Orthopaedic Nursing in the 2010s. A Critical Ethnography.

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STATEMENT

This body of work contains no material which has been accepted or offered for the award of any other degree or diploma in any university or other tertiary institution and to the best of my knowledge contains no material previously published or written by another person, except where due reference has been made in the text.

I give consent to this copy of my thesis, when deposited in the School of Nursing library, being available for loan and photocopying.

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Paul McLiesh

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ABSTRACT

This is a complex yet subtle story- it is a story about orthopaedic nurses, who they are, what do they do and why.

Background

Orthopaedic nursing is a speciality that has members in many settings and institutions throughout the world. Orthopaedic nurses identify themselves as a distinct group who share common beliefs, values and actions. Their patients have similar needs and they work in similar ways to meet those needs. Changes in nursing and changes in the surgical treatment of orthopaedic patients have impacted the way orthopaedic nurses' deliver care. In part, this has created a threat to the speciality as some no longer see the need to have the care of orthopaedic patients delivered by specialist orthopaedic nurses.

Aims

This study describes the orthopaedic nursing group and makes evident the value of their roles and actions in caring for their patients. It asks if the group identifies as a speciality, how that speciality is defined and what are the essential skills needed to be considered an orthopaedic nurse. It identifies the common needs of members of the group, how those needs are meet by leaders of the group and what it is that makes them leaders of the group.

Methodology

A critical ethnography framework was used for this research as it best matched the aims of understanding the group and what factors influence its existence.

Method

The research was conducted in two phases. Participants were self-selected. The first phase used an online questionnaire that asked a series of questions about the participants' backgrounds, their roles and activities as members of the group. Phase two consisted of six semi-structured interviews with six participants selected from phase one.

Findings

The orthopaedic nursing group is a complex and difficult group to define. The group and its members vary in a number of ways but share common elements. They describe an attraction to orthopaedic nursing that is based on the type of nursing and the team focussed nature of the work. Orthopaedic patients are often restricted to bed or have limited mobility. This has implications for

the way their nursing care is delivered. Much of the care they require is basic nursing care but it needs to be delivered in a unique way by orthopaedic nurses. The skills and knowledge needed to deliver this care may not be overtly obvious to outsiders, or even to someone looking directly at the care being delivered but for nurses from other specialities who try to deliver that same care it becomes more obvious. It is difficult for some orthopaedic nurses to articulate the specifics of that care as they have learned to deliver that care over time from other members of the group at almost an intuitive level.

Changes to the surgical management of orthopaedic patients have been the most significant issue influencing the way the group practices. Some in the group and others outside the group have seen the reduction in the requirement for specific skills such as traction as a sign that the group is no longer a specialist group and that orthopaedic patients do not need their care delivered by specialists. However the fundamentals of orthopaedic nursing remain unchanged and still need to be delivered by specialist nurses.

Leadership of the group is a complex issue and is often undervalued, even by the leaders themselves. Developing teams, attracting new staff to the speciality, relationships with other disciplines and inspiring and promoting orthopaedic nursing are all responsibilities of the group but must be fostered and directed by the leaders.

Conclusion

Orthopaedic nursing remains a strong speciality but continues to face many challenges. While the specific skills and knowledge required by orthopaedic nurses continues to fluctuate, the fundamentals remain constant. It is vital that the group considers their current position and use this knowledge to help influence the future direction of the group. The future of the group is dependent on how it responds to external and internal changes and demands. This is how the speciality has evolved and is the best way forward to ensure success in the future.

'Any specialist area of a profession has to continually define its position to justify and take forward its practice.'

Editors Comment, Peter Davis, 2007(p.43)[1]

CHAPTER 1: INTRODUCTION

Background

Orthopaedic nursing has been acknowledged as a specialty within nursing since the early part of the 20th century.[2] However, changes over the past decade have impacted on the speciality and the need for some traditional orthopaedic skills has changed. As surgical techniques improved and length of admissions decreased, the type of care required by orthopaedic patients has changed often meaning they no longer require lengthy periods of bed rest in traction. This has had implications for the skills and knowledge required by orthopaedic nurses to provide care to orthopaedic patients however these changes are not uniform and have occurred in varying degrees throughout orthopaedic units around the world. So what orthopaedic nursing means now to members of the group may vary depending on their location or work setting, the length of time in the field and the practices of the orthopaedic surgeons attached to their units.

There has been some research into orthopaedic nursing that has asked and sought to identify what nurses consider important aspects of being an orthopaedic nurse, a description of the experience of orthopaedic nursing, advocacy for orthopaedic nursing as a speciality and identification of shared beliefs and values.[1-5] Although the literature is sparse it has served to reinforce that orthopaedic patients have unique needs, that may not be easily identifiable or articulated, and orthopaedic nurses have developed skills, knowledge and philosophies in response to their patients' needs.

Context and purpose of the study

Specialist nursing has long been recognised as a means of meeting the needs of a particular group of patients. Nurses with specialised knowledge, experience and education are needed to provide specific care that cannot be provided by nurses without those specific skills and knowledge.[6] Orthopaedic nursing has become one of those specialties as the needs of orthopaedic patients became more complex.

Orthopaedic patients have distinctive needs that are best delivered by orthopaedic nurses who possess unique skills and knowledge that best matches their needs. The literature identifies a level of commonality in the vision and beliefs of orthopaedic nurses despite differences in their location

and practices. It is reasonable to suggest that orthopaedic nurses can be defined as a group that shares values and beliefs and it exists on numerous levels.

Given the existence of this cultural group it is of importance to identify what is unique about the group, what the members believe, what they do and why they do it. This is of value to the group in helping provide a medium for their collective voice, especially within the contemporary health care climate where the speciality is under threat by providing resources that can used to advocate for their existence and value.

Orthopaedic nurses may strongly believe that their patients require care delivered by nurses with appropriate skills and knowledge. However those in senior management may not hold the same beliefs and may make changes to move the care of orthopaedic patients into generalist wards. This has the potential to leave orthopaedic nursing exposed to erosion as a specialty as it is subsumed within general nursing and with their care not being delivered by specialised orthopaedic nurses. This risk is identified and supported widely in the literature.[4, 5, 7-9] Some in the healthcare system may argue that much of the care provided to orthopaedic patients has become generalised surgical nursing and could be easily provided by any experienced surgical nurse.[4, 7] A number of authors acknowledge that the trend is to incorporate orthopaedics into generalised surgical wards but argue that general surgical nurses do not possess the necessary skills and knowledge to provide effective care to orthopaedic patients.[1, 4] Hommel et al tested that principle and demonstrated an increase in complication rates and length of stay in orthopaedic patients cared for in general wards.[10]

Therefore the benefits of developing an intricate understanding of the speciality will have the potential to inform practice, improve care delivery, tailor postgraduate specialist education curriculums and improve the health outcomes for orthopaedic patients. This study may assist in advocating for the orthopaedic nursing group or for individual position/roles and assist in justifying the development of new roles within the current system. There is also potential benefit to the orthopaedic patient as their care is provided by nurses who have the best knowledge and skills to manage their needs.

As some aspects of orthopaedic nursing change, it is important that orthopaedic nurses articulate their role within the current healthcare climate. It is likely that individuals or small groups of orthopaedic nurses are actively attempting to achieve this in their current roles and settings but may be finding this difficult as they lack support or the benefit of numbers. What is needed is a method of investigation and description that focuses at the 'human problems' that exists within all factors that influence orthopaedic nurses. (p. 9)[11] Spradley described ethnographic research as offering excellent strategies for discovering human needs within groups and therefore ways of meeting those needs.[12] Therefore an ethnographic methodology will be used to investigate the orthopaedic nursing group and describe what its members believe is important, what the needs of

the group are, who is leading the group and where it is going. Achieving an understanding of these factors may allow for a strengthening of the orthopaedic nursing group with resulting benefits to all members of the group and their patients.

Statement of the research questions

Research Question:

How do orthopaedic nurses' view the specialty of orthopaedic nursing today?

Within the research question there are a number of specific considerations and sub questions:

- What is important to orthopaedic nurses in today's healthcare climate?
- What skills and knowledge do orthopaedic nurses believe are essential for them to be considered orthopaedic nurses?
- What factors influence the orthopaedic nursing group today?
- How do orthopaedic nurses identify within their speciality?
- Is there consensus in the beliefs of the group?
- Who are the leaders of the orthopaedic nursing group?
- What is it that they do as leaders to lead the group?
- What should be the focus of the group for the future?

Aim:

The aim of this research is to develop a deeper understanding of the state of orthopaedic nursing as a group.

This information can then be used by members of the orthopaedic nursing group to refocus their direction and plans at varying levels.

Objectives:

- Identify if orthopaedic nurses consider orthopaedic nursing a speciality
- Define the speciality and the similarities and differences in beliefs between various members of the group.
- Identify what orthopaedic nurses perceive as essential skills and knowledge that are unique to their practice.
- Identify the common needs of individuals within the group and articulate those needs to the leaders to be considered and addressed.
- Identify emerging orthopaedic nursing roles and assist the leaders of the speciality to plan for the future.

Significance of the research

The significance of this study is driven by the factors that drive any research- is there a problem or issue, is there a gap in knowledge, who will it benefit, is there a need for it and has it been recommended by previous research? The research must meet these needs to be of relevance to the people that are influenced within the field of orthopaedic nursing. The motivation for completing this research is influenced by the authors' practice as an orthopaedic nurse and his existence as a member of the group. The initial motivation may have begun with reasons associated with the authors' local practice but it soon became evident that the previous research in this field supports further exploration of the subject. The focus of the research and therefore the use of a specific methodology were driven by gaps in our current knowledge, the perceived needs of the group and the natural progression from the previous research agenda.

The focus is on the orthopaedic nursing group, with an understanding that there are a number of levels and different demographics. It is likely that there are similarities that the majority of the group experience and there may be a benefit in identifying and articulating this. Within any group there are members who have differing perceptions about what is important to the group, there are also members who may not identify themselves as orthopaedic nurses despite working in that setting.[13] Even though they may not identify as an orthopaedic nurse it is important to consider them as their motivation and role within the group impacts on the larger group. Historical perceptions and experiences also influence the way individuals and groups respond to change and threats to accepted group values.[14] It is therefore important to consider the history of the group. Any perceived changes may be influenced by the individuals or the groups past experiences and the pattern of formation of the group. It is also vital to consider the factors that influenced formation, assisted advocacy and the roadblocks to success that were present. Awareness of these factors is valuable when trying to understand the processes at work and how to influence those factors to achieve positive change. Identifying who controls or leads the group, the factors that affect the group and what limitations, real or perceived, are of value. These considerations will influence the current group and also act to shape the future.

The author considers himself a passionate member of the orthopaedic nursing group and has witnessed change occurring over his career that has had the potential to negatively impact orthopaedic nurses and the standard of care delivered.

Throughout his practice the membership of a committees, steering groups or networks that were designed to assess and guide the delivery of orthopaedic services did often not include orthopaedic nurses as part of the initial group until orthopaedic nursing leaders asked to join.[15] This occurred in areas that had a potential significant effect on orthopaedic nurses or included areas that were

influenced directly by orthopaedic nurses who had to fight to be included in the decision making process. Those involved may have asked why do we need to ask to be involved. Should that not have occurred naturally when other disciplines such as medicine and physiotherapy were automatically included. Individuals and groups generally want to have some control over their environment and the systems that affect them. It maybe reminiscent of the catch cry attributed to the Reverend Mayhew during the American revolution- "No Taxation Without Representation": orthopaedic nurses are delivering care and often managing the systems, why are they not consulted on the processes of assessment and change that has the potential to affect their practice?[16]

In the published literature there is consensus amongst orthopaedic nurses about what defines an orthopaedic nurse, the types of skills and knowledge they require, understanding of the roles that do (and should) exist and what the nurses consider important in their field. What is missing and required from the literature is an assessment of how the group can use that knowledge to strengthen its position and how the leaders of the group can plan for its future.

In reality this task is difficult as the group does not clearly exist in easily identifiable groups and has no natural structure and easily definable leadership; it is organised haphazardly and has fluctuating membership. For this reason it is important that this type of research be completed to aid in the process of assessing the needs of the group and assist in providing direction for the future.

Assumptions and acknowledgement of biases

Assumptions

A number of assumptions have been made in the research project.

The author assumes that orthopaedic nursing is a speciality of general nursing and that there exists specific skills and knowledge that are required of orthopaedic nurses to provide care to orthopaedic patients. This assumption has been proven regularly throughout the literature but will be tested again during this research with the aim of validating the argument.

It is assumed that at least some orthopaedic nurses believe they are part of a wider group, both formally and informally. How nurses see the group is likely to vary greatly but it is assumed that there is a core group of orthopaedic nurses who consider that a wider group exists and that it consists of members of orthopaedic nurses from various settings. There are formal groups of orthopaedic nurses, some of which have been in existence for decades, so it is reasonable to assume that a group of nurses exist who identify formally as orthopaedic nurses.

It is assumed that a level of concern exists within orthopaedic nursing regarding changes that are occurring within healthcare as a whole and within specific orthopaedic units which have a potential

detrimental effect on the group. This is reflected strongly in the literature and is also the experience of the author during interactions with other orthopaedic nurses.[4, 7, 17, 18] A real threat to the speciality is identified in the literature has been supported by other orthopaedic nurses during international conferences, as part of local orthopaedic and international nursing committee groups. It is assumed that there are a number of differing orthopaedic nursing groups, some more formalised than others, ranging from those who have official memberships and who meet formally to those groups that have developed over time haphazardly and the membership is not defined.

Biases

The researcher is a long standing member of the orthopaedic nursing group in Australia and has ties to all international orthopaedic nursing groups throughout the world. He has held various positions in local and national orthopaedic nursing committees and presents regularly at the national and international level on topics of interest to orthopaedic nurses. He is currently employed as the lecturer responsible for delivering a post graduate orthopaedic nursing degree at a large Australian University. The researcher acknowledges the potential for bias based on his current position within the group and sought to minimise any bias influencing the research. The researcher holds particular views on all aspects of the research topic but has sought to use the data to allow development of the results. The researcher did keep a diary of experiences and ideas and used these to test against the data where appropriate.

It is important to note that the researcher was aware that potential participants are aware that the researcher is a well-established member of the group and that they may not fully articulate all the relevant knowledge because they assume the researcher is already aware of it and it does not need to be said. This remained a strong focus especially during the interviews when participants were encouraged not to assume any knowledge on behalf of the interviewer.[11]

Definition of terms

Anonymity:

> Ensuring that information or data supplied by research participants is not publically identifiable as coming from that individual[19]

Confidentiality:

> Ensuring that information remains private- personal information supplied by participants of the research is kept secret. [19]

Critical Theory:

Critical theorists suggest that truth is created through the relationships of power and describing these relationships can change the inequities within them.[11] The outcome of research in this paradigm is to achieve empowerment through understanding of how gender, class, race, culture religion shape inequities.[11]

Demographics:

Statistical characteristics of a population and include gender, race, age, disabilities, mobility, home ownership, employment status, and even location.[20]

Ethnography:

Systematic approach to learning about social and cultural life of communities taking the position that human behaviour and the way people make meaning of their lives is highly variable and locally specific (p.1).[11]

Fragility Fracture:

'Fragility fractures are defined as fractures resulting from a fall from a standing height or less, or presenting in the absence of obvious trauma'.[21]

Likert Scale:

A scale of measurement in which participants respond to statements in a range of how much they agree or disagree with that statement.[22]

Orthopaedics:

Derived from the Greek words orthos (straight) and paedios (child)[23] and is the branch of surgery concerned with conditions involving the musculoskeletal system.[20]

Orthopaedic Nursing

The role of the orthopaedic nurse is to advance musculoskeletal health care by promoting excellence in orthopaedic research, education, and nursing practice.[24]

Nurse Practitioner (NP)

A registered nurse who has acquired the expert knowledge base, complex decision-making skills and clinical competencies for expanded practice, the characteristics of which are shaped by the context and/or country in which s/he is credentialed to practice.[25] NP practice is usually well defined and limited to a narrow scope of practice. They are not considered a 'Maxi nurses or a Mini Doctor'(p. 87).[7]

Specialist Practitioner

> An individual who is able to exercise a higher level of judgement, discretion and decision making focussing on four broad areas: clinical practice, care and program management, clinical practice development and clinical practice management.[8]

Summary of thesis

The thesis is a description of a critical ethnographical study of the speciality of orthopaedic nursing in today's healthcare environment.

Chapter one provides a background description to orthopaedic nursing and contextualises the history and development of orthopaedic nursing. There is discussion of the purpose of the study and an argument as to the significance of the research and the value of the investigation. The aim of the research is to describe orthopaedic nurses and what is important to them as a cultural group.

An extensive literature review can be found in chapter two. This describes the history of orthopaedic nursing and its significance. The literature is critically assessed and summarised.

Chapter three contains a description of the use of critical ethnography as the basis of the methodology used for this piece of research. This includes a brief background to the development of ethnography, the reasons why it suited this line of investigation and the benefits and limitations for its use for this research. Critical theory is used to assist in the empowerment for the participants that will assist them in shaping their own futures.

Chapter four describes the methods utilised within this research and identifies the use of a two phase design. An initial online questionnaire was conducted and then followed by a series of semi-structured interviews. Details of all ethical considerations and risk minimisation are also identified here. It also contains detail of ethics approval and an explanation of how anonymity and confidentiality were maintained throughout the project. Data collection techniques are described and detailed provided how data was captured to best inform the research aims.

Chapter five tells the story of orthopaedic nursing. It considers the issues that of importance to the group, how individuals become orthopaedic nurses, how they learn, how they interact with other groups, how they are lead and what concerns them. Chapter six interprets the results from the previous chapter and provides significance and relevance. The final chapter outlines the implications for practice and further research. It makes a number of recommendations for practice, education, leadership, orthopaedic nursing groups and future research.

CHAPTER 2: LITERATURE REVIEW

Review of the literature is important as it provides a history of the topic, contextualises the issues and provides background that strengthens the research and recommendations. There is considerable interventional research based on the clinical aspects of orthopaedics which serves as a window to the activities of the group and demonstrates where the current interests of the group lie. There is value in assessing this research activity but was not included in this project as its focus was centred on a more in depth exploration of the orthopaedic nursing role.

Literature specific to the study of orthopaedic nursing is relatively sparse. A basic search of common databases demonstrated significant fewer publications associated with orthopaedic nursing as compared to other specialities. There remains a body of knowledge that focuses on developing an understanding of the role of an orthopaedic nurse and what that entails. The early literature describes the beginnings of orthopaedic nursing and its evolution. The bulk of recent literature is focussed on describing orthopaedic nursing and the types of skills and knowledge required to provide effective care. The early literature begins during the early 1990s and continues to today with the majority found in the mid1990s –early 2000s. The literature was often in response to threats to the speciality and was mainly focussed on advocating for what orthopaedic nursing means for both the nursing and patient groups.[26] It is during this period that orthopaedic surgical techniques began to change significantly and influenced the way orthopaedic patients received their care.[1] This had implications as a number of the unique and traditional skills were required less frequently leading to orthopaedic nursing being considered less of a specialty.[5, 18] Orthopaedic units were beginning to merge with general surgical units so that orthopaedic patients were receiving care from non-specialist nurses.[17]

Therefore the purpose of this chapter is to describe the literature regarding the role of the orthopaedic nursing and their group and provide a context to this research.

Search strategy

A literature review was conducted in several stages-

Basic search terms were used to identify appropriate articles with the purpose of refining major headings and MESH terms. The CINAHL and PubMed databases where used to conduct this search with terms ‘Orthop*’and ‘Nurs*’ (the use of the asterisk, as a wildcard [*] allows for the American and English spelling of orthopaedics as well as any plurals and combinations of the words- nurse. nurses or nursing). The MESH terms and major headings were then used in a more comprehensive search (Table 1)

Table 1: Major Headings & MESH Terms

CINAHL	PubMed
Orthopaedic Nursing	Orthopaedic Nursing • Education • Manpower • History • Organization & administration
Specialization	Specialization
Nursing Role	Nursing research
	Job descriptions

These terms were used in the search strategy as well as the terms orthop* AND Nurs* AND spec*. Resulting searches: 227-PubMed and 197-CINAHL.

From that search appropriate literature was then selected. The reference lists of each paper were reviewed to identify any literature not identified previously. These papers were considered for inclusion. Appropriate literature was deemed to be any published article, discussion or data that related to the concept of orthopaedic nursing as a speciality.

The search strategy uncovered a large amount of literature associated with interventional research. These were excluded if there was no consideration of the role of the orthopaedic nurse. This resulted in forty two published articles remaining, some of which are editorial, discussion or a description of the history of orthopaedic nursing or an orthopaedic nursing group. A number of books and websites were also included and these were sourced from the original articles, within known orthopaedic nursing websites and via the authors' personal knowledge of the literature. The resulting collection is a comprehensive but not exhaustive list of the literature concerning the speciality of orthopaedic nursing.

Historical perspective

Orthopaedic nursing literature often begins with a description of its history. Consideration of the emergence of orthopaedic nursing over the past century allows an understanding of how orthopaedic nursing developed, what factors drove its development, how the leaders of the group guided the process, what was important to members of the group and how all those factors, can continue to influence the direction of the group today.

The first use of the term orthopaedics is attributed to Nicolas Andry, a French physician, in a book published in 1741 but the term did not find a true specialised use until the early 19th century when

facilities like the General Institution for the Relief of Persons Suffering from Bodily Deformities (now known as the Royal Orthopaedic Hospital [ROH]) was established in Birmingham.[27, 28] Previously care of orthopaedic injuries and deformities was managed by individuals with limited formal training. Institutions like the ROH were devoted to the care of individuals with congenital deformities resulting from chronic disease like polio and began treating individuals in a more organised manner. It was not until the mid-19th century that medical practitioners such as Hugh Owen Thomas and his nephew Robert Jones began to develop the specialty of orthopaedic surgery that had, not too long before, been the purvey of unregistered 'bone setters' who had limited, or no training, and whose practice varied greatly.[28] Orthopaedics and orthopaedic nursing began to incorporate care and treatment of both chronic and acute injuries and illnesses. This model of care was beginning to more closely resemble the model as we know it today. Dame Agnes Hunt is considered the matriarch of orthopaedic nursing and was responsible for creating and running a hospital with help from Robert Jones in 1900.[27] However there are earlier references to orthopaedic nursing as identified by Cholmeley (as found in Kneale & Davis, 2005) of an orthopaedic nurse who was employed in 1841in an early London institution.[23] During this period healthcare systems were managed directly by the medical profession which impacted on the way nursing and orthopaedic nursing developed. It would be wrong to suggest that nurses, during that time, did not have a voice and were unable to influence the provision of healthcare. Florence Nightingale is considered the pioneer of nursing following her work in the Crimean war where she identified a link between unsanitary conditions and the incidence of preventable deaths.[29] She was able to use evidence to influence the design of health care provision. Likewise early orthopaedic nursing leaders like Dame Agnes Hunt were able to influence surgeons and start to change the way healthcare was delivered.

The history of nursing has value in demonstrating the reason why nursing began as a formalised profession. Identifying a link between practice and outcomes is the very basis for modern nursing. Today healthcare is based on the premise that care is supported by evidence and identifies how outcomes are shaped by practice through the synthesis of knowledge. This occurs via research and in practice, is then analysed and evaluated and translated into practice.[30] The process was also the same for the development of orthopaedic nursing throughout history and can be traced from the late 1800s with the work of Dame Agnes Hunt who herself had had tuberculosis (TB) of her left hip with associated chronic pain and restriction on her mobility.[31] Through her personal experience of a chronic disability she was able to identify the unmet needs of crippled children and design care that met those needs by setting up a facility that was based on good nutrition, access to open air, rest and kindness.[31] She convinced Robert Jones to visit this facility at Baschurch once a month to provide care and perform surgery for the children.[31] During and after the first world war the facility

also treated war casualties, some directly from the front lines.[32] In 1921 all patients were moved to a new 320 bed hospital at Owestry that was later named The Robert Jones and Agnes Hunt Hospital after the pair.[31] During this period orthopaedics began the early stages of a transformation that would result in the system of orthopaedic healthcare that we know today. Dame Agnes was not only responsible for designing and implementing care that was effective for her patients she was also instrumental in organising outreach clinics in numerous towns where surgeons would visit and provide access to medical care and surgery that was previously unattainable.[31] In the United States of America (USA) orthopaedic nursing was also borne out of the treatment of chronic conditions, like TB infection, rickets and poliomyelitis.[27, 29] Many hospitals of the day did not accept 'cripples' as they were considered incurable but Dr James Knight, a New York(NY) physician, took a number of patients into his Manhattan family home in 1863 where his wife, family members and hired domestic staff who provided their nursing care.[29, 33]

The genesis of modern day orthopaedics occurred during the latter half of the 19th century but it was not until the first half of the 20th century that orthopaedic nursing began to become more organised. The types of surgery and treatments were rapidly progressing and the complexities of managing changes in patient needs were also increasing. General nursing training was not providing nurses with the necessary skills and knowledge to manage orthopaedic patients.[6] The type of specialist care provided by orthopaedic nurses of that day is challenged however by Footner who argues that it is likely that 'these nurses were, in the main, generalist nurses practising general nursing with limited specialist tasks added on'.(p.220) [6] It is also of note that the early stages of the specialty were structured around the medical model as that was the dominant profession of the time and nursing was still finding its way.[6] Specialist orthopaedic nurse training was limited to local hospitals until the mid-1930s.[27] During the mid-20th century training of specialist orthopaedic nurses was governed by boards, often under the supervision of medical staff, such as the Joint Examination Board in the United Kingdom (UK) or based in hospitals like the Hospital for Special Surgery School of Practical Nursing (HSSSPN) in the USA.[27, 29] While the delivery of specialist education and practical experience was coordinated by nurses there was still overall control by the medical profession. The British Association of Orthopaedic Nurses(BAON), formed in 1970, had Mary Powell, an orthopaedic nurse, as its president but a consultant orthopaedic surgeon as its chairman.[27] The management of this association, and others like it may have been directed by medical staff. It is important to note however that the nurses who were involved in setting up similar groups, were visionaries and true leaders. They achieved a level of success and were required to work within the contemporary system of using medical staff as part of the management to allow a level of credibility and acceptance of the group. Under this system they were able to advocate for the specialist status of orthopaedic nursing, identify the need for

specialist orthopaedic nursing groups, work with medical staff to forge relationships and advocate for their patients. No doubt some medical staff were instrumental in supporting these nurses in forming groups. Two papers by orthopaedic nurses in the early 1970s described the contemporary role of the orthopaedic nurse. They were primarily seen as assistants to the orthopaedic surgeon and were responsible for a number of administration roles but included an element of a nurse with specialist skills and knowledge.[34, 35] As the care of the orthopaedic patient became more complex, length of stay decreased and the educational requirements for orthopaedic nurses changed. As the minimum educational requirements of a nurse moved towards a Bachelor level degree, orthopaedic nursing moved toward a specialist status incorporating calls for specialist orthopaedic university education. In the UK the BAON was disbanded due to changes to the joint examination board and transformed into the Royal College of Nursing (RCN) in 1986 becoming the Orthopaedic Nursing Forum (ONF).[27] Due to a lack of members the group was not initially granted society status until 1988 when they were granted status as a society.[27] NAON was formed in 1980 in the USA out of the structure of the previous organisation ONA.[24]

Contemporary orthopaedic nursing

Footner quotes White (1977) who proposed that if general nursing continued without specialisation, nursing would continue as a profession that is broadly based on knowledge but would be lacking in depth.[6] She also described the emergence of modern day nursing specialisation throughout the world in the early 1980s as identified by the International Council of Nurses(ICN) in 1987.[6] A reluctance to change by some groups in the USA lead to the development of the physician assistant which is a warning to nurses that they must be willing to evolve to remain relevant.[6] The literature seeks to define the term specialist nurse and make evident the implications for clinical practice, education and advancement of the profession. The issue goes to the very heart of this research. What is it that makes an orthopaedic nurse a specialist? What are the skills and knowledge that they possess and how are they used in practice? Searching for definition and understanding of these concepts has value for this project as well as the group, it allows for role definition, provides the basis for pathways of career development and focuses the development of curriculum in specialist training.

Footner argued that once all nurses complete their qualifications and begin working they can be considered specialists in that particular type of nursing, especially if they work there for a long time, however there is much more to the concept of specialist nursing.[6] Specialist care has been defined within a medical framework but that has not allowed any real insight into the needs of specialist nurses and only serves to restrict their practice development.[8] Clarke used the ICN

statements on specialist nursing, to describe a platform where nursing can be developed and considers specialist practice to be at a much higher level of decision making, leadership, teaching, learning and research.[8] She continues by clearly defining the difference between a nurse practicing within a speciality as a generic nurse and a specialist nurse who is practicing within that speciality who

> '....exercises a higher level of judgement, discretion and decision making focussing on four broad areas: clinical practice; care and programme management; clinical practice development and clinical practice management.'(p.83)[8]

Drozd et al identify that specialist knowledge results from a combination of factors; specialist educational training, high level medical knowledge, technical skills and extensive clinical experience.[1] Support for the concept that specialisation is directly related to the level of care the patient receives is found throughout the literature and identifies that orthopaedic patients will receive appropriate and safer care resulting in better outcomes when delivered by specialist nurses.[1, 3, 5, 7, 18, 36] While much of the literature supports this notion there is a lack of supporting quantitative evidence. It may be inherently obvious to those practitioners in the speciality but it warrants further qualification through research. There may be a lack of quantifiable evidence but it can be argued that there is an overwhelming body of clinical evidence that orthopaedic patients receive a higher standard of care when it is delivered by nurses with specialist skills and knowledge. The risk of not evolving and not developing new roles has been identified and has the potential to lead to dissolution of the specialty.[1, 4, 7, 8, 37] The literature also links the lack of available specialised education courses as a risk to the speciality.[3, 7] One factor that complicates the issue of specialist nurses is the variability regarding the types and names of current roles in orthopaedic nursing today. Often roles have developed in response to the individual needs of patients groups and local institutions.[6] Nurse practitioners (NP) roles were initially developed in the USA during the 1960s in response to a lack of medical staff in rural and remote areas and emerged in the UK during the 1980s.[37] A number of NP positions were adopted in response to gaps in practice. But during the 1990s orthopaedic nursing, along with other specialities, also began developing clinical nurse specialist (CNS) roles partly in response to a publication by the UK Central Council for Nursing in 1992 titled 'The Scope of Professional Practice'.[37, 38] The two areas of orthopaedic nursing practice that appear to have the highest proportion of CNS today are the pre-operative assessment area and the fragility fracture setting. There was, and continues to be, a blurring of the use of NPs and CNSs in these roles. The pre-operative and joint replacement services lent themselves to the role of a CNS as it involved a number of regular assessments that could be completed by a specialist nurse.[37] This occurred due to a natural structure to the flow of patients and the need to lower length of stay as more and more patients required joint replacement

surgery as people lived for longer periods.[37] It was shown that specialist nurses were as accurate (or more) in taking a history and completing a basic assessment when compared to a medical officer.[39] Other areas of specialisation include fragility fracture liaison services (FLS) and fracture review clinics in outpatient departments. FLS are often a multidisciplinary team including a specialist nurse whose role it is to review patients with fragility fractures, implemented care that is driven by previously agreed protocols, case manage patients, provided education to staff and patients and maintain records for statistical analysis.[40] Nurse led fracture clinics in outpatient departments are run by specialist orthopaedic nurses, often NPs, who have set protocols for their practice. They may review patients with simple forearm or hand fractures and remove plasters, assess skin/wounds, assess range of movement, provide education and communicate with the patients primary medical professional.[41]

There is variation in the level of regulation over these roles and the profession continues to establish guidelines, rules and methods of registration around these roles. NPs have relatively rigorous guiding principles and methods of registration while other CNS roles remain disordered and haphazard. NPs tend to have specific roles that are unique and well defined but are limited to specific areas whereas CNSs tend to have broader roles that are clearly defined and can be performed by a number of individuals. Both have their limitations and benefits and should not be excluded but should be tailored to suit the ward/units needs with the focus on the needs of the patient population being served. A potential criticism of these specialist orthopaedic nurse roles may be a lack of defendable data around the safety and efficiency of the care provided. For a new role to be successful it must provide care that is at the same standard as is currently provided, this means identifying any changes in complication or re-admission rates, patient complaints and successful treatment outcomes. It is vital then, to include the type of data that is respected and understood by senior medical staff and administrators who are the people that need to be convinced of the value of these roles. This evidence can then strengthen the argument for these roles by providing evidence that can be used by other orthopaedic nurses who wish to replicate the types of roles used.

Defining orthopaedic nursing

Driscoll and Teh (p.99) identify a quote by the American philosopher John Dewey who believed that ‘We do not learn by doing… we learn by doing and realising what came of what we did….’.[42] Although this is a simple concept the implications are significant. Individuals, groups and systems learn (ideally) by identifying the outcomes of what is practiced. This is true also for orthopaedic nursing, we learn by observing what occurs as a result of the care that is delivered, the plans made and the design and implementation of systems. Artless and Richmond claim that nursing is divided

into three elements that are debated throughout the literature, the art of nursing, the science of nursing and the knowledge needed.[43] Although this concept is not unique to orthopaedic nursing it does allow an individual to apply these concepts to practice through identification of the different elements unique to orthopaedic nursing and use that knowledge to refine practice. Artless and Richmond link specific types of orthopaedic nursing to each element and describe the interconnected relationship of each of the elements.[43] Although the concept at first appears abstract and difficult to apply clinically it does provide a basis from which the nurse can explore their practice with the aim of improving the care their patients receive. The depth of understanding and awareness of the complexity of nursing often takes years to be developed by individual nurses who have, over time, cultivated the ability to reflect on their practice at a number of levels.[42] It may not be an intuitive process but likely occurs at a certain level without a conscious awareness initially but if identified serves to drive lifelong learning with motivation for improving practice.[42]

On review of the literature it is evident that orthopaedic nursing requires unique skills and knowledge. It is also plainly evident that there is a level of frustration within the speciality of needing to substantiate this 'uniqueness' by justifying their position within the current healthcare setting. A number of articles published, during the mid-1990s until the early 21st century is likely in response to threats to the speciality during that time. It would appear that orthopaedic nursing leaders felt the need to provide evidence of the value of the speciality in the form of research, publication and editorial comment.[9, 17, 18, 44] This is a reasonable response by any group when faced with threats to its existence and in some ways is responsible for this authors' research. Any speciality group relies on evidence and research to support its existence and validate itself within the health system. In the early 1990s there was very little published evidence supporting the speciality of orthopaedic nursing. It was also during this time that nursing moved toward tertiary sector training of its new members and therefore began the adoption of the use of nursing models and research agendas. This allowed 'nursing to establish a firmer body of knowledge on which to base nursing…(and) help identify the unique function of a nurse'.(p.42)[9] This process continues in today's focus on evidence based nursing.[45] Orthopaedic nursing has also reflected this pathway and has sought to develop its own body of knowledge and evidence.

The type of published literature is often focussed on identifying what is inherently unique or difficult to articulate about orthopaedic nursing and has often sought to allocate skills, activities and roles into separate categories. Early studies attempted to match the types of quantitative methodologies that were generally accepted as the only real evidence of the day.[2] Even though today qualitative data is more readily accepted these early studies were valuable in taking the first steps towards building an evidence base of the uniqueness of orthopaedic nursing. Salmond

conducted a research project in which the priorities for future orthopaedic nursing research were identified and categorised.[46] This was an important step to the development of the overall research agenda for the speciality but did not really describe the components of orthopaedic nursing. However it could be surmised that the priority areas identified would likely be important to orthopaedic nurses. Love asked orthopaedic nurses to allocate a number of nursing activities to categories ranging from highly orthopaedic nursing function, a nursing function that can be completed by most nurses or activities that belong to another nursing speciality.[2] These were further refined into five categories and the frequencies of each function were noted.[2] Although there were limitations in the design of the study and it lacked the ability to weight the activities, it was acknowledged that orthopaedic nursing encompasses an element of specialised care but is combined with generic nursing skills that are adapted to meet the needs of orthopaedic patients. [2] Despite some limitations these early studies were visionary in responding to the speciality's needs of the times and were instrumental in beginning the development of the body of evidence & knowledge. Later studies built on these by attempting to define the role of the orthopaedic nurse and make explicit the uniqueness and subtleties of orthopaedic nursing.[1, 3, 4, 8, 36] For example, Santy described six categories of orthopaedic nursing as partner, mediator, technician, risk manager, comfort enhancer and guide around the core category of Harmonist.[4] Drozd builds on this work and describes four categories, as identified by a number of focus groups, of partner/guide, comfort enhancer, risk manager and technician.[1] Although there are differences in methods and methodologies a number of common themes are identified throughout the literature and have served to develop an analysis of orthopaedic nursing. Other literature seeks to define roles within orthopaedic nursing with a focus on speciality orthopaedic nursing roles.[6, 42] While a proportion of literature identifies aspects of, and needs for, specialist orthopaedic nursing education only a few are focussed solely on that topic with some providing a description of the currently available programs.[7, 47, 48] Research reviewing the clinical evidence of the effect and outcomes of providing specialist orthopaedic nursing care to orthopaedic patients is lacking in the literature and its development would serve to further strengthen the speciality. Kneale called for this type of research, specifically in respect to post graduate education of orthopaedic nurses, but to date the call remains poorly answered.[5] Hommel measured outcomes of orthopaedic patients cared for by specialist nurses against those patients cared for by general nurses and found an increase in length of stay and complication rates for those in general surgical areas.[10] There were difficulties however in measuring variations in some aspects of the study like those cared for in both areas, but this is the type of data that can be used to influence hospital administrators and government agencies to demonstrate the value in having orthopaedic nurses provide care for orthopaedic patients.

Professional orthopaedic nursing groups

These were originally found in the UK or USA however many more have been formed in the past decade. An example of their purpose can be summarised by the following:

> '…. the development and support of nurses caring for patients with musculoskeletal conditions…' and '….set forth the highest quality of musculoskeletal healthcare by promoting excellence in research, education and nursing practice….' (p.3)[49]

Large orthopaedic nursing groups have been active for a number of decades in the UK and the USA but recently a substantial increase in the number of professional orthopaedic nursing groups has been noted.[24, 50] As an example the Australian and New Zealand Orthopaedic Nurses Association (ANZONA) was developed within the past five years. The states of Australia and New Zealand have had active local groups for a number of decades such as the South Australian Orthopaedic Nurses (SAON).[51] These groups had initially worked and existed in relative isolation but are now developing closer links with international orthopaedic nurses through organisations like the International Collaboration of Orthopaedic Nursing (ICON).[52] Generally these groups rely on the voluntary support of members across different sites and do not have significant resources to devote to their mission. It is believed that this research will assist in providing these groups with a deeper understanding of the needs of individual orthopaedic nurses and orthopaedic nursing units or groups with a view to the overall benefit of all in the group.

Summary

Orthopaedic nurses have long sought to demonstrate the value of their speciality. There is a natural chronology to the development of the literature and research that focuses on the practises and identification of the uniqueness of orthopaedic nursing often in response to threats against the speciality. Orthopaedic nurses were able to identify gaps in practice and opportunities for advanced practice roles and used research, published evidence and made editorial comment to support these. The history of orthopaedic nursing can be used to assist the leaders of today plan for the speciality and help identify the needs of orthopaedic nurses and patients today.

There is a move toward further specialisation within the speciality itself as traditional orthopaedic nursing skills and roles are being used less frequently. Changes in healthcare have seen change to emphasis on out of hospital care. Orthopaedic nurses must recognise these types of changes and respond to them if the speciality is to survive.

CHAPTER 3: METHODOLOGY

The culture of any group has been described as a definable set of shared values, beliefs, sanctions, goals and serves to define the way the group functions, interacts and behaves.(p.290-1)[53] Groups of people tend to behave in similar ways, have shared norms (defined or inferred) and often share values that rise out of common activities.[12] The levels of these shared functions exist at varying levels depending on the group. These shared values are often closely aligned in an ethnic or cultural group at a deeper level whereas a group such as orthopaedic nurses may share certain common beliefs but at an overt level. Some individuals identify themselves strongly as part of a particular cultural group whilst others, who work in the same setting, don't see themselves as part of the larger group. Individuals within a large cultural group are likely to have varied backgrounds, differing cultural, religious beliefs and see themselves differently when it comes to identifying within the group. It is important to consider this in regard to this project as there is no one homogenous group of orthopaedic nurses who can be studied and observed. Nurses who work in the orthopaedic setting are likely to consider themselves part of the group to varying degrees. This chapter provides a definition of the methodology used to design the framework of this research and identifies the theoretical assumptions embedded in the methodology that were used to generate new knowledge.

Understanding culture

A definition can be applied to culture, as provided in the previous section, but when studying a culture it is vital to consider the point of view from which that definition or interpretation arises.[12] Spradley uses a real life example of policemen performing Cardiopulmonary Resuscitation (CPR) on an individual who had just died in a public place in a culturally specific area. The policemen were aware of the persons condition and had the knowledge to attempt to save their life by performing CPR but a number of onlookers believed the policemen were harming the woman and began to attack them.(p5-6)[12] Two groups of people were witnessing the same scene with very different perspectives and if an investigator relied on only one of the groups views the whole picture would not be truly understood. There is value to the researcher in understanding that people will 'act towards things on a basis of the meanings that the things have for them' and that 'meaning is derived from… the social interaction' one has with others.(p6)[12] In other words there is meaning to peoples actions and that often their behaviour is formed by their experiences and beliefs that have formed over time.[54] As an investigator into a culture it is vital that you become the student and learn from the people you are investigating, this allows discovery of the true meaning behind actions.[55]

Culture is behaviour that has been identified as highly variable and locally specific to that particular group.[11] Culture is a set of group patterns that develops over time and is influenced by individuals within the group, it is a dynamic state, open to change at varying degrees over time.[11] The culture of groups is influenced by internal as well as external influences. Orthopaedic nurses will have a culture that differs from the culture of the average nurse, this is due to the different demands of specific skills and knowledge, differences in their patients needs and therefore the way nursing care is implemented. Generally people prefer to have control over what happens to themselves and their groups so they will actively position themselves to maximise their control.[11] Even within a larger group, individuals are members of many different groups and will hold differing levels of power or position within each group.[11] Often these groups will have slightly different priorities and may see the one scene from different perspectives and therefore it is important to understand that all individuals may behave differently and that behaviour is influenced by various experiences, backgrounds and values.[11, 56] It is also true that not all individuals within the group may identify as members of the group.[11] These concepts are vital to consider when conducting research of this type.

Ethnography

Ethnography has been described as an approach to learning about the culture of a group of people, using the researcher as the primary tool of data collection, emphasising and building on the perspectives of the group and building theories for testing and adaption[57]. The term has its origins in the Greek 'ethnos' [custom, culture, group] and the Latin 'graphia' [description]. (p114)[58] Ethnography developed out of the early work of anthropology which has been used since ancient Greece and more recently, specifically as ethnography, beginning during the early 1960s[59]. Traditionally ethnography is concerned with identifying the culture of a group through long periods of observation and data collection.[58] Early or traditional ethnography was used as a methodology to investigate very culturally different groups of people and necessitated significant emersion of the researcher into the culture.[11] Researchers identified that there were limitations to this approach and that by combining other methods of data collection through a systematic and rigorous approach a comprehensive understanding of the group could be achieved.[11] There remains debate though about the purity of what constitutes ethnographical research with some authors advocating for the use of multiple methodologies or design[59]. Its use and design have transformed significantly since its first use and has been criticised by some authors.[11] However a number of nursing researchers advocate for its use in a variety of settings and design[19, 60, 61] Ethnography allows knowledge synthesis that is derived from the groups perspective that can be grounded in other theories such as critical or constructivist theory.(p.33)[11] Rice and Ezzy suggest that it is

possible that other research methods could be utilised to answer some research questions quickly but may not afford the depth of understanding that ethnography provides.[60] Spradley(1979) suggests that it offers an excellent strategy for discovering human needs and therefore ways of meeting those needs.[12] A number of different types of ethnography are described in the literature. Sandy identifies three types of ethnographic research, holistic, semiotic and behaviouristic.(p.23)[62] However a more recent description is offered by Grbich which may be more relevant: classic, critical and postmodern/post structural ethnography.[61] She does acknowledge however that some studies may lie across these boundaries which in turn allow development of a methodology that best addresses the question. Munhall identifies the distinction between large and small ethnographies, calling them mini or maxi types.[19] This is an important concept for this project as it did not have the resources to attempt to investigate across the entire group but instead looked for common themes and shared beliefs across a representative sample. Schneider et al also identifies an important fact that the quantitative and qualitative paradigms are inter-connected and discusses the existence of a paradigm tension and stresses that decisions about methodology should be made to answer different clinical questions .(p.25) [58] This is also important in the context of this study as both quantitative and qualitative data was collected to develop a deeper understanding of the group.

Qualitative and quantitative research approaches

There are a number of assumptions made by the author in this thesis in regards to qualitative and quantitative research that require basic identification.

The use of a paradigm approach has been used to explain variations in the way people understanding how things occur in the world.[61] These variations can be translated into the way phenomena occur and helps to conceptualize fundamental beliefs.[19] 'Qualitative research aims to elicit the contextualised nature of the experience…and attempts to generate analysis that are detailed….and integrative'.(p.1)[60] Quantitative research is based on the principles of science and mathematics where there are absolute truths that were constant and could be replicated.[61] Truth could be found by understanding that independent variables affect measurable outcomes that could then be expressed in a numerical value that can then be analysed.(p.15-6)[61] Between the 17th and 20th centuries opposition to the overriding belief in absolute truths began to develop and manifested itself as the belief that understanding phenomena should also include individuals concepts of understanding as well as context to the situation.[61] This gave rise to the qualitative paradigm which uses a number of methodologies to describe various phenomena such as phenomenology, grounded theory, ethnography and action research.[19]

Ethnography acknowledges both the strengths and weakness of both paradigms and advocates for use of both types of data collection, where appropriate, to assist in developing a complete understanding of the situation. [11] Using both approaches provides the researcher and the reader with a richer understanding of the phenomena.

Critical ethnography

The aim of this research is to gauge how orthopaedic nurses identify within their speciality; this shared understanding of the culture is likely to be influenced by external and internal factors that have been influenced by historical, economic and political factors. An example of the type of global influences that has local effects is the global financial crisis that creates funding problems in a local program as a state budget is cut back to rein in costs. Identifying these types of factors suggests a critical approach that will provide an understanding about the truth of the culture that can be gained between the researcher and the participants.[59] A critical approach enables empowerment, emancipation and equality for participants and social structures are challenged and possibly changed.(p.23)[58] It also enhances the participants potential to access important social and economic resources that will assist them in becoming activists in shaping their own futures and can be instrumental in implementing change.(p.65 & 77)[11]

There are limitations to using ethnography for research: requirement to see the world from the informants perspective, spending long periods in field work, gaining entry, and the possibility that data collected from a small group may not be transferable.[60] In relation to this study some of these limitations were negated as the researcher is already part of the community and it was likely that facets of our worldview were similar. This assisted, but did not guarantee entry into the group. The author acknowledged and identified his current biases, beliefs and assumptions that he possessed and accounted for these in the analysis. However it has been identified, and important, that in critical ethnographic research the researcher is actively involved in the analysis and that they may actually be transformed themselves during the process.[61] The researcher may adopt a position free from restraint and seek to minimise the distance between themselves and the participants.[58]

Ethnography has been shown to be an effective choice of methodology in situations where it is not clear that a specific problem exists.[11] The process begins with a set of connected ideas that is constantly redefined until the ideas are finalised and interpreted at the end.(p.2)[54] This method does not assume answers or even the questions but instead allows the process and the participants to shape the direction of the research in an interactive process.(p.39)[11]

Ethnography matches the requirements of this research project and the concepts discussed in the preceding sections have been used in designing this project. The focus of this project has been continually refined over its course in response to the early data and has had a significant effect on the authors' beliefs about the group to which he thought he previously had an established understanding.

The methodology of ethnography has been described above and the research methods were designed to match the methodology in terms of achieving the aims and objectives of the research.

CHAPTER 4: METHODS

The following chapter describes the methods used to achieve the aims and goals of the research guided by the methodology. Schensul et al describe the process of 'operationalization' for ethnographic research as definition and measurement of the phenomenon, the establishment of validity (ensures representation of the phenomenon) and then establishing reliability and consistency in measurement.(p.50)[54] They continue by describing variations in the way this process occurs through the use of a ground up (inductive), ground down(deductive) and middle (both) approaches.(p.51)[54] Consideration of this process of organisation was vital in designing the methods for this research. It influenced the methods of data collection, the questions asked and how design decisions were made. This concept may be difficult to understand in isolation without context. When beginning the process of designing the method of this research the researcher initially used a deductive approach to identify 'domains' (the abstract concepts within a model of relationships) within the context of orthopaedic nursing.[54] The identification of domains that are based on the personal experiences of the author, popular conceptions of the group, general overview of the existing literature and anecdotal views of the group were used as an initial framework. This involved identification of various factors and variables that are valid measures of each domain. Once initial data had been gathered an inductive approach was then used to identify specific variables and these were grouped into factors and then domains by identifying common themes.

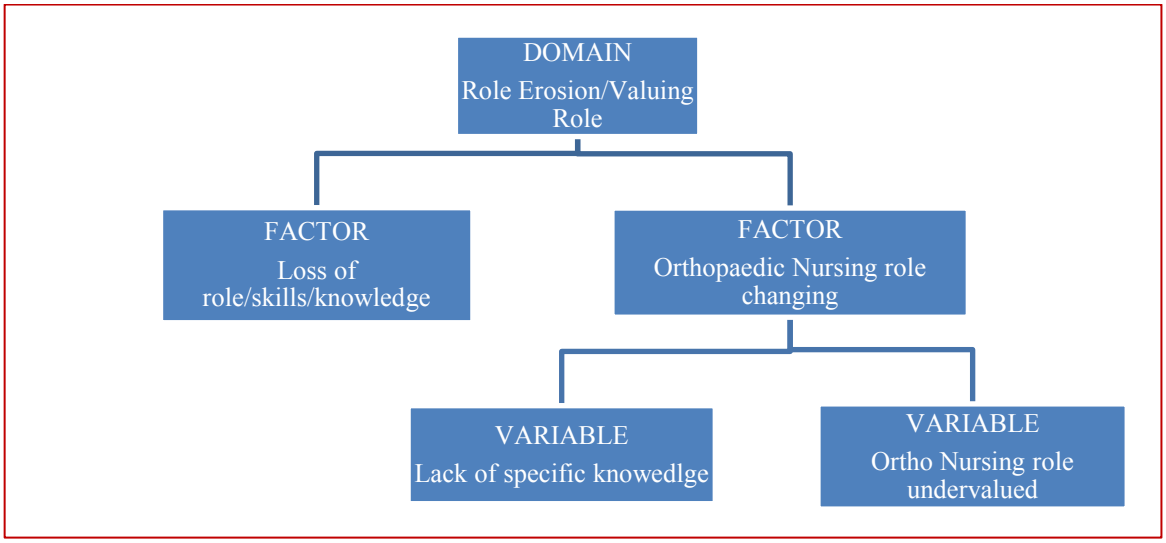

Table 2. Example of development of Variable-Factor-Domain concept

This used specific tools to test the initial analysis and framework design in a cyclic manner that ensured validity of the initial concepts as well as informing the design of the project. The resulting data and domains either supported the initial design or acted to refocus the process in real time.

The overall process was one of an initial broad sweep of the setting followed by an analysis of the initial data and development of domains then a more focussed investigation of those domains on a complex level.

Research methods

The project was separated into two distinct phases to allow for the cyclic processes described above. This ensures a level of rigor where the research is guided by the data.

Phase 1:

Phase one consisted of a confidential on-line questionnaire that was designed to gather a number of types of data.

Recruitment occurred in a number of ways. Emails were sent to all members of ANZONA via the professional orthopaedic nursing organisations. A call for participants was also made at the biennial ANZONA conference in Brisbane in late 2011 with a short presentation to all delegates and copies of the information sheet were inserted into delegates' satchels. Links to the questionnaire were provided on a number of the local professional orthopaedic nursing groups websites as well as the ANZONA Facebook™ page.[63] Participants were provided with the Uniform Resource Locator (URL) for completion of the questionnaire and suitability for inclusion occurred via the use of specific questions. If the participant did not match the inclusion criteria they were unable to proceed with the questionnaire. Contact details, complaints and information sheets (**Appendix I**) were made available on the questionnaire. Consent was implied by the participant logging onto the site and completing the questionnaire and participants were self-selecting. Data included demographic data re age, place of employment, education level and length of time working as an orthopaedic nurse. Questions regarding the participants' level of involvement in relevant professional associations, their level of experience with orthopaedic nursing, the types of orthopaedic patients found in their work areas and how often they attend orthopaedic nursing meetings outside of work time were included. They were asked if they considered themselves an orthopaedic nurse, did they believe that orthopaedic nursing remains a legitimate specialty, what skills and knowledge did they feel were important to being considered an orthopaedic nurse, did they feel that the speciality is under threat, and what direction do they believe the specialty should be focussed toward in terms of education and practice. Collection of this data was in various formats including multiple choice questions, short answer questions or Likert scales. There was no limit to the number of participants in this phase but a minimum of 50 (roughly 10% of ANZONA members) was set. This allowed for a reasonable representation of the

group. All nurses who worked in an appropriate orthopaedic setting could be included unless they met any one of the exclusion criteria below:

- Carers, students, pre-registration nursing assistants
- Managers who have not provided 'hands on' care in the past 5 years.
- Nurses who have not been continually employed in the areas identified above for a minimum of 2 years.
- Are not currently employed in an acute care or rehabilitation setting that provides care for orthopaedic patients.

At the end of the questionnaire all participants were offered the opportunity to voluntarily submit their contact details for inclusion in phase two of the project.

Phase 2:

Phase two consisted of semi-structured interviews based on preliminary analysis of the data from phase one. Participants who identified their willingness to be involved in phase two were reviewed by the coordinator to determine their suitability as key informants. Semi structured interviews were completed with six of these participants. Purposive selection of participants for this phase ensured a broad range of geographical areas and care settings were captured. Although this proved difficult as a number of participants who initially registered their interest in being interviewed no longer wished to be involved when the second phase began. Key informants who demonstrated a critical insight into the issues challenging the orthopaedic nursing group were actively sought for inclusion in this phase.

The use of semi-structured interview techniques, helped to develop a deeper understanding of the issues identified during phase one. Interview questions were developed based on thematic analysis of the findings during the phase one questionnaire.[54] A number of common issues were identified during phase one and questions were developed, at the factor level to facilitate a deeper understanding of the issues surrounding these factors. The questions were ordered starting with a general to a more specific or detailed focus.[54] Participants were offered the opportunity to expand on any concepts they felt were important to identify during the interview and the researcher explored some of this information raised by the participant in a greater depth. The interviews were conducted face to face, where possible, but for those participants who lived interstate the interviews were conducted via Skype™. Participants were contacted by email to organise a time for the interview and were offered times that suited them. They were provided with plain language information and complaints sheets and a consent form to sign and return to the researcher.(**Appendix I, II**) Transcription of interviews was completed using a professional transcription organisation who have a set policy for privacy in accordance with the National

Privacy Act 1988.[64, 65] Phase two participants were provided with an electronic copy of the interview transcription so they could ensure accuracy of the transcription.
Ideally data collection would have continued until saturation point was reached but this was limited by restrictions of the academic time period. Given the time limitations of this project it was not possible to complete more than one rotation of the cycle of ethnographic research limiting the depth of investigation and the ability to explore issues and validate concepts.

Ethical Considerations

A risk analysis of the research project was completed and identified very little potential risk to the researcher or the participants. No patients were involved in the research and a protocol was developed for use in the case of any adverse events involving the researcher or the participants. The research was conducted in accordance with the University of Adelaide's (UofA)code for responsible conduct and maintained the values and principles outlined in the 'National Statement on Ethical Conduct in Human Research'.[66, 67] Application for approval of the research project was made to the University of Adelaide's Human Research Ethics Committee and granted on 13 October 2011 with approval number H-256-2011.[68]
This project has the potential to inform practice, direct specific education, guide research and improve health outcomes for orthopaedic nurses and patients. There is also potential benefit to the orthopaedic patient as they have their care provided by nurses who have the best knowledge and skills to manage their needs.

Declaration of interest

The author acknowledges that he considers himself an orthopaedic nurse and has been a member of a professional orthopaedic nursing group for approximately fifteen years. He is also a lecturer who coordinates the delivery of a post graduate orthopaedic nursing degree at a large metropolitan university in Australia. He presents at international and national conferences on topics associated with orthopaedic nursing.

Privacy and Confidentiality

All participants' electronic particular data, including recordings of interviews, were stored on the researcher's personal drive on the UofA network server that is password protected and only accessible to the researcher. All other hard copy data (signed consent forms etc.) were stored in a

locked cabinet in the researcher's office in the School of Nursing (UofA). Data was de-identified and names replaced with codes before any analysis was conducted or data transcribed. Confidentiality was maintained by guaranteeing that no participants were identified throughout any of the data. All electronic data was stored on the UofA server under conditions identified in the human research guidelines.[67] The sample size for the initial phase of the research was large enough to guarantee anonymity. The interview phase included a smaller sample but involved participants from a wide range of locations and settings therefore limiting the potential identification of an individual's data being identifiable.

Analysis of the collected data

Analysis of the data was completed on a continual basis and served to modify the research.[11] As various types and forms of data were collected the analysis involved a number of stages and differing approaches. Analysis of the data was combined to develop the overall findings. This process has been described as a cognitive process and a technical procedure and is guided by an already established theoretical approach embedded in the data collection process.[11] Quantitative data collected during the questionnaire was imported into SPSS (Statistical Package for the Social Sciences).[69] This program allowed identification of means, standard deviations (SD), numbers and percentages. (*Appendix III*) A statistician was consulted during this stage to ensure rigour of any statistical analysis. Analysis of the Likert scale questions was completed using means and SD but was combined with other data to develop an overall understanding. Qualitative data from the free form questions were analysed using a thematic or pattern level of analysis.[11] Variables were identified and grouped into common factors and then into domains. The domains were analysed and an overall set of domains was developed. This process was not purely linear and involved a series of cyclic processes that ensured accuracy. The final domains were then used to direct the questions in phase two. Semi structured interviews were conducted and the transcripts reviewed numerous times to identify the emerging themes. The review of the transcripts also served to re-enforce the domains identified in phase 1. However other themes, not previously identified were recognized in this data and used to add to an overall understanding. It is acknowledged that complex relationships exist in the study topic and analysis that was conducted horizontally and vertically allowing the development of relationships at all levels of analysis.[11] Reporting of the results will be presented in a descriptive manner in accordance with the ethnography methodology. This method of results incorporates qualitative and quantitative data to develop a complex and integrated story of the cultural group. The quantitative data and from the questionnaire in phase 1 will not be presented in the conventional method that this type of data is presented in other types of research. Instead it will be combined with other data to provide an

overall description of orthopaedic nursing using reference to the extant literature. Tables and results of the quantitative data can be found in the appendices. *(Appendix III)*

CHAPTER 5: ORTHOPAEDIC NURSES AND THEIR STORY

This chapter describes the results of this research and is derived from a number of sources. In line with ethnographic research design, it combines quantitative and qualitative data along with the researchers' experience. It is supported by responses from the participants and serves to develop a high level understanding of the phenomena of interest and describe the orthopaedic nursing group. Like any cultural group orthopaedic nurses share common beliefs, knowledge, values and skills but have their members vary greatly. They have different levels of education, are engaged in different activities, have numerous roles and responsibilities and are shaped by a variety of life and societal experiences.

This has implications for the group and their leaders as it means that the group is not easily led and achieving a sense of belonging may be difficult. This is also true for any large group that shares some common activities or functions. Orthopaedic nurses do however share a number of elements that makes them a unique group. Using a representative sample of the group to develop an understanding of the group may not always be directly transferable to the larger group. However a majority of the group shares a number of common factors that can be isolated and can be transferred to the group at some level. Identification of these shared factors allows an understanding of shared cultural beliefs that when articulated can benefit the group as a whole. It will be demonstrated that the participants, while not representing the overall group, it is this core group that influences the evolution of the group and influences its direction. This is vital to the groups' survival and is not fully understood or appreciated by some members of the larger group. A flow chart of the relationships of elements associated with orthopaedic nursing can be found in *Appendix V*.

The following sections describe the participants, their roles, their functions as orthopaedic nurses and aspects of their group. These descriptions are unique to the participants in this project but some characteristics will be applied to the wider orthopaedic nursing group where appropriate.

Who are Orthopaedic Nurses?

Orthopaedic nurses in this study are found in a variety of settings and have a numerous roles. The majority work in wards of acute care hospitals from all over Australia and New Zealand and have roles that include some aspect of clinical care. They provide care for a wide range of orthopaedic patients in those settings ranging from elective joint replacement patients to high level trauma centres that care for patients with serious spinal, pelvic and multi trauma injuries. A large majority of the wards where they work have mainly orthopaedic patients however a few nurses who identify

themselves as orthopaedic nurses work in wards whose primary focus is not orthopaedics. In those areas that are not purely orthopaedic the most common other type of patients found are other surgical patients such as plastic, general surgical or urology. A number of participants cared for patients with acute spinal injuries. These patients are alternately managed by neurosurgical units in some hospitals. The majority of orthopaedic nurses are female, matching nursing in general. Anecdotally it may have been believed that orthopaedics has a higher percentage of male staff due to the physical nature of the work. However this has not been identified throughout the literature and was not raised throughout the research. The average age was a slightly lower than the general nursing population for each respective country. [70, 71] Over 50% of the participants report working in a management position which may indicate that the average age of the overall orthopaedic group may be even lower than this. Again, anecdotally this may be due to the heavy nature of orthopaedic nursing but any firm conclusion cannot be made here.

The group describe themselves as being passionate orthopaedic nurses who are experts in the area with a relatively high level of experience. It must be remembered that the participants were self-selected in the research and are therefore likely to be invested in promoting orthopaedic nursing through involvement in activities such as this type of research.

Becoming an orthopaedic nurse

How someone becomes an orthopaedic nurse is not described in the literature in any detail. What attracts people to orthopaedic nursing is described to some degree but is not often a focus. Orsini describes a project that actively sought to attract and retain nurses in the orthopaedic area and is unique in its consideration of how nurses are attracted to the orthopaedic area.[47] The concept of retention and recruitment remains a crucial issue for orthopaedic nursing that may not be fully appreciated. Attracting new nurses into the speciality is vital to ensure the continued existence of the group and identifying the attraction to orthopaedic nursing.

All names used throughout this paper are pseudonyms.

'...I just enjoyed - I think when you're a student you're open to all new ideas. I really just liked the team. I got the fact that in orthopaedics you've got to work as a team.'

Cameron, interview participant.

'*I think just the mechanics of it really fascinated me and that we had the ability to help people have their bones repaired and their muscles reattached and so forth. So I think I really was drawn to that sort of aspect of it...*'.

Shane, interview participant.

'*I think, looking back, those influential positions were filled by very capable, professional women and those women have gone on to achieve great things in nursing. The stars were aligned really for me to succeed in orthopaedics and I just loved it. I loved the area of orthopaedics. I found orthopaedic nursing interesting….*'. Angela, interview participant.

Issues of enjoyment, love of the work, being able to achieve real outcomes for patients and teamwork are important factors identified in attracting nurses to the speciality. Specifically being inspired by leaders of the speciality and the way they related to their staff and the passion they displayed for orthopaedic nursing that may create a life-long interest in orthopaedic nursing. Angela describes how she had approached a hospital to apply for a clinical position after being away from the clinical setting for a long period.

'...I was asked where would I like to work at the [hospital name] and I said, I've always liked orthopaedics.'

Angela, interview participant.

Since then Angela has gone on to become a senior orthopaedic nurse who is an influential leader of the group and someone who has had a significant positive impact on the group. If she did not have that love for orthopaedic nursing fostered early in her career she may have ended up in another area.

What orthopaedic nurses do?

Orthopaedic nursing is generally influenced by the injuries and needs of their patients. There is naturally an element of general nursing in the orthopaedic setting as a large number of their patients have many co-morbidities and a proportion of their needs are not specific to orthopaedic nursing.

'To be an orthopaedic nurse you've really got to have a good all-round knowledge of nursing, because your patients can have lots of co-morbidities.'

Cameron, interview participant.

'*All of which I suppose is nursing in general. That's not particularly specific to orthopaedics...*' Victoria, interview participant.

Skills such as pain management, wound care, pressure ulcer prevention, mobility, showering and discharge planning are generic skills required by most nurses. However the types of injuries orthopaedic patients sustain and the implications of those injuries impacts on the way those generic

skills are delivered. The orthopaedic nurse needs to have those generic skills but be able to apply them specifically to the orthopaedic patient who has different needs. An example is the provision of pressure area care to the orthopaedic patient resting in bed in traction. For the patient who has no pain and is not in traction turning can be achieved relatively easily, but for the patient in traction who is in pain and has certain restrictions on his movement (to maintain alignment/prevent disruption of a fracture) this becomes a difficult and specialised activity. Specific skills and knowledge are essential in achieving this effectively.

'..often our patients haven't got use of one arm or one leg or whatever,... so often the patients will need help with activities of daily living. I guess that's one of the unique things'.

Cameron (interview participant).

Orthopaedic nurses possess specific skills and these are widely recognised and have been articulated by all participants. They are the types of skills that are uniquely 'orthopaedic' and are often related to surgical management of the patients.

'*application of traction, basic plastering skills, pain management, neurovascular observations & significance of changes, discharge planning, complex dressing skills as well as baseline for ortho eg pin sites,.... pressure area management, hygiene assistance / ADL assistance*, *recognising that the pt is immobile, bowel regimes and prevention of constipation…'.*

Participant #20, questionnaire.

While these skills are overt orthopaedic nurses can struggle to fully appreciate and articulate their significance. Those finer skills are often developed over time, possibly at a subconscious level and are therefore difficult to articulate and not easily appreciated by others.

'I suppose it's because it's just so normal for me. It's hard to actually spit it out, I suppose.'

Victoria, interview participant.

'They need to have the skills and the knowledge to do what they do and I'm not sure if they know that they need that. I think, deep down, they probably do. If you really said to someone - any nurse on an orthopaedic ward - if you just had generic RNs in here and no one with specific orthopaedic skills, do you think you need someone with it? They would probably say yes'.

Angela, interview participant.

This was evident as some of the junior or less experienced orthopaedic nurses interviewed struggled to articulate the role of the orthopaedic nurse at the same level as experienced nurses.

This depth of awareness is developed over time with a certain level of introspection and forms a very important aspect of orthopaedic nursing and how it is lead.

Stuck in bed

The one major factor that separates orthopaedic patients from other patients is restrictions to their mobility. The ability to mobilise gives individuals the freedom to do what they like and go where they want. A significant proportion of orthopaedic patients who are admitted following an unexpected injury suffer a sudden restriction to their mobility.

'*I'm talking more about the ones who have been broken by external forces, so the acute type patients, trauma patients. I mean, they've been through something that they weren't expecting and in a lot of cases it's disrupted their life'.*

Victoria, interview participant.

This has implications for both the patient and therefore the nurses who are providing their care. The young patient resting in bed following an unexpected motor vehicle accident (MVA) in traction that cannot turn over in bed without pain and assistance has very specific needs. They are often literally tied to the bed, like a form of restraint, they cannot stand, they cannot go to the toilet or they may not even be able to feed themselves. This has implications for the physical and emotional needs of orthopaedic patients, often manifesting itself as fear.

'…the first thing I guess is, they need to know that they're safe…'

Cameron, interview participant.

Cameron identified that orthopaedic patients are likely to have some level of fear regarding their injury, the treatment and the long term implications. They find themselves, unexpectedly, in an uncomfortable setting with a sudden lack of control over what is happening to them. Ensuring that they feel safe is the first priority of the orthopaedic nurse and this is achieved by a nurse who understands their injury and its implications. It is the experienced orthopaedic nurse who can then provide care to minimise that fear and the implications of their injury as much as possible. This ability develops over years of experience in forming relationships with individual patients that is grounded in knowledge developed from all patients throughout their experience. This is evident in how orthopaedic nurses relate to their patients.

'I think things happen to patients - happen to their basic bodily functions - and orthopaedic nurses have a great knack of being able to unite to come together and laugh about that sort of thing… but I think around those basic care issues orthopaedic nurses come together and can laugh

off some things that in some other areas of nursing they wouldn't experience because their patients might not be as immobilised.

Angela, interview participant.

There is an element of prediction of the patient's needs, their concerns and even identification of needs that the patient is yet to recognize. It may be helpful to the patient to predict certain events that are likely to occur throughout their journey and that these events are normal and not of concern if managed correctly.

'She was anticipating their needs and she'd see these patients say, oh you were right about that? I got constipated on Day 5 or whatever it was. Whatever was in her spiel. They appreciated that'.

'there are unique needs that orthopaedic patients have because it stems from their orthopaedic conditions and the journey that they might travel with you, so being advised of that in advance is only probably something an experienced orthopaedic nurse could do.'

Angela, interview participant.

Possessing an awareness of patients' injuries and the treatment options allows the orthopaedic nurse to provide the patient with all possible treatment options, explain the rationale for treatment decisions and answer any questions. Experienced orthopaedic nurses are best placed to do this as the patient may only see the orthopaedic surgeon for a short period each day and not have the opportunity to have a detailed conversation. Developing this level of education is important to orthopaedic nurses.

'Asking questions so that you understand what the injury is, and why that's a particular surgery that they're going to perform to fix it. Or why we're not performing surgery to fix it. So that you have a better understanding on how you can care for your patient'.

Yvonne, interview participant.

'I have to know more. I have to be able to answer their questions and be able to explain it to them in a way they can understand and I think, for me, that's very important.'

Shane, interview participant.

There are noticeable changes in the level of engagement patients wish to have in their care decisions over the past decade. Orthopaedic nurses are likely to get asked more questions about the care their patients are receiving. They also get asked their opinions of the different treatments options offered to them and therefore need to have a well-developed knowledge base. The nurse is

the person who is with the patient for the longest periods throughout their admission so they may develop close relationships and be the natural person who the patient seeks advice.

'earlier in my career they just seemed to accept what was happening to the… it's probably reversed the people that say I don't want to know rather than people that say yeah, I do want to know, I want to have a look at the X-rays, what else can you tell me? They're more interested in knowing what's going on with their bodies now than 10, even 15 years ago.

Shane, interview participant.

'... we've got this baby boomer generation coming through that expect their rights and know their rights - they expect their care to be of a certain level. So it's about meeting those expectations as well, which I guess is the same everywhere'.

Cameron, interview participant.

Patients are likely to have a stronger sense of safety if they are confident in the abilities of the nurses caring for them. Orthopaedic nurses, like other nurses, have a strong sense of advocacy for their patients. Many of the changes that orthopaedic nurses fight for are grounded in improving the care delivered to their patients. At the superficial level it may appear that the group or individual nurse is promoting themselves but often this is driven by a desire to improve the lives of orthopaedic nurses in general as well as the patients for who they care.

'One of the things that I think is really important about orthopaedic nursing is the advocacy, whether ..... with the patient or within the profession. So, the patient..... At the professional level, you're advocating for the speciality. Anything that might have an impact on nursing.'

Angela, interview participant.

Angela also highlighted the notion that maybe orthopaedic patients should expressly have the right to be cared for by appropriately trained and experienced nurses.

'Well, maybe an orthopaedic patient is entitled to have a charter that says I will be looked after by an orthopaedic - or at least one of the nurses on this shift is orthopedically trained. We've got these consumer right movements - but is that what they should be saying? Yes. I think they do have needs'.

Angela, interview participant.

Orthopaedic patients have unique needs that sometimes are difficult to clearly articulate and are not readily identified by others outside of the speciality. This often creates a sense of unease or frustration when others under or de-value the intricacies of orthopaedic nurses and their practice.

It takes more than one

By its nature orthopaedic nursing means having to work as a team. Due to their injuries many orthopaedic patients are often unable to move independently, mobilise or complete their usual activities. They often have casts or splints attached to limbs making them heavier or they may also have external fixators or large dressings that make movement difficult. For orthopaedic patients this often means that their care needs to be delivered by more than one nurse so that it is safe for both the patient and the nurse. The author has many memories of up to five nurses crowding around a patient's bed each holding a limb or some piece of equipment in order to turn the patient for pressure area care. This is not an uncommon sight in an orthopaedic ward and is something that orthopaedic nurses do without really considering it.

' - the qualities that orthopaedic nurses have are that they are hardworking. They are not afraid of hard work. They are more likely to be a team player than an individual player because you cannot get through a shift without having the assistance of your team. You can't mobilise a patient without - you can't roll a patient. You can't administer nursing care, even the basics of nursing care, without having the assistance of someone.'

Angela, interview participant.

'I got the fact that in orthopaedics you've got to work as a team'

Cameron, interview participant.

That ethos of teamwork is not isolated to the ward either. It is a theme identified in the way orthopaedic nurses work together in other areas such as in organising an international conference as described by Angela below.

'I think it's a good example of orthopaedic nurses working together well because the committee was just brilliant and nothing was too much trouble. Everyone pitched in. I think if - it's a symptom of orthopaedic nurses. That's how we work.'

Angela, interview participant.

Orthopaedic nurses work as teams because the care that their patients need cannot be delivered otherwise. This is something that may not be fully appreciated by most orthopaedic nurses as this

ethos of team work is ingrained in orthopaedic nursing teams and is learnt by new orthopaedic nurses almost subconsciously. Appreciating this need for team work is vital however for orthopaedic patients who are placed on non-orthopaedic wards where development of this ethos may not occur.

Learning to be an orthopaedic nurse

Everyone agrees that education is important, but few orthopaedic nurses consider how they and others learnt to become an orthopaedic nurse. Understanding the way people learn to be an orthopaedic nurse influences how the next generation will practice and teach others. Nursing education begins during undergraduate training where orthopaedic nursing may not be taught as a speciality, so much of the learning about orthopaedic nursing begins and occurs in the clinical setting.

'I think in the under-graduate training it gets a bit lost in the fact that there's so much else to learn on a general basis. I think once you start specialising you learn it from other staff who have the knowledge, you learn it from... whether that be a nursing staff member ... the surgeon - the radiologist'

Shane, interview participant.

Where learning goes from there is varied. Learning from other experienced orthopaedic nurses, while you work, is how the majority of orthopaedic nurses learn in the first few years of their careers. The next step in education is often a post graduate degree. These courses are limited in their availability though and some believe that this is not necessarily the best answer for all orthopaedic nurses.

'They very much see the postgraduate as being where nurses should be going. I just think, well, you're getting all these nurses doing their post grad cert, their ... grad dip and possibly Masters. Does it make them a better nurse? I don't know'

'We need some really strong ward nurses. We don't need 30 nurse educators in orthopaedics. But we do need 30 damn good ward orthopaedic nurses who have got really strong good knowledge and current up to date knowledge'.

Victoria, interview participant.

In the past much of the orthopaedic skills were taught in hospital based programs but many of these stopped once education moved to the university sector. Some see value in bringing back this level of training as they feel it allows more nurses access to skill development without having to enrol, pay and complete a university course.

'not all nurses want to go on to a university level, to learn further. They just want some basic stuff. If your organisation doesn't offer that itself, then it quite often it can be difficult for nurses to pick up those skills'.

Yvonne, interview participant.

This is true and valid but exposure to a post graduate level of education to some is vital in keeping that high level of knowledge current and assisting to develop new leaders of the group. It allows a level of validation of those skills obtained and knowledge developed from other orthopaedic nurses on the wards. It also serves to change the focus of the nurse and may start the process of developing future leaders.

'... a lot of things that you pick up from doing the grad dip. A lot of the practical sides you might pick up from experience and practice, but the knowledge to why you do something... I think a lot of nurses on the orthopaedic wards may have experience but they may not have the grounding behind why they do things a certain way'.

Cameron, interview participant.

Despite the method of education an interest must exist in the individual and be nurtured and cultivated by the leaders of the group to drive the passion for learning.

'They've got to have an interest. You can't just waft on by. So you've got to have an interest, you've got to actually educate yourself.'

Jordan, interview participant.

'I think an interest, as basic as having an interest that can be fed I guess, and once you feed that interest then the knowledge and skill increases along with that. So yeah, I guess it's finding the people that have got the interest and talking to them and teaching them and showing them'.

Shane, interview participant.

Over three quarters of orthopaedic nurses in phase 1 of this research have post graduate awards in orthopaedic nursing. This level of post graduate education is not likely to be representational of the entire orthopaedic nursing group but demonstrates a strong desire for further education. A third of participants expressed a desire to continue their formal education in the near future.
Additional education is not unique to orthopaedic nurses but is seen as a method of improving knowledge, improving patient care, beginning the pathway to leadership roles and accessing management positions. Orthopaedic nurses identify a need for specific information but there is some uncertainty about how this should be delivered. When compared to other specialities, the

lack of available post graduate orthopaedic education courses raises a number of questions not answered in this project. Consideration of the reasons for the lack of orthopaedic nursing courses should be made whether it is due to low demand or has the speciality not been promoted suitably to drive provision of orthopaedic courses from the tertiary education sector.

Other groups

Physiotherapists and Occupational Therapists

Orthopaedic nurses do not practice in isolation, depending on the setting they often work closely with other members of the healthcare team. Physiotherapists and occupational therapists (OT) are usually closely involved with orthopaedic patients. The roles of these groups are to assist patients who have restricted mobility or functional capacity. The level of involvement of OTs or physiotherapists varies depending on the clinical setting. Some areas use one group more than the other although there are combinations. Role confusion is the greatest between these two groups and orthopaedic nurses. Each group has its defined role of promoting patients' mobility, teaching and encouraging exercises, functional assessment, assisting with equipment or splinting, patient education and discharge planning. Generally these groups are usually employed to work during office hours so at other times these roles are assumed by orthopaedic nurses as they are present 24 hours a day. This is where the role confusion begins. Many senior nurses believe that orthopaedic nursing has given away too many of these roles resulting in a weakening of the speciality and a loss of knowledge.

'*The input from the nurses I think has changed. For us, the physios have taken a much bigger role in our orthopaedic cases, which changes I guess what we do, and I think that a lot of our non-orthopaedic aware staff …. expect that what the physios do is all that the patients needs to do, and they forget that perhaps the physios aren't there quite as often as we are and we've still got a massive role to play in encouraging that physio to continue.'*

Shane, interview participant.

This participant identifies the lack of clarity around the orthopaedic nursing role that has lead to, or developed from, the changes in roles of different teams.

'I would like it to be that there are knowledgeable nurses taking a lead in care. Not being told what to do by physiotherapists and OTs. We need to take back some things but first we need to organise standard roles for the orthopaedic nurse.'

Participant #19, Questionnaire.

There are elements of distrust between the groups in some settings especially as they vie for inclusion in new positions, systems or pathways. There seems to be a closer link between the physiotherapist and medical groups as they have developed from a similar model of practice. However physiotherapists and OTs provide a valuable level of specialised care to the orthopaedic patient. Orthopaedic nurses need to be capable of providing a large proportion of elements of that care especially at those times when there is no one else around. This requires strong leadership to inspire a level of confidence in their abilities and awareness that it is part of the orthopaedic nurses' role to mobilise patients, assist with their exercises, fit/adjust braces and provide discharge planning.

'I think people are reluctant to mobilise patients. They rely on the physios too much.'

Cameron, interview participant.

Cameron believes that orthopaedic nurses of all levels should be capable and willing to initiate treatment for their patients within their scope of practice and not rely on the availability of other disciplines. This is especially relevant during out of office hours and for those orthopaedic nurses who work in settings where there are no regular physiotherapists or OTs. Delays to treatment and care have a potential negative effect and may increase the length of stay and rate of complications.

Medical Staff

The medical profession has had, and continues to have, a significant impact on orthopaedic nursing. Changes in the practice of medicine have forced changes in the function of orthopaedic nursing. A majority of orthopaedic nurses work alongside orthopaedic surgeons and other medical staff. Traditionally the relationship was very different to today where the nurse was there to assist the surgeon on rounds or in consulting roles.[34] The current relationship between these two groups is vital for the patients' wellbeing but can be strained at times which may be related to the difference in the model of care that each group uses. Some orthopaedic nurses have a sense of a lack of respect from medical staff in terms of valuing their role. This relationship is vital to the delivery of effective care to the orthopaedic patient. Senior orthopaedic nurses may develop good working relationships with the surgeons and be confident in making care or treatment suggestions but don't see the same level of respect when it comes to activities at a higher level. As an example Angela describes her unsuccessful attempts to engage with the senior medical staff about including orthopaedic nursing in discussions of potential changes to the unit's structure.

'I think its personal relationships that build on that. I think… I have got [a]good personal relationships with the consultants we work with, but I know when I approached one of them, I

really didn't get much of an audience with him about it. I think that's a concern… I was attempting to collaborate, but nothing really has come back. That's a concern for the speciality as well.'
'We don't really have that mutual respect and evidence of collaboration that we should.'

Angela, interview participant.

Relationships on a ward and daily level are complex as numerous members of both teams aim to work together as one team. Conflict can and does occur as senior experienced orthopaedic nurses may be given incorrect orders/direction from junior medical staff with little or no experience in the orthopaedic area. This tension is often made worse if the medical staff member does not appreciate the experience and knowledge of the nurse. Generally senior orthopaedic nursing staff are aware of the knowledge level of the medical staff and will adapt their practice to ensure their patients are receiving the best care.

'So often I'd be coaching the interns through their X-rays. For example, we'd have first year and second year interns on rotation from Melbourne….. Yeah, often I will get told the wrong thing and try and explain to them no, I think you're seeing…. so I guess for me I have to be a little bit diplomatic and careful and make sure I document to cover myself, because often I guess.'

Shane, interview participant.

Cameron identifies that often orthopaedic nurses assume the role of prompting junior medical staff until they are confident that the medical staff can make sound decisions. There is a view that some orthopaedic medical staff do not manage the holistic care of their orthopaedic patients as well as is possible. This creates some tension for orthopaedic nurses as they act as advocates for their patients.

'In medicine [Doctors from internal medicine units] they're a bit more collaborative and they're a bit more holistic in their view to patients; whereas orthopaedic doctors often aren't. Often the nurses do become experts in prompting the doctors or letting them know all the things that are happening with their patients.'

Cameron, interview participant.

However there are examples where a mutual respect is evident and relationships between the two groups are well developed.

'I am very happy with the recognition of orthopaedic nursing as a specialty within my workplace by nursing, management and medical. My workplace has recognised orthopaedic nursing as a specialty and because of this has allowed the development of specialty roles.'

Participant #38, Questionnaire.

Relationships between orthopaedic nurses and other teams in the orthopaedic setting are vital to the delivery of safe and effective care. Identification of power balances within these relationships can assist in strengthening those relationships for the benefit of the patient. This is of special importance for leaders of the groups who can use this understanding to lead change and develop effective relationships between all members of the group.

Professional representative orthopaedic nursing groups

Many formalised orthopaedic nursing groups exist throughout Australia and New Zealand. A few have been running for a number of decades. The number of formal members and the effectiveness of each group are influenced by the individual drive of members and leaders. It takes a few people with passion and motivation to inspire others and to drive and develop the group. Some of the smaller regions of Australia (Tasmania and Northern Territory) do not have formalised groups that meet regularly but still have individuals who are passionate and continue to promote the speciality. Each group have a committee who are responsible for arranging membership, organising education meetings, conferences and workshops. They engage in political and policy activities such as being members of local orthopaedic networks or lobbying government bodies to varying extents. Their overall objectives could be summarised by improving care for orthopaedic patients, promotion of the speciality, providing education and expanding the body of knowledge around orthopaedic nursing by research and publication, demonstrating leadership and collaborating with other orthopaedic nurses. [72]

'Whether the group thinks they need it or not, they do… They need to have a special interest group. At a national and international level, there is no question that - and we're working through it now - we need to communicate with each other. We're communicating a lot more.'

Angela, interview participant.

Angela identifies the importance of having these formalised groups at all levels, despite the engagement, or lack of it, of all members.

'…being with ANZONA at a national level, because teleconferences you're able to share knowledge as well, isolate problems and how to work through a solution.'

Jordan, interview participant.

International collaboration between groups has occurred haphazardly in the past but is now starting to occur in a formalised manner. ICON has allowed formalised ties to be developed between

orthopaedic nurses from around the world.[52] Global collaboration has occurred in the development of best practice guidelines with the overall aim of publishing the guidelines and slowly developing a body of literature about orthopaedic nursing practice. There are regular international orthopaedic nursing conferences that are held by each region and are attended by nurses from all other countries. This collaboration is in its infancy but is slowly growing. It has not been without issues between groups but appears destined to be a strong and valuable body. Two international peer reviewed orthopaedic nursing journals are distributed regularly and comprise primary orthopaedic nursing research from around the world. A section in each edition contains an update of what is happening in each regional orthopaedic nursing group.

Not all members of the group see the value or wish to engage in these formalised groups. Some individuals may identify themselves as orthopaedic nurses but do not want to participate at any level further than their own workplace or may not be aware of the group. A number of participants identified this during phase one of the research with answers to a number of questions about what they would like to see happening to their local professional orthopaedic nursing group.

'don't care.' Participant #56, Questionnaire.

'not aware of this organization.' Participant #5, Questionnaire.

Participants described a number of ideas and innovations that could strengthen the work of formal groups as well as ANZONA. These include suggestions for improving communication, ideas for publication and research, development of recommendations for practice and competencies, allocation of awards, developing ties with the orthopaedic medical groups, improving awareness of the group, improving membership and having a bigger voice in the political arena.

'National competency development. Loads of orthopaedic education, maybe orthopaedic lectures via Skype, learning packages to work on specific ortho projects through ANZONA committee based on evidence based practice like recommendations for the more effective spinal collar to use.'

Participant #67, Questionnaire.

A number of participants are happy with the current direction of their local professional group/ANZONA and want things to continue as is.

'Loving ANZONA as they get the voice of ortho nurses heard. Keep up the great work.'

Participant #25, Questionnaire.

These formalised groups remain the essence of the orthopaedic nursing group and are vital to the speciality's continued development and success.

Orthopaedic nursing leaders

'Well, the problem probably is that there isn't any one person responsible for it.'

Angela, interview participant.

Any group has leaders and orthopaedic nursing is no exception. The orthopaedic nursing leaders roles are as diverse as the leaders themselves. A leader of any group has a number of roles and responsibilities but is primarily responsible for assessing the current condition of the group and its activities and then makes decisions that guide the group in a certain directions. This is usually based on what the leader believes is in the groups best interest (and those who it serves) and in achieving the groups goals and objectives. They may arrive at those decisions independently, allow the group to decide or use a combination of both to decide. This is easier for a leader of a group that has set members, is relatively small and is found in one place. The orthopaedic nursing group is not one small, easily definable group so defining its leadership is complex and multifaceted. Due to its nature the overall group is not formally structured so there is no one overriding position or group that is responsible for overseeing its leadership.

A large proportion of participants from both phases identified that leadership of the group was one of the most important factors when considering the orthopaedic nursing group. The strength or lack of effective leadership has a direct relationship to the function and strength of the group and will closely influence its future.

Who are the leaders?

Leaders of orthopaedic nursing are not always nurses in senior management positions. Some orthopaedic nurses in management positions do not actively engage in promotion of the group and may not be members of a professional orthopaedic nursing group. They have leadership roles within their management position and have an influence on developing knowledgeable and skilled orthopaedic nurses on a ward/unit level but don't engage outside of their workplace responsibilities. These leaders are valuable for orthopaedic nursing but those leaders who engage at in additional activities are vital for the future of orthopaedic nursing. The converse is also true; a number of junior nurses who are not in management roles may position themselves as leaders within the group and actively seek to engage in additional activities. They may start off as

committee members of the local groups and then gradually increase their involvement as they grow in confidence and are able to demonstrate their abilities to others.

'I think there are leaders at every level. There are leaders at the ward level, at the [professional orthopaedic nursing group] level, at the ANZONA level….. They're everywhere. … as well as the nurses in charge of a ward are leaders as well as the coordinators are on any one shift. Sometimes leadership - they're installed in those positions, but, then, sometimes those qualities are there and they just can't help but come forward. …..Sometimes they're installed. Sometimes it's natural. Sometimes you formally step into that role, but, then, how you lead can be different in those roles as well…. It's also the nurses on a shift. The [name of a nurse] on a shift who are advocating for the patients and for doing things in a particular way that is true to orthopaedics.'

Angela, interview participant.

'it could be RN who's got their grad dip but is happy teaching people on the ward. You can be an orthopaedic leader without being maybe a leader; if that makes sense.'

Cameron, interview participant.

Each of these leaders has a valuable role in the development and sustainment of orthopaedic nursing within their local area as well at a broader level.

Becoming a leader

Understanding why certain individuals become leaders and how they achieve this will allow the group to actively promote leadership and strengthen the groups' future. Participants describe a number of factors that influence the development of a leader. A combination of the attributes of the individual, the opportunity, experience, knowledge and inspiration from others all go to create leaders.

'I think again it starts with - to become a leader you do need some experience. I think it's about… how that person is driven with that experience. I think as soon as you start doing extra external things, so going on a ….. course and then maybe going on and doing your grad dip, I think then people expect you to be able to be a leader…. I think once you've done that, it's what you do with it.

Cameron, interview participant.

'leading by example, watching others, being inspired by others. You do need to go down the formal path of education. You do need to grasp opportunity when it comes to you. So, grasping opportunities.'

Angela, interview participant.

Leaders are vital to the overall group as well as to each local area. Of equal importance is the role of members of the group who choose not to be formal leaders. These individuals may display aspects of a leadership role on a daily basis while implementing clinical care and supervising and teaching junior staff.

'Some people are really happy to just be Indians and they're always there, you can always rely on them, but they don't particularly want to have their name on anything. Then other people are quite happy, like they've got a lot of good ideas and yes, they just automatically go into a leadership role. Other people see them as leaders… they respect them and their role.'

Jordan, interview participant.

Being inspired is a significant consideration in the development of leaders. It will benefit the overall group and local areas if the current leaders are aware that the development of future leaders is closely linked to mentorship and inspiration of junior staff.

'I also think I was very lucky in that the senior nurses that were around me, who were encouraging me, were enlightened as well. I think that I was encouraged and they could see in me some potential and so that was encouraged...'

Angela, interview participant.

Senior nurses are partly responsible for inspiring new leaders and combining this with a certain level of cajoling can assist in getting individuals involved in leadership activities. From there leaders will continue to support those who have displayed a willingness to be involved and who demonstrate the potential skills needed to become a leader of the future. This may be a process that neither group is fully aware of and occurs at a subconscious level. The types of individuals who become leaders seem to possess a certain level of internal drive to achieve things beyond their work responsibilities and they are able to think laterally and widely.

What do leaders do?

Most leaders possess attributes that predisposes them to the leadership role. This could be learnt, inspired or inherent within that individual's personality, or more likely a combination of each.

'But they've just got good ideas and they're driven. They're just natural leaders.'

Jordan, interview participant.

'They're open to ideas, so they're usually not rigid people. They're usually open to ideas from other people, and they may suggest new ideas.'

Cameron, interview participant.

To become leaders individuals usually possess a high level of passion for orthopaedic nursing. This passion drives a desire to promote the speciality and to advocate for nurses and patients within the speciality. Much of the promotion of the speciality, at a higher level, occurs in the individuals own time often using their personal resources.

'I think those nurses who are the core of that group are just so passionate that I take my hat off to them, because they really keep it going.'

Victoria, interview participant.

'I think a lot of the orthopaedic leaders I know that are passionate have given up a lot of their own time; whereas some people don't. I think you can tell the difference… but it's a reality I think….. you certainly start to become that orthopaedic leader….'

Cameron, interview participant.

Dedicating your own time to these leadership roles is difficult for some and is likely to prevent some individuals from engaging deeply. The passion for the speciality is what drives the person to spend their own time working towards goals of the group. Leaders all work differently but their roles consist of a number of common activities. Organising education sessions for groups of orthopaedic nurses, arranging conferences and seminars, collaborating with other leaders (nationally and internationally), identifying areas of deficits in knowledge or practice and designing strategies to rectify those deficits. They may also participate in high level committees or groups that have decision making powers that influence healthcare policy, conduct research or practice improvement projects, work to inspire other orthopaedic nurses, act as a mentor for others, advocate for and manage new orthopaedic nursing positions, being aware of threats to the group and directing the future of the group. These activities are not coordinated between the larger group so there is a level of frustration that some leaders feel as their influence over change and practice is slow to become evident. Even though there is a level of frustration, some leaders understand that it is part of their responsibility to the specialty and that they have a role in continuing the work of the leaders of the past and not wasting their achievements.

'I think it is part of your professional responsibility. To me, I see it as its part of my professional role.

Yvonne, interview participant.

'…they must get sick of hearing me bang on about the same old thing. I'm getting sick of it. I think - yeah - who does it? Well, it'll fall to the same few, but hopefully, as we were engaged in orthopaedic nursing, others are engaged because they're inspired or they connect with the speciality or whatever it is.'

Angela, interview participant.

[Not so] shameless self-promotion

Some individuals that 'stick their hand up' or attend or present at meetings may feel they risk being seen as self-serving. Participants describe that effective leaders need to have an element of 'shameless self-promotion' to their practice. There may be an element of self-pride in these actions but the majority of leaders are usually motivated by the desire to advocate for the group and their patients.

'Maybe the shameless self-promotion is about going to that meeting…. and saying, are you aware of this evidence? It's also about putting the poster for [professional orthopaedic nursing group] next education meeting up against the next international meeting of the bone and joint crowd or whatever. It's just taking every opportunity to say, yes, we're still here'.

Angela, interview participant.

This need to 'shamelessly self-promote' arises from a sense of powerlessness (or reduced power) of the group to influence some aspects of what is occurring to them. To get their voice heard they need to make a loud and long enough noise that can be heard by those that possess influence over the group. This inspires others and ensures that those groups and individuals that make decisions affecting orthopaedic nurses are aware of the groups objectives and wishes are may take them into consideration while making those decisions.

'Well, I think all the orthopaedic nurses need to have the responsibility to promote orthopaedic nursing as a specialty. I like the way ANZONA or the way [orthopaedic nursing leader] especially is trying to get ANZONA affiliated with the Australian Orthopaedic Association… trying to get a little bit more recognition amongst AOA. Just that we're also health professionals and we would like the recognition.

Jordan, interview participant.

Self-promotion is achieved on a number of different levels and to varying degrees by different leaders. It all adds to the overall promotion of the speciality of orthopaedic nursing.

I think obviously being involved in their respective groups and not just in regards to orthopaedics. But getting their name out there, and being involved in - at a political level. At a social level, at within our specialty group level. So it's about going to conferences, and letting people know who you are and being involved in committees outside of your actual specialty.

Yvonne, interview participant.

It's got my attention!

'It's got my attention! Participant #8, Questionnaire.

Arising from this research is the appreciation that leaders of the orthopaedic nursing group often do not fully appreciate the value of their actions. The roles that they assume and the activities associated with those roles are often undervalued or underappreciated by the leaders themselves. This may be due to a lag between completing activities and seeing noticeable results. Often the activities have a high demand on the personal time and resources of the individual leader which may create a feeling of resentment. It may not be until processes such as this research that this becomes evident through a certain level of introspection.

'Even though I was doing the certificate, I haven't thought much more than that. That I was moving the profession forward. It was more moving [Angela] forward. Moving myself forward.'

Angela, interview participant.

Many of the participants described the types of activities they do to promote orthopaedic nursing but few articulated what effect those actions were having or identified the impact to their practice. The more experienced (in orthopaedics and leadership roles) interview participants were better able to link their activities with broader results. This may occur as the individual spends more time in an orthopaedic nursing group leadership role and begins to identify the delayed links between actions and results. It is therefore important that the current leaders appreciate their responsibilities for the future of the group as well as appreciating the value of their work.

'I think… as you move closer to the patient, dare I say, that broader group might not be able to articulate those needs as much, but from you and I who are a part of that group, then we know they need the leadership. They need the specialty to exist and they need the education. I think they need to be organised, whether that's organised in wards or organised professionally.'

Angela, interview participant.

It falls to the passionate few.

'Yeah, it falls to the passionate few and you get tired. I know… I got tired of doing that, so you do need to engage new people to bring new perspectives and new passion..'

Angela, interview participant.

A number of participants describe the imbalance of responsibilities for some activities within the group. Much of the work leading, promoting the group and organising events and meetings is undertaken by a small number of the group. This may be the executive members of the professional orthopaedic nursing group but may also be a devoted orthopaedic nurse who is not in an official position or someone who does not have many other members to assist them.

'MORE MEMBERS! It is becoming increasingly difficult to keep on top of things like mail outs to members, organising professional days and twilight nights with such a small group…. Same few people doing all the work for most of the time.'

Participant #20, Questionnaire.

There is a direct and obvious link between the number of members in a group, the drive and dedication of the leaders and the effectiveness of the group. Organising education sessions, completing administration tasks, tracking memberships, distributing information, engaging with member's needs, promoting the group, keeping in contact with members are all demanding tasks that need to be completed for a formal group to function well. If a formal group does not function well and does not engage with their members then the speciality will suffer. In these areas orthopaedic nursing may be driven forward by individuals within their own practice area but there is very little coordinated effort on a larger scale.

'Our state,… isn't really very organised. The only information that I get is for that one study day a year and for membership renewal. That's the only correspondence I get at all, and I've been a member of the [Professional local] Orthopaedic Nurses how long? It would be at least four or five years.'……. 'I do battle on a little bit by myself….'

Shane, interview participant.

Shane describes a lack of engagement by the professional orthopaedic nursing group. For it to be effective the leaders need to be motivated, passionate, organised and be able to devote some of their personal time to the group. This is difficult to achieve sometimes as it requires time and dedication from the leaders and if that is not present then the group suffers.

Needs of the group

The needs of orthopaedic nurses vary depending on their roles and location. This may be in a subacute setting, in rehabilitation or in the rural sector. A lack of, or at least barriers to, engagement are described extensively by the participants when it comes to different settings such as rural orthopaedic nurses. They have unique needs as they are required to have a broad range of orthopaedic nursing skills without the support that is often available in the large metropolitan hospitals. They care for a broad range of injuries and their patients are returning from other hospitals more quickly than they have in the past.

'By virtue of their rural nature, they have to be Jack and Jill of all trades. They have to cover all aspects of nursing, but a lot of private procedures are done in the country. A lot of post-acute care, step-down stuff. Rehab is getting done in the country. They're the areas that are crying out for education.'

Angela, interview participant.

Pressure on acute beds and changes in the healthcare system have changed the way orthopaedic patients are managed. They are in hospital for shorter periods, discharged to rural or rehabilitation hospitals or nursing homes earlier than previously which shift the patient along the care continuum. This has an impact for orthopaedic nurses working in those environments who need to provide care for patients who are more acutely unwell than they feel comfortable managing.

'*Yeah, I'm finding that we're getting them out a lot faster, just because we get bed blocked a lot, because we're the base hospital, so then sending out to our satellite hospitals. The patients aren't probably as worked up as they should be and the GPs aren't quite prepared to know what to do with these patients. We're sending them also back to nursing homes a lot faster too.'*

Jordan, interview participant.

Engagement in the formal orthopaedic nursing groups is sometimes difficult for some orthopaedic nurses. Attending education sessions may be restricted due to travel costs and lack of time. There is a sense of loneliness that rural nurses feel as they are often working in hospitals or wards where there are a number of specialities and not many other nurses are passionate about orthopaedic nursing.

'we do have regular meetings/ in-service but as we live about 4 hours drive-It is often not possible to attend them.'

Participant #16, Questionnaire.

' I guess a lot of my work is on the spot education to most of the other staff because most of them aren't that interested in orthopaedics, so I'm a bit of a one girl band here at the moment, yeah.'

Shane, interview participant.

Rural nurses identify that engagement with other orthopaedic nurses is very important to them and developing methods to ensure that they are included in the overall group is vital. Ensuring that communication is maintained with the rural group is important and a number of participants described the ease with which this could be achieved given he available IT options of today.

What concerns orthopaedic nurses

Part of the motivation in conducting this research originates from concerns for the speciality's future. A number of factors are placing pressure on the speciality and pose a risk to its future. The majority of these concerns emanate from the under-valuing or de-valuing of the speciality itself. Individuals and groups who manage healthcare delivery at the highest levels may no longer see orthopaedic nursing as a speciality. This has the potential to influence decisions they make about how orthopaedic nursing services are delivered when restructuring healthcare services. This manifests itself as orthopaedic nursing units being merged within general surgical units. This has occurred, and continues to occur in a number of hospitals and units around the world. Participants during phase one identified a belief that management, government and other specialities do not fully appreciate orthopaedic nursing as a speciality. (*Appendix IV*) Orthopaedic nurses are concerned that this will have a negative impact on the level of care orthopaedic patients receive and that the speciality will be diluted or may even cease to exist.

'We are a speciality under threat because of the absorbing of orthopaedic beds - orthopaedic wards - within general wards.'

Angela, interview participant.

Those who advocate for combining orthopaedic patients in other areas may argue that over time the nurses in those areas will develop the same skills as those in orthopaedics. But it is felt that the majority of those nurses may not develop an interest in the orthopaedic nursing speciality to the same extent and those that do may not have those passionate, motivated orthopaedic nursing leaders there to inspire and guide them.

'My greatest concern is that, with the loss of specific orthopaedic beds, it will affect the speciality so that the skill is diluted further into other units and you have less of an ability.

We talk about orthopaedic nursing being a team. If you don't have your team around you, you're not going to have people passionate about it together. You're not going to have knowledge shared. People aren't going to learn. I mean, the other nurses I suppose could learn, but they might not be as interested in learning, which is what you've got where people are co-located.'

Angela, interview participant.

Participants felt strongly that orthopaedic patients needed to be cared for by nurses with orthopaedic specific skills. An increased risk of injury to the patient or the nurse as well as an increased length of stay and complication rates is identified by the participants for orthopaedic patients placed outside of orthopaedic units. Despite the decrease in use of a number of traditional orthopaedic nursing skills, identified risk remains for facilities that transfer the care of orthopaedic patients to generalist wards.[10]

'*I think there's a risk of injury to staff. I think there's a risk of complications being missed ....because people don't feel confident getting them up and they're waiting for physios. In our area there's always going to be someone who's senior who knows that these people should be up and advocate for these people. If they're outside of our area there's a strong chance that they may not be mobilised for four, five days; end up with pressure sores, bowel obstruction. If we start moving people - if we don't fight and we lose our specialty then there's a chance that our patients may as a result end up with complications that they may not have got if they'd be in one area.'*

Cameron, interview participant.

'They say I've got an orthopaedic patient and can you please come? So I went up there and I talked them all through using pillows instead of traction and how to turn her and all the little skills about, putting a pan in…using the good leg to get her on a pan, and making sure she had a femoral catheter put in so she had some pain relief. Not sitting up more than 40 degrees. All these things that to me I just know it. These poor nurses they were like, oh my God, we knew nothing of that….'

Victoria, interview participant.

Concerns about nursing in general and about the newer generation of nurses are evident. These concerns are affecting nursing overall but also have specific impact in orthopaedic nursing. Pressure to discharge patients early, admission on the day of surgery, casualization (lack of permanent contracts) of nursing staff, increase in the overall pace of nursing and focus on budget and not care are some of the issues identified in nursing today.

'It's just a lot faster, a lot more acute and then the minute the patient… can get out of bed, they're basically discharged home.'

Jordan, interview participant.

'The admission process when a patient is admitted to the ward is much more involved than it used to be because they have to do all these scores and things like that and checklists and what have you. They're just so busy because of other requirements as well that are all clinically related, but, at the same time, they've got their coordinators putting pressure on them to get discharges done.'

Angela, interview participant.

The participants acknowledged that the current generation of new orthopaedic nurses are different to those of the past. They claim that they are not as passionate about orthopaedic nursing and there are not as many who are looking to take a lead within the speciality.

'the only thing I would say is probably some - a little bit saddened by nurses today not having - or not being passionate about anything. Don't get me wrong. There are some very, very good nurses out there. But…I don't know whether that's a reflection of the way they're trained these days, or where it comes from. But it's certainly different to 10 years ago.'

Yvonne, interview participant.

During phase 1 all participants were asked two questions about the level of appreciation newer nurses had for the speciality. There were no clear answers either way. (*Appendix IV*) During the interviews some participants were asked if they thought that there was a real difference between junior orthopaedic nurses of today as compared to when they were in those positions. The majority thought there was a real difference but admitted there may be an element of seeing the same situation from a different perspective. When they were junior nurses their leaders had felt as they do now and saw them as unmotivated and lacking passion. Participants identified a natural period during the early career of an orthopaedic nurse where they have begun to achieve a significant level of knowledge and skills and have become early leaders but resist engagement at a higher level. This was recognized as a natural process and should be accepted by senior leaders with a view to encouraging them slowly during that period.

'I don't know whether it's an issue about maturity, but I think there's a period there where nurses don't engage because they're having too good a time or whatever. We've all gone through that at varying degrees. I see some of these typical Gen Ys actually now doing the journey in their speciality that I took. I think the group has got there the same way. I think they're passionate in the

same way. The use a different language. They communicate that in a different way, but I think they're getting there. They've still got to meet the social moreys that their social group expects of them, so not to be too uncool about being passionate about orthopaedic nursing. I think the group's getting there.'

Angela, interview participant.

What does the future hold?

Orthopaedic nurses generally see a positive future for orthopaedic nursing. However some are not confident of the future as pressure increases to subsume orthopaedics under other services.

'Positive, hopefully we can continue to strive to become empowered and motivate others to enjoy working in Orthopaedics. It will remain a specialty'

Participant #51, Questionnaire.

'I fear we many loose our speciality.'

Participant #62, Questionnaire.

Even those who are positive about the future are cautious however and often qualify their comments with an element of hope. The group believes that the future is not guaranteed and that significant forces are acting to weaken or dilute the speciality. There is a positive overtone however that suggests that, to a certain extent, the future of the group is under their control and even where there is loss of the speciality the group can continue to achieve its goals and strengthen the speciality overall. It could be likened to the analogy of losing some battles to win the war. Winning the war is probably not something that will ever be overtly obvious however but individuals within the group have the power to combine with others, redefine their practices, react to changes and forces and adapt to stay strong. This has been the achievements of the leaders of the past and has helped to bring the group to where it is today.

'Orthopaedic nurses need to broaden their scope of practice see, what gaps they can fill in, perhaps nurse led ortho clinics, school visits, sports clubs they need to be innovative, Ortho nurses need to reclaim lost skills and clearly show the difference they make otherwise they will be just surgical nurses.'

Participant #20, Questionnaire.

Summary

A large proportion of the group describe having a passion for orthopaedic nursing and a strong sense of pride.

'Orthopaedic Nurses Rule!'

Participant #51, Questionnaire.

The orthopaedic nursing group is a diverse complex group but it shares a number of common elements. Orthopaedic nurses are unique and have subtle differences in the way they practice when compared other nursing groups. This is partially developed out of the unique needs their patients have, especially in relation to limited mobility. By the nature of their role they work closely with other health professionals which can lead to role confusion. Relationships have developed over time between orthopaedic nurses and medical staff and OTs/physiotherapists. These relationships are vital to patient care and need to be considered by the group.

In some respects leaders of the group are similar to other nursing groups. The way the group develops its leaders is unique though and important for its survival.

There are threats and challenges to the group, some of which can be met by the group while others are outside of their control. The way the group meets those challenges will influence its future.

CHAPTER 6: INTERPRETATION

The following chapter will interpret the results of the research. It uses data from the participants combined with evidence from the literature to deduce meaning and apply significance to the subject of orthopaedic nursing.

Fundamentals of orthopaedic nursing

Orthopaedic nurses identify themselves as a distinct group who act in similar ways and who share common beliefs and values. Their members are from numerous backgrounds, are different ages, have different political influences, belong to many other diverse groups, have been shaped by different experiences and have various roles. Despite these differences they share characteristics that define the group.

Orthopaedic nurses are found in a variety of settings and have been considered a specialist group for the best part of half a century.[27, 29] Their membership, the way they function, their roles and priorities change on a continual basis but the foundation of their practice remains unchanged. Orthopaedic nurses deliver care that requires specialist knowledge and skills and is designed to assist orthopaedic patients who have restricted movement and therefore unique needs. Despite the impact that changes in orthopaedic medicine have had on the group, the fundamentals of orthopaedic nursing care remains unchanged. Throughout its history orthopaedic nursing has been forced to adapt to changes in healthcare, in society and in orthopaedic medicine.[27, 29] Many of these changes are outside the control of the group and their survival has been dependant on their ability to adapt to these changes and continue to deliver specialist care.[27, 42] Research participants describe how changes to the way orthopaedic patients are surgically managed has been the single most influential factor that has affected the orthopaedic nursing group as their patients spend significantly less time resting in bed and the use of traction and casting is extensively reduced. Traditionally these factors were considered some of the most defining characteristics of orthopaedic nursing, both by those outside and also within the group. These types of skills and knowledge were unique to orthopaedic nursing and historically were partially responsible for defining the speciality. The drive by orthopaedic medicine to change and improve surgical techniques was identified throughout the research as altering that definition as many of those skills are required less often by the orthopaedic patient. This has led to individuals beyond the group beginning to see orthopaedic nursing as less of a speciality as those specific skills are required less frequently.[44] They believe that the work of orthopaedic nurses has become generic and can be delivered by a non-specialist surgical nurse. This has manifested itself in moves to disband orthopaedic units and merge them with general surgical units where orthopaedic patients receive

care delivered by non-specialist nurses. The literature identifies that this is occurring worldwide, to differing extents, and represents a very real threat to the speciality of orthopaedic nursing. Despite the changes and reduction in those types of skills orthopaedic nurses still believe that there are significant unique skills and knowledge required to provide care safely to orthopaedic patients. The orthopaedic nurses within this study identified that it is in the groups' best interest to defend itself by describing the value that is inherent in what it is that they do as specialist nurses and why it is best that their patients receive care provided by specialists. Identifying the fundamental practice of orthopaedic nursing is vital in beginning the process of advocating for the speciality in today's healthcare setting. Those within the group, at all levels, need to understand what the central tenets of orthopaedic nursing are so that they can then articulate that to others, particularly those who have decision making powers that can influence the group. The objective is to achieve emancipation of the group through understanding that can then be used by the group to advocate for its value and influence practice.

Specialist care delivery

The group strongly believes that their patients still require specialist care and that moves to subsume orthopaedic patients on general wards is detrimental to the specialty and, more importantly, to their patients. This is strongly supported in the literature and was re-enforced by the participants within the research. [1, 3, 5] Orthopaedic nurses often feel undervalued in their roles and believe that orthopaedic patients have unique needs that require specialist nursing that is not appreciated by some outside of the group. Orthopaedic nurses within this study believe that plans to disband orthopaedic units are potentially destructive because it will lower the standard of care that orthopaedic patients receive. They see this as confirmation that others do not understand or value the importance of what it is they do for their patients.

They identify the potential risks in having orthopaedic patients cared for by non-specialist nurses. Non specialist nurses may be unaware of the importance of some types of injuries and the impact on the need of the patient, especially in regard to positioning. The data in this research demonstrates that orthopaedic nurses have developed a unique ability to move patients, with various injuries, in a safe manner while limiting the patients' pain. They also have the capacity to prevent or at least identify orthopaedic complications early and act to minimise the impact on the patient. They have an ingrained ethos of early rehabilitation and will proactively mobilise their patients early and encourage movement. They have refined their discharge planning skills to match the unique needs of their patients following discharge from hospital.

In combination these abilities act to reduce length of stay, reduce complication rates and improve outcomes for orthopaedic patients.[10] Orthopaedic patients cared for by non-specialist nurses are at risk of not receiving this type of care.

Articulating the fundamentals

It was evident throughout this research that some orthopaedic nurses sometimes found it difficult to articulate what it is that they do in an organised or detailed manner. This was more so for junior orthopaedic nurses who are yet to develop a deeper appreciation of the subtleties of orthopaedic nursing. Some experienced orthopaedic nurses who had spent time defining their practice, even if only in an unstructured way, have developed a complex appreciation of orthopaedic nursing and were able to articulate this in their responses. Unique aspects of orthopaedic nursing practice are a subtle yet definable practice that has developed over time in response to the needs of their patients. It is based around a teamwork model of care as much of the care needed by orthopaedic patients cannot be delivered by any one individual. It incorporates both aspects of specialist care as well as basic nursing skills that are delivered in a unique manner as required by orthopaedic patients.

Leadership

It is the responsibility of the leaders of the group, who have developed a deeper understanding of their speciality, to motivate the group, advocate for its value and identify threats and opportunities.[44, 73, 74] It was evident that the leaders themselves are a varied group and have specific roles, individual responsibilities and work in various settings. They are not always the manager of a ward or in a management position but may be an individual who has positioned themself, and has been accepted, as a leader of the group. These are the individuals that act to inspire others, actively work to direct the groups' future and respond to threats. It was clearly evident throughout the interview process that some do not appreciate the significance of what they do in these roles and undervalue their contribution to the future of the group. These are the leaders that are on the committees of their local professional orthopaedic nursing groups, organising conferences and workshops, have become involved in decision making, at a political level, appreciate the importance of education and appreciate the need for leadership of the wider group. It would seem that this level of awareness has developed over time and the individual has moved from a focus at the practical level to the conceptual level of practice and thought. Those who are still in the beginning phases of this awareness may see those advanced leaders and their actions as impractical

or abstract. While the more experienced leader focuses on aspects of leadership at a more complex level those who are less experienced may see their actions as pointless and unachievable and are more likely to concentrate on the practical tasks of leading a group. Both levels (and all those in between) are vital to the existence of the group. For the experienced leader it is vital to appreciate that not all the leaders or members of the group will be thinking at the same level and there will be a certain level of disengagement by some. For those less experienced it is important that they value the work of those more experienced leaders and keep themselves open to working towards that level of understanding in the future. It is obvious that not all members or leaders wish to achieve that level of practice so it is important for the experienced leaders to identify those capable and willing individuals and actively mentor them towards leadership roles. This ensures that there are future leaders of the group that are willing and able to lead the speciality forward with the overall goal of strengthening the speciality.

Professional orthopaedic nursing groups

The number of formalised professional orthopaedic nursing groups continues to grow throughout the world. The participants recognised the importance and value of these structured groups that can assist in advocating for the speciality. The professional groups provide a platform from which to engage others on a political level and lobby for involvement in the decision making process. Engagement and acceptance by others in these processes is more likely to be achieved with the credence of a formalised group rather than relying on individuals. It was seen that some consider these groups powerless and lacking in the potential to achieve and direct real change while others clearly appreciate the potential of the group given the right circumstances. The leaders have the potential to increase the groups' power and influence over time and into the future. Achieving this is not without costs however. Participants acknowledged that these types of activities are time and resource intensive and require individuals who have created well organised and effective professional groups. It was plainly evident that the level to which these activities are delivered to the wider group, and how many are in those groups, is directly influenced by the drive of its members and leaders. If the members lacked drive then the activities and engagement of the wider group suffered. Some members described how a lack of drive and direction by leaders of their professional group resulted in a poorly organised group with limited membership and a lack of desire by members to be involved. It is vital that leaders of the groups appreciate the need to be well organised and accept that they have a responsibly to the wider group to ensure they are including all current and potential members effectively. This is was evident for professional

orthopaedic nursing groups who had larger committees and membership and therefore tended to be more efficient.

Managing changes and concerns

A lack of engagement by newer generations of nurses is described by many of the current leaders and adds a level of concern and frustration to the leadership with an understanding though that a certain level of disengagement is normal.

While nursing and orthopaedic nursing are continually evolving each generation of nurses has slightly different priorities, different ways of working, different levels of engagement and is faced by different pressures. It is important to appreciate these differences and use an awareness of it to engage newer orthopaedic nurses of today in service of the wider group. Participants suggested using contemporary means of engaging younger nurses into early leadership roles to strengthen the group. It is the leaders and groups responsibility to be innovative in their practice with the overall aim of strengthening the speciality. Over the past few years some professional orthopaedic nursing groups have adapted the way they engage with their members. A number of groups host websites that allow members to access information electronically and quickly, they also use social media (such as Facebook™) to communicate with and recruit members and many of their services are available electronically.[63, 75] This makes accessing material and services more timely and suits the skills that many of the newer members have and wish to use. It also allows closer collaboration with orthopaedic nurses from around the world. The ICON Facebook™ site is accessible to any orthopaedic nurse in the world and is used regularly to share information, get suggestions for research and develop closer ties with other orthopaedic nurses.[75] Participants identified that a strong level of collaboration between orthopaedic nurses from around the world was one of the most effective ways of strengthening the group. Ensuring that the services delivered by the local professional group continue to meet the needs of their members ensures the relevance of the group and serves to improve engagement. The new generation of orthopaedic nurses have many valuable skills and while inspiring them to accept the 'baton' of leadership may be challenging it is vital for the current leaders to achieve this so as to secure the future of orthopaedic nursing.

Education

There is no clear consensus by the group of how orthopaedic nursing education should be delivered. Many advocate for tertiary, post graduate level of education while others recommend

clinically based hospital programs. The professional groups also have a role to play in providing ongoing education as do the individual nurses on the wards on a daily basis. All these methods have strengths and weaknesses and it appears that a combination of all options is best suited to ensuring orthopaedic nursing continues to develop leaders, maintain core skills and knowledge and improve patient care.

Orthopaedic nurses in this study are cautiously optimistic of their future. There are units where the future may not look so encouraging but overall the group has a relatively positive outlook. However there are real threats to the group and the group remains oppressed by external influences that act to weaken its existence and function. Some believe that the group no longer provides specialist care and that orthopaedic patients can now be managed by general nurses. It is the responsibility of the current leaders to advocate for the group, develop new leaders and actively campaign in the political arena for the speciality. The strength of the group lies in building on the work already begun in collaboration between orthopaedic nurses from around the world but orthopaedic nursing needs to constantly define its position and react to changes to ensure its survival.

CHAPTER 7: DISCUSSION

Introduction

Orthopaedic nursing is a complex and somewhat difficult cultural group to define. However they share common skills, philosophies of care, motivations and values that make them a unique group. A single description may not be accurate for all members of the group, especially as there are variations in the way members identify within the group, but there remains a core group of orthopaedic nurses who can be described in some commonality. This group is the core of orthopaedic nursing and therefore warrants special consideration. The group is in a continual process of transformation; however the fundamental aspects of orthopaedic nursing remain unchanged. There is inherent value in defining the position of the group especially during a time of change in orthopaedics. Threats to the group have been identified and its members respond in different ways to justify their practices and demonstrate their value. The value of defining the orthopaedic nursing group lies in shaping the direction of the group, developing links with other members of the group from around the world and refining clinical practice to match the needs of orthopaedic patients.

This chapter will describe the significance of the major findings, identify the strengths and weaknesses of the research and make recommendations for practice, education, orthopaedic nursing groups and future research.

Major findings and their significances

The purpose of this study was to provide a rich understanding of the cultural components of the orthopaedic nursing group to an extent that had not previously been attempted.

The research asked how orthopaedic nurses' viewed the specialty, what was important to orthopaedic nurses, what skills and knowledge do they believe are essential for them to possess and what factors influence the group today. The purpose of the research was to identify any consensus within the group, identify the leaders of the group, their roles and describe the groups' shared outlook for the future.

Orthopaedic nurses have a strong sense of self-preservation. Their speciality is under threat and much of the achievement they have accomplished may be lost if orthopaedic nursing ceases to be a speciality. Orthopaedic nursing has grown and been moulded by and in response to changes in orthopaedic medicine, healthcare and patient needs, it remains a dynamic existence with the

necessity for its survival linked to continual definition of its position. Orthopaedic nurses cannot change all factors that are influencing the group but can actively seek to change others. The responsibility of the current leaders is to identify the group needs, their patients' needs and what is expected of themselves and others in shaping the future of orthopaedic nursing. The chance to shape that future is the best it has ever been due to the ability of orthopaedic nurses throughout the world to develop links, organise groups and collaborate with each other in an instant. Working together as one large group has the potential to increase the strength of the group and extend its reach to influence change.

Orthopaedic nurses describe a set of skills and knowledge that they believe are vital to be considered an orthopaedic nurse. As the mix of required skills has changed over the past decade the fundamentals of orthopaedic nursing endure. Even as patients spend less time resting in bed or staying in hospital their core orthopaedic nursing needs remain fundamentally unchanged. They may not need traction applied or have casts fitted, as often, but they still need the specialised skills and knowledge that orthopaedic nurses have spent time refining over decades. They are still restricted to bed, if only for shorter periods, and still need care that matches their unique needs. There is a shift in the types of roles orthopaedic nurses are engaged in as more emphasis is placed on the primary care of patients at both ends of hospitalisation. New roles are developing to improve pre-admission and post discharge services by improving patient flow and reducing length of stay. There is competition from OTs and physiotherapists for some of these positions and it is vital that orthopaedic nurses fight for these roles so that orthopaedic patients continue to receive care from healthcare professionals who are experts in providing holistic care.
Traditional skills are still required, despite being used less frequently, and should not be lost as the number of nurses who possess those skills declines. The role of orthopaedic nurse on the ward may be changing but the core skills and knowledge required to function as an effective orthopaedic nurse remain unchanged. Orthopaedic patients have unique needs and orthopaedic nurses have developed philosophies of care to meet those needs. As the care of orthopaedic patients moves to general surgical areas, where that philosophy of care does not exist, it is likely that the delivery of care will be unsatisfactory. It is important to have orthopaedic nurses providing care for orthopaedic patients.

Orthopaedic nurses possess unique knowledge of their patients' needs. This is crucially important to that patient and can be recognised by the patient if it is lacking but is not easily definable outside of that experience. Herein lies the struggle of communicating the importance of the issue. It is difficult to measure and, for some, is difficult to articulate but is ingrained into orthopaedic nurses'

practice. It is measurable to a degree and some attempts have been made to do just that.[10] However it is worthy of further investigation with rigorous research. Measuring the impact of care provided by non-specialist nurses could also be identified at unit levels by measuring indicators such as length of stay, complication rates and patient complaints.

Orthopaedic nurses and their group are inextricably linked to numerous other groups and influences. They are part of the larger nursing group and are directly influenced by changes in nursing. They are also members of many other groups that also influence their practices and behaviours. There are members of the group who did not contribute to this project but it is vital that they are considered as this adds to a richer description of the overall group.

Members engage on different levels as there is variation in the consensus of the group in regards to the issues. This variation is healthy and serves to develop new ideas, allow individual groups to respond to their unique situations and make improvements that can be used elsewhere.

Leadership of the group was described as one of the most significant issues for the group. This is complicated by the composition of the group as it is vast and is found in various settings throughout all areas of healthcare. Therefore the function and responsibilities of each member are slightly different. It is important for the current leaders of the group to be aware of this and develop leadership in local areas while collaborating at a higher level to ensure a consistent direction. The leaders have a responsibility to the group that is sometimes difficult to achieve as the majority of their activities occur in their own time, using their own resources. Developing larger formalised orthopaedic nursing groups can assist in this process and spreads the workload. One significant leadership issue was a sense of a undervaluing of their role, both by the leaders as well as others. Leaders are often devoted to their cause and work hard to achieve their goals but may not fully appreciate the value of what they do.

It is important to understand the journey of becoming a leader as this will assist in fostering emerging leaders of the group, especially the newer generation of orthopaedic nurses who may respond differently to the leadership challenge.

This is vital for the future of the orthopaedic nursing group as their existence is challenged and the roles and functions of the group change.

Strengths and limitations of the study

Strengths

The major strength of this study is the approach to the subject and the use of ethnography as a method. This allowed a view of orthopaedic nursing that has not been previously attempted and serves to describe the group at a higher level. It builds on previous work of describing orthopaedic nursing activities but goes further by describing the common aspects of all orthopaedic nurses. It is not limited to the experience of individual nurses but uses a number of different methods, tools and observations to develop a richer description of orthopaedic nursing as a whole. The use of critical theory in the methodology allowed an appreciation of the inherent oppression of the group. This understanding helped identify elements that act to create inequities within the social context of the group. The ultimate purpose of the study was to empower the group and assist them to become activists in shaping their own future.[11]

The researcher is a long standing member of the group and while this may have led to certain biases it strengthened the research by allowing a degree of insight into the experience of orthopaedic nursing, improving access to the group and assisting in the development of the method, the questions and analysis of the data.

Limitations

The main limitation of this study is the restriction to the time frame imposed by the academic period. The study would benefit from a number of additional research cycles with other methods of data collection. Use of clinical observations and focus groups would strengthen the data and allow a level of applicability to clinical relevance. Focus groups would allow a level of interaction between members of the group and permit discussion to debate and stimulate ideas and concepts. Inclusion of those orthopaedic nurses beyond those working in Australia and New Zealand would also strengthen the study and provide an international aspect however there is value in describing the group from this perspective. The number of interview participants in phase two could be increased to improve the data. The participants were self-selecting so there is a bias towards those nurses who identify strongly with the group however these are the members of the group that identify as orthopaedic nurses so they are essentially the group of interest. No nurses from the private sector and only one male where included in phase two which may limit data from those groups. Due to limitations in time and scope, inclusion of other groups that are closely linked to

orthopaedic nursing such as physiotherapists and medical staff were not included. Only the researcher analysed the data. Transcripts were returned to participants for review and approval.

Recommendations

A number of recommendations are proposed as a result of this research. These have been drawn from a combination of the participants and their responses in conjunction with the literature. These recommendations have been constructed in support of the literature and then separated into recommendations for practice, education, leadership, orthopaedic nursing groups and further research.

Recommendations for practice

Traditional orthopaedic nursing skills such as traction and casting are being used less frequently. Application and removal of casts appears to be moving to specialist orthopaedic nurses only, often in the outpatient setting, resulting in a loss of skills for ward orthopaedic nurses. The ability of ward nurses to safely remove, modify or split a cast out of office hours is reduced thereby increasing potential complications for patients. It is recommended that ward staff rotate regularly to the area that manages those activities. Casting is a skill that requires regular practice to maintain and therefore these changes should be ongoing and not just an update session every now and then. Traction management is a specialist skill and while being used less frequently is still occasionally required. It is recommended that institutions ensure that contemporary procedures are readily accessible to staff that contain detailed instructions (including diagrams) to assist in the management of traction. These should include principles of traction as well as common complications and requirements for ongoing care. It is also recommended that a core selection of orthopaedic nurses have regular updates/practical sessions of traction management.

These skills and others like them are contracting in the frequency of their use but are still required occasionally. It is recommended that these skills be identified by the leaders and that strategies are implemented that ensures these skills are not lost. This should be an ongoing process that identifies what new skills are required and what skills are no longer required. This will ensure relevancy of the group and their practice.

Focus on much of nursing is currently concentrated at developing advanced care roles but it is vital that the standard of core skills and basic nursing care is maintained. This is especially important as

nursing experiences changes in patient acuity and turnover. It is the responsibilities of the leaders to ensure that these standards are being reviewed and maintained and that all staff are aware of the importance of maintaining these standards. This is difficult however as changes and new policies compete with for their priorities and time.

As nursing and orthopaedic nursing evolve new skills and roles continue to emerge. Orthopaedic nurses should identify these skills and roles and continue to keep their practice contemporary and relevant. They should actively pursue these changes and seek to drive these changes in line with their overall goals.

Awareness of the different care philosophies between nursing and other groups, such as OTs, physiotherapists and medical staff, in the orthopaedic setting are valuable in influencing how the groups function together. It is recommended that the leaders of all groups clearly identify their roles and responsibilities with one another. This is best achieved proactively and not in response to conflict. Engagement of other groups may be difficult as they may not see the value in this type of discussion. Instilling this level of collaboration in all staff is valuable and may be achieved over time, avoiding a philosophy of 'us and them'. It is important that orthopaedic nurses continue to advocate for their patients and actively pursue their needs respectfully with other team members. Reluctance by some junior orthopaedic nurses to mobilise patients without physiotherapy direction is of concern and is recommended as a focus for ward staff. Orthopaedic nurses who have the appropriate education and knowledge should be encouraged to initiate mobility of their patients without having to wait unnecessarily for a physiotherapist, especially at times when they are not available. Advanced practice roles should remain within the orthopaedic nursing scope of practice and not be assumed by allied health staff. Orthopaedic nurses need to first understand their scope of practice and then be able to demonstrate that they are best suited to providing a holistic care at an advanced practice level with evidence.

It is strongly recommended that all orthopaedic patients receive care in wards that are predominately managed and staffed by nurses who have specialist orthopaedic nursing education and experience. The main focus of the ward should be orthopaedics but for those areas that cannot support an entire orthopaedic ward, a majority of nurses who have the necessary skills, knowledge and drive to provide care to orthopaedic patients should be present over each shift period.

Recommendations for education

Formalised orthopaedic nursing education must continue to grow in its availability for orthopaedic nurses everywhere. It should be encouraged by leaders and the local professional orthopaedic nursing groups as both a way of engaging nurses in the beginnings of leadership and strengthening their knowledge and skills base. Specialist postgraduate education will expose the student to other leadership and research skills that are often provided within the core subjects of the program. These skills can be used in the workplace to assist the student to become an effective leader as well identify means of measuring and reflecting on their practice. This may stimulate ideas that can be used to improve practice and strengthen service delivery.

Those who are responsible (including this author) for the design and delivery of specialist post graduate nursing programs should continually refine their curriculum, in collaboration with representatives from the clinical setting, to match the contemporary needs of the orthopaedic nursing group. They must ensure that the content is based on best evidence. They should also use methods of delivery that suit members and improve access.

The availability of specialist education programs should be actively disseminated to all members of the group at conferences, on websites and at any other available opportunities.

Education by methods other than at a post-graduate level should be considered of equal importance. It is recommended that hospital based programs be encouraged to deliver specialist clinical skills and knowledge. For some, this may be difficult to implement and sustain but should be considered a high priority for the leaders of the group and may be accomplished in conjunction with clinicians from numerous settings who can work together to run courses for each of their groups. They may also consider using the professional orthopaedic nursing group who should also have ongoing educational programs.

Recommendations for leadership

Leadership at varying levels is vital to the wellbeing and function of the orthopaedic nursing group. It is recommended that the current leaders of the group develop an appreciation of the value of their work and role. Activities such as organising workshops or conferences, collaborating with other groups or engaging in political lobbying are vital to the group and its importance should be valued.

Awareness of the way in which leaders of the group develop is vital for the groups' survival, especially during periods of change. It is recommended that current leaders appreciate this developmental process of leadership. They should also value the potential influence their behaviour has on new leaders and continue to act as a role model. The current leaders should

actively identify members with the drive and potential to be leaders of the future and develop strategies to mentor them toward future leadership roles. The overall aim is to achieve a successful; succession plan which will ensure the future success of the group.
Leaders should be aware that an element of self-promotion is often needed to be an effective leader and while this may been seen by some as self-serving, it should be based in the desire to improve the lives of orthopaedic nurses and their patients.
Leaders should be warned that achieving this level of leadership often requires a large amount of their own time. It is even more challenging if there is a lack of support from members or other leaders. In these circumstances inspiring and inducing others to be involved is vital while ensuring that the leader is open to inclusion from others in the group. Control of the group should not be held by a select few because they see themselves as the only individuals willing to devote time and effort, this may be effective in the short term but is not likely to succeed in the longer term.
Leaders should also be aware that they may not see immediate results from their efforts and that the development of the group will only be obvious over time. They should use this knowledge to prevent themselves from becoming discouraged.

Recommendations for professional orthopaedic nursing groups

Many recommendations made previously, especially including leadership, refer both to leadership in the ward setting as well leadership of the group as a whole. Much of the leadership of the group occurs within the local orthopaedic nursing groups as this is where members of the group meet to actively plan their actions and assess the needs of the group.
It is a strong recommendation that every state, territory or local area have a formalised orthopaedic nursing group that meet regularly with a defined philosophy and set of objectives. For those areas that are unable to achieve this they should amalgamate with another group, for a short period while they build their membership. This is reliant on having a number of motivated individuals who will drive this growth however.
Part of this amalgamation should include access to educational sessions. Where this is difficult due to distances, IT solutions should be sought to remedy this.

It is a strong recommendation that ANZONA purchase rights to the use of an online conference facility where regular education sessions are delivered by experts that can be accessed by any members of the professional orthopaedic nursing group. This technology is relatively simple to use, inexpensive and will allow access to information session of members who have been traditionally unreachable. This includes rural members of the group who have unique needs and who are often not fully included.

The other requirement of the group is the need to keep their members informed of available resources, committee meetings and minutes. The use of a website is an excellent medium for this and is currently in use by a number of groups. It is vital that these are maintained regularly however.
Rural members warrant special consideration as their needs are slightly different to their metropolitan colleagues so specific education sessions should be provided and the topics be developed in collaboration with members from those areas.

International collaboration is vital to the global survival of the group and excellent progress has been achieved already. It is recommended that this continue in its current form with increased support from ANZONA to encourage members to attend international conferences and invite international members to Australia and New Zealand.
A number of participants describe the need for local groups to develop competencies and guidelines. This is not the consensus of the group but should be of serious consideration with assessment of the potential uptake and benefits considered.
It is also recommended that closer relationships are developed with other orthopaedic groups. This is likely to occur slowly over time with much effort but may serve to elevate the status of orthopaedic nursing among medical colleagues. This should be combined with a level of political lobbying for appropriate issues.

Active marketing of the group is essential and should be completed locally as well as internationally. This should include the use of advertising material in each local orthopaedic ward or unit.
A summary of the recommendations for local groups will be compiled and distributed to ANZONA and other professional orthopaedic nursing groups at the completion of this project.

Recommendations for future research

This research has built on the invaluable work of previous researchers and commentators within the speciality. It has taken the next step in the process of defining the specialty and makes recommendations for future research.
To provide a link between what it is that orthopaedic nurses do and the implications of this, it is recommended that further research be conducted that measures outcomes of the work of orthopaedic nursing. Similar in concept to the work of Hommel et al who measured the differences in the complication rates and length of stay for orthopaedic patients cared for by orthopaedic

nurses and those care for in other wards.[10] Description of actual, real life outcomes that can be linked to the practice of orthopaedic nursing can be used by the group to advocate for the value of their practice. The use of mixed methods research provides good overall data of which the quantitative data can be used by the orthopaedic nursing group to advocate to those groups who appreciate that level of data, combined with the descriptive power of qualitative data to develop a richer description.

A repeat of the methodology and methods used in this project, with a broader sample and more methods of data collection are warranted and could serve to strengthen these recommendations. Inclusion of patients in research should also be considered in providing an alternative perspective that could also strengthen the debate.

Likewise, future research could include all areas of subspecialties within orthopaedic nursing such as paediatric orthopaedics, as suggested by Judd (2010).[36]

Inclusion of other groups (medical, OTs etc.) is of value in future research and would serve to define the role orthopaedic nurses play in the overall delivery of care.

Promotion of research among members of the orthopaedic nursing group as a valuable tool and a individual learning experience should be considered by leaders of the group. It may not be readily taken up but will be of value over time and add to the body of knowledge.

A description of the history of orthopaedic nursing in Australia and New Zealand and the development of the professional orthopaedic nursing groups and ANZONA may also be of benefit to future orthopaedic nurses.

Summary

These recommendations have been made in response to the data collected within this research in combination with the available literature. The recommendations are not exhaustive but may act to stimulate ideas from members of the group and help develop long term strategies for the speciality. Implementing these recommendations will strengthen the orthopaedic nursing group and act to protect its future.

Orthopaedic nursing remains a strong speciality but continues to face many challenges. It is vital that the group spends time in a certain level of introspection and considers their current position, the direction forward and the best means of achieving that. To keep the culture vibrant there needs to be constant change in reaction to demands. It is how the speciality reacts and responds to these changes that will shape its future. This is how the speciality has evolved in the past and is the best way to ensure its future success.

The fundamentals of orthopaedic nursing remain unchanged. While the specific skills and knowledge required by orthopaedic nurses continues to fluctuate, the essentials of orthopaedic nursing remain constant. As these skills and knowledge change it is vital that orthopaedic nurses continue to provide the specialist care that is still, and will always be, required by orthopaedic patients.

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Appendix I

THE UNIVERSITY of ADELAIDE

RESEARCH INFORMATION SHEET #1

What does it mean to be an orthopaedic nurse in 2011?

Thank you for considering being involved in this research project. It is being conducted by Paul McLiesh as part of a Master of Nursing Science course. This research has been approved by the Human Research Ethics Committee of the University of Adelaide.

Purpose of the study: To understand how orthopaedic nurses identify as a specialty. To explore the qualities that are unique to orthopaedic nurses and how that then affects the care orthopaedic nurses are able to deliver. Identify the knowledge base that orthopaedic nurses believe is essential to their practice.

Potential Benefits: Present a shared voice for orthopaedic nurses, ensuring that orthopaedic patients receive the most appropriate care. Help inform training organisations about the specific needs of orthopaedic nurses. Provide direction for further research.

Potential Risks: There is very little chance of harm occurring to anyone involved in this research project. All steps will be taken to prevent and manage any harm to any persons.

What will be asked of you: You will find more information about the project on the questionnaire website. You will be asked to complete an anonymous on-line survey that asks questions about what, as an orthopaedic nurse is important to you. This should take around 20 minutes to complete. These questions will be multiple choice and short answer questions. You will then be asked if you would like to be involved in the next phase of the project and will be given an opportunity to read the information sheet for phase 2. If you would like to proceed to the next phase you will be asked to provide your contact details.
The next stage will involve an interview either in person or via the internet.

What you can expect: Privacy of all your personal information will be maintained at all times. Your participation in this project along with information you share will be kept strictly confidential and will not be identified as coming from you. Your safety will be paramount throughout the project.
Who can be involved: Any nurse who identifies as an orthopaedic nurse who currently works in a unit or wards that cares for orthopaedic patients in Australia or New Zealand. You must have worked in this, or a similar area, for at least two years.

You may withdraw from the research project at any time you wish without any consequences.

If you have any questions or concerns now or at any time during the project you can contact the coordinator or for any complaints visit:
http://www.adelaide.edu.au/ethics/human/guidelines/applications/#complaints

Coordinator:
Paul McLiesh
School of Nursing
The University of Adelaide
ADELAIDE SA 5005

Paul.mcliesh@adelaide.edu.au
(08) 8313 6286

The University of Adelaide
Human Research Ethics Committee (HREC)

This document is for people who are participants in a research project.

CONTACTS FOR INFORMATION ON PROJECT AND INDEPENDENT COMPLAINTS PROCEDURE

The following study has been reviewed and approved by the University of Adelaide Human Research Ethics Committee:

Project Title:	**What does it mean to be an orthopaedic nurse in 2011?**
Approval Number:	**H-256-2011**

The Human Research Ethics Committee monitors all the research projects which it has approved. The committee considers it important that people participating in approved projects have an independent and confidential reporting mechanism which they can use if they have any worries or complaints about that research.

This research project will be conducted according to the NHMRC National Statement on Ethical Conduct in Human Research (see http://www.nhmrc.gov.au/publications/synopses/e72syn.htm)

1. If you have questions or problems associated with the practical aspects of your participation in the project, or wish to raise a concern or complaint about the project, then you should consult the project co-ordinator:

1st Contact Name:	**Dr Rick Wiechula, Post Graduate Coordinator**
Phone:	**+61 8 8303 4878**
2nd Contact Name:	**Paul McLiesh**
Phone:	**+61 8 8313 6286**

2. If you wish to discuss with an independent person matters related to:
   - making a complaint, or
   - raising concerns on the conduct of the project, or
   - the University policy on research involving human participants, or
   - your rights as a participant,

   contact the Human Research Ethics Committee's Secretariat on phone (08) 8303 6028.

Appendix II

RESEARCH INFORMATION SHEET #2

What does it mean to be an orthopaedic nurse in 2011?

Thank you for your ongoing involvement with this research project.
This research has been approved by the Human Research Ethics Committee of the University of Adelaide.

Purpose of the study: To understand how orthopaedic nurses identify as a specialty. To explore the qualities that are unique to orthopaedic nurses and how that then affects the care orthopaedic nurses are able to deliver. Identify the knowledge base that orthopaedic nurses believe is essential to their practice.

Potential Benefits: Present a shared voice for orthopaedic nurses, ensuring that orthopaedic patients receive the most appropriate care. Help inform training organisations about the specific needs of orthopaedic nurses. Provide direction for further research.

Potential Risks: There is very little chance of harm occurring to anyone involved in this research project. All steps will be taken to prevent and manage any harm to any persons.

What will be asked of you: You will be given all the information about the project. This phase of the research will involve an interview between yourself and the coordinator to develop a better understanding of some of the issues identified during the initial questionnaire. The interview should take approximately 30 minutes and will take place at a time & place convenient to you. Depending on where you live it may be held in person or via Skype™.

What you can expect: Privacy of all your personal information will be maintained at all times. Your participation in this project along with information you share will be kept strictly confidential and will not be identified as coming from you. Your safety will be paramount throughout the project.
This is an opportunity to share your beliefs and advocate for orthopaedic nurses.

Who can be involved: Anyone already included in the first phase of this research project, however there are only a small number of people included in this phase.

You may withdraw from the research project at any time you wish without any consequences.

If you have any questions or concerns now or at any time during the project you can contact the coordinator or for any complaints visit:

http://www.adelaide.edu.au/ethics/human/guidelines/applications/#complaints

Coordinator:
Paul McLiesh
School of Nursing
The University of Adelaide
ADELAIDE SA 5005

Paul.mcliesh@adelaide.edu.au
(08) 8313 6286

THE UNIVERSITY OF ADELAIDE HUMAN RESEARCH ETHICS COMMITTEE

STANDARD CONSENT FORM
FOR PEOPLE WHO ARE PARTICIPANTS IN A RESEARCH PROJECT

1. I, ……*(please print name)*

   consent to take part in the research project entitled:

   What does it mean to be an orthopaedic nurse in 2011? (Phase 2)

2. I acknowledge that I have read the attached Information Sheet entitled:

   What does it mean to be an orthopaedic nurse in 2011?

3. I have had the project, so far as it affects me, fully explained to my satisfaction by the research worker. My consent is given freely.

4. Although I understand that the purpose of this research project is to improve the quality of medical care, it has also been explained that my involvement may not be of any benefit to me.

5. I have been given the opportunity to have a member of my family or a friend present while the project was explained to me.

6. I have been informed that, while information gained during the study may be published, I will not be identified and my personal results will not be divulged.

7. I understand that I am free to withdraw from the project at any time and that there will be no consequences as a result of my withdrawal.

8. I acknowledge I have received a copy of the information and complaints sheet and am aware that I should retain a copy of this Consent Form, when completed, and the attached Information and complaints Sheet.

…… ……...
(signature) *(date)*

WITNESS

I have described to …….. *(name of subject)*

the nature of the research to be carried out. In my opinion she/he understood the explanation.

Status in Project**:** …….

Name: ……..….

……...
(signature) *(date)*

Appendix III

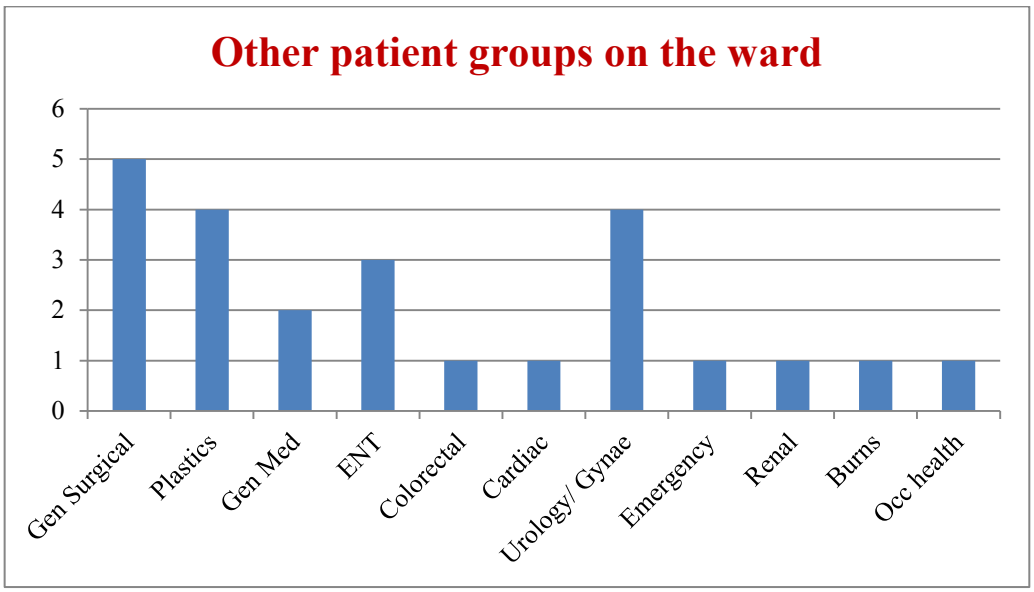
Phase 1 Questionnaire Results.

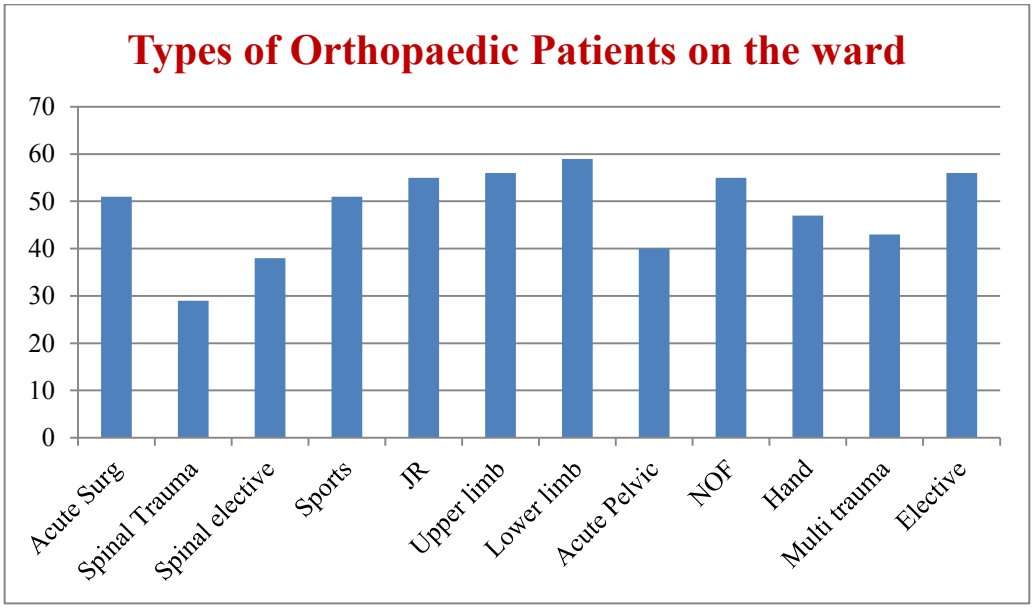
Variable	Number	Mean	SD	%
Sample	63*			
Age		42.72	10.15	
Gender				
Male	8			
Female	57			
Country				
NSW	6			9.2
NZ	12			18.5
NT	1			1.5
QLD	8			12.3
SA	25			38.5
Victoria	5			7.7
WA	8			12.3
Full Time #	36			55.4
Part Time #	29			44.6
Level of Nursing				
EN	1			
RN	26			
CN	19			
Manager/NP	19			
Ortho Job Mainly clinical				
Yes	55			84.6
No	10			15.4
Unit mainly Ortho				
Yes	58			89.2
No	7			10.8
Main Ortho job Clinical				
Yes	55			84.6
No	10			15.4
Type of ward				
Acute	57			87.7
Outpatient	3			4.6
Rehab	1			1.5
Other	4			6.2
Years in ON		14.69	8.033	
Qualifications in ON				
Yes	44			67.7
No	21			32.3
Years in current position		7.62	5.684	
Member of local ON group				
Yes	45			69.2
No	20			30.8
Type of membership				
Member	35			53.8
Committee	11			16.9
Chair etc	11			16.9
Attend Meetings				
Yes	25			38.5
No	20			30.8
ON activities outside of ON group				
No	38			58.5
Attend conferences#				
Yes	32			49.2
Mostly	11			16.9
No	21			3.32
Receive ON Journal#				
Yes	33			50.8
No	31			47.7

*65 included participants- 2 partially completed questionnaire, 63 completed majority of questions-

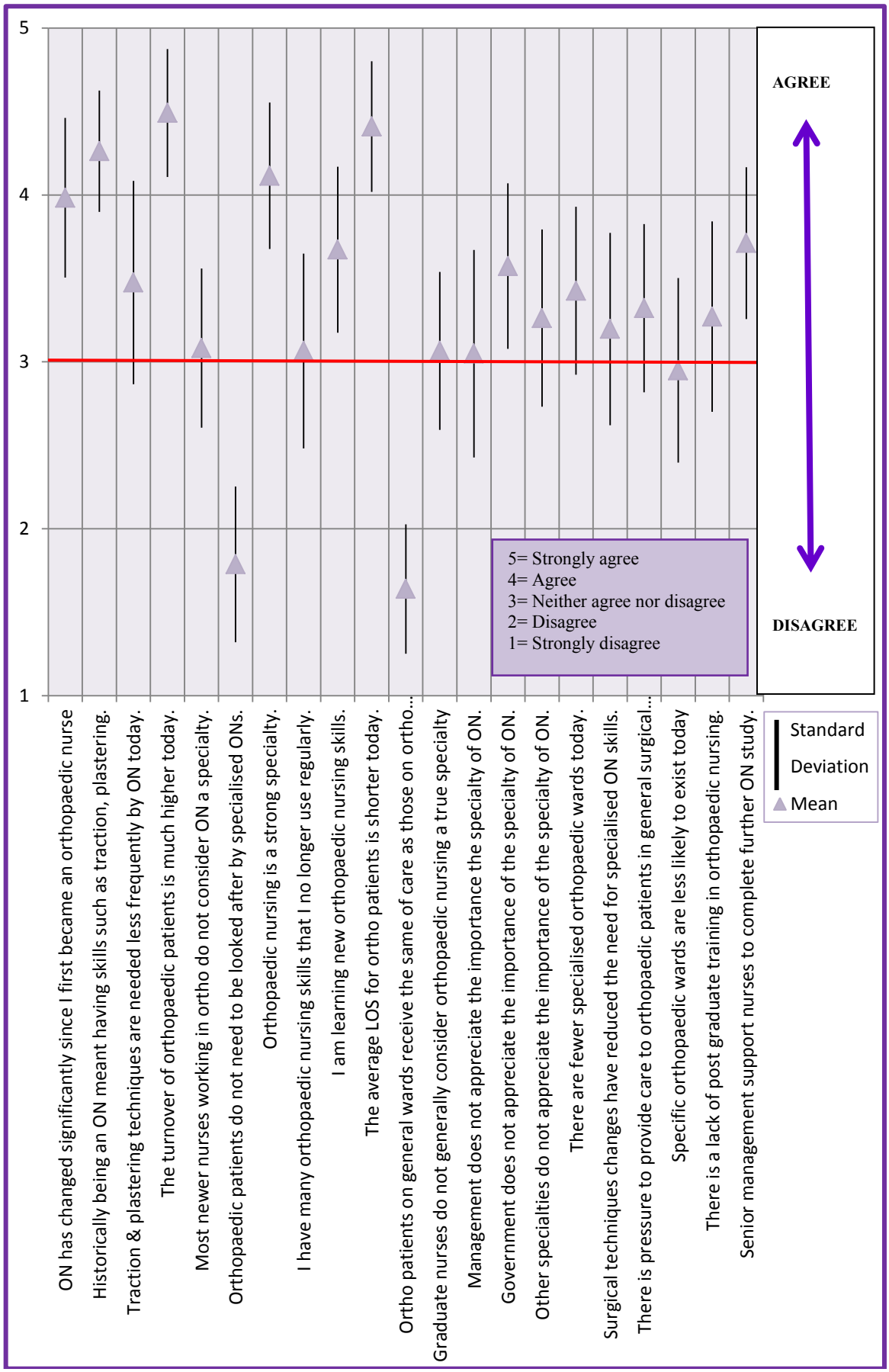
Not answered by all participants.

SD (Standard Deviation), ON (orthopaedic Nursing)


Other patient groups on the ward
6
5
4
3
2
1
0
Gen Surgical
Plastics
Gen Med
ENT
Colorectal
Cardiac
Urology/ Gynae
Emergency
Renal
Burns
Occ health

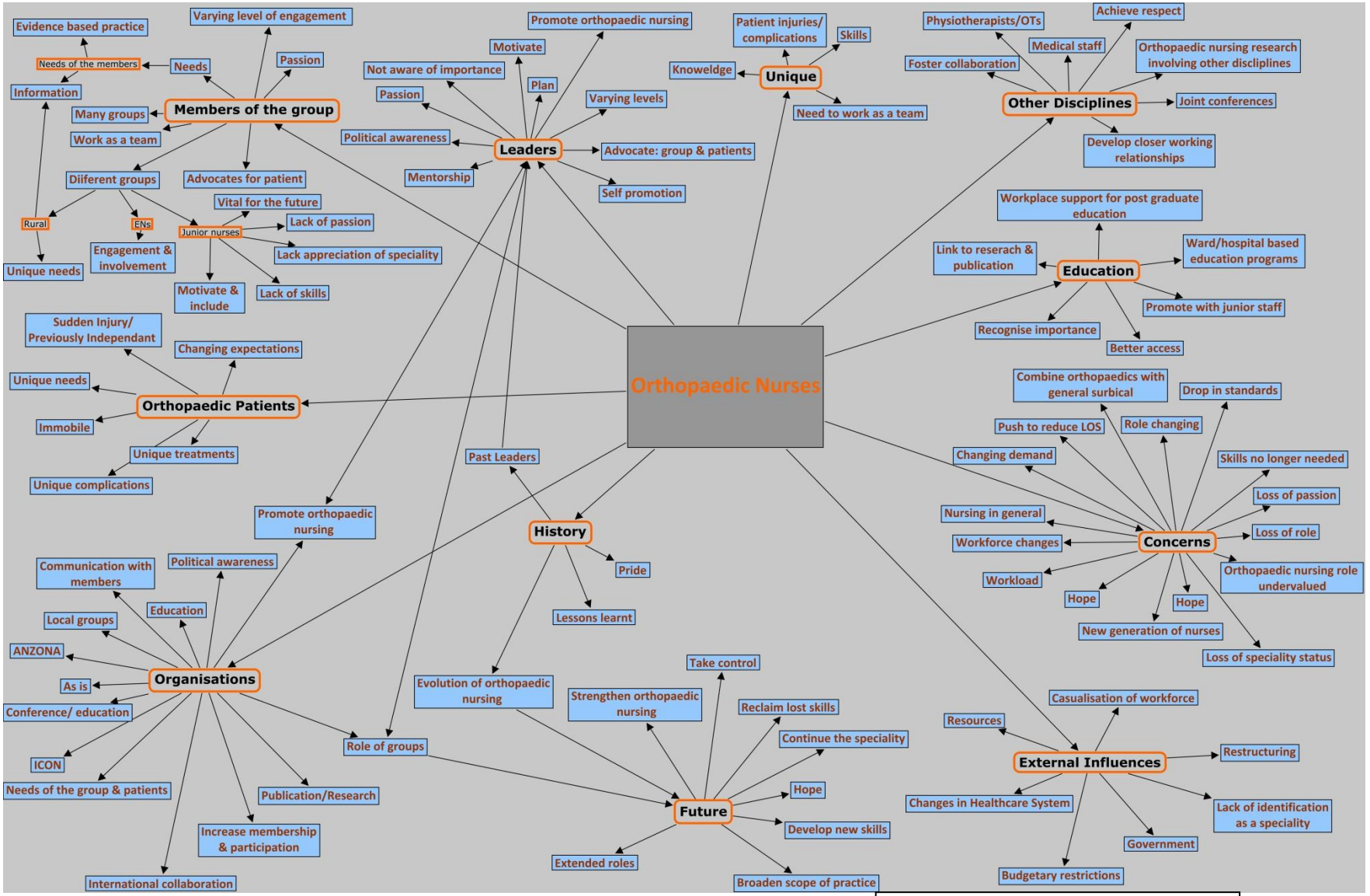

Types of Orthopaedic Patients on the ward
70
60
50
40
30
20
10
0
Acute Surg
Spinal Trauma
Spinal elective
Sports
JR
Upper limb
Lower limb
Acute Pelvic
NOF
Hand
Multi trauma
Elective

Appendix IV


5
4
3
2
1
AGREE
DISAGREE
5= Strongly agree
4= Agree
3= Neither agree nor disagree
2= Disagree
1= Strongly disagree
Standard Deviation
Mean
ON has changed significantly since I first became an orthopaedic nurse
Historically being an ON meant having skills such as traction, plastering.
Traction & plastering techniques are needed less frequently by ON today.
The turnover of orthopaedic patients is much higher today.
Most newer nurses working in ortho do not consider ON a specialty.
Orthopaedic patients do not need to be looked after by specialised ONs.
Orthopaedic nursing is a strong specialty.
I have many orthopaedic nursing skills that I no longer use regularly.
I am learning new orthopaedic nursing skills.
The average LOS for ortho patients is shorter today.
Ortho patients on general wards receive the same of care as those on ortho...
Graduate nurses do not generally consider orthopaedic nursing a true specialty
Management does not appreciate the importance the specialty of ON.
Government does not appreciate the importance of the specialty of ON.
Other specialties do not appreciate the importance of the specialty of ON.
There are fewer specialised orthopaedic wards today.
Surgical techniques changes have reduced the need for specialised ON skills.
There is pressure to provide care to orthopaedic patients in general surgical...
Specific orthopaedic wards are less likely to exist today
There is a lack of post graduate training in orthopaedic nursing.
Senior management support nurses to complete further ON study.

	Mean	Std. Deviation
Generally, senior management support nurses who wish to complete further study relevant to orthopaedic nursing.	3.71	0.91
There is a lack of post graduate training in orthopaedic nursing.	3.27	1.14
Specific orthopaedic wards are less likely to exist today	2.9	1.10
There is pressure to provide care to orthopaedic patients in general surgical areas.	3.3	1.0
Changes in surgical techniques have reduced the need for previously specialised orthopaedic nursing skills ie application & maintenance of traction.	3.2	1.15
There are many fewer specialised orthopaedic wards today compared to 10 years ago.	3.4	1.00
Nurses from other specialties do not appreciate the importance of maintaining the specialty of orthopaedic	3.2	1.06
Government does not appreciate the importance of maintaining the specialty of orthopaedic nursing.	3.5	0.9
Senior management does not appreciate the importance of maintaining the specialty of orthopaedic	3.0	1.24
Graduate nurses do not generally consider orthopaedic nursing a true specialty	3.0	0.94
Orthopaedic patients placed on general surgical wards will receive the same standard of care as those placed on orthopaedic wards.	1.6	0.775
The average length of stay for orthopaedic patients is much shorter today than 10 years ago.	4.4	0.78
I am learning new orthopaedic nursing skills.	3.6	0.99
I have many orthopaedic nursing skills that I no longer use regularly.	3.0	1.16
Orthopaedic nursing is a strong specialty.	4.1	0.87
Orthopaedic patients do not need to be looked after by specialised orthopaedic nurses.	1.7	0.93
Most new nurses working in orthopaedics do not consider orthopaedic nursing a specialty in 2011.	3.0	0.95
The turnover of orthopaedic patients is much higher today.	4.4	0.76
Traction & plastering techniques are needed less frequently by orthopaedic nurses today.	3.4	1.21
Historically being an orthopaedic nurse meant having skills such as application & management of traction, plastering etc	4.26	0.72
Orthopaedic nursing has changed significantly since I first became an orthopaedic nurse	3.9	0.95

Appendix V



Orthopaedic Nursing Concept