-based nature of group interviews, it may not be possible to withdraw the data collected from an individual participant prior to the point at which they choose to withdraw.

As with any group process, confidentiality in terms of individuals' identity cannot be guaranteed however, no material that could personally identify you will be used in any reports on this study. Interviews will be recorded to enable accuracy of data collection. The tapes will be transcribed by the researcher and erased at the completion of the study.

Transcripts and consent forms will be securely stored (in a locked filing cabinet and/or password protected) in the School of Nursing at the University of Auckland for a period of six years. The transcripts will be viewed only by the researcher and PhD supervisor.

If you have any questions about the research or about your participation, please feel free to contact Lisa Stewart ([lisa.stewart@auckland.ac.nz](mailto:lisa.stewart@auckland.ac.nz)), or alternatively the Principal Investigator and research supervisor, Matthew Parsons PhD, Professor in Gerontology, School of Nursing, University of Auckland, Ph:(09) 373 7599 Ext 83033 E-mail: [m.parsons@auckland.ac.nz](mailto:m.parsons@auckland.ac.nz)

Alternatively you can contact Judy Kilpatrick, Associate Professor and Head, School of Nursing, University of Auckland. Ph: (09) 373 7599 ext.82897 E-mail: [j.kilpatrick@auckland.ac.nz](mailto:j.kilpatrick@auckland.ac.nz)

For any queries regarding ethical concerns you may contact the Chair, University of Auckland Human Participants Ethics Committee, the University of Auckland, Office of the Vice Chancellor, Private Bag 92019, Auckland 1142. Telephone 09 373-7599 x 83711.

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS  
COMMITTEE ON 21/02/11 TO 21/02/2014 REFERENCE NUMBER 2010 / 622

## CONSENT FORM



SCHOOL OF NURSING  
Faculty of Medical & Health Sciences

Private Bag 92019  
Auckland  
Tel: 64-9-373 7599  
Fax: 64-9-367 7158

This form will be kept for 6 years

**Research Project: Aligning undergraduate nursing education to meet the health service needs of an ageing population.**

*Investigator: Lisa Stewart, PhD Candidate, Professional Teaching Fellow, The University of Auckland Private Bag 92019 Auckland Ph: (09) 9235346 E-mail: [lisa.stewart@auckland.ac.nz](mailto:lisa.stewart@auckland.ac.nz)*

- I have read the Participant Information Sheet related to the above project for participation in a focus group discussion of one hour duration.
- I understand the nature of the research and why I have been invited to participate.
- I have had time to consider whether to take part in the study and had the opportunity to ask questions and have them answered to my satisfaction.
- I agree to take part in this research and understand that participation is voluntary and has no affiliation with the academic course I am enrolled in and The Head, School of Nursing has given assurance that my participation or non-participation will not affect my grades or relations with the University.
- I understand that I am free to withdraw participation at any time, and realise that I may not be able to withdraw data I have already contributed in the group interview prior to the point at which I choose to withdraw.
- I understand that confidentiality in terms of individuals' identity cannot be guaranteed due to the nature of the group process, but that no material that could personally identify me will be used in any reports on this study.
- I understand that the focus group interviews will be audio-taped for data analysis purposes.
- I agree to not disclose any identifying information discussed in the focus group.
- I understand that the data will be kept for 6 years, after which it will be destroyed.
- I know who to contact if I have any questions about the focus group or the study.

Name \_\_\_\_\_

Date \_\_\_\_\_

Signature \_\_\_\_\_

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 21/02/11 TO 21/02/2014 REFERENCE NUMBER 2010

## Appendix 2: Participant information sheet and consent form for focus group with recent graduates



### 2. SCHOOL OF NURSING

Faculty of Medical & Health Sciences

### PARTICIPANT INFORMATION

#### **Research Project: Aligning undergraduate nursing education to meet the health service needs of an ageing population.**

*Investigator: Lisa Stewart, PhD Candidate, Professional Teaching Fellow, The University of Auckland  
Private Bag 92019 Auckland Ph: (09) 9235346 E-mail: [lisa.stewart@auckland.ac.nz](mailto:lisa.stewart@auckland.ac.nz)*

My PhD research involves an investigation of student attitudes and knowledge about the ageing process, older people and working with them. Part of the study involves the implementation of educational strategies within the Bachelor of Nursing programme. The research will be undertaken in different phases.

This phase, of which you are invited to participate, involves focus group interviews with recent nursing graduates to explore knowledge and attitudes pertaining to older people and their health, and also the influence of undergraduate education and experiences in relation to these. The information gained will be valuable for informing curriculum design and educational strategies to ensure nursing students are adequately prepared to face the challenges of nursing the rapidly ageing population.

The focus group interviews will be conducted in a group setting at the University of Auckland, with a total of 8-10 recent nursing graduates. The resultant data will be analysed to inform curriculum design and educational strategies to ensure nursing students are adequately prepared to face the challenges of nursing the rapidly ageing population.

Your participation in the research is entirely voluntary. If you agree to participate in the study, please send an email to Lisa Stewart [lisa.stewart@auckland.ac.nz](mailto:lisa.stewart@auckland.ac.nz) to indicate your willingness to take part and to enable arrangements for participation. If you do

agree to be involved in the study, you are free to withdraw at any time, without having to give a reason. You do not have to answer all the questions posed and you may leave the focus group interview at any time. However, because of the discussion-based nature of group interviews, it may not be possible to withdraw the data collected from an individual participant prior to the point at which they choose to withdraw.

As with any group process, confidentiality in terms of individuals' identity cannot be guaranteed, however no material that could personally identify you will be used in any reports on this study. Interviews will be recorded and transcribed by the researcher. All recordings will be erased after transcription. Transcripts and consent forms will be securely stored (in a locked filing cabinet and/or password protected) in the School of Nursing at the University of Auckland for a period of six years. The transcripts will be viewed by the researcher and the Principal Investigator and PhD supervisor.

If you have any questions about the research or about your participation, please feel free to contact Lisa Stewart ([lisa.stewart@auckland.ac.nz](mailto:lisa.stewart@auckland.ac.nz)), or alternatively the Principal Investigator and research supervisor, Matthew Parsons PhD, Professor in Gerontology, School of Nursing, The University of Auckland, Ph:(09) 373 7599 Ext 83033 E-mail: [m.parsons@auckland.ac.nz](mailto:m.parsons@auckland.ac.nz)

For any queries regarding ethical concerns you may contact the Chair, the University of Auckland Human Participants Ethics Committee, the University of Auckland, Office of the Vice Chancellor, Private Bag 92019, Auckland 1142. Telephone 09 373-7599 x 83711.

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS  
COMMITTEE ON 21/2/11 TO 21/2/17 REFERENCE NUMBER 7037



**3. SCHOOL OF NURSING**

**Faculty of Medical & Health Sciences**

Private Bag 92019

Auckland

Tel: 64-9-373 7599

Fax: 64-9-367 7158

**CONSENT FORM**

This form will be kept for 6 years

**Research Project: Aligning undergraduate nursing education to meet the health service needs of an ageing population.**

*Investigator: Lisa Stewart, PhD Candidate, Professional Teaching Fellow, The University of Auckland Private Bag 92019 Auckland Ph: (09) 9235346 E-mail: [lisa.stewart@auckland.ac.nz](mailto:lisa.stewart@auckland.ac.nz)*

- I have read the Participant Information Sheet related to the above project for participation in a focus group discussion of one hour duration.
- I understand the nature of the research and why I have been invited to participate.
- I have had time to consider whether to take part in the study and had the opportunity to ask questions and have them answered to my satisfaction.
- I agree to take part in this research and understand that participation is voluntary I understand that I am free to withdraw participation at any time, and realise that I may not be able to withdraw data I have already contributed in the group interview prior to the point at which I choose to withdraw.
- I understand that confidentiality in terms of individuals' identity cannot be guaranteed due to the nature of the group process, but that no material that could personally identify me will be used in any reports on this study.
- I understand that the focus group interviews will be audio-taped for data analysis purposes.
- I agree to not disclose any identifying information discussed in the focus group.
- I understand that the data will be kept for 6 years, after which it will be destroyed.
- I know who to contact if I have any questions about the focus group or the study.

Name \_\_\_\_\_

Date \_\_\_\_\_

Signature \_\_\_\_\_

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 21/02/11 TO 21/02/2014 REFERENCE NUMBER 2010 / 622

## Appendix 3: Focus group discussion guides

### FOCUS GROUP INTERVIEW GUIDE FOR NEWLY ENROLLED STUDENTS

Research Project: Research Project: Aligning undergraduate nursing education to meet the health service needs of an ageing population.

What words do you think best describe older people? *Prompt is old age attractive?*

What things do you think defines or determines old age? *Prompts wisdom, experience chronological age, wrinkles, and ability to work*

In general all old people are the same, what do you think about this statement?

Do you think about yourself being old one day? *(How do you feel about becoming old yourself)*

What area of nursing interests you the most, what is it about the area that interests you? *Where do you want to work?*

On the completion of your Bachelor of nursing programme if you were offered a job in aged care what factors do you think would influence your decision to take the job? Addition: In general how would you describe working with older people?

Any points anyone would like to add to the discussion?

## **FOCUS GROUP INTERVIEW GUIDE FOR RECENT GRADUATES**

**Research Project: Research Project: Aligning undergraduate nursing education to meet the health service needs of an ageing population.**

What words would you use to describe older people?

In general how would you describe working with older people?

If you were offered a job in older people's health what factors would influence your decision to take the job? *Prompts; Pay, team, location, skills*

Can you recall experiences you had with older people during your undergraduate training? Describe what you can recall

How do you think these influenced your perceptions about older people?

Are there any other factors from your undergraduate education experience that has influenced you in relation to your thoughts and attitudes towards working with older people?

What do you think are the important knowledge and skills you need to have to work with older people in any setting? Are there any other important factors to consider when working with an older person?

If you were responsible for educating nursing students how you would promote learning for the factors you have discussed?

How would you go about improving attitudes about older people and prompting interest in working with them?

Any points anyone would like to add to the discussion?

## FOCUS GROUP INTERVIEW GUIDE FOR EVALUATION PHASE

### Research Project: Aligning undergraduate nursing education to meet the health service needs of an ageing population.

What words would you use to describe older people?

In general how would you describe working with older people?

If you were offered a job in older people's health what factors would influence your decision to take the job? *Prompts; Pay, team, location, skills*

What experiences have you had with older people during your training (*prompt to intervention(s)*)

How do you think these experiences have influenced your views ageing, older people or working with older people?

Are there any other factors from your undergraduate education experience that has influenced you in relation to your thoughts and attitudes towards working with older people?

What do you think are the important knowledge and skills you need to have to work with older people in any setting? Are there any other important factors to consider when working with an older person?

If you were responsible for educating nursing students how you would promote learning for the factors you have discussed?

How would you go about improving attitudes about older people and prompting interest in working with them?

Any points anyone would like to add to the discussion?

## Appendix 4: Participant information sheet, survey questionnaire



### 4. SCHOOL OF NURSING

Faculty of Medical & Health Sciences

Private Bag 92019

Auckland

Tel: 64-9-373 7599

Fax: 64-9-367 7158

### PARTICIPANT INFORMATION

#### **Research Project: Aligning undergraduate nursing education to meet the health service needs of an ageing population.**

*Investigator: Lisa Stewart, PhD Candidate, Professional Teaching Fellow, School of Nursing, The University of Auckland Private Bag 92019 Auckland Ph: (09) 9235346  
Email :[lisa.stewart@auckland.ac.nz](mailto:lisa.stewart@auckland.ac.nz)*

My PhD research involves an investigation of student attitudes and knowledge about the ageing process, older people and working with them. Part of the study involves the implementation of educational strategies within the Bachelor of Nursing programme. The research will be undertaken in different phases.

You are invited to participate in this phase of the research which involves completing the attached questionnaire. The pre-test-post-test design will enable comparison analysis of the classes' responses to determine if the educational strategies employed facilitate the acquisition of the knowledge, skills and attitudes required to meet the core capabilities necessary to face the challenge of nursing the rapidly ageing population. The attached self completion questionnaire will take 15 minutes of your time. Your participation in this research is entirely voluntary and has no affiliation with the academic course you are enrolled in. The Head, School of Nursing has given assurance that your participation or non-participation will not affect your grades or relations with the University. Responses to the questionnaire will be anonymous and you will not be required to provide any identifying data. Due to the anonymous nature of the data, once you have submitted the questionnaire, it will not be possible to withdraw the information you have provided.

Your consent to participate will be acknowledged through the completion and submission of the questionnaire into the secure collection box located at the back of the class. Once the survey data has been collated and analysed all hard copy data will

be shredded. Data will be securely stored on password protected computers for future use and possible comparisons with other data sets. It is likely that findings from this study will be reported in professional publications. This means your responses may not remain confidential, however this will be done in a way that does not identify you as its source.

If you have any questions about the research or about your participation, please feel free to contact Lisa Stewart ([lisa.stewart@auckland.ac.nz](mailto:lisa.stewart@auckland.ac.nz)), or alternatively the Principal Investigator and research supervisor, Matthew Parsons PhD, Professor in Gerontology, School of Nursing, University of Auckland, Ph:(09) 373 7599 Ext 83033, E-mail: [m.parsons@auckland.ac.nz](mailto:m.parsons@auckland.ac.nz)

Alternatively you can contact Judy Kilpatrick, Associate Professor and Head, School of Nursing, The University of Auckland. Ph: (09) 373 7599 ext.82897 E-mail: [j.kilpatrick@auckland.ac.nz](mailto:j.kilpatrick@auckland.ac.nz)

For any queries regarding ethical concerns you may contact the Chair, University of Auckland Human Participants Ethics Committee, the University of Auckland, Office of the Vice Chancellor, Private Bag 92019, Auckland 1142. Telephone 09 373-7599 x 83711.

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS  
COMMITTEE ON 21/02/11 TO 21/02/2014 REFERENCE NUMBER 2010 / 622

## Appendix 5: Questionnaire

Please insert the first two and last two numbers of your student ID \_\_\_\_\_

### Attitudes and knowledge about ageing, older people and working with them

#### Section 1: Background information

For the following questions please place a tick in the most appropriate box

**1. Age group (years)**

<input type="checkbox"/> <20	<input type="checkbox"/> 21-25	<input type="checkbox"/> 26-30	<input type="checkbox"/> 30-40	<input type="checkbox"/> >40
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**2. Gender**

<input type="checkbox"/> Male	<input type="checkbox"/> Female
-------------------------------	---------------------------------

**3. Which ethnic group do you most identify with?**

<input type="checkbox"/> European	<input type="checkbox"/> Asian
<input type="checkbox"/> Maori	<input type="checkbox"/> Other. Please specify :
<input type="checkbox"/> Pacific Island	_____

**4. What is your highest educational qualification?**

<input type="checkbox"/> NCEA level III (or equivalent)	<input type="checkbox"/> Post graduate diploma / degree
<input type="checkbox"/> Trade certificate /diploma	<input type="checkbox"/> Other. Please specify:
<input type="checkbox"/> Bachelor's degree	_____

Continued on next page

5. At what age do you think someone is defined as 'old' or becomes an 'older person'?  
(Tick the closest answer)

<input type="checkbox"/> 60+	<input type="checkbox"/> 65+
<input type="checkbox"/> 70+	<input type="checkbox"/> 75+
<input type="checkbox"/> 80+	<input type="checkbox"/> 85+
<input type="checkbox"/> 90+	<input type="checkbox"/> unsure

6. Have you had any work experience (healthcare related or other) with older people?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

If yes, please describe:

---



---

7. Have you ever lived with older people?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

If yes, please explain who you lived with and for how long

---



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8. Do you spend time with any older relatives or friends such as Grandparents?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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If yes, please provide approximate ages of older friends or relatives you spend time with

---



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Continued on next page

**9. What word(s) best describe older relatives or friends that you have met or spent time with, you may tick more than one (leave this section blank if you do not know or have any elderly relatives or friends)**

<input type="checkbox"/> Independent	<input type="checkbox"/> Disabled
<input type="checkbox"/> Fragile	<input type="checkbox"/> Healthy
<input type="checkbox"/> Sociable	<input type="checkbox"/> Isolated
<input type="checkbox"/> Active	<input type="checkbox"/> Unwell

**10. On completion of the Bachelor of Nursing Programme, what field do you most want to work in?**

<input type="checkbox"/> Hospital surgical ward	<input type="checkbox"/> Primary health care
<input type="checkbox"/> Hospital medical ward	<input type="checkbox"/> Mental health
<input type="checkbox"/> Accident and Emergency	<input type="checkbox"/> Intensive care
<input type="checkbox"/> Older people's health	<input type="checkbox"/> Paediatrics
<input type="checkbox"/> Community health care	<input type="checkbox"/> Other. (Please Specify)
<input type="checkbox"/>	<input type="checkbox"/>

Continued on next page

## Section 2: Reactions to ageing

This section explores your views about your own ageing and becoming old.

Please indicate your level of agreement or disagreement with the following statements

	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
I find it hard to imagine myself as being old one day	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I get old I do not think I will enjoy life as much as I do now	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the thought of growing old depressing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the thought of growing old frightening	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I get old I will have the freedom to do what I want	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In old age I will be as enthusiastic about life as I am now	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think old age will bring satisfactions that are not available to me during my youth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe old age will be an enjoyable time of life for me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Section 3: Older people

This section explores your perceptions about older people

Please indicate your level of agreement or disagreement with the following statements

	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
Older people are dignified and accomplished	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most older people are physically fragile	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most older people are socially confident	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most older people think about death and dying all the time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most older people are genuinely interested in what you have to say	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most older people are physically active	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most older people get depressed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most older people are kind and helpful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most older people are grumpy and disinterested	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most older people are socially isolated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Section 4: Knowledge of ageing

This section explores your knowledge about ageing. Tick whether the following statements are true or false

	True	False
It is best for older people to live in residential care	<input type="radio"/>	<input type="radio"/>
As people get older they lose the ability to control their bladder and bowel	<input type="radio"/>	<input type="radio"/>
Older people no longer have life goals	<input type="radio"/>	<input type="radio"/>
Most older people are able to look after themselves	<input type="radio"/>	<input type="radio"/>
Older people are dependent on other people to look after them.	<input type="radio"/>	<input type="radio"/>
Older people do not benefit from regular exercise as much as younger people	<input type="radio"/>	<input type="radio"/>
Older people are just like babies, only at the other end of the age spectrum	<input type="radio"/>	<input type="radio"/>
Old age equates to a loss of function and abilities	<input type="radio"/>	<input type="radio"/>
It is unsafe for older people to engage in sexual activity	<input type="radio"/>	<input type="radio"/>
Older people have difficulty walking and moving around	<input type="radio"/>	<input type="radio"/>
Nutrition is not as important in older people as it is in younger people	<input type="radio"/>	<input type="radio"/>
Chronological age is the most important determinant of age	<input type="radio"/>	<input type="radio"/>
As people get older they become increasingly confused and disorientated	<input type="radio"/>	<input type="radio"/>
With old age comes disease and illness	<input type="radio"/>	<input type="radio"/>
Older people are just waiting to die	<input type="radio"/>	<input type="radio"/>

## Section 5: Working with Older people

This section explores your thoughts about working with older people. Please indicate your level of agreement or disagreement with the following statements.

	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
Working with old people does not interest me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working with old people is boring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health promotion is an important aspect of working with older people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would lose my nursing skills working with older people all the time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The thought of working with older people frightens me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Only basic nursing skills are required when working with older people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working with older people requires heavy lifting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working with older people requires a proactive and restorative approach to care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would find it depressing working with older people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are a wide variety of healthcare settings and career paths which involve working with older people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Older people do not require as much skilled nursing care as other groups in the population	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Section 6: Aspects of care**

This section explores how prepared you feel to nurse older people. Please score from 1-10 (by circling on the scale) how you feel about performing the following aspects of nursing care in terms of your confidence, experience, knowledge and skills.

**Assisting an older person with hygiene care**

Not confident	1	2	3	4	5	6	7	8	9	10	Very confident
Inexperienced	1	2	3	4	5	6	7	8	9	10	Very experienced
Some skills	1	2	3	4	5	6	7	8	9	10	A lot of skills
Some knowledge	1	2	3	4	5	6	7	8	9	10	A lot of knowledge

**Performing a comprehensive and holistic assessment of health, wellness and function with older people**

Not confident	1	2	3	4	5	6	7	8	9	10	Very confident
Inexperienced	1	2	3	4	5	6	7	8	9	10	Very experienced
Some skills	1	2	3	4	5	6	7	8	9	10	A lot of skills
Some knowledge	1	2	3	4	5	6	7	8	9	10	A lot of knowledge

**Initiating and maintaining effective therapeutic communication with an older person**

Not confident	1	2	3	4	5	6	7	8	9	10	Very confident
Inexperienced	1	2	3	4	5	6	7	8	9	10	Very experienced
Some skills	1	2	3	4	5	6	7	8	9	10	A lot of skills
Some knowledge	1	2	3	4	5	6	7	8	9	10	A lot of knowledge

Continued on next page

**Assisting an older person with mobilising (walking) and transferring**

Not confident	1	2	3	4	5	6	7	8	9	10	Very confident
Inexperienced	1	2	3	4	5	6	7	8	9	10	Very experienced
Some skills	1	2	3	4	5	6	7	8	9	10	A lot of skills
Some knowledge	1	2	3	4	5	6	7	8	9	10	A lot of knowledge

**Identify and managing the interaction of multiple functional, medical and social problems, including syndromes of old age**

Not confident	1	2	3	4	5	6	7	8	9	10	Very confident
Inexperienced	1	2	3	4	5	6	7	8	9	10	Very experienced
Some skills	1	2	3	4	5	6	7	8	9	10	A lot of skills
Some knowledge	1	2	3	4	5	6	7	8	9	10	A lot of knowledge

**Promoting an environment that enables client safety, independence, quality of life, and health.**

Not confident	1	2	3	4	5	6	7	8	9	10	Very confident
Inexperienced	1	2	3	4	5	6	7	8	9	10	Very experienced
Some skills	1	2	3	4	5	6	7	8	9	10	A lot of skills
Some knowledge	1	2	3	4	5	6	7	8	9	10	A lot of knowledge

Continued on next page

**Section 7: Nursing role with older people.**

Which of the following is part of the nurse's role when working with older people?

3= definitely a nursing responsibility

2= partly a nursing responsibility

1= not a nursing responsibility

0 unsure

	3	2	1	0
Communicating health information with the older person and their family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Initiating goal setting and restorative care principles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identifying and preventing factors that cause functional decline	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recognising and managing common ageing syndromes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Initiating health promotion strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facilitating older peoples' participation in their health care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promoting health screening and immunisations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Individualising care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recognising the complex interactions between acute and chronic conditions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facilitating communication across and between care providers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Co-ordinating care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Educating of older people and their family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of questionnaire  
Thank you for your time

## Appendix 6: Ethics committee approval letters

Office of the Vice-Chancellor  
Research Integrity Unit  
The University of Auckland  
Private Bag 92019  
Auckland, New Zealand



Level 3, 76 Symonds Street

**UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS  
ETHICS COMMITTEE**

Telephone: 64 9 373 7599

Extension: 83711 / 87830

Facsimile: 64 9 373 7432

21 February 2011

**MEMORANDUM TO:**

Dr Matthew Parsons / Lisa Stewart  
School of Nursing

**Re: Application for Ethics Approval (Our Ref. 2010 / 622)**

The Committee considered your application for ethics approval for your project titled "Aligning undergraduate nursing education to meet the future health needs of an aging population".

Ethics approval was given for a period of three years with the following comment(s).

1. The Committee expects to receive the questionnaire for approval prior to its use.

The expiry date for this approval is 21/02/2014.

If the project changes significantly you are required to resubmit a new application to the Committee for further consideration.

In order that an up-to-date record can be maintained, it would be appreciated if you could notify the Committee once your project is completed.

Please contact the Chairperson if you have any specific queries relating to your application. The Chair and the members of the Committee would be most happy to discuss general matters relating to ethics provisions if you wish to do so.

All communications with the UAHPEC regarding this application should indicate this reference number - 2010 / 622.

Lana Lon  
Executive Secretary

University of Auckland Human Participants Ethics  
Committee c.c. Head of Department / School, School of  
Nursing  
Lisa Stewart School of Nursing

1. Should you need to make any changes to the project, write to the Committee giving full details including revised documentation.
2. The approval is for three years. Should you require an extension write to the Committee before the expiry date giving full details along with revised documentation. Extension can be granted for up to three years, after which time you must make a new
3. At the end of three years, or if the project is completed before the expiry, you are requested to advise the Committee of its completion.
4. Do not forget to fill in the 'approval wording' on the Participant Information Sheets and Consent Forms giving the dates of approval and the reference number before you send them out to your participants.
5. Please send a copy of this approval letter to the Manager - Funding Processes at Research Office if you have obtained any funding other than from UniServices. For UniServices contract, please send a copy of the approval letter to the Contract Manager at UniServices.
6. Please note that the Committee may from time to time conduct audits of approved projects to ensure that the research has been carried out according to the approval that was given.

Office of the Vice-Chancellor  
Research Integrity Unit  
The University of Auckland  
Private Bag 92019  
Auckland, New Zealand



**UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE**

Level 3, 76 Symonds Street  
Telephone: 64 9 373 7599  
Extension: 83711 / 87830  
Facsimile: 64 9 373 7432

14 July 2011

**MEMORANDUM TO:**

Dr Matthew Parsons / Lisa Stewart  
School of Nursing

**Re: Application for Ethics Approval (Our Ref. 2010 / 622)**

The Committee considered your request for amendment for your project titled "Aligning undergraduate nursing education to meet the future health needs of an aging population".

The Committee approved the following amendment(s):

1. The newly developed questionnaire as required in the original approval letter.

The expiry date for this project is 21/02/2014.

If the project changes significantly you are required to resubmit a new application to the Committee for further consideration.

In order that an up-to-date record can be maintained, you are requested to notify the Committee once your project is completed.

The Chair and the members of the Committee would be happy to discuss general matters relating to ethics approvals if you wish to do so. Contact should be made through the secretary in the first instance, Lana Lon, l.lon@auckland.ac.nz.

All communications with the UAHPEC regarding this application should include our reference number - 2010 / 622

Lana Lon  
Office of the Vice-Chancellor

Research Integrity Unit  
The University of Auckland  
Office of the Vice-Chancellor  
Research Integrity Unit



**UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE** Level 3, 76 Symonds Street  
Telephone: 64 9 373 7599  
Extension: 83711 / 87830  
Facsimile: 64 9 373 7432

Secretary  
University of Auckland Human Participants Ethics  
Committee c.c. Head of Department / School, School of  
Nursing

UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE (UAHPEC)  
14-Jan-2014

MEMORANDUM TO:

Prof Matthew Parsons Nursing

Re: Request for change of Ethics Approval Ethics Approval (Our Ref. 7037): Amendments Approved

The Committee considered your request for change for your project entitled Aligning undergraduate nursing education to meet the future health needs of an aging population and approval was granted for the following amendments on 14-Jan-2014.

The Committee approved the following amendments:

1) To extend the ethics approval for the study for further 3 years.

The expiry date for this approval is 21-Feb-2017.

If the project changes significantly you are required to resubmit a new application to the Committee for further consideration.

In order that an up-to-date record can be maintained, it would be appreciated if you could notify the Committee once your project is completed.

The Chair and the members of the Committee would be happy to discuss general matters relating to ethics approvals. If you wish to do so, please contact the UAHPEC Ethics Administrators at [roethics@auckland.ac.nz](mailto:roethics@auckland.ac.nz) in the first instance.

Please quote reference number: 7037 on all communication with the UAHPEC regarding this application.

(This is a computer generated letter. No signature required.)

## Appendix 7: Univariate analysis tables

**Table A7-1: Univariate analysis baseline reaction to ageing scores with other variables**

Variables	Count Type III Sum of Squares	df	Mean Square	F	Sig.
Age	20.201	1	20.201	.677	.412
Gender	10.719	1	10.719	.351	.554
Ethnicity	314.711	5	62.942	2.137	.063
Education level	137.049	3	45.683	1.515	.212
Experience working older people	18.330	1	18.330	.601	.439
Experience living with older people	60.488	1	60.488	2.000	.159
Perceptions of older people	397.073	1	397.073	14.036	.000
Knowledge of Ageing	109.560	1	109.560	3.657	.058
Perceptions working older people	100.731	1	100.731	3.356	.069
Knowledge of nursing role	40.249	1	40.249	1.343	.248
Descriptions of older people	110.386	1	110.386	3.685	.057

**Table A7-2: Univariate analysis baseline perceptions of older people scores with other variables**

Variables	Count Type III Sum of Squares	df	Mean Square	F	Sig.
Age	14.027	1	14.027	.978	.324
Gender	0.066	1	.066	.005	.946
Ethnicity	190.271	5	38.054	2.798	.019
Education level	124.802	3	41.601	3.009	.032
Experience working older people	6.487	1	6.487	.452	.502
Experience living with older people	14.361	1	14.361	1.004	.318
Reactions to ageing	186.729	1	186.729	14.036	.000
Knowledge of Ageing	145.437	1	145.437	10.738	.001
Perceptions working older people	36.547	1	36.547	2.578	.110
Knowledge of nursing role	3.537	1	3.537	.253	.616
Descriptions of older people	134.390	1	134.390	9.876	.002

**Table A7-3: Univariate analysis baseline Knowledge of ageing scores with other variables**

Variables	Count Type III Sum of Squares	df	Mean Square	F	Sig.
Age	60.528	1	60.528	3.532	.062
Gender	.126	1	.126	.007	.932
Ethnicity	81.968	5	16.394	.947	.452
Education level	65.931	3	21.977	1.277	.284
Experience working older people	.001	1	.001	.000	.996
Experience living with older people	3.183	1	3.183	.183	.669
Reactions to ageing	62.264	1	62.264	3.657	.058
Perceptions of older people	175.761	1	175.761	10.738	.001
Perceptions working older people	41.915	1	41.915	2.445	.120
Knowledge of nursing role	9.389	1	9.389	.533	.466
Descriptions of older people	134.716	1	134.716	8.112	.005

**Table A7-4: Univariate analysis baseline perceptions of working with older people scores with other variables**

Variables	Count Type III Sum of Squares	df	Mean Square	F	Sig.
Age	15.889	1	15.889	.936	.335
Gender	.520	1	.520	.030	.862
Ethnicity	14.663	5	2.933	.168	.974
Education level	30.590	3	10.197	.594	.619
Experience working older people	6.414	1	6.414	.375	.541
Experience living with older people	10.927	1	10.927	.640	.425
Reactions to ageing	56.401	1	56.401	3.356	.069
Perceptions of older people	43.514	1	43.514	2.578	.110
Knowledge of ageing	41.295	1	41.295	2.445	.120
Knowledge of nursing role	24.523	1	24.523	1.433	.233
Descriptions of older people	.295	1	.295	.017	.896

**Table A7-5: Univariate analysis baseline knowledge of nursing role scores with other variables**

Variables	Count Type III Sum of Squares	df	Mean Square	F	Sig.
Age	60.283	1	60.283	2.760	.099
Gender	3.336	1	3.336	.150	.699
Ethnicity	233.609	5	46.722	2.192	.058
Education level	104.074	3	34.691	1.588	.194
Experience working older people	15.906	1	15.906	.719	.398
Experience living with older people	30.563	1	30.563	1.388	.240
Reactions to ageing	29.588	1	29.588	1.343	.248
Perceptions of older people	5.608	1	5.608	.253	.616
Knowledge of ageing	11.801	1	11.801	.533	.466
Perceptions working older people	31.550	1	31.550	1.433	.233
Descriptions of older people	8.669	1	8.669	.391	.532

**Table A7-6: Univariate analysis baseline perceived confidence scores with other variables**

Variables	Count Type III Sum of Squares	df	Mean Square	F	Sig.
Age	2736.600	1	547.320	1.973	.085
Gender	289.459	1	289.459	1.580	.212
Ethnicity	2335.840	4	583.960	3.527	.010
Education level	388.634	3	129.545	.695	.557
Experience working older people	483.002	1	483.002	2.669	.106
Experience living with older people	720.957	1	720.957	4.044	.047
Reactions to ageing	1983.846	1	1983.846	12.101	.001
Perceptions of older people	136.266	1	136.266	.737	.393
Knowledge of ageing	186.974	1	186.974	.654	.420
Perceptions working older people	1776.020	1	1776.020	10.680	.002
Knowledge of nursing role	124.697	1	124.697	.431	.512
Descriptions of older people	1.286	1	1.286	.004	.947
Perceived experience	11571.548	1	11571.548	210.442	.000
Perceived knowledge	11658.034	1	11658.034	215.873	.000
Perceived skill	12205.275	1	12205.275	255.418	.000

**Table A7-7: Univariate analysis baseline perceived experience scores with other variables**

Variables	Count Type III Sum of Squares	df	Mean Square	F	Sig.
Age	2158.576	1	431.715	2.760	.023
Gender	67.286	1	67.286	.389	.535
Ethnicity	2958.115	4	739.529	5.094	.001
Education level	900.141	3	300.047	1.792	.155
Experience working older people	1128.534	1	1128.534	7.009	.010
Experience living with older people	1616.443	1	1616.443	10.397	.002
Reactions to ageing	1333.986	1	1333.986	8.407	.005
Perceptions of older people	27.548	1	27.548	.137	.711
Knowledge of ageing	40.815	1	40.815	.235	.629
Perceptions working older people	981.669	1	981.669	6.034	.016
Knowledge of nursing role	0.088	1	0.088	.001	.982
Descriptions of older people	44.570	1	44.570	.222	.638
Perceived confidence	30005.29	1	30005.294	1138.167	.000
Perceived knowledge	13190.90	1	13190.904	550.947	.000
Perceived skill	13276.33	1	13276.339	577.951	.000

**Table A7-8: Univariate analysis baseline perceived skill scores with other variables**

Variables	Count Type III Sum of Squares	df	Mean Squar e	F	Sig.
Age	2290.582	1	458.116	3.010	.015
Gender	122.637	1	122.637	.722	.398
Ethnicity	2059.806	4	514.951	3.363	.013
Education level	684.257	3	228.086	1.363	.260
Experience working older people	967.134	1	967.134	6.033	.016
Experience living with older people	1204.757	1	1204.757	7.644	.007
Reactions to ageing	1230.266	1	1230.266	7.820	.006
Perceptions of older people	15.485	1	15.485	.090	.764
Knowledge of ageing	18.675	1	18.675	.109	.742
Perceptions working older people	666.173	1	666.173	4.069	.047
Knowledge of nursing role	10.949	1	10.949	.069	.793
Descriptions of older people	48.363	1	48.363	.232	.630
Perceived confidence	10709.445	1	10709.445	215.873	.000
Perceived experience	12998.876	1	12998.87	550.947	.000
Perceived knowledge	34689.080	1	34689.08	5234.82	.000

**Table A7-9: Univariate analysis baseline perceived knowledge scores with other variables**

Variables	Count Type III Sum of Squares	df	Mean Square	F	Sig.
Age	2316.833	1	463.367	3.1	.012
Gender	190.014	1	190.01	1.153	.286
Ethnicity	2327.290	4	581.82	3.998	.005
Education level	599.871	3	199.95	1.220	.308
Experience working older people	1020.227	1	1020.2	6.564	.012
Experience living with older people	1086.212	1	1086.2	7.022	.010
Reactions to ageing	1068.153	1	1068.1	6.896	.010
Perceptions of older people	22.316	1	22.316	.101	.751
Knowledge of ageing	14.135	1	14.135	.085	.772
Perceptions working older people	684.494	1	684.49	4.298	.041
Knowledge of nursing role	9.423	1	9.423	.062	.803
Descriptions of older people	41.877	1	41.877	.190	.664
Perceived confidence	34243.530	1	34243.	1560.8	.000
Perceived experience	12756.213	1	12756.	577.95	.000
Perceived skill	13595.421	1	13595.	108.59	.000

## Appendix 8: Demographic data all cohorts and time points

**Table A8-1: Participants' age ranges from the questionnaire data**

Cohort	≤ 20	21-25	26-30	30-40	40 <	Total responses
C1T5	14	35	10	5	-	64
C2T3	35	25	3	4	2	69
C2T4	25	34	3	5	2	69
C2T5	13	51	2	4	2	72
C3T1	64	18	1	2	-	85
C3T2	35	7	3	-	-	45
C3T3	35	31	3	1	-	70
C3T4	29	46	5	-	-	80
C3T5	15	56	5	1	1	78
C4T1	69	12	3	4	1	89
C4T2	41	13	4	2	1	61
C4T3	48	21	3	5	-	77
C4T4	28	39	3	4	1	75

**Table A8-2: Sex of participants from the questionnaire data**

Cohort	Female	Male	Total responses
C1T5	59	5	64
C2T3	65	5	70
C2T4	64	4	68
C2T5	66	5	71
C3T1	82	3	85
C3T2	42	3	45
C3T3	26	2	28
C3T4	77	3	80
C3T5	75	3	78
C4T1	79	11	90
C4T2	45	7	52
C4T3	68	9	77
C4T4	68	7	75

**Table A8-3: Participants ethnicity from the questionnaire data**

Cohort	European	Maori	Pacific	Asian	African	Total responses
C1T5	31	1	2	28	2	64
C2T3	32	4	4	27		69
C2T4	34	4	5	23		68
C2T5	36	5	5	24		72
C3T1	48		4	32	1	85
C3T2	28	0	0	16	1	45
C3T3	9	1	1	14		25*
C3T4	41	4	4	34		80
C3T5	38	2	2	37		78
C4T1	51	5	4	27	3	90
C4T2	26	1	1	21	1	50
C4T3	42	4	4	24	3	77
C4T4	41	3	3	24	3	74

**Table A8-4: Participants highest educational qualification from the Questionnaire data**

Cohort	NCEA LIII	Bachelor Degree	Post Graduate	Trade or Other	Total responses
C1T5	37	24	2	1	64
C2T3	51	9	1	9	70
C2T4	53	7	1	-	67
C2T5	55	10	2	5	72
C3T1	72	8	4	1	85
C3T2	40	3	2	-	45
C3T3	21	2	1	-	24
C3T4	65	11	3	-	79
C3T5	66	8	-	2	76
C4T1	71	13	2	4	90
C4T2	39	7	2	2	50
C4T3	59	12	2	4	77
C4T4	59	9	2	4	74

**Table A8-5: Participants experience of living with older people from the questionnaire data**

Cohort	Experience		Lived with			Length of time			
	No	Yes	Grand parent	Parent	*Other	< 6 mths	<12 mths	1-5 yrs	> 5 yrs
C1T5	35	29	26	2	1	13	-	3	11
C2T3	35	33	30	3	-	8	2	5	14
C2T4	34	37	33	3	-	1	3	9	9
C2T5	39	33	27	4	-	9	3	9	9
C3T1	48	37	34	1	1	14	3	7	11
C3T2	27	18	18	-	-	7	4	3	3
C3T3	17	7	7	-	-	1	1	2	3
C3T4	47	27	27	-	-	9	1	4	9
C3T5	42	36	35	-	-	9	4	8	11
C4T1	58	32	31	-	1	14	3	7	6
C4T2	27	21	20	-	1	6	1	8	6
C4T3	50	27	26	-	1	9	2	5	6
C4T4	45	30	29	-	-	13	2	6	5

\*Other includes: Relatives other than a parent or grandparent, or an older friend

**Table A8-6: Participants experience working with older people from questionnaire data**

Cohort	Experience		Type of experience				
	No	Yes	ARC	Family	*Other	School work	Clinical placement
C1T5	1	63	12	3	1	-	45
C2T3	3	66	15	1	2	-	48
C2T4	3	69	21	6	2	1	37
C2T5	5	67	21	8	-	-	35
C3T1	58	27	20	4	2	-	1
C3T2	13	32	11	2	2	-	16
C3T3	11	13	1	1	-	1	9
C3T4	11	65	15	7	4	-	38
C3T5	12	66	16	4	1	1	43
C4T1	66	24	18	1	2	2	
C4T2	22	27	6	1	2	-	13
C4T3	18	59	12	1	-	-	44
C4T4	9	66	10	4	-	-	54

\*Other work includes: working in a gym, retail, reception and telemarketing in which older people were customers

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