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## Exploring leadership and research in nurse practitioner roles across Australia and Ireland: A mixed-methods study

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**Exploring Leadership and Research in Nurse Practitioner  
Roles Across Australia and Ireland:  
A Mixed-Methods Study**

This thesis is presented for the degree of

**Doctor of Philosophy**

**Mary Ryder**

Edith Cowan University

School: School of Nursing and Midwifery

2020

## **Abstract**

### **Introduction**

The Nurse Practitioner role is recognised as the highest level of clinical nursing. Leadership and research are identified as core attributes for Nurse Practitioners in the regulatory frameworks. There is an expectation that as clinical leaders, Nurse Practitioners have the ability to transform healthcare delivery within their specialist area of practice.

### **Background**

The voice of Nurse Practitioners is limited in the current literature related to how they view their leadership contribution to Nursing. There has been some criticism in the evidence to date related to volume, consistency and transferability of Nurse Practitioner research. However, there is a shortage of evidence related to research from Nurse Practitioners, including their interpretation of research within their role.

### **Design**

A mixed-methods, sequential explanatory study was completed. Nurse Practitioners from Ireland and Australia were contacted via their respective Professional Associations to participate in the research.

### **Methods**

Phase one conducted an electronic survey to ascertain Nurse Practitioner leadership and research activities across Ireland and Australia. Phase two data collection was conducting through semi-structured interviews with participants to explore their understanding of leadership and research in their role.

### **Results**

Nurse Practitioners perceive that they provide strong clinical leadership in transforming healthcare delivery for patient populations. Research is perceived by Nurse Practitioners in the traditional sense, of generating new knowledge, and they do not value the research work they do. Leadership and Research in the Nurse Practitioner role is similar in Ireland and Australia. Leadership of research was not found, due to a lack of time allocated to research and a lack of confidence to undertake research.

## **Conclusion**

Nurse Practitioners provide patient focused clinical leadership in healthcare. Autonomy in clinical decision-making and the freedom to change healthcare delivery was evident. There is a reliance on interprofessional leadership and assistance to embed the role, ensuring its success. A lack of clarity pertaining to research requirements for Nurse Practitioners was identified. A translational research continuum has been proposed, as an alternative to the traditional definition of research for Nurse Practitioners.

## **Declaration**

I certify that this thesis does not, to the best of my knowledge and belief:

- i. incorporate without acknowledgment any material previously submitted for a degree or diploma in any institution of higher education;
- ii. contain any material previously published or written by another person except where due reference is made in the text of this thesis; or
- iii. contain any defamatory material;
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## List of Publications

1. Ryder, M., Jacobs, E., Hendricks, J. (Submitted 16<sup>th</sup> February 2020, and a revision submitted on 5<sup>th</sup> June 2020) An Integrative Review of Nurse Practitioner Research Related to Healthcare Transformation, *International Journal of Nursing Practice*; ID Ref: IJNP-2020-00121. (Appendix 1)
2. Ryder, M., Jacob, E., Hendricks, J. (Submitted 6th May 2019; Revised 24th September 2019; Revised 24<sup>th</sup> February 2020; Revised 22<sup>nd</sup> June 2020). A Survey Identifying Leadership and Research Activities Among Nurse Practitioners. *Contemporary Nurse*, Manuscript ID RCNJ-2019-0096.R3. (Appendix 12)
3. Ryder, M., Jacob, E., & Hendricks, J. (2019). An inductive qualitative approach to explore Nurse Practitioners views on leadership and research: An international perspective. *J Clin Nurs*, 28(13-14), 2644-2658. doi:<http://dx.doi.org/10.1111/jocn.14853> (Appendix 14).
4. Ryder, M., Jacob, E., Hendricks, J. (2019) Leadership and Research Activities of Nurse Practitioners: Ireland and Australia. Poster Presentation. *RCSI 38<sup>th</sup> Annual International Conference*, January 2019, Dublin, Ireland. (Appendix 16).
5. Ryder, M., Jacob, E., Hendricks, J. (2019) Exploring how Nurse Practitioners implement Leadership & Research. Poster Presentation. *RCSI 38<sup>th</sup> Annual International Conference*, January 2019, Dublin, Ireland. (Appendix 17).
6. Ryder, M., Jacob, E., Hendricks, J. (2019) Nurse Practitioners views on leadership and research. Poster Presentation. *ICN Congress 2019*. June 2019, Singapore. (Appendix 18).
7. Ryder, M., Jacob, E., Hendricks, J. (2019) Nurse Practitioner Leadership and Research. Oral Presentation. *ICN Congress 2019*. June 2019, Singapore. (Appendix 19).
8. Ryder, M., Jacob, E., Hendricks, J. (2019) Nurse Practitioner Perceptions on Leadership and Research. Oral Presentation. *ACNP National Conference - Transforming Healthcare*. September 2019, Melbourne, Australia. (Appendix 20).
9. Ryder, M., Jacob, E., Hendricks, J. (2019) A Survey of Leadership and Research activities of Nurse Practitioners. Poster Presentation. *ACNP National*

*Conference - Transforming Healthcare.* September 2019, Melbourne, Australia.  
Winner of Best Poster. (Appendix 21).



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## List of Abbreviations

Title in this manuscript	Full Title
ACNP	Australian College of Nurse Practitioners
APN	Advanced Practice Nurse <sup>1</sup>
	Clinical Nurse Specialist <sup>1</sup>
	Clinical Nurse Consultant <sup>1</sup>
IAANMP	Irish Association of Advanced Nurse and Midwife Practitioners
ICN	International Council of Nurses
NP	Nurse Practitioner <sup>2</sup>
	Advanced Nurse Practitioner <sup>2</sup>
	Certified Nurse Practitioner <sup>2</sup>
NMBA	Nursing and Midwifery Board of Australia
NMBI	Nursing and Midwifery Board of Ireland
RN	Registered Nurse

<sup>1</sup>These titles are commonly used interchangeably in the literature. To minimise the use of a myriad of titles they are all referred to in this thesis as Advanced Practice Nurse (APN)

<sup>2</sup> These titles are commonly used interchangeably in the literature. To minimise the use of a myriad of titles they are referred to Nurse Practitioner (NP) in this thesis.

# 1 Chapter One: Introduction

Nurse Practitioners are Registered Nurses (RN) with specialised advanced education and clinical capabilities that enable them to expand and extend the nursing role to deliver patient care as independent autonomous practitioners (International Council of Nurses, 2014[ICN]). The Nurse Practitioner (NP) role is identified as the highest level of a regulated clinical nurse at the direct point of care for patients (Nursing and Midwifery Board of Australia, 2014; Nursing and Midwifery Board of Ireland, 2017). The first known nurse practitioners were introduced in the United States of America (USA) in the 1960s to offer quality healthcare for children in underprivileged areas (Delamaire & Lafortune, 2010; Driscoll, Worrall-Carter, O'Reilly, & Stewart, 2005; Ford, 2015). Nurse Practitioners have demonstrated the ability to offer high-quality healthcare to identified patient populations (Mboineki & Chen, 2019; Stanik-Hutt et al., 2013). Since the introduction of the NP, workforce challenges have brought the role to the forefront of healthcare as they have been identified as a solution to spiralling healthcare costs (Fox, Gardner, & Osborne, 2018; Maier & Aiken, 2016; Maier et al., 2018; Maier et al., 2016). The NP role exists in a number of international countries including Australia, Canada, Finland, Hong Kong, Ireland, New Zealand, Singapore, Spain, Sweden, United Kingdom (UK), and the United States of America (USA) (Carney, 2016). All Nurse Practitioner roles will be referred to in this manuscript as NP.

Core attributes of the NP role include leadership and research (Cashin et al., 2015; Elliott, Begley, Sheaf, & Higgins, 2016). Leadership is an essential attribute to identify, plan, and implement change to healthcare delivery (Begley et al., 2010; Carryer, Gardner, Dunn, & Gardner, 2007; Elliott, 2017). There is an expectation that NPs, in addition to being clinical experts, have a vision and persuasive ability to motivate a team to transform healthcare delivery within their various domains (Elliott, 2017; Fischer, 2016; Poghosyan & Liu, 2016; Saravo, Netzel, & Kiesewetter, 2017).

The leadership position of NPs has been described as providing influence for innovation, improving clinical practice, healthcare delivery, and advancing the profession of nursing and midwifery (Elliott et al., 2016). Evidence to date has

determined that researchers and stakeholders acknowledge the importance of leadership to the NP role (Elliott, 2017; Elliott, Begley, Kleinpell, & Higgins, 2014; Elliott et al., 2016; Elliott et al., 2013; Leggat, Balding, & Schiftan, 2015). The literature has focused on comparing the outcome of NPs to those of physicians rather than researching the role as distinct within the healthcare workforce (Chavez, Dwyer, & Ramelet, 2018; O'Connor, Palfreyman, & Borghmans, 2018; Roche, Gardner, & Jack, 2017). Thus, the voice of NPs and their perceptions of leadership related to the role is limited and it is difficult to ascertain if or how NPs themselves view their leadership contribution to nursing from the available evidence.

Research is also identified as a core attribute of the NP role (Begley, Elliott, Lalor, & Higgins, 2015; Lambert & Housden, 2017; Nursing and Midwifery Board of Australia, 2014; Nursing and Midwifery Board of Ireland, 2017). The NP research role is more ambiguous than the leadership role. In the international literature NP regulation, characteristics, education levels, the scope of practice and practice settings have been studied and reported (Carney, 2016; Delamaire & Lafortune, 2010; Duffield, Gardner, Chang, & Catling-Paull, 2009; Jokiniemi, Pietilä, Kylmä, & Haatainen, 2012; Pulcini, Jelic, Gul, & Loke, 2010; Sheer & Wong, 2008). Masso and Thompson (2017) have criticised a lack of consistency in reporting the work done by NPs, in Australia, noting that it is difficult to compare similarities between NP roles when the reporting of work done in the literature by NPs is variable. The primary concern of Masso and Thompson (2017) is that the details of NP interventions are not specified in the NP research therefore, they argue that it is difficult to determine the relationship between what changed to produce the reported outcome. It is therefore difficult to determine from the literature if the evidence produced by NPs is transferrable, or if the NP role is comparable between organisations, health systems, or countries. Although there is a large proportion of literature reporting on the NP role, there is a dearth of literature related to the research component of the role, or NP perception of research within their role. Acknowledging NPs, as clinical leaders, it is reasonable to expect that they also provide evidence on which to base their contributions in the clinical setting. However, it has yet to be determined if NPs perceive themselves as leaders in Nursing, or if activities attributed to the role are transferrable internationally.



## 1.2 Background

The NP role was developed collaboratively with nurses and physicians in the USA in the 1960s in response to dilemmas in the healthcare system with a shortage of primary care providers, unequal distribution of healthcare available, an escalation of healthcare costs and an impetus to expand the nursing role (Delamaire & Lafortune, 2010; Fenton & Brykczynski, 1993; Vessey & Morrison, 1997). The introduction of NPs was widely accepted as the role improved access to quality healthcare services by providing safe, effective, and accessible care to disadvantaged communities (Delamaire & Lafortune, 2010). For the nursing workforce, it meant that experienced nurses could extend their current role to incorporate what were seen to be traditional medical skills such as diagnosing clinical conditions, prescribing treatments for patients, referral to other healthcare providers and health promotion (Delamaire & Lafortune, 2010; Driscoll et al., 2005; Harvey, Driscoll, & Keyzer, 2011; Matthews, 2012).

The NP role facilitates nurses, as clinical leaders, to contribute to healthcare delivery by exercising high levels of judgement and decision-making in the clinical setting (Furlong & Smith, 2005). Differences existed in the reason for the implementation of the role in various countries. In Australia, the NP role emerged to provide primary care to rural and remote populations, whereas in Ireland the role was developed to provide a clinical career pathway for nurses (Delamaire & Lafortune, 2010). The majority of NPs, in Australia and Ireland now work in acute hospitals, and particularly emergency departments (Department of Health, 2019; Middleton, Gardner, Gardner, & Della, 2011). In contrast the majority of NPs in the USA work as family NPs in primary care (American Academy of Nurse Practitioners, 2019).

Post-graduate education for the role of NP was a hallmark internationally since its inception in the 1960s (Aleshire, Wheeler, & Prevost, 2012; Delamaire & Lafortune, 2010; Pulcini et al., 2010). By the 1970s, educational requirements of NPs progressed from graduate certificate to master's degree programs and became a common expectation of individuals wishing to practice at this level (Aleshire et al., 2012). The ICN (2014) recommends a master's degree level of education as a minimum standard for NPs. In the USA however, a Doctoral level preparation for NPs acknowledges the

complexity of the role and aids nursing in seeking parity of education with other healthcare professionals (Cashin, 2018). In contrast, National Standards in both Ireland and Australia require a master's degree of education as a minimum for NPs.

Ireland and Australia are different in their approach to the NP role as they have robust legislation and frameworks to support the NP role, and other countries have not put in legislative frameworks for the role (Carney, 2016; Delamaire & Lafortune, 2010). Unlike many countries, the NP title is recognised and protected by legislation in Australia and Ireland (Carney, 2016; Government of Australia, 2010; Government of Ireland, 2011). Nurse Practitioner competencies were developed as part of the national framework at the inception of the role in both Ireland and Australia and have since been replaced with Advanced Practice (Nursing) Standards and Requirements (Nursing and Midwifery Board of Australia, 2016; Nursing and Midwifery Board of Ireland, 2017). The NP is the only legislated advanced practice nurse (APN) role in Ireland and Australia.

### **1.3 Leadership role for Nurse Practitioners**

The common purpose of the NP role internationally is related to improving access to quality healthcare for patient populations (Chavez et al., 2018). Healthcare transformation or reform is essential to meet the increasing diversity of patient populations increasing healthcare costs (Smigorowsky, Sebastianski, Sean McMurtry, Tsuyuki, & Norris, 2019) and healthcare service gaps (Smith, McNeil, Mitchell, Boyle, & Ries, 2019). Nurse Practitioners are identified as clinical leaders, leading change, policy development, and healthcare transformation (Begley et al., 2010; Carryer et al., 2007; Steinke, Rogers, Lehwaldt, & Lamarche, 2018). Clinical leaders have designated the responsibility to use evidence-based practice (EBP), manage complex systems of care, and improve the quality of outcomes by making improvements at the point of care (Porter-O'Grady, Clark, & Wiggins, 2010). They are responsible for negotiating change, through visionary critical direction (Davidson, Elliott, & Daly, 2006; Elliott, 2017).

In Ireland, research exploring the NP role identified 13 leadership activities directly related to the NP role (Elliott et al., 2013). These included introducing and developing

new patient services, changing clinical practices through formal education, and taking the responsibility for guideline development and implementation. Leadership was evident in the early NP role, in Australia, where it was reported that NPs provided clinical leadership in the immediate clinical environment, but also the wider context of health care delivery (Carryer et al., 2007). This NP twofold leadership is similar to recent findings from Canada, describing patient-focused and organisational/system focused leadership from Advanced Practice Nurses (APN) (Lamb, Martin-Misener, Bryant-Lukosius, & Latimer, 2018). Lamb et al. (2018) concluded that APNs described their leadership as a set of capabilities that are both patient-focused leadership and organisational or system focused leadership, as they can influence change at both the patient and organisational level.

It may be reasonable to expect NPs, as leaders of healthcare transformation, to produce an abundance of literature related to their leadership activities and research related to healthcare change and transformation (Masso & Thompson, 2017). However, it may be argued that the leadership element of the NP role is not quantified in the research and that the research into NPs lacks clarity required to support the transferability of interventions. The current evidence lacks international comparison or cross-validation of leadership activities amongst NPs. There was a dearth of research identified ascertaining if NPs identify themselves as leaders in the nursing profession, or what they perceive to be their leadership role. It is important to understand NP perceptions of their role as it provides an insight into their interpretation of the standards and scope of their role. Standards cannot be achieved in the absence of a clear understanding by those that the standards are pertinent to.

#### **1.4 Research role for Nurse Practitioners**

Research is fundamental to the NP role, as the role has been identified to make significant transformations to healthcare delivery by using evidence-based practice. It is important to measure the effect of the change and the contribution nursing is making to healthcare transformation and provides evidence to support changes to healthcare delivery (Carrick-Sen et al., 2015). The limited available literature suggests that NPs research role is related to the implementation of evidence-based practice (Lambert & Housden, 2017). It is reasonable to expect that, NPs as change leaders in healthcare

reform, are researching the impact of this change for patient populations to determine if the changes are producing the expected outcomes.

Leading research to inform clinical practice is a suggested outcome indicator for NPs from research on NP stakeholders from an Irish context (Elliott et al., 2014). Research is embedded in three of the suggested leadership outcome indicators including, increased use and application of evidence, knowledge generation to inform clinical practice, and NP-led evaluation of quality patient care (Elliott et al., 2014).

While clinical standards and requirements for NPs are composed in extensive detail in national standard documents in some countries (American Association of Nurse Practitioners, 2013; Nursing and Midwifery Board of Australia, 2014; Nursing and Midwifery Board of Ireland, 2017), research standards provide less clarity. National standards differ in their specifications of the research role for NPs, varying from developing clinical research questions, conducting or participating in research projects, participating in journal clubs and communities of practice, disseminating and incorporating evidence-based practice into clinical practice, attending professional conferences, contributing to the professional through research, to having a research domain embed in clinically focused standards (American Association of Nurse Practitioners, 2013; Lambert & Housden, 2017; Nursing and Midwifery Board of Australia, 2014; Nursing and Midwifery Board of Ireland, 2017). The current Australian NP standards only reference research once, stating that NPs implement research-based innovations for improving care (Nursing and Midwifery Board of Australia, 2014). The Irish NP standards also only have one reference to research requiring NPs to demonstrate a vision for advanced practice on a knowledge base developed through research, critical thinking, and experiential learning (Nursing and Midwifery Board of Ireland, 2017). Interestingly, early competency standards from Ireland and Australia identified research as a core concept for the NP role (Gardner, Carryer, Gardner, & Dunn, 2006; National Council for the Professional Development of Nursing and Midwifery, 2004). These earlier NP standards stated NPs were required to engage and lead, conduct, disseminate and publish nursing and midwifery audit and research that contributes to the quality of care, shapes and advances policy development (Gardner et al., 2006; National Council for the Professional Development of Nursing and Midwifery, 2004). It is unclear why research standards for NPs have changed and

arguably downgraded. The changes to research requirements may be reflective of the difficulty NPs experienced in participating in research, nonetheless, the level of expected engagement and contribution to research is uncertain. Begley et al. (2015) explained this ambiguity related to the research role for NPs transfers to organisational nursing leadership and their level of understanding of the requirement for NP research. The change to the research role for these clinical nurse leaders is not in line with the scientific evolution of the nursing profession. It is important that nursing and NPs recognise the importance of research in demonstrating the effectiveness of the role and how it can transform healthcare provision and benefit patient care (Carrick-Sen et al., 2015; Hayes, 2006).

There is some criticism about NP research to date. Some authors argue that research to support the NP role is lacking and falling behind clinical practice (Smigorowsky et al., 2019). Little is known about the outcomes of NP services, as the research is often of poor quality, even though the role itself is the most studied healthcare role (Smigorowsky et al., 2019). Masso and Thompson (2017) support this thinking as they criticise the lack of context in NP research, making it difficult to compare what may be similar in roles across various sites. The added inconsistency related to defining the NP role internationally confounds the nature of the role even further. This arguably suggests that many NPs are not fulfilling a research role, and many that are, are engaged in poor quality research.

While original competency standards for NPs in Australia listed leadership of research as part of the NP role, little research has been undertaken to determine if NPs have engaged in this practice. Research leadership is described as influencing others about research related behaviours (Evans, 2014). Although Begley et al. (2015) provided insight into the stakeholders' perceived research activities of five Irish NPs, it is difficult to identify research to date that has explored NPs perceptions on their role in research. How the concept of research leadership applies to NP is unclear and it is questionably fitting for clinical leaders to provide research leadership in the clinical setting.

## **1.5 Purpose of the Research**

The purpose of this research was to explore leadership and research in the NP role. The research proposes to provide NPs with an opportunity to describe their perception of leadership and research in their role. This research project also proposes to compare the NP role across two countries. This will aid in determining if research around the NP role is transferrable between countries. There is a gap in the literature and research that has compared the core components of the NP role across countries.

## **1.6 Significance of the Research**

This research will ascertain if NPs perceive their role as providing leadership in the nursing profession and will determine if the activities are reflective of their responsibility in the transformation of health. The research will also provide quantifiable measurements of NP leadership activities among NPs across Ireland and Australia. This thesis will enhance the NP role by identifying and quantifying NP research activities, and for the first time, describe NPs perception of their research role. The research will generate new knowledge by exploring the concept of research leadership among NPs and will determine if there is a relationship between leadership and research. The findings of this research will report on the outcomes of comparing the NP role across two countries, which has not previously been reported in the literature.

## **1.7 Aim of the Research**

The aim of this research was to explore nurse practitioner perceptions of leadership and research across Ireland and Australia. The study had three key research aims, which were:

- a) To generate new knowledge in relation to NPs leadership and research by giving NPs a voice to describe their perceptions of the core components of the role
- b) To extend the understanding of leadership and research among NPs across Ireland and Australia, and explore if there is a relationship between both activities
- c) To explore the NP role across two countries to determine if there are consistencies in practice
- d) To explore the concept of research leadership among NPs in Ireland and Australia

### **1.7.1 Research Questions**

1. What are the leadership activities of practicing NPs?
2. What are the research activities of practicing NPs?
3. What are NPs perceptions of leadership within their healthcare transformation role?
4. What are NPs perceptions of research within the NP role?
5. What are NPs understanding of the concept of research leadership?
6. Does a correlation exist between leadership and research?
7. Are leadership and research activities and perceptions similar among NPs in Ireland and Australia?
8. What are the challenges and opportunities afforded to NPs in the transformation of healthcare delivery?

### **1.8 Research Design**

This research used a mixed-methods approach. The complexity of the NP role, in addition to the complex multi-factorial aspects to leadership and research, requires a combination of both quantitative and qualitative research methods to explore the details of the research questions (Creswell & Plano Clark, 2011). A sequential explanatory mixed-methods design as described by Creswell and Plano Clark (2011) was used. This design involved an initial quantitative phase to ascertain activities from a larger population of NPs. A second qualitative phase of data gathering proceeded to enable the researcher to explore and build on the findings gathered during the first phase of the research (Creswell & Plano Clark, 2011).

### **1.9 Summary of Chapter One**

This chapter outlines that leadership and research are core to the clinical leadership role of NP. Nurse Practitioners are the highest level of clinical nurses charged with the responsibility of improving access and providing quality healthcare to specialist populations and are therefore at the forefront of healthcare transformation. Researching changes to healthcare transformation is important as it demonstrates the

profession's contribution to changes in health delivery and patient outcomes. The evidence to date has not explored NPs own perceptions of their leadership role in the nursing profession or healthcare transformation. The research role of NPs is unclear, further confounded by changes to research requirements in updated practice standards for NPs. There is a dearth of evidence exploring the research role of NPs, or their perception of their role in research. In addition, no research to date has compared perceptions of NPs across international boundaries. This research project aimed to explore the concept of leadership and research among NPs across Ireland and Australia using a mixed-methods approach.

### **1.10 Structure of the Thesis**

This thesis consists of seven chapters. Chapter one provides an introduction to the study. Chapter two presents a review of the existing literature related to NPs leadership and research in healthcare transformation. Chapter three describes the methods, research process, and ethical considerations. Chapter four presents the result from phase one of the research (quantitative surveys) and chapter five, the results from the second phase (qualitative interviews). Chapter six presents a discussion of the findings. Chapter seven concludes the thesis providing a summary of the findings, a discussion of the limitations of the study, and recommendations for further research.

This thesis is inclusive of the PhD candidates' publications in chapters two, three, and four. The traditional structure of these chapters has been altered to accommodate these publications.

### **1.11 Chapter to Follow**

Chapter two provides a detailed review and critique of the literature pertaining to the evidence of healthcare transformation by NPs. A systematic integrative review of the literature is presented and is currently under review with the International Journal of Nursing Practice.



## **2. Chapter Two: Literature Review**

This chapter is not included in this version of the thesis.

## **3. Chapter Three: Methodology**

### **3.1 Introduction**

This research aimed to explore the role of NP in leadership and research. Following on from the literature review, this chapter outlines the design and mixed methods methodology that was chosen as the most appropriate way to answer the proposed research questions. It discusses the chosen methodology and outlines why a sequential explanatory mixed methods design was chosen for the study. Details of the research method along with ethical issues relevant to the project, participant, and data analysis are described.

### **3.2 Methodology**

The NP role is complex as it transcends both nursing and medicine (Delamaire & Lafortune, 2010; Duffield et al., 2009; Pulcini et al., 2010; Stasa, Cashin, Buckley, & Donoghue, 2014). Due to the nature and complexity of a hybrid-nursing role such as that of NP, more than one research methodology is required to explore it (Beck & Harrison, 2016; Gardner, Chang, Duffield, & Doubrovsky, 2013). Mixing research techniques has been used often to expand the scope of a study, or to deepen the understanding of a phenomenon (Sandelowski, 2000a). Increasingly complex human phenomena mandates for more complex research methods to answer research questions (Sandelowski, 2000a; Tashakkori & Creswell, 2008). Researching a complex nursing role, and specifically exploring two complex functions of that role, requires a mixed-method approach as this facilitates a fuller exploration of the research question. This research not only seeks to establish current practices and procedures of NP's across two countries but also explore NPs' perspectives of their research and leadership practices. To explore the role of NPs in leadership and research requires more than one method of data collection (Creswell & Plano Clark, 2011).

#### **3.2.1 Theoretical Framework**

A theoretical framework, or a conceptual framework, is a formalised set of beliefs and opinions about the social world used to guide the design and conduct of research (Plano Clark & Ivankova 2016). It is considered important to use a theoretical

framework in research to link the proposed research to the previous knowledge base of the concept (Schneider 2013). The benefit of using a theoretical framework for research is that it can provide clarity to concepts and their relationships (Schneider 2013). This research examined several theoretical frameworks to apply to this research.

The first theory examined was Kanter's (1977 and 1983) Theory of Organisational Empowerment. Kanter's (1977; and 1993) Theory of Organisational Empowerment demonstrated that access to organisational information, support, resources, and advancement opportunities, which are identified as organisation empowerment structures, has resulted in improved organisational commitment, job satisfaction, and decreased burnout for nurses. This theory has been tested on NPs previously and determined that organisational empowerment had a positive effect on their relationship with clinicians and managers in an organisation (Almost & Spence Laschinger 2002). Empowerment strategies have also resulted in improved professional values and patient outcomes for NPs (MacPhee et al., 2012; Rajotte, 1996; Richardson & Storr, 2010). However, the assumptions of Empowerment as a leadership theory exclude NPs working as independent practitioners outside of healthcare organisations. Additionally, this theory does not reflect independent perceptions of the concept of research or research leadership within the NP role.

James McGregor Burns (1978) Transformational Leadership theory, analysed by Bass & Riggio (2005), was also considered as a theoretical framework for this research. This theory conceptualises that transformational leaders and their followers elevate one another to higher levels of morality and motivation. The four elements associated with transformational leaders include individual consideration; intellectual stimulation; inspirational motivation and idealised influence (Bass & Riggio, 2005). The assumptions in this theory applied to exploring NPs perception of their leadership role, however, this is only one aspect of this research. The theory did not conceptualise research as a core element of a professional role. Therefore, this theory was also rejected.

The strong model of advanced practice (Daly & Carnwell, 2003) was also examined as it acknowledges all elements of the NP role, including leadership and research. A

professional practice model and framework for advanced practice roles did not provide a theoretical framework that could be applied to this research, instead, it is a framework used to differentiate between varying advanced practice roles (Daly & Carnwell, 2003).

Creswell & Plano Clark (2018) acknowledge that theory provides a narrower perspective to research than a worldview. A theory holds different perspectives in the domains of qualitative and quantitative research. A theory identifies key variables in quantitative research, where it is translated into a hypothesis or research question, that is tested with the data collected. In contrast, a theory is often generated during the qualitative research process and positioned to explain the findings (Creswell & Plano Clark 2018). Creswell & Plano Clark (2018) propose that as an alternative to a theoretical framework in mixed-methods, a quantitative research phase may assist in defining problem areas that theory-based research can explore in a qualitative follow-up phase of a research study. Creswell & Plano Clark (2011) propose that the research question is of primary importance, more important than the method or theoretical framework underlying the method. In this research, as an alternative to a theoretical framework, the questions used in the quantitative phase were used to identify areas for further exploration during interviews and inductive reasoning.

### **3.2.2 Philosophy Underpinning Mixed Methods Research**

The origins of mixed methods research have evolved from systematic triangulation research in 1959 to mixed methods research in the 1980s (Creswell & Plano Clark, 2011; Maxwell, 2015). Definitions since the late 1980s began describing a methodology of mixing methods and disentangling research paradigms, from mixing all phases of the research process to a definition that had both methodological and philosophical orientation (Creswell & Plano Clark, 2011; Maxwell, 2015; Mesel, 2013). A current definition describes mixed methods research as

*‘an approach to inquiry involving or collecting both quantitative and qualitative data, integrating the two forms of data, and using distinct designs that may involve philosophical assumptions and theoretical frameworks’*  
(Creswell, 2014).

Components entailed in defining a research methodology including philosophy, research design, and specific methods and their applicability to this research will all be detailed in this chapter.

### 3.2.2.1 *Philosophical Assumptions*

Philosophical assumptions consist of a set of beliefs and assumptions that guide the researcher. These are often referred to by Creswell and Plano Clark (2011) as a worldview, while other researchers refer to paradigms (Creswell, 2014; Guba & Lincoln, 1994; Houghton, Hunter, & Meskell, 2012; Mesel, 2013). A paradigm or worldview entails the synthesis of ontology, the philosophy of existence or being, epistemology, related to the knowledge of the phenomenon and methodology, which is the framework for conducting the study (Creswell & Plano Clark, 2018; Cuthbertson, Robb, & Blair, 2019). This means choosing the influencing factors of the research process which frame the aims, paradigm, and method (Guba & Lincoln, 1994; Houghton et al., 2012). Historically it was believed that paradigms of qualitative and quantitative research could not be combined, until philosophical analysis by Lincoln and Guba (1994), focused on correlations between philosophical assumptions such as ontology, epistemology, and methodology, disputed this attitude (Mesel, 2013). Pragmatists, often proponents of mixed methods, advocate for efficient use of both approaches (Cameron, 2009; Mesel, 2013). Creswell and Plano Clark (2011) believe that worldview can inform mixed-method research by providing a general philosophical orientation to the research that accepts that they can be combined or used individually.

Pragmatism is a worldview often associated with mixed-methods research, where the focus is on the importance of the question asked (Creswell & Plano Clark, 2011). Biesa (2010) proposed pragmatism as a solution to addressing philosophical concerns at seven levels, by applying a realistic approach to data collection, design, epistemology, ontology, the purpose of the research, and the relationship between the research and practice. Creswell and Plano Clark (2011) believe that multiple paradigms can be used in mixed-methods research study, which the researcher has followed in this research.

Creswell and Plano Clark (2011) propose a number of combinations of mixing research methods, known as typologies, taking into consideration different sequences

of data collection, the balance between qualitative and quantitative research in the overall approach, the phase at which data integration occurs, and the theoretical perspective whether the research aims to change or inform. This research seeks to explore specific core elements of the NP role in a large population, and subsequently determine NPs' perceptions of these elements. This will add the NPs' voice to the nursing evidence base to determine their leadership and research contribution to the healthcare change agenda. The complexity offered by the extension of the NP role requires neither qualitative nor quantitative methods alone but a melding of methods to explore the details of the research question (Creswell & Plano Clark, 2011; Johnson, Onwuegbuzie, & Turner, 2007; Whitehead & Schneider, 2013). Mixed methods methodology facilitates investigating the multilevel phenomena of leadership, research, and research leadership by using both quantitative and qualitative forms of research (Ivankova, Creswell, & Stick, 2006; Stentz, Plano Clark, & Matkin, 2012). The central premise of mixed-methods research is that the use of quantitative and qualitative approaches in combination provides a better understanding of the research problem than either approach alone (Stentz et al., 2012). The value of using mixed-methods methodology is the integration of both qualitative and quantitative data to validate and explain the findings during the design, interpretation and reporting phases (Fetters, Curry, & Creswell, 2013).

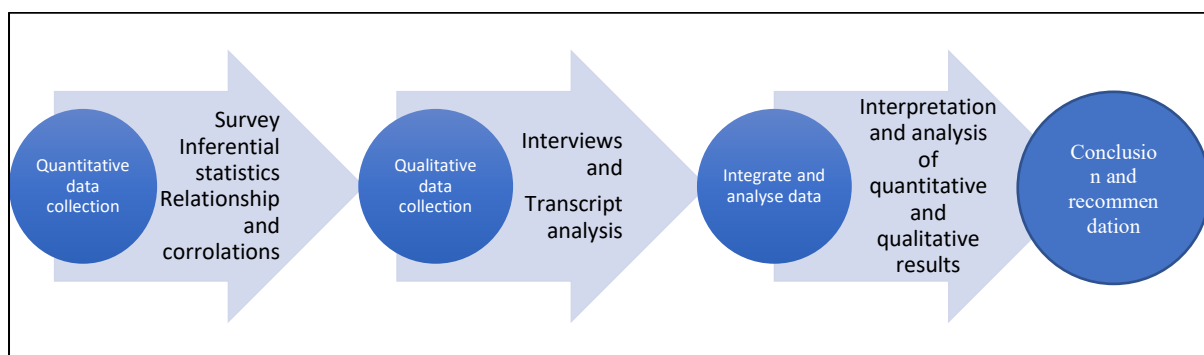
It is important that a researcher is not only explicit about the reason for mixing methods, but chooses an appropriate method design based on the level of interaction between both quantitative and qualitative phases, the relative priority of the phases, timing of the phases and procedures for mixing data from the phases (Creswell & Plano Clark, 2011; Kettles, Creswell, & Zhang, 2011). For this research, a sequential explanatory research design was chosen.

Quantitative data, by assessing large numbers of responses to variables, provides a general understanding of NP leadership and research activities but does not facilitate examining NP perceptions of their activities, which can be explored in greater depth by gathering qualitative data (Creswell & Plano Clark, 2011; Ivankova et al., 2006). This methodology arguably offers a more comprehensive approach to research by examining the topic in a broader sense to gain a deeper understanding of the study

phenomenon (Terrell, 2012). This approach to research must involve both philosophical assumptions and distinct procedures (Creswell, 2014).

### 3.2.3 Research Design

This research used an explanatory sequential mixed methodology, which occurs in two distinct steps (Creswell & Plano Clark, 2011; Lamont, Brunero, Lyons, Foster, & Perry, 2015; Roots & MacDonald, 2014). That is an initial quantitative phase followed by a qualitative phase to explain the initial quantitative results (Creswell & Plano Clark, 2011). This type of mixed methods methodology first proffered the researcher an opportunity to pragmatically reach a large sample across two countries; and second, it enabled exploration of participants' perceptions, using a smaller group and to compare the findings between NPs in both countries.



*Figure 2: Explanatory sequential design applied to this research (Creswell & Plano Clark, 2011; Whitehead & Schneider, 2013)*

This research was undertaken in two phases. Phase one quantitative and phase two qualitative data were then integrated and analysed and triangulated, by capturing different dimensions of the same topic, to validate the data (Figure 2) (Creswell & Plano Clark, 2011; Fetters et al., 2013; Ivankova et al., 2006; Kettles et al., 2011).

### 3.2.4 Phase One

A cross-sectional, self-administered, cohort survey method to collect quantitative data was used in phase one of the study to identify NPs current leadership and research activities. A cross-sectional survey produces a representative sample of a population

during a single point in time (Choen, Manion & Morrison 2018). Cross-sectional studies are unable to demonstrate developmental patterns over time unless they are repeated (Choen, Manion & Morrison 2018). The researcher was satisfied that this was not the purpose of this research. Similarly, determinants of individual behaviour are difficult to address in cross-sectional studies (Choen, Manion & Morrison 2018), however, the researcher determined that these would be explored during interviews during the second phase of the research.

#### *Phase one: Quantitative Questions*

- Do NPs identify themselves as leaders in the nursing profession?
- What are the leadership activities of NPs in Ireland and Australia?
- Do NPs identify themselves as researchers in the nursing profession?
- What are the research activities of NPs in Ireland and Australia?
- Is there a difference in the leadership and research activities of NPs in Ireland and Australia?
- Is there a relationship between leadership and research activities?

#### *3.2.4.1 Sample*

The research looked at the perceptions of Nurse Practitioners from Ireland and Australia. At the time of the research, there were 1,380 endorsed NP in Australia and 208 registered in Ireland (NMBA, 2016; NMBI, 2014). A convenience sample was chosen from the identified populations aimed to represent the characteristics of the overall target population. Geographical location was also a factor considered in sampling. To access large numbers in two geographical locations, it was decided to source participants via professional associations. Of the 1,380 NPs in Australia, 603 (44%) were members of the Australian College of Nurse Practitioners (ACNP) and in Ireland of the 208 registered NP's the Irish Association of Advanced Nurse Midwife Practitioners (IAANMP) has 95 members (46%) (ACNP and IAANMP, 2016).

The sample was determined by eligibility criteria in Ireland and Australia. Inclusion criteria included:

- Registered Advanced Nurse Practitioner (Ireland)

Or



- Endorsed Nurse Practitioner (Australia)

AND

- Have practiced as a Nurse Practitioner in Ireland or Australia within the last five years
- Member of an NP professional association

Whilst acknowledging the time constraints of NPs it was anticipated that the perceived value of this survey would directly appeal to members of NP professional associations and result in an adequate response rate (VanGeest & Johnson, 2011). As a group of nurses that have been educated to master's degree level, and have a core research function with the role, it was also anticipated that an acceptable response rate would be achieved (VanGeest & Johnson, 2011).

A mathematical strategy known as power analysis was used to determine the correct sample size. An f-test power analysis using G Power software, determined a total sample size of 84 responses, 12% of the total population, as the target to demonstrate a correlation between variables with 99% power (Figure 3). It was calculated that 60 responses (9.6%) would provide 95% power. Descriptive statistics were used to describe, compare, and summarise information about the participants (Pilot, 2010). Chi-square statistics were used to establish an association between categorical variables (Delucchi, 1983; Hess & Hess, 2017).

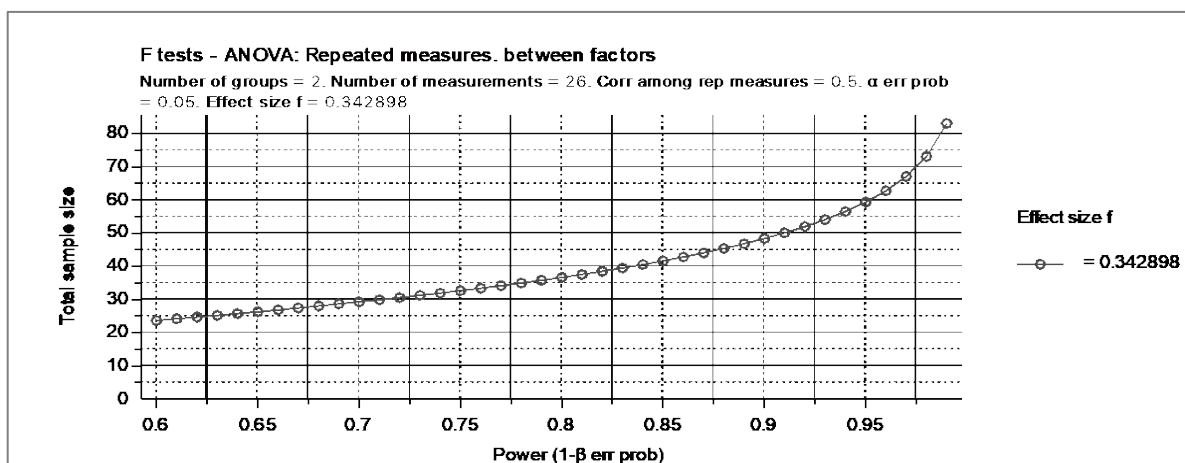


Figure 3: G Power ANOVA analysis

#### 3.2.4.2 *Recruitment and Ethics*

The first stage of recruitment was ethical approval from the University Human Research Ethics Committee. This was required before contacting the two professional associations.

Research Ethics approval was granted from the Edith Cowan University (ECU) Human Research Ethics Committee (project number 16418, Appendix 3). The researcher then contacted both professional associations (ACNP and IANMP) via email and requested that an invitation to participate be emailed to all eligible members.

The process of recruitment with IANMP, in the absence of a specific research or ethics committee, required organisational committee approval before the circulation of the survey. The Organisation's general committee granted permission, and the approval was explicit in the distribution of the survey to members (Appendix 4). The ACNP required an additional organisational research review process to access members for research purposes, and approval was subsequently granted (Appendix 5). Both professional associations agreed to distribute the survey to members via email. The professional associations were also requested to distribute a reminder email five days before the closure of the survey. The survey remained open for one month after the invitation email from the professional association.

#### 3.2.4.3 *Informed Consent*

There are three ethical principles for informed consent to advocate for participant's best interests which are autonomy, beneficence, and justice (Judkins-Cohn, Kielwasser-Withrow, Owen, & Ward, 2014). Respecting the participant's autonomy acknowledges their right to hold their personal views, opinions, and destiny (Sandelowski, 2000a). The participant email contained an attachment with additional information about the research (Appendix 6) to provide participants with information to choose to participate in the research. The attachment included information on the benefits of the research to the NP profession and indicated there was no personal benefit from participation. The first question required participants to verify that they had read the participant information and agreed to proceed with the survey before the survey content could be accessed (Appendix 7, Page 1-2). Participant information

included full disclosure of the nature and the process of the research (Judkins-Cohn et al., 2014). Participants were informed that there were no right or wrong answers to questions, which were specifically related to their current role. Contributor anxiety was not anticipated during the survey. Participants were provided with contact information for the Research Ethics Committee and the research team (Appendix 6 & 7). Justice related to the fair selection of participants through accessing participants using professional associations. The voluntary completion and return of the survey implied consent.

#### *3.2.4.4 Respect for Anonymity and Confidentiality*

Anonymity and confidentiality were protected as participants could not be identified or linked with responses (Fouka & Mantzourou, 2011). Using professional associations to distribute emails enabled the research survey to be distributed without the researcher requiring the contact details of participants. This protected the anonymity of the participants. The surveys were anonymous, and participants were informed that they were unable to withdraw once the survey was submitted as it would be impossible to identify which survey they had completed (Fouka & Mantzourou, 2011; Murray, 2014; Woods & Schneider, 2013). The final question of the survey provided participants with an opportunity to volunteer an email address to express an interest in participating in phase two of the research (Appendix 7, question 30). This contact information was embedded in the web-based survey, which was password protected. The contact details were removed during analysis of the data.

#### *3.2.4.5 Data Collection*

Phase one comprised of an online survey of NPs in Ireland and Australia. A survey is a common observational tool used in exploratory research to collect information about the characteristics of the group (Creswell & Plano Clark, 2011). The survey was designed to discover if NPs identified themselves as leaders and researchers in the nursing profession. It also aimed to identify leadership and research activities amongst NP in Ireland and Australia and subsequently compare leadership and research outcomes between the role in Ireland and Australia.

#### 3.2.4.5.1 *Instruments*

An online survey was developed, using cloud-based software, Qualtrics®. (Appendix 7). There were no NP surveys identified in the literature to measure both leadership and research. Therefore, a combination of two surveys instruments were used, with permission from the respective authors (Appendix 8 [Nurse Practitioner Study Nurse Practitioner Survey, (Gardner, Gardner, Middleton, & Della, 2009b)] and Appendix 9 [National Organization of Nurse Practitioner Faculties, (Buchholz, Bloch, Westrin, & Fogg, 2015)]).

The first instrument was the Australian Nurse Practitioner Study Nurse Practitioner Survey (Australian Nurse Practitioner Survey) Garner et al., 2009b). This is a five-section, 56-item survey instrument related to demographic and professional membership information, formal education, professional development activities, employment, and identification of work activities (Gardner et al., 2009b). This instrument was selected as it was developed to profile the NP role in Australia and provided comprehensive demographic data (Gardner, Gardner, Middleton, & Della, 2009a; Middleton et al., 2010). It was anticipated that using a modified version of this instrument would provide an opportunity to compare profiles of NPs in both Ireland and Australia. Modifying the first instrument included eliminating twenty-four questions relating to teaching delivery of educational preparation courses, reasons for not continuing further education, the title of their previous role, specific place of work, employment conditions, and clinical service patterns as they were not specifically related to the research. These questions were not relevant to the research question. The final instrument used in this research contained 32 items from the original tool.

The second instrument used in this research was the 2012 National Organization of Nurse Practitioner Faculties (NONPF) Research Special Interest Group (SIG) Survey, which was developed by NONPF in the United States of America (USA) (Buchholz, Bloch, et al., 2015). This is a 23-question survey instrument including demographic, academic, and research related questions. Questions from the National Organization of Nurse Practitioner Faculties (NONPF) Research Special Interest Group (SIG) Survey specifically related to research activities for NPs were included in the survey.

The role of leadership was not specifically addressed in either of the selected instruments. Participants were asked to score how much of their role was in leadership, on a scale of 0 (no leadership) to 10 (strong leadership). Elliott et al. (2013) defined a list of leadership activities and outcomes for NPs in Ireland (Elliott et al., 2014). In the absence of a tool, these activities were incorporated into the instrument developed for this research in the format of a five-point Likert scale (0 [never] - 4 [always]). The final survey instrument was a 30-item web-based survey tool, consisting of questions on demographics (9 questions), professional development (4 questions), nature of work (2 questions), leadership (2 questions) covering 26 measurements, and research related questions (12 questions). The final question provided an opportunity to provide a contact email to indicate that the participant would like to participate in phase two of this research (Appendix 7).

#### *3.2.4.5.2 Validity and Reliability of the survey instrument*

Modifying a survey instrument nullifies the original instrument reliability. Reliability refers to the consistency that a measure produces the same result each time when the underlying construct does not change (Engberg & Berben, 2012). The Australian Nurse Practitioner Survey (Gardner et al., 2009b) was piloted by the original authors before its final development stage to ensure the questions fulfilled the purpose of the survey. The Australian Nurse Practitioner Survey (Gardner et al., 2009b) has subsequently been administered at two identified time points with the results demonstrating consistency in measurements (Gardner et al., 2009a; Gardner et al., 2009b; Middleton et al., 2011; Middleton et al., 2010). Demographic questions not related to the research questions were removed from The Australian Nurse Practitioner Survey (Gardner et al., 2009b). Since only demographic data were changed, this would not affect the reliability of the survey instrument.

The NONFP survey tool has only been distributed once but analysis included testing relationships among variables using correlation matrices and contingency tables (Buchholz et al., 2015). No data were available as the developers of the tool have not declared any inter-rater or test-retest reliability studies to demonstrate the reliability of the instrument. It was reported that the type of questions asked in the survey

demonstrated a significant capacity for research undertaken by respondents but identified a limitation of the survey tool to distinguish between research projects for academic awards and projects using multiple research methods (Buchholz et al., 2015). The NONFP survey has not been repeated and further use of this survey tool has not been identified in the literature. Demographic questions that were duplicated in the Australian Nurse Practitioner Survey (Gardner et al., 2009b) were removed in the current study instrument. Beyond the demographic questions, none of the questions were changed and fully aligned with the Australian Nurse Practitioner Survey (Gardner et al., 2009b) and the NONFP survey (Buchholz et al., 2015). Therefore, the reliability of the study instrument was not affected.

Combining two validated instruments does not automatically imply validity. Validity is the degree to which the instrument measures the intended topic (Engberg & Berben, 2012). The Australian Nurse Practitioner Survey (Gardner et al., 2009b) was reviewed by an independent expert panel consisting of NPs, nurse researchers, senior nurses, and analysts from the Australian Institute of Health and Welfare for content validity (Middleton et al., 2010). The tool was then revised and piloted with NP students and feedback from the expert panel (Gardner et al., 2009a; Middleton et al., 2010). The second instrument, the NONPF tool (Buchholz et al 2015), was developed through consultation with a research SIG, was subsequently reviewed for face validity by seven members of the organisation across the United States of America (USA) (Buchholz et al., 2015). Members of the organisation are NPs and also academic faculty in various universities in the USA. No questions were altered from the original survey tool for the current study instrument.

One question in the final tool, question 15 (Appendix 7) was derived from the SCAPE study (Elliott et al., 2013). This question on leadership activities evolved from a mixed-method case study review of the role. Therefore, its reliability has not been tested previously. In the current study analysis using Cronbach's alpha ( $\alpha \geq 0.90$ ) determined that removing one of the leadership activities items from the question did not affect the reliability of the question.

The final survey was examined for content and face validity with two academics involved in NP education and two NPs, one in Ireland and one in Australia. One question was added to the survey instrument following review. Question 16 was generated, which asked nurses to consider how much of their role was in leadership. Nurse Practitioners have not previously been asked to consider their role as a leader, therefore a broader response scale (10-point scale) was chosen to increase the diversity of responses. A post hoc analysis of the final survey instrument concluded that the leadership activity questions did not compromise the construct validity of the questions from the Australian Nurse Practitioner Survey (Gardner et al., 2009b). Statistical analysis could not determine overall construct validity of the current study as there were too many variables with zero variances.

#### **3.2.4.6**      *Data Analysis*

Quantitative data analysis was conducted using the software package IBM SPSS Statistics Version 20. Data was transferred directly from Qualtrics to SPSS and checked for irregularity and outliers. Missing data was cleaned for analysis (Sandelowski, 2000a). Descriptive statistics were used to describe, compare, and summarise information about the sample groups (Pilot, 2010). Inferential statistics, including chi-square, were used to test the hypotheses related to the relationship between categorical variables (Hess & Hess, 2017). Eta squared was used to determine effect size (Fritz, Morris, & Richler, 2012).

#### **3.2.5 Phase Two**

Phase two of the research involved interviews with NP participants who had consented to participate. Qualitative research brings meaningful contextualisation and clarity to research questions and concepts (Azungah, 2018). Phase two aimed to explore issues gleaned from the quantitative phase of data collection and provide a deeper understanding of NP perceptions of leadership and research. This provided the researchers with an opportunity to glean insights through in-depth descriptions of the phenomena that were difficult to elicit from the quantitative data (Azungah, 2018).

### 3.2.5.1 *Research questions*

The second phase provided the opportunity to seek further clarification of outcomes provided in the survey of leadership and research activities of NPs across Ireland and Australia. The purpose of the interviews was to not only clarify the results from the quantitative phase of the research but, also to explore NP perceptions of leadership and research activities in Ireland and Australia (Peters & Halcomb, 2015):

- How do NPs implement leadership and research in nursing?
- Is there a difference in how leadership and research are demonstrated between NP in Ireland and Australia?

### 3.2.5.2 *Participants*

In a sequential explanatory design, a researcher usually connects the two phases by selecting participants for the qualitative follow-up based on quantitative results from the first phase (Ivankova et al., 2006). The estimated sample size for phase two was determined using a pragmatic model developed by Malterud, Siersma, and Guassora (2016) who determined that there are five elements to determine appropriate sample size for qualitative research (Table 5).

*Table 5: Application of Malterud et al. (2016) to sample selection in Phase Two.*

<b>Elements</b>	<b>Application</b>
Study Aim	To build on information gathered from Phase one of the research
Sample Specificity	Specific aspects of variation included: <ol style="list-style-type: none"><li>1. NPs from both Ireland and Australia and</li><li>2. Inclusive of both research active and non-research-active NPs.</li></ol> Equal numbers of participants, in chronological order, including specific variations, were selected.
Use of Established Theory	The purpose of interviews was to synthesise and explore the theory that NPs across Ireland and Australia are leaders and are active in research, from the participants' perspective.



Quality of Dialogue	Strong, focused dialogue using semi-structured interviews. An interview schedule was developed from phase one outcomes. This is described in detail during data collection.
Analysis Strategy	An inductive approach was applied where participant experiences drove data analysis. Data Analysis adhered to Braun and Clarke (2006) approach to thematic analysis. This is described in detail in data analysis.

Malterud et al. (2016) and Creswell and Plano Clark (2011) propose that a large sample was not required for Phase Two of this research. Therefore, a sample size of six to ten participants, with equal numbers from Ireland and Australia was estimated (Creswell & Plano Clark, 2011; Sandelowski, 1995). The sample size, however, was influenced by determining when the researcher was confident that sufficient description and explanation were achieved to sufficiently answer the research questions related to leadership and research (Blaikie, 2018). This was determined upon reaching data saturation in the themes that emerged during data analysis (Boddy, 2016; Guest, Bunce, & Johnson, 2006).

As more participants indicated an interest in undertaking the interviews than was feasible, a systematic approach to sampling was used as recommended by Creswell and Plano Clark (2011), whereby the results from phase one of the research were used to direct the follow-up procedures to select participants most suitable to elaborate on the phenomena. In this research the characteristics were specific, and a strategy of purposeful sampling was applied following indication of willingness to participate in phase two (Creswell & Plano Clark, 2011; van Rijnsoever, 2017). Specific aspects of variation included:

1. NPs from both Ireland and Australia and
2. Inclusive of both research-active and non-research active NPs
3. Inclusive of NPs irrespective of leadership score.

Subsequently, equal numbers of survey participants, in chronological order, that indicated they were research-active and not research-active, from Ireland and Australia were approached for participation in interviews.

### 3.2.5.3 *Ethical Considerations*

The three ethical principles for informed consent previously discussed for Phase One of the research were upheld for the second phase (Judkins-Cohn et al., 2014). Participants that choose to participate in an interview were identified from Phase One, where they volunteered a contact email address indicating a willingness to participate during Phase Two of the research. Selection criteria were applied to the identified sample group and suitable participants were contacted and provided with an explanatory statement and consent to participate via email (Appendix 10 & 11). Participants were then asked to provide options for a suitable time for the interview. Participants were requested to return the consent form via email prior to the interview.

The principles of beneficence are to be of benefit or to do no harm, and non-maleficence, risks related to participation, were considered during the research (Fouka & Mantzourou, 2011). Harm may constitute psychological, emotional, or social discomfort and therefore a high level of sensitivity from the researcher was required particularly during interviews where there was a potential for participants to become upset while discussing emotive experiences (Fouka & Mantzourou, 2011; Mahat-Shamir, Neimeyer, & Pitcho-Prelorentzos, 2019). It was not expected that participants would feel any distress during the interview as the topic was neither controversial nor an emotive one. In the event that a participant expressed feeling distressed or negatively affected during the interview, the researcher was prepared to provide participants with contact numbers for counselling services, such as beyond blue (Australia) or refer them to their workplace counselling services. This was explained clearly to participants at the beginning of the interview and information was also available in the participant information letter and informed consent to participate (Appendix 10 & 11). Participants were permitted to withdraw their consent to participate prior to publication of the research (Fouka & Mantzourou, 2011; Judkins-Cohn et al., 2014).

#### 3.2.5.4 *Respect for Anonymity and Confidentiality*

Confidentiality was provided through the use of an identifying number only known to the researcher during reporting, ensuring participants could not be identified or linked with responses (Fouka & Mantzourou, 2011). Recordings of interviews in stage two of the research were downloaded onto a password-protected computer. The identified place of employment was replaced in the transcripts with 'the hospital'. Participants were provided with an opportunity to amend the transcripts to ensure anonymity was respected, this process is described as member checking (Thomas & Magilvy, 2011). The researcher stored the consent forms, which included participant names, in a locked file in the locked researcher's office to be destroyed within five years of completion of the research in keeping with data protection regulation for both Ireland and Australia (Fouka & Mantzourou, 2011).

#### 3.2.5.5 *Data Collection*

Interpretative description was used to guide data collection and analysis for phase two of the research (Sandelowski, 2000b; Thorne, Kirkham, & MacDonald-Emes, 1997). Qualitative descriptive studies offer an accurate account of events that are interpreted as such by both the participant and the researcher (Sandelowski, 2000b). Hence collecting information from NPs was used to provide a description of the role and enable the perspective of NPs to be obtained.

##### 3.2.5.5.1 *Interviews*

The second phase of this research was related to collecting qualitative data via interviews. In international research across two countries conducting face-to-face interviews was impractical for a single researcher. Oates (2015) contends that the internet affords qualitative researchers an increased geographical reach for their research, such as accessing NPs across two countries. Therefore, the researcher determined that utilising an alternative interview mechanism such as telephone or Skype was more attainable than face-to-face (Ward, Gott, & Hoare, 2015). Rolfe (2010) pronounced that it was possible to achieve an easy rapport with participants during telephone interviews. However, Hamilton (2014) suggests that using Skype is a superior choice of interview medium over the telephone as the researcher can add a visual friendliness at the beginning of the interview. In contrast, telephone

interviewing provides the participant with a certain level of anonymity not available with face-to-face interviewing, reducing participant anxiety (Ward et al., 2015). Indeed Hanna (2012) and Oates (2015) argue that despite technical hitches experience with Skype it is like the telephone interview medium, a reasonable, affordable data collection tool. With this in mind, the researcher offered participants a choice of interview medium of either phone or skype interviews. All interviews were recorded using a digital recorder (Whitehead, 2011)

Semi-structured interviews were used for this research as they were identified as a method of understanding perceptions of a given phenomenon (Mahat-Shamir et al., 2019; Shields & Watson, 2013). The use of an interview schedule increased the objectivity and trustworthiness of the research, by ensuring key data was captured while still permitting participant flexibility for personal elaborations (Barrett & Twycross, 2018; Kallio, Pietilä, Johnson, & Kangasniemi, 2016). An interview schedule based on the results from phase one guided the interview (Chapter 5, Table 12), but the researcher probed further as the participant responded to the open-ended questions, used to encourage participants to tell their story (Barrett & Twycross, 2018; Peters & Halcomb, 2015). Participant responses were probed inductively on key responses by using broadening or process questions (Guest et al., 2006), for example, “can you give me an example of how perhaps you have fulfilled bringing about change in healthcare?” Interviewing, itself is a skill, which incorporates establishing a good rapport between the researcher and participant during the first few minutes of the interview (Hamilton, 2014). In this research the researcher is also an NP, therefore had the ability to establish a good rapport with participants, due to having similar experiences.

#### 3.2.5.6 *Researcher Position*

The researcher has an invested personal interest in this topic as an NP, registered in Ireland, and endorsed in Australia. It is important to consider the position of the researcher to address issues pertaining to reflexivity in qualitative research (Berger, 2015), the researcher acknowledges how their perspectives may have influenced the research process and its interpretation (Wong, 2015). The process of reflexivity requires continuous internal dialogue and critical self-evaluation of the researcher’s

characteristics during the research process (Berger, 2015). Having clinical and academic experience as an NP in both countries facilitated the opportunity for an examination of leadership and research issues within the NP role. Being an NP placed the researcher in a position to extract unintended moments of trust where a unique understanding of the phenomenon enabled an openness for participants' [sic] by sharing similar experiences as NPs (Råheim et al., 2016; Woo, O'Boyle, & Spector, 2017). The goal of reflexivity is to monitor the effects of the researcher's position and enhance the accuracy of the research by making conscious and deliberate efforts to disclose the researcher's positions and maintain strong personal awareness as part of the world being studied (Berger, 2015). The researcher has disclosed her position throughout the research process, through open disclosure with the professional associations, providing a written statement to participants in the information letter about the research and further disclosure at the beginning of interviews. The researcher has been engaged in reflexivity with research supervisors throughout the process.

#### 3.2.5.7 *Data analysis*

In this research, the aim was to explore realistic and pragmatic descriptions of NPs opinions of leadership and research in the role. To achieve this successfully the researcher derived inferences from the data collected and applied these to the general population (Ormerod, 2010; Woo et al., 2017). This required the researcher to work exclusively from the participant experiences to drive data analysis, referred to as an inductive approach (Azungah, 2018). An inductive research methodology is regarded as 'bottom-up' or data-driven research, such as thematic analysis (Woo et al., 2017). Induction involves searching for patterns in data, such as relationships among variables that can be generalised (Woo et al., 2017). Woo et al. (2017) and colleagues present best-practice recommendations for inductive research, which were applied to this project (Table 6).

*Table 6: Application of Best Practice Recommendations for Inductive Research (Woo et al., 2017)*

Recommendation	Application
State a clear purpose	The research questions were specified in this research  A clear framework was used, such as the interview schedule (Appendix 11)
Exploiting data	This research was data-driven and shared with a supervisor to ensure openness (Braun & Clarke, 2006)
Creative data collection	This was achieved using open-ended questions; Intellectual flexibility for data analysis, where the researchers maintained an open attitude to search the data and patterns within the data
Active and open data sharing to facilitate replication and transparent reporting while citing comparative work and offering recommendations for fellow researchers	This was achieved by submitting the data for peer review (Chapter five).

Before data analysis commenced audio recordings of the interviews were transcribed. Transcribing is a process of transforming speech into text and enabled the researcher to revisit conversations using multiple analytical angles to identify multiple meanings (Skukauskaite, 2014). The initial four interviews were transcribed verbatim by a professional transcriber. The researcher transcribed the remainder of the interview recordings. Transcribing starts the process of analysis through which the researcher begins to construct theory and logic to data through a heightened consciousness of content and context (Evers, 2011; Skukauskaite, 2014). The transcription format used was pragmatic transcription as described by (Evers, 2011). Pragmatic transcription produces verbatim text but excludes particulars not required for the analysis at hand, for example, duration of silences/hesitation and every instance of stuttering (Evers,

2011). This transcription format was chosen as international interview recordings inevitably incur time delays resulting in silent periods. Transcriptions were verified and anonymised by the researcher by listening to the audio recordings whilst reading and editing the transcripts, for spelling corrections and removing utterances that would detract the flow of the content (Clark, Birkhead, Fernandez, & Egger, 2017). It was essential to maintain consistent standards and quality when transforming an interview into a transcript to establish rigor in the process (Clark et al., 2017). Member checking was used for the assessment of accuracy and verification of transcripts (Thomas & Magilvy, 2011). Minor amendments and corrections were made by four participants to the transcripts. This verification process of transcriptions participants also ensured credibility (Thomas & Magilvy, 2011). NVIVO version 11.3 (for Mac) software was used for data management and coding as recommended by Whitehead (2011).

Inductive thematic analysis was performed using Braun and Clarke (2006) phases of thematic analysis. Thematic analysis is a method of identifying, analysing and reporting themes within data (Braun & Clarke, 2006; Thomas, 2006). Thematic analysis is not embedded in any particular theoretical framework, therefore, can be flexibly applied to several theoretical frameworks, or presented descriptively (Braun & Clarke, 2006; Thomas, 2006; Whitehead, 2011). Through acknowledging techniques individuals use to create meaning of experiences and the influence of broader social context on their meanings it retains focus on the material collected and limits of reality (Braun & Clarke, 2006).

The thematic analysis process includes six phases, and the application of these phases are outlined in chapter five, table 13. Reading the transcripts while listening to the interview recordings enhanced transcription accuracy and familiarised the researcher with the information (Vaismoradi, Turunen, & Bondas, 2013; Whitehead, Trip, Hale, & Conder, 2016). Reading and listening to data collected ensured the researcher became immersed in the data and began the phase of searching for and analysing patterns in the data related to the research questions, this is known as coding (Whitehead, 2011). Coding helped to achieve all three aims of thematic analysis, examining commonalities, examining differences, and examining relationships (Harding, 2015). The process was inductive and driven by the data through analysing transcripts for common phrases (Whitehead, 2011; Whitehead et

al., 2016). The researcher began to systematically manually generate initial codes from the data, which identified features of the data, giving full and equal attention to each data item (Braun & Clarke, 2006). After generating a large number of codes across the data set, the researcher then re-focused to analyse the broader set of themes by sorting different codes into potential themes (Braun & Clarke, 2006). The researcher was able to visualise the themes using hierarchy charts and mind maps in NVIVO software. This process supported the development of the main themes and sub-themes in the data. Phase four of Braun & Clarke (2006) relates to reviewing and refining themes. Two primary themes were identified consistent with the overarching focus of the interview questions, however additional major themes were present. All identified themes were explored and searched, using hierarchy charts and exploring the cores, sources, and the dataset as a whole. Thematic maps were produced of themes, codes, and the relationship. These themes were reviewed, discussed, and agreed with research supervisors. The final phased described by Braun and Clarke (2006) was defining and naming themes. During this phase of thematic analysis each emerging theme was refined and defined by consistent review of codes and individual datasets. Additional review of each dataset, comparing themes across completed the process.

#### 3.2.5.8 *Trustworthiness*

Establishing a clear trail of data analysis increased the trustworthiness of the study (Nowell, Norris, White, & Moules, 2017; Welch & Jirojwong, 2014). Nowell et al. (2017) outlined criteria on how to conduct a trustworthy thematic analysis. It is determined when the participants agree that an accurate interpretation of the experience is captured by the researcher (Thomas & Magilvy, 2011). This was achieved by member checking the transcripts of the recorded interviews and ensure the content has been accurately documented (Thomas & Magilvy, 2011). Transferability refers to the generalisability of the inquiry (Nowell et al., 2017). Without knowledge of the sites that may wish to transfer the findings, the researcher is required to provide rich descriptions from which transferability can be judged by others (Lincoln & Guba, 1985; Nowell et al., 2017). Confirmability relates to establishing that the researcher's interpretations and findings are derived from the data (Nowell et al., 2017). Demonstrating confirmability is dependent on ensuring credibility, transferability, and dependability



are achieved. Maintaining ongoing documentation of the decision trail concerning data collection and analysis demonstrates consistency and credibility (Welch & Jirojwong, 2014; Whitehead, 2011). Reflexivity is identified as a criterion to demonstrate trustworthiness and has previously been addressed related to this research. It required a self-critical attitude from the researcher about their pre-conceptions and required following rather than leading the direction of interviews (Nowell et al., 2017; Thomas & Magilvy, 2011).

### **3.2.6 Integration of data**

Mixed methods data analysis includes applying analytical techniques to both quantitative and qualitative data, and subsequently mixing the two forms of data (Creswell & Plano Clark, 2011). In mixed-methods sequential explanatory design priority is given to the quantitative phase of data collection unless the purpose of the study indicates otherwise (Ivankova et al., 2006). The purpose of this study was to explore the role of NPs in leadership and research and to discover if they are considered important aspects of the NP role in Ireland and Australia.

The quantitative phase reported NPs role in leadership and research activities in Ireland and Australia and the second, qualitative phase provided an opportunity to explain and explore the leadership and research activities of NPs. Both phases of the research were connected when interview questions for the qualitative phase were based on the results of quantitative data in phase one. A quantitative and qualitative design was mixed at the design stage of the research by identifying quantitative and qualitative questions and further integration occurred during the interpretation of the outcomes of the entire research project and combining outcomes (Ivankova et al., 2006). A mixed-methods approach provided the researcher with the opportunity to explore the complexity of NP leadership and research from the perspective of NPs through pragmatically researching a large sample across two countries and then exploring perceptions using a smaller sample group, and then compare the findings between Ireland and Australia.

### **3.3 Summary of Chapter Three**

This chapter has described mixed methods research and justified the use of this approach for this research. The research methods, participants, data analysis, and ethical considerations related to this project have been discussed. Providing a detailed research process demonstrates the organisation of the research and an understanding of how the researcher proceeded to conducting the research.

### **3.4 Chapter to follow**

The following chapter provides the results of the first phase of the research. This involved a survey to establish NPs leadership and research activities across Ireland and Australia.

## **Chapter Four: Phase One Results**

This chapter is not included in this version of the thesis.

## Chapter Five: Phase Two Findings

### 5.1 Introduction to Chapter

The previous chapter reported the findings from phase one survey. This chapter reports on the results of the second phase of the research. Interviews were conducted to further explore the NPs perception of leadership in their role and provide examples of what they perceived to be leadership activities. The interviews also explored the research role of the NP and prompted participants to provide examples of research activities they had engaged with. This chapter presents the results from phase two of the research.

Thematic analysis of interviews identified four main themes:

- a) Theme one: Innovative leadership
- b) Theme two: Optimism
- c) Theme three: Research
- d) Theme four: Resilience

Findings from phase two were published in the *Journal of Clinical Nursing* (Ryder, Jacob, & Hendricks, 2019).

Published as:

Ryder, M., Jacob, E., & Hendricks, J. (2019). An inductive qualitative approach to explore Nurse Practitioners views on leadership and research: An international perspective. *Journal of Clinical Nursing*, 28(13-14), 2644-2658 (Appendix 14).

### 2.13 Title

An inductive qualitative approach to explore Nurse Practitioners' views on leadership and research; An international perspective

### 5.3 Abstract

#### 5.3.1 Aims & Objectives

This paper explores the ways in which Irish and Australian Nurse Practitioners implement leadership and research in their roles; and, whether there is a difference in

how leadership and research are demonstrated between Nurse Practitioners in Ireland and Australia.

### **5.3.2 Background**

The original concept of the Nurse Practitioner role was to expand nursing practice in order to provide high quality, accessible healthcare to patients. This placed Nurse Practitioners at the crux of changes to healthcare delivery. Implementing these changes requires leadership. Research demonstrates the effects of these changes to healthcare delivery and contributes to healthcare knowledge from the nursing profession.

### **5.3.3 Design**

In the qualitative phase of a mixed methods study, an interpretative descriptive approach was used to draw on participant experiences.

### **5.3.4 Methods**

Thirty-eight respondents agreed to be interviewed following an online survey. Ten interviews were recorded and transcribed verbatim. Data was analysed using Braun and Clarke thematic analysis method. The research complied with the consolidated criteria for reporting qualitative research, COREQ.

### **5.3.5 Results**

Ten participants, five Nurse Practitioners from Ireland and five from Australia were interviewed. Four themes emerged from the analysis: (1) Innovative leadership, which included the categories of leadership activities, the work of NPs and trailblazers; (2) Optimism, incorporating pride in achievements, the future outlook for the role and continued innovation of NPs over time; (3) Research, which included the NP research role, research challenges, support and research leadership; and (4) Resilience, which included overcoming resistance, isolation and seeking positive support systems.

### **5.3.6 Conclusion**

Nurse Practitioners are clinical leaders focused on improving healthcare delivery for patient populations. There is a lack of understanding of the Nurse Practitioner role. Nurse Practitioners lack confidence to be independently research active. Research by Nurse Practitioners requires support from nurses in academia. There is no difference in the role in Ireland and Australia.

### **5.3.7 Relevance to clinical practice**

Nurse Practitioners are engaged in healthcare transformation. Nurse Practitioners require support from research experts in academia to make a significant contribution to nursing knowledge in healthcare delivery.

### **5.3.8 Keywords**

Nurse Practitioners, Advanced Nurse Practitioners, Leadership, Research, Nursing, Nurse Roles.

## **5.5 Introduction**

There is a requirement and expectation by regulators that Nurse Practitioners (NPs) are clinical leaders and research active (Begley, Elliott, Lalor, & Higgins, 2015; Elliott, Begley, Sheaf, & Higgins, 2016; Lamb, Martin-Misener, Bryant-Lukosius, & Latimer, 2018). Nurse Practitioners are at the crux of changes to healthcare delivery, by leading and implementing changes in challenging demographic and economic climates (Elliott et al., 2016; Lamb et al., 2018; Poghosyan, 2018). It is important for NPs, as clinical leaders, to research healthcare delivery, not only in order to demonstrate effectiveness in their role, but to contribute to healthcare knowledge and inspire confidence in the nursing profession (Carrick-Sen et al., 2015; Pulcini, Jelic, Gul, & Loke, 2010; Stanik-Hutt et al., 2013).

The NP role in Ireland and Australia shares many characteristics. In both countries the NP role is regulated nationally by Nursing and Midwifery Boards with defined regulatory frameworks which include education qualifications at master's degree level and defined standards of practice (Nursing and Midwifery Board of Australia [NMBA], 2016; Nursing and Midwifery Board of Ireland [NMBI], 2017). Clinical leadership and research engagement are embedded in the standards of practice for NPs in Ireland and Australia (NMBA, 2014; NMBI, 2017). Regulation of the NP role has previously been compared across many countries (Carney, 2016; Delamaire & Lafortune, 2010; Duffield, Gardner, Chang, & Catling-Paull, 2009; Pulcini et al., 2010). There is a need to validate the effectiveness of NP services and provide evidence of the need for the role, but to also explore inter-country transferability of NP credentials and research

(Pulcini et al., 2010). This paper explores NP perceptions of leadership and research across Ireland and Australia.

## **5.5 Background**

The NP role was first introduced in the 1960s in the USA to meet the health needs of children in the community (Ford, 2015). This role now is commonplace across the Western world. At the core of the NP role is the provision of high quality, accessible healthcare to improve health and the prevention of disease, through direct relationships with patients. This core is underpinned by the right to autonomous practice (Pulcini et al., 2010; Weiland, 2015).

Ireland and Australia have successfully established legislation and delineated the NP role from other advanced practice roles (Begley et al., 2013; Gardner, Duffield, Doubrovsky, & Adams, 2016). In both Ireland and Australia, the role is recognised as the definitive clinical nursing role, incorporating leadership and research as its core components (NMBA, 2016; NMBI, 2017).

### **5.5.1 Leadership in the Nurse Practitioner role**

The literature related to NP leadership role has increased in recent years, primarily from Irish and Canadian sources (Elliott, 2017; Elliott, Begley, Kleinpell, & Higgins, 2014; Elliott et al., 2016; Elliott et al., 2013; Lamb et al., 2018). This literature has identified two areas of leadership for NPs: clinical/patient focused and professional/organisational focused (Elliott et al., 2014; Lamb et al., 2018). Essentially NP leadership has a dual function: patient focused leadership which includes managing patient care, patient education, advocating for patients and initiating meaningful patient communications (Lamb et al., 2018); and, leadership that is organisationally focused, including mentoring and coaching, improving quality of patient care, enhancing professional nursing practice, committee leadership and facilitating collaboration in team work (Lamb et al., 2018). However, Elliott (2017) proposes that organisational level factors have a major influence on NPs leadership capacity within an organisation as opposed to a department. One organisational

support structure identified to advance NP leadership capacity is by creating formal links with universities to increase NP research activities (Elliott, 2017).

Although research is part of the regulatory requirement for NPs in both Ireland and Australia, little research is available on this aspect of the role. The leadership role has been researched in Ireland, but no research has been found pertaining to leadership in Australian NPs (Elliott et al., 2014; Elliott et al., 2016; Elliott et al., 2013). There is no research to date comparing NPs leadership activities across two countries, or indeed ascertaining if NPs identify themselves as leaders of the nursing profession. The NP role represents the highest grade of clinical leadership in nursing, therefore enabling both aspects of NP leadership will enable fulfilment of the role to its true potential (Delamaire & Lafortune, 2010; Elliott, 2017). For NPs researching the quality and effectiveness of the role is important, as it is essential for these clinical leaders to contribute to healthcare knowledge (Carrick-Sen et al., 2015; Stanik-Hutt et al., 2013).

### **5.5.2 Research in the Nurse Practitioner role**

Nurse Practitioner standards of practice in Ireland and Australia related to research, specify NPs provide a contribution to research, yet they are expected to be capable in research applied to healthcare (NMBA, 2014; NMBI, 2017). Nurse practitioners internationally report that less than 4% of their work time is research related, intimating that NP research activity is lacking (Chattopadhyay, Zangaro, & White, 2015; Gardner et al., 2010; Martin-Misener et al., 2015; McGee, 1996; Middleton et al., 2016). To date a number of NPs have reported that the safety and quality of care provided by NPs is comparable to physicians' care (Blanchfield & McGurk, 2012; Griffin & McDevitt, 2016; M. Kelly, Crotty, Perera, & Dowling, 2010; M. B. Kelly, Dowling, Burke, & Meskell, 2013; Lee et al., 2014; Lutze, Ross, Chu, Green, & Dinh, 2014; Newhouse et al., 2011; Stanik-Hutt et al., 2013; Thompson & Meskell, 2012). However, a broader variety of effectiveness outcomes should be included in NP research (Stanik-Hutt et al., 2013). There is no literature to date discussing NPs perception of the research component of their role.



## **5.6 Methods**

### **5.6.1 Aim**

To explore NP perceptions of leadership and research activities in Ireland and Australia?

### **5.6.2 Research Question**

- How do NPs implement leadership and research in nursing?
- Is there a difference in how leadership and research are demonstrated between NPs in Ireland and Australia?

For the purpose of this study, research was defined as the discovery of knowledge that is or can be applied to real world conditions.

### **5.6.3 Research Design**

As part of a larger mixed methods explanatory sequential design research project, this qualitative phase uses inductive methodology to bring meaning to the phenomena through the subjective views of participants (Creswell & Plano Clark, 2011). This research complied with the consolidated criteria for reporting qualitative research (COREQ) (Tong, Sainsbury, & Craig, 2007), (See Appendix 15).

### **5.6.4 Data Collection**

The research involved collection of qualitative data via semi-structured interviews, providing more detail to data collected during a previous survey (Creswell & Plano Clark, 2011). The purpose of the survey was to establish NP's leadership and research activities across Ireland and Australia. The purpose of the interviews was to gain further explanation on research and leadership activities that NPs undertook (Creswell & Plano Clark, 2011).

### **5.6.5 Recruitment and Participants**

Participants who indicated willingness to participate in interviews were recruited from an expression of interest in a previous survey. Creswell and Plano Clark (2011) recommend a systematic approach to sampling for the qualitative phase of this

research design, by using the results from the quantitative phase of the research to direct the follow-up procedures to select participants best able to elaborate on the phenomena. Consequently, equal numbers of survey participants that indicated they were research active and not research active from Ireland and Australia were approached for participation. A participant information sheet and consent form were emailed to participants.

Whilst data saturation was a useful determinant of sample size at a conceptual level, a pre-meditated pragmatic model was also used to guide sampling (Boddy, 2016; Malterud, Siersma, & Guassora, 2016). The pragmatic model determined that six to ten participants would be required to synthesise and build on knowledge learned from phase one of the research (Malterud et al., 2016). Subsequently, sequential contact of participants continued until it was determined that data saturation had been reached for both groups (Boddy, 2016; Guest, Bunce, & Johnson, 2006; Malterud et al., 2016).

Thirty-eight participants indicated interest in participating in interviews, eight were eliminated as an email address was not provided. Five participants did not reply to the first email. The sample size itself was dependent upon reaching data saturation in the themes that emerged during data analysis (Boddy, 2016; Guest et al., 2006). Ten participants were interviewed for the research.

#### **5.6.6 Ethics**

Ethical approval was granted by the Human Research Ethics Committee at the University. All participants consented to participate in the research.

#### **5.6.7 Data Collection**

The option of telephone or skype interview was made available to all participants with a selection of times. Telephone and skype interviews were offered as a practical solution to interviewing participants due to geographical location of participants and researcher (Iacono, Symonds, & Brown, 2016; Oltmann, 2016). It is reportedly easier to establish rapport with participants during telephone interview whilst relieving the participant of any anxiety related with face to face interviews and skype is acknowledged as an appropriate alternative to face-to-face interviews (Iacono et al.,

2016; Ward, Gott, & Hoare, 2015). Nine of the ten participants selected the telephone interview option and one participant selected a skype interview.

The interview guide consisted of 11 open ended questions (Table 12). The questions were generated following data analysis of the previous survey responses. All participants were asked the same questions and were probed inductively on key responses, by using broadening or process questions (Guest et al., 2006), for example, "*Can you give me an example of how perhaps you have fulfilled bring about change in healthcare?*".

Table 12: Interview Schedule

How do NPs implement leadership and research in nursing? Is there a difference in how leadership and research are demonstrated between NP in Ireland and Australia?	
Item	Topic
1	<p><b>Examine NPs perceptions of leadership within their role.</b></p> <ol style="list-style-type: none"> <li>1. Explain your understanding of leadership in the NP role?</li> <li>2. Describe an incident where you were able to or should have been demonstrate leadership in your role as a NP.</li> <li>3. One of the roles of NP is to bring about change s in healthcare – Can you give me an example of how you have fulfilled this?</li> <li>4. Can you give me an example (s) of the opportunities and challenges you have encountered when fulfilling the role of change agent in healthcare?</li> </ol>
2	<p><b>Examine NPs perceptions of research within the NP role</b></p> <ol style="list-style-type: none"> <li>1. Explain your understanding of undertaking research in the NP role?</li> <li>2. Describe an incident where you were able to or should have been demonstrate doing research in your role as a NP.</li> <li>3. Research is a part of the NP’s role. What is your understanding of the type of research NP’s should undertake?</li> <li>4. Have you been the principal investigator in any research? If so what type?</li> <li>5. Can you describe opportunities and barriers you have encountered to doing research; and; how can NPs maximise or overcome these?</li> <li>6. Do you think NPs have a role in sharing the findings of research they are doing? If so, how do you feel this should occur?</li> <li>7. Describe your understanding of NP’s research leadership</li> </ol>

The duration of interviews varied between 26-48 minutes. All interviews were recorded and transcribed verbatim. A professional transcriber transcribed the initial four interviews. Transcriptions were verified and anonymised by the researcher by listening to the audio recordings while reading and editing the transcripts, for spelling

corrections and removing utterances that would detract the flow of content (Clark, Birkhead, Fernandez, & Egger, 2017). The researcher transcribed the remainder of the interview recordings as the transcriber was unavailable. Maintaining consistent standards and quality whilst transforming an interview into a transcript establishes rigor in the research process (Clark et al., 2017). Completed transcripts were returned to individual participants by email for accuracy and verification. Participants were also requested to verify that their identity was protected in the transcripts. Minor amendments and corrections were made to four transcripts following review by participants. NVIVO version 11.3 (for Mac) software was used for data management and coding.

### **5.6.8 Data Analysis**

Data was analysed using Braun and Clarke (2006) approach and outlined in Table 13. Initial codes were generated using a systematic approach after completion of six interviews, three from Ireland and three from Australia (Braun & Clarke, 2006). Data saturation was not reached at six interview participants. Four additional interviews were coded in the same manner, using systematic approach, identifying aspects of the data using different colour highlighter for codes, or nodes as they are referred to in NVIVO (Braun & Clarke, 2006). Guest et al. (2006) recommend that the number of participants individually expressing a recurrent theme is a preferable indicator to the significance of the theme than the number of times the theme is expressed and coded. A long list of different codes was collated. The second round of analysis refocused the researcher on the broader level of themes, sorting codes into themes and relationships between codes and themes, creating a visual hierarchy of potential themes and sub-themes (Braun & Clarke, 2006). The potential themes were refined, separated and or reorganised as required to ensure extracts were appropriate to potential themes. The dataset was checked for potential missing themes. Potential themes were refined and defined to explain the true meaning of the theme within the overarching research questions (Braun & Clarke, 2006). It was determined that data saturation had been reached when no additional codes emerged, or themes generated after an additional four interviews were analysed (Boddy, 2016; Guest et al., 2006; van Rijnsoever, 2017).

Table 13: Application of Braun and Clarke (2006) approach to thematic analysis

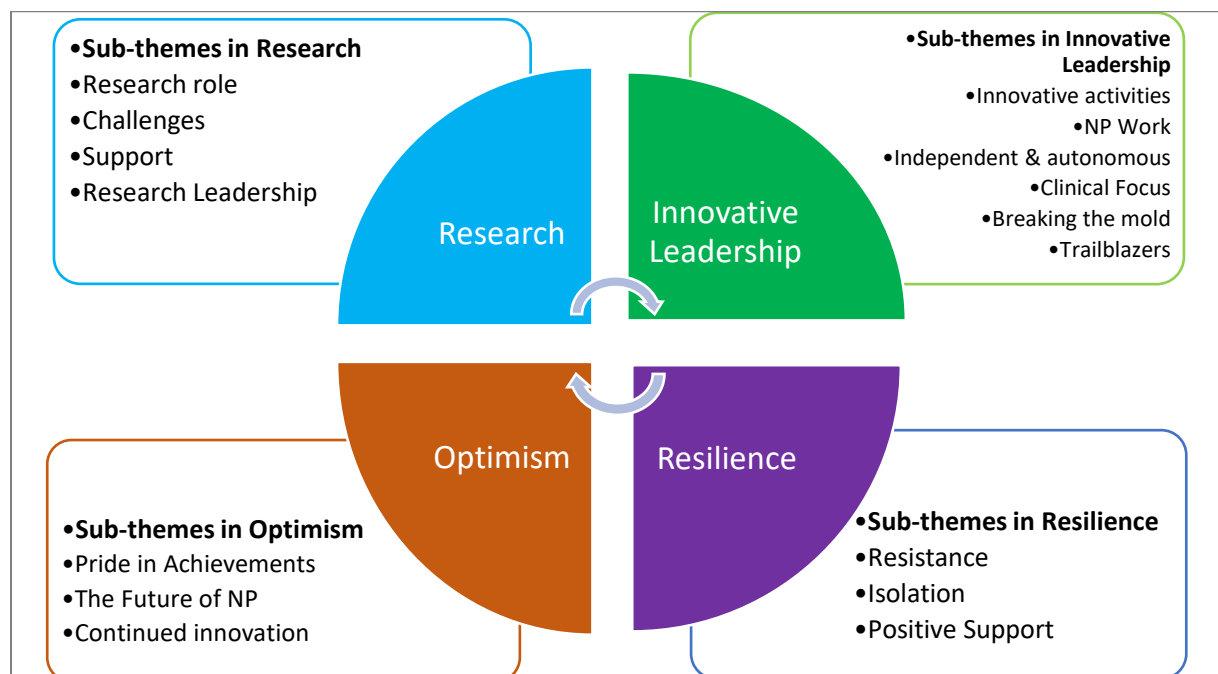
Phase	Application of steps
Familiarisation with data	The researcher conducted the interviews but became re-familiar with the data listening to the recordings and jotted down initial thoughts and ideas while transcribing, editing and verifying transcripts. Verified transcripts were shared with research supervisors.
Generating initial codes	The researcher exported the transcripts to NVIVO for Mac (11.4.3) software and began to manually generate initial codes while re-reading transcripts using an inductive approach where codes were generated without a pre-existing framework.
Searching for themes	Visual hierarchy charts of collated codes and were explored using NVIVO software and maps of potential themes were generated.
Reviewing themes	<p>Two primary themes were identified as the overarching focus of the interview questions was leadership and research, however additional major themes were also present.</p> <p>All identified themes were explored and searched in the hierarchy charts exploring the codes and sources and the dataset as a whole.</p> <p>Thematic maps were produced of themes, codes and their relationships.</p> <p>Themes were reviewed, discussed and agreed with research supervisors.</p>
Defining and naming themes	<p>Ongoing review of codes and individual datasets refined the themes and provided clear definitions for each emerging theme.</p> <p>When the analysis of each data set was completed the themes were compared across all data sets. The process was completed and validated with research supervisors.</p>

## 5.7 Findings

Participants varied in age and experience. Eight participants were in the 45-64-year-old age category, whilst two were in the age category 25-44-year-old. Six participants were authorised to practice as NPs within the last five years, two within 6-10 years, and one in each category 11-15 years and 16-20 years respectively. Six participants stated they were research active, whilst four stated they were not. Participants worked in a variety of specialist areas including women's health, prison service, paediatrics, acute hospital care, mental health, midwifery and older person care. There was only one male participant. All but two participants worked as the only NP in their service.

### 5.7.1 Themes

Four major themes were identified: innovative leadership; optimism; research; and, resilience (Figure 4). Each theme comprised a number of sub-themes which will now be discussed.



#### *Figure 4: Thematic Framework*

The major themes were:

##### *5.7.1.1 Theme One. Innovative leadership: the NP leadership role in nursing*

All interview participants described clear examples of innovation when discussing leadership in the NP role. Innovation means developing new approaches to working (Baker, 2015). Participants related this to developing new care pathways for patients and in some instances embedding a new nursing role in a complex healthcare structure. Nurse Practitioners, irrespective of country or specialty, described how they had introduced innovative change into healthcare services. The theme of innovation was further broken down into the categories of leadership activities, work of nurse practitioners and trailblazers.

##### *5.7.1.1.1 Leadership activities*

The category of innovative leadership refers to the way in which participants implemented new healthcare service delivery and developed different ways of undertaking leadership within their role. Leaders are people who influence others, formulate a vision, motivate and inspire others to lead in change of a service (Jankurová, Ljudvigová, & Gubová, 2017). However, interview participants discussed more than leadership activities, they elaborated their capabilities at adapting skills and experience to change services. Innovative leadership activities for NPs describes how, in the absence of leading a specific team, they had applied their capabilities and creative skills to effect changes to models of care delivery, quality of patient care and nursing roles (Horth & Buchner, 2014). Some examples include:

“What we’re doing at the moment is we’re trying to setup transitional services, not just transfer but transition, so that by the age of 14 onwards we’re trying to develop programmes ... we’re providing evening sessions, bringing in little groups at a time, and talking to them about stuff that’s relevant to them, that age group.” IRL 4



“I’ve just introduced a new model of care where we’ve got nurse practitioners doing the on-call, after hours service, because we don’t have any residential medical officers.” AUS 3

“I think we lead in terms of developing care pathways and practices, evidence-based practice care for patients to improve quality of patient care and also to improve service efficiencies.” IRL 5

#### 5.7.1.1.2 *The work of NPs*

This category exemplifies how the work of NPs is broad and varied internationally and between specialities and roles. Participants described the nature of their work in detail and consequently two sub-categories were identified: independent, autonomous practitioners and clinical focus.

##### 5.7.1.1.2.1 *Independent, autonomous practitioners*

This sub-category relates to how participants felt they had the ability to make decisions based on their own judgement without the oversight of other health professionals. They described their responsibility to undertake independent decision-making and had the freedom to be autonomous in their work with their defined patient caseload. This was demonstrated through comments such as:

“I have total autonomy, I see my own patients, I make my own diagnosis, I prescribe my own medication.” AUS 4

“I work in the hospital, where there is only one consultant and he is here only one day a week, and the rest of the time I’m kind of very on my own. So, a lot of the other consultants would look to me for guidance on, kind of how to manage patients, you know. Anyone that was admitted to the ward, a lot of times I would be asked to go and lead and know, figure out what to do with that patient.” IRL 4

Not only were participants independent in their decision-making related to their current patient caseload, they also indicated they had the autonomy to evolve models of care for their patients whilst working with multidisciplinary teams. Participants stated:

“Taking the incentive to go thinking about changing patient (care) or ensuring that there’s safe robust practice. And just for the consultants and other members of the staff within, not just the speciality but within the multidiscipline team as well.” IRL 2

“We plan to set up a NP-led outpatient clinic for some of the lower risk patients coming back. ... The next step in terms of the VTE (venothromboembolism) is to look at a low risk ambulatory pathway for PE (pulmonary embolism) patients which will be very much NP lead as well.” IRL 5

#### 5.7.1.1.2.2 *Clinical focus*

This sub-category refers to the way that the participants described the primary focus of their role as clinical work, patient care and patient pathways. It was evident that NPs in both Ireland and Australia had a very clinical focus to their role. Participants conversed that they were primarily focused on clinical patient care and improving experiences for patients across all clinical specialisms. This was evidenced in comments such as:

“It’s ... [refers to all the patient parameters that the participant checked prior to increasing the Vagus Nerve Stimulator (VNS)] ... the role of the NP to manage that from there on in, so they come to me two weeks after its inserted. I check their wounds, make sure it’s safe to turn the device on, and then they would see me initially every two weeks where I would turn up settings...That’s fully done by a nurse, there is no consultant that does that, it’s us the NPs.” IRL 4

“We introduced a midwifery antenatal clinic for the low risk lady and tried to get the midwife on board on that. So, there was about 10% came through that pathway. So about 25% so far this year have come in as being totally midwifery care and advanced practice, so that’s a huge change.” IRL 2

“I’m giving education to patients and families about how to use a spacer, about you know, cardiac risk stratification, about like you know, you take on this other role almost.” AUS 3

#### 5.7.1.1.3 Trailblazers

This category relates to how the NP role is relatively new and consequently many participants were pioneers in their specialist area and in their organisations. A commonality amongst participants was their descriptions about developing their role which was uniquely different from traditional nursing and medical roles. Participants discussed how they were required to break the traditional mould of the nursing role and trailblaze a new role for NPs that nurses could follow in their wake. This was described in comments such as:

“That’s probably the biggest challenge trying to get them to see that, yes, the role is that bit different, you are straddling the two roles. But by its very nature my role as an ANP can’t be the same as what it was when I was a staff nurse.”  
IRL 3

“Then there was also just pushing for being able to provide long acting reversible contraceptives, such as the rod and IUD options for my clients and really be able to insert and remove” AUS 2

“It’s changing practice, it’s a small step at a time but it’s getting there.” IRL 2

#### 5.7.1.2 Theme Two Optimism: The future of the NP role

The theme of optimism explains the positive sentiment expressed by participants when reflecting on their roles and discussing their future expectations in general. Sentiment of hopefulness that “*the future will have ANPs who do nothing but research*” (IRL 3), and confidence regarding the future direction of healthcare for their NP role and the patient caseload under their care were expressed. There was an evident sense of excitement expressed by all participants with statements such as “*why shouldn’t a NP look at*” (IRL 3), any research topic and inferring that NPs should become political, and influential when discussing their future plans. A sense of pride, “*I’m proud of what I’ve done*” (AUS 4), was apparent when reflecting on where they had come from. The theme of optimism also described pride, looking to the future and continued innovation.

#### 5.7.1.2.1 *Pride*

The category of pride explains the feelings of pleasure expressed by the participants when reflecting on their own achievements as NPs, such as:

“We had brought in training for nurses, we did a lot of psychosocial intervention training, we got the course approved by The Nursing Board ... doing something that was useful and productive.” IRL 1

“I do get a lot of opportunity to discuss my role ... Well I’ve changed quite a lot in the last couple of years, over the last 12 months, with introducing this new model of care and taking on two other candidates.” AUS 3

#### 5.7.1.2.2 *Looking to the future*

Looking to the future refers to the way in which the participants discussed the vision they had for the future of the NP. They imagined the future of the NP role as exciting “*the opportunities, I think moving forward*” (IRL 5). The energy and excitement were palpable from participants when they verbalised their images. Participants comments that reflect this included:

“Now that they are becoming more of a critical mass, I think the time has come for us to be a little bit more vocal on the political side of things in terms of how services are constructed, what the possibilities are for nursing within a new health service and where we have the vision for nursing to go.” IRL 3

“I don’t think we’re there yet, but I think there’s potential becoming renowned that as a most senior clinical leader in their field,” AUS 1

#### 5.7.1.3.1 *Continued innovation*

Continued innovation refers to the optimism expressed by NPs regarding the future evolution to services and operations to benefit patient care. Whilst participants had significantly changed healthcare services once they began their NP role, they also

expressed clear vision and plans for future evolutions by NPs to healthcare. Comments that related to this include:

“I guess actually the whole area of transition in chronic illness is huge at the moment. ...The three ANPs in children’s hospitals we work really closely together, ... we try and do a lot of stuff the same so that parents get the same kind of service across three hospitals, within reason.” IRL 4

“I’m doing a lot more chronic disease now and I think that that’s where potentially where women’s health needs to go as well.” AUS 2

### 5.7.1.3 *Theme Three: Research*

Research relates to the generation of new knowledge or as one participant elaborated: “*I always think of research as being empirical research where it’s published in a journal*” (AUS 3). For those who were not research active at the time of interview, their enthusiasm for getting involved in future research was evident. There were four sub-categories identified: research role, research challenges, research opportunities and research leadership.

#### 5.7.1.3.1 *Research role*

The category research role relates to participants’ perceptions of research within their NP role. Participants concurred that research should be core to the NP role. Some participants were very engaged with the research process including presenting and publishing their findings nationally and internationally, evident with comments such as:

“Well I think I’ve got a paper pending publication about women with experiences of cervical screening and it’s about NP led care.” AUS 2

“So, I collected and analysed that data and then presented it. There were two opportunities in particular. In one case I was invited to Madrid to present to quite a number of European consultants.” IRL 4

Four participants discussed their active engagement with audits rather than primary research and believed that this did not entail them being research active. Participants suggested that management wanted audits, they “*wanted facts and figures about the provision of treatment,*” (IRL 1) and that “*auditing that needed to be done*” (IRL 2). Despite management emphasis on audits as opposed to research, participants were of the clear estimation that research was equally as important for them in fulfilling the NP role, suggesting that:

“I think they could be researching their practice, or pathways that they are involved in, to see if they make a change to service delivery.” IRL 5

“Yes, I think never lose sight of the direct patient care for our credentialing and we always have to be involved in that, but yes research is just as important and relevant and part of being a NP.” AUS 1

#### 5.7.1.3.2 *Research challenges*

The sub-category research challenges relate to how participants described situations or relationships that they perceived prevented them from successfully engaging with research. Aside from the fact that “*everybody is so busy with the clinical side of their role*” (IRL 3), nursing management, hospital management, medical colleagues and ethics committees were all identified as challenges that NPs had to overcome in order to engage with research. Participants comments included:

“But I don’t think that nursing management necessarily prioritises giving working time or paid time to nurse practitioners to research” AUS 3

“Interestingly with the medical staff, there are geriatricians who in general are fantastic colleagues, who have taught me so much ... are very accepting of the nurse practitioner role, but anything to do with research they tend to be a bit cynical about. Yeah, so that’s an interesting barrier that I certainly wasn’t expecting from that group of professionals.” AUS 1

“Actually, just in relation to a barrier, when I was doing one of the studies, I had applied for ethics across the four hospitals, ... There was no problem in three of the hospitals, but in the fourth hospital the ethics committee said that unless I named a consultant neurologist from their hospital as the PI (Principal Investigator) and the lead author they weren’t going to do anything, they weren’t going to give me ethics.” IRL 4

Participants also suggested that there were personal challenges extant that inhibited their research participation. There was an insinuation that a fear of research was perhaps part of the challenge. This was reflected in the following comments:

“I suppose that’s another barrier to undertaking research, the fear of actually starting that process, and feeling that your competent enough to carry out that, the research basically.” IRL 5

“Probably over time I will pluck up the courage and I will think about going and doing more research on that but at the moment you know it just...” IRL 2

#### *5.7.1.3.3 Research Support*

Research support refers to how participants expressed a desire for help with research. Support was suggested in the form of assistance, guidance, encouragement and release of time from clinical expectations. Whilst medical and senior nursing colleagues proposed challenges to NP research their support was also welcome. Comments evidence of this are:

“From an opportunities point of view, to be honest with you, I think there are great opportunities to do your research. I mean the consultants I work with are really, really helpful, one is really supportive.” IRL 4

“Probably the Director of Midwifery she’s really good. Because she wants to see stuff, so she would be the first person to go to and say look what about this, what about that. Or she’ll come to me and say this has come up from risk management a couple of times what about doing this? ...And one of my clinical

supervisor consultants she's brilliant, she is great for looking at stuff and she'll suggest a few bits." IRL 2

Participants also expressed a desire for research support in the form of assistance from the higher education institutions, as a positive element to encourage their research engagement. There was also a suggestion that University assistance was beneficial for "*acceptance to the collegian, [relates to member of the College of Nurse Practitioners] the college and journals.*" (AUS 2). University links for research purposes were articulated to be the most beneficial to research engagement. This was evident in comments:

"Absolutely. You cannot do it without support. For research especially, I think you need to be able to collaborate with people and especially you need to have input to the universities. I don't think it can be done without that." IRL 1

"I have always had the support from the University that we are linked with, a statistician has always been offered to me if I need help with any statistics. So, I've been given wonderful opportunities to do research." IRL 4

#### 5.7.1.4.1 *Research Leadership*

Research leadership means influencing others on research related behaviours (Evans, 2014). However, this was not the interpretation participants had of this definition. Participants were generally "*not familiar with that as a term*" (AUS 2). Opinions varied from the view to that of "*showing our leadership qualities by undertaking research*" (AUS 2). Others expressed that it was related to publishing research, or "*getting it out there*" by presenting research (AUS 3) at conferences. Some expressed they were too "*research naive*" (IRL 5), but overall participants considered research leadership was not their focus at the time of interview. This was expressed in comments such as:

"Ah, I don't think we have research leadership, I don't know necessarily that there is enough support, now given that when we started my view is possibly different to somebody else who is only a year or two in the role." IRL 3



“I think it’s great that we can lead it, as in we can do it, and we can show people what we are doing and showcase what we are doing.” IRL 4

Although the term was new to most participants, it was considered with enthusiasm reflected in some comments:

“Research leadership, well I guess leading the way, so becoming. I don’t think we’re there yet, but I think there’s potential ...that we are also the ones who are always doing research. That if you’re a nurse practitioner it comes hand in hand that you will be doing research as part of your day to day work. It’s not all about hands on patient care. That reputations not there yet but getting it slowly it is.”  
AUS 1

“I think it’s really, really important because I think it’s up to ANPs to lead other people to show that nurses can do lots of research and can get out there and can get your publications out there.” IRL 4

Participants articulated that universities had an important role to play in research leadership. Participants indicated that additional educational preparation was required for this role, despite having undertaken research units in their master’s degree, and that research expertise is in the university environment:

“I think the fact we are now seeing ANPs going off down the doctorate route is going to generate good quality hopefully research at a level that gets respect.”  
IRL 3

“Yes, well certainly for my situation, yes it does, because she’s the expert, she’s been able to guide and teach me along the way.... The professor of nursing is certainly encouraging me, yes.” AUS 1

#### 5.7.1.4 Theme Four: Resilience

Resilience is defined as “*the ability to persist in the face of challenges and to bounce back from adversity*” (Reivich, Seligman, & McBride, 2011, p. 25). Resilience was strongly identified by participants. This theme refers to the capacity of the participants to recover from difficult situations and or relationships and to develop personal survival strategies to remain in the role, supported by:

“There was a kind of air at the beginning, can we trust her, does she really know what she is doing, ... but once they got to know me and know that actually I did know what I was doing, then that very much changed and I got a huge amount of respect from the general paediatric consultants around the hospital.” IRL 4

Resistance to the role and positive support from colleagues were important components of this theme.

##### 5.7.1.4.1 Resistance

Resistance refers to the opposition participants experienced related to performing their role. Participants communicated that in developing their NP roles, relationships with other health providers proved more complex than they had anticipated, and this was echoed as resistance to their role. Resistance from nursing colleagues was not surprising to some as they reported that “*nurses have a reputation for eating their own young*” (AUS 4). Comments that relate to this include:

“The midwives themselves, people that I would have thought would have been really helpful. I don’t know if it’s just professional jealousy, but they have made my life quite difficult and very much scrutinising all my practice” IRL 2

“Funny enough the challenges often have come, the challenges come more from the nursing side than from the medical side. And that has been an issue from the very beginning.” IRL 3

“I’ve come to realise that they don’t actually like nurses being leaders or nurse practitioners. They like to keep us in our place. And so, I’ve had some incidents

where I feel like there's been bullying going on with a couple of professional [sic] gynaecologists," AUS 2

Participants described that others made them feel "*like a bit of a disruptor*" (AUS 2), or "*troublemaker*" (AUS 4) because their NP role was seen to usurp activities and tasks traditionally associated with medicine. Additional comments supporting this include:

"Oh absolutely, and it (the role) can have quite negative consequences for the ANP (carrying out traditional medical skills). In some instances, they can be seen as a troublemaker, seen as pushing the boundaries." IRL 3

While participants reflected on the difficulties, they had experienced they also felt that their roles gained acceptance and relations with others improved as the NP role become more established,

"once they got to know me and know that actually I did know what I was doing, then that very much changed, and I got a huge amount of respect from the general paediatric consultants around the hospital" IRL 4.

It was reported that the air of "*fear is probably the wrong word, maybe scepticism of a nurse being able to carry out the role*" (IRL 5) had disappeared. Additional participant comments related to this experience include:

*"I think where that changed from the director midwifery point of view was when she went, became Director of Midwifery, and went to various different things in the country. And the other Directors of Midwifery started to see the benefits of it and said, 'Oh that's a great model, that's brilliant'. So, she bought in from that then which was brilliant. And then the others, the consultants started taking on board the whole process. They began to say, 'Oh yeah, okay, well we'll refer people to you'. And over time as they realised that actually I'm not flying solo across the corridor, the women had good follow-up. They are gradually buying in."* IRL 2

*“Now it’s become less so over the years whether that’s because our newer colleagues don’t see us as a challenge or a threat I don’t know. But in the beginning, there was a lot of barriers and I think that by nursing staff particularly. They would ... tell you “Who do you think you are, trying to, you know, make yourself out better than us?” And “You are not helping us, and you are doing nothing for us!” There was a lot of that.” IRL 3*

However, not all participants experienced acceptance. Two participants reported feeling so constrained by resisters they felt compelled to leave their role, *“because they were just preventing me from fulfilling my job”* (IRL 1). Concurring with this another participant stated:

*“So, it has been a unique role and a very privileged one, but for a number of reasons, a change in senior management, I won’t bore you with all of the specific details, but it came to a point where I decided I’m going to leave before I’m pushed.” AUS 4*

Participants articulated that understanding resistance from others contributed to the resilience that they developed to challenges. There was an overwhelming acceptance that *“there is a common thought that they don’t really understand the roles of Nurse Practitioner’s”* (AUS 1). It was acknowledged that recognising *“the role for anything more than just the clinical part”* (IRL 1) was problematic and was therefore also a significant contributor to resistance. There were also sentiments that management were unsure where the role sat in relation to reporting relationships as evidenced by:

*“The one problem with nurse practitioners, and I think this is faced by everybody, is we don’t fit in to typical management structures.” AUS 4*

*“There has been a little bit of angst about that because none of our supervisors are qualified Nurse Practitioners and there is a common thought that they don’t really understand the roles of Nurse Practitioner’s.” AUS 1*

#### 5.7.1.4.2 *Isolation*

The role of NP in these situations was described as “*quite an isolated role*” (AUS 1) which was viewed by many as disadvantage. Situations were described where NPs articulated that it was “*very difficult as a single practitioner*” (IRL 5), and resulted in feelings of isolation for many commenting that:

“I just felt very isolated...I'm in a very isolated position” AUS 4

“One of the things is it is really, really lonely. You are up there lonely, I think initially coming off the floor and that you are, you haven't got that comradeship and different things, that was a big change.” IRL 2

Feelings of isolation were not exclusive to participants who worked in small facilities as the only NP, but also in large organisations as evidenced by:

“Ah interesting, in some ways working in a bigger organisation was more professionally isolating. You weren't people isolated, you had lots of admin and other people around you” AUS 1.

#### 5.7.1.4.3 *Support*

Constructive support from medical and nursing colleagues assisted participants build personal resilience to overcome challenges. Participants described aligning themselves with supportive colleagues to manage and overcome negativity from others. Whilst peers provided the greatest challenges in some instances, in others they were a great source of support and encouragement. Participants comments included:

“It made a massive difference to me to be working with people who were research minded, who were encouraging ...The research group was just brilliant because it really developed our skills, people brought different skills to it.” IRL 1

“I know I said we are not supported by management, but we are actually well supported by the medical people that come over here.” AUS 5

“I mean the consultants I work with are really, really helpful. One is really supportive. I have always had the support from the University that we are linked with,” IRL 4

Peer support, when in an isolated role, was often difficult to source. Therefore, the opportunity to network at conferences was verbalised as a valuable support network. This was demonstrated through comments such as:

“I suppose that makes us feel better talking when we get together and network at a conference or whatever, you realise that you are not alone because it. The NP role can be quite an isolated role.” AUS 1

Participants demonstrated resilience, by adapting well to resistance and working through complex relationships, in the face of adversity by persevering to make their role successful in their respective organisations.

## **5.8 Discussion**

This research demonstrates that NP perceptions of the role in Ireland and Australia are similar in leadership and research activities, challenges and triumphs. Innovative leadership reflects the myriad of changes NPs lead and implemented in changing and improving healthcare delivery for their specific patient groups. The leadership activities in this research concur with the literature from Lamb et al. (2018) and Elliott et al. (2014) as they describe their leadership role affecting changes to healthcare delivery for specific patient groups, with a strong emphasis on independent autonomous decision-making, and a strong clinical focus. By changing healthcare delivery, participants in this research described forging new working relationships and influencing changes to multidisciplinary teams describing new reporting relationships. This is reflective of work by Elliott et al. (2014) in their leadership outcome indicators for NPs in Ireland, which were: a) capacity and capability building of multidisciplinary team; b) measures of esteem; c) new initiatives for clinical practice and healthcare

delivery and d) clinical practice based on evidence. Measures of esteem were reflective in discussions related to client and peer satisfaction with their work and professional body representation. The themes in this research were similar to perceptions of leadership amongst Canadian NPs where two major themes were identified a) patient focused leadership and b) organisation and system focused leadership (Lamb et al., 2018). This research suggests that the NP leadership role is more than achieving a series of outcome indicators or competence but in keeping with more recent literature it requires a significant level of capability from NPs to deliver innovative healthcare services (Elliott et al., 2014; Horth & Buchner, 2014; Lamb et al., 2018).

This research identified that NPs in Ireland and Australia were autonomous managing specified patient caseloads and implementing improvements within the multidisciplinary team. Autonomy is described as the cornerstone of NP practice (Weiland, 2015). Autonomy includes independent practice, or the freedom to have independent decision-making authority without physician involvement, and self-empowerment, described as the ability to affect patient outcomes (Wang-Romjue, 2018). An autonomous nurse practitioner practices with a nursing philosophy and without being dependent upon medicine (Weiland, 2015). Recent literature reports that NPs working independently of physician oversight had greater autonomy associated with greater job satisfaction (Petersen & Way, 2017; Poghosyan & Liu, 2016; Spetz, Skillman, & Andrilla, 2017). This research concurs that NPs in both Ireland and Australia are independent and autonomous in their clinical work, it is important to note that participants were primarily working in the acute hospital environment and regulation in Ireland and Australia require collaborative agreements with an identified physician. Petersen and Way (2017) reported that collaborative relationships with physicians and NPs effected increased empowerment and autonomy for NPs which may provide an understanding for the autonomy discussed in this research.

The theme of trailblazers in this research signifies the capabilities of NPs in Ireland and Australia to improve healthcare for their respective patient groups. Brooks and Skiem (2017) identified a number of nurse leaders as trailblazers, none of whom were NPs. However, the same traits were identified in NPs in this research, such as: The

passion to improve healthcare; be the first in their area to define their unique leadership role; have an awareness of risks while making a change to a unique role; being confident in their skills and abilities to function in a dual role (Brooks & Skiem, 2017). The skills trailblazers utilise are the ability to be multilingual in the exclusive nursing language and the shared language of colleagues whom they collaborate with. In doing so, NPs connect nursing with other healthcare occupations while remaining grounded in nursing (Brooks & Skiem, 2017). It signifies the unique contribution NPs bring to healthcare. The future of the NP role is optimistic with capabilities, confidence, competence and courage of practitioners continuing to transform healthcare delivery (Ford, 2015). With the challenges presenting in existing demographics, digital advances, and person-centred care, NPs are presented with unique opportunities to invent and inspire healthcare for the future (Ford, 2015). Participants in this research supported this vision of trailblazers instigating innovative changes to healthcare delivery.

This study also identified that research did not strongly feature in NPs work. This supports the literature which claimed that research activity in the NP role has consumed less than 4% of work time (Johnson, Brennan, Musil, & Fitzpatrick, 2016; Middleton, Gardner, Gardner, & Della, 2011). Yet NPs are the proposed leaders in healthcare transformation (Delamaire & Lafortune, 2010; Elliott, 2017; Ford, 2015). The research literature is lacking on the barriers and enablers to NP research. The research requirements are unclear in the Standards of Practice for NPs (NMBA, 2014; NMBA, 2017). Research is a core component of the NP role and researching NP outcomes is a priority (Roberts & Goolsby, 2017).

This study provides new knowledge that indicates NPs value research in the role. However, this research reports that audits are arguably preferred by management as they provide valuable results quickly, measuring performance against benchmarks. Audits do not facilitate nursing's contribution to healthcare knowledge (Twycross & Shorten, 2014). Contributing to healthcare knowledge, service audits are emerging in the literature by NPs, measuring how well a service is achieving its intended aims (Dwyer, Craswell, Rossi, & Holzberger, 2017; M. Kelly et al., 2010; Parker, Desborough, & Forrest, 2012; Thompson & Meskell, 2012; Twycross & Shorten, 2014; Wand, D'Abrew, Barnett, Acret, & White, 2015). Generating new knowledge through



a systematic defensible process of enquiry by NPs is evident but scarce (Adams, Gardner, & Yates, 2017; Jennings, McKeown, O'Reilly, & Gardner, 2013; O'Connell, Gardner, & Coyer, 2014; Scanlon, Murphy, Tori, & Poghosyan, 2018; Twycross & Shorten, 2014). It is not surprising that there is a dearth of literature pertaining to research leadership and NPs, as the term was unfamiliar to NPs in this research. This research indicates that the research leadership role is more associated with research experts such as nursing faculty. It is important the NP role is understood to support research and facilitate collaboration with research experts.

Resistance, due to a perceived lack of understanding of the NP role was identified in this research. This finding is consistent with the literature where a lack of understanding and clarity related to the title and scope of the NP role is cause for resistance to the role (Aleshire, Wheeler, & Prevost, 2012; Delamaire & Lafortune, 2010; Pulcini et al., 2010). Physicians have been highlighted in the literature as the most resistant to the NP role in the past, this is arguably due to the volume of NPs in primary care, yet horizontal resistance from nursing peers would appear to be equally resistant in the acute care environment (Anderson & Morgan, 2017; MacLellan, Higgins, & Levett-Jones, 2015). This research concurs with the literature, particularly during the early stages of the introduction of the role. Participants in this research have described overcoming this resistance and developed resilience through positive support in the workplace and developing supportive networks. There is no literature related to resilience in the NP workforce.

## **5.9 Conclusion**

NPs are not only clinically focused but provide innovative leadership in healthcare through their continued improvements to healthcare delivery for their patient populations. Autonomy is one of the hallmarks of NP leadership, both related to clinical decision-making and service improvements. The advantage of a nurse who has both clinical and leadership credibility and capability should be realised and optimised in healthcare organisations. There is a persistent lack of understanding of the NP role in the nursing profession. Nurse Practitioners in Ireland and Australia have not identified themselves as research leaders. There is an appetite to address the scarcity of research but there is an acknowledgement that additional support from management

and academia to accomplish this is required. Specific research requirements for NPs in Ireland and Australia are unclear. Sharing knowledge through publication is important for the nursing profession. Nurses working in academia hold the key to support NPs in leading and publishing research.

This research explored perceptions of NPs in two countries with similar legislative frameworks. The findings may not translate to NPs in other countries. More research exploring the NP role across countries should be encouraged. Based on these results, further research should explore organisational leadership frameworks and research support structures to ensure NPs contribution to healthcare transformation is optimised and acknowledged.

### **5.9.1 Relevance to clinical practice**

The Nurse Practitioner role is the most senior clinical nursing role internationally. The role is identified as the key to healthcare transformation. Nurse Practitioners are skilled in their clinical specialist area and clinical leadership but are underutilised in a greater organisational leadership role. Nurse Practitioners are ideally placed to become leaders in research and make significant contribution to nursing knowledge in healthcare delivery. However, Nurse Practitioners require expert research knowledge and support from colleagues in higher education to optimise these opportunities and become capable researchers.

### **5.9.3 Funding**

There was no funding for this research.

### **5.9.3 Conflict of Interest**

The authors declare that there is no conflict of interest that could be perceived as prejudicing the impartiality of the research reported.

#### **5.9.4 What does this paper contribute to the wider global clinical community?**

- This research demonstrates that NPs in Ireland and Australia identify themselves as autonomous decision-makers and innovative leaders who are primarily focused at improving healthcare delivery for patient groups.
- This research provides new knowledge as it identified that nurses working in academia hold the key to increasing NP research activity and publications in Ireland and Australia. There is a desire among NPs to increase research engagement and productivity.
- Nurse Practitioners in Ireland and Australia do not identify themselves as research leaders, there is confusion and misunderstanding around this terminology.

#### **5.10 Summary Chapter Five**

Phase two of the research found that NPs are innovative leaders with a determination to continually improve healthcare services for their patient populations. Leadership activities described by NPs in Ireland and Australia were similar. Research is more ambiguous for NPs in Ireland and Australia where the participants discussed varying levels of research engagement. Participants believed that engaging with research projects was important for NPs as clinical leaders. However, many expressed feelings of being frightened of research largely due a lack of experience with research projects in their clinical role. There was a desire from participants that nursing academics would support and direct research for NPs in clinical areas by providing guidance and leadership with research projects. Nurse Practitioners in Ireland and Australia cited a lack of clarity pertaining to the NP role as a cause for perceived resistance to their role from all areas of the nursing profession, and also from the medical and allied health professionals. They described resilience in overcoming resistance from healthcare professionals accompanied with role maturity where they expressed that over a period of time, they felt accepted in their respective roles.

#### **5.11 Chapter to Follow**

The next chapter presents a discussion of the research project. It also provides implications for practice and recommendations based on the results and findings of the research.

## 6 Chapter Six: Findings and Discussion

### 6.1 Introduction

The purpose of this research was to explore leadership and research amongst NP across Ireland and Australia. International competencies for the NP role include clinical leadership and research (International Council of Nurses, 2005). These competencies have been reflected in the regulatory frameworks for the NP roles in Ireland and Australia since its inception (Australian Nursing and Midwifery Council, 2006 [ANMAC]; National Council for the Professional Development of Nursing and Midwifery, 2004 [NCNM]). Leadership remains a strong focus for NPs in updated practice standards, however, research requirements have changed

While it is internationally expected by regulatory bodies that NPs provide leadership in the nursing profession, NPs perceived leadership and research activities have not previously been reported. This research set out to explore NPs perceptions of leadership and research and to identify if a relationship exists between these core attributes. This research also sought to compare NPs leadership and research expectations between Ireland and Australia as the regulatory frameworks were identified as being similar and the NP role has never been previously compared. Exploring NPs understanding of their role in leadership and research identified challenges and opportunities afforded to NPs in the transformation of healthcare delivery. This chapter presents a discussion of the overarching premise from the research.

There are four major findings from this research:

1. Nurse Practitioners see themselves as clinical leaders in nursing. They use their leadership role to transform health care practices to improve patient outcomes.
2. Nurse Practitioners perceive research in the traditional sense, generation of new knowledge. This understanding of research means that NPs do not value the research work they do.
3. Nurse Practitioners reported leadership and research activities and perceptions are similar across Ireland and Australia.

4. NP do not feel they have the ability to include research leadership in their roles. Research leadership is the marrying of two core concepts of the NP role and brings new knowledge to the role. The leadership of research by NPs was not found to occur, although they were often part of research groups. This was found to be in part due to a lack of time allocated to research in their role and a lack of confidence to undertake research leadership.

The following section will discuss these findings in greater detail.

## **6.2 Nurse Practitioner Leadership**

Participants in this research perceived that they provided strong leadership to the nursing profession. This is evidenced by the high leadership scores reported by NPs in the survey. This is the first research to ask NPs to quantify their leadership contribution to the profession. The high leadership score was reported despite the majority of NP participants working in independent autonomous positions, as opposed to leading a defined team. The highest areas of leadership which NPs felt they undertook included increased use/application of research evidence in clinical practice; evaluation of quality patient care and training and mentoring of multidisciplinary team members.

This research adds to the literature that previously captured NPs perception of leadership in their role. In particular, NPs identified with a clinical leadership role. Stanley and Stanley (2018) support this description reporting that clinical leaders are experienced nurses, often at the highest level of clinical interactions, with a passion for developing high standards of patient care and quality service. Previous research from Australia, during the early stages of NP role development, recognised clinical leadership as one of the core elements of the NP role (Carryer et al., 2007). Carryer et al. (2007) work support the findings from this study, identifying that NPs developed their role from new healthcare demands and perceived deficiencies in access to quality patient care, demonstrating innovative leadership by the development and implementation of improvements that transformed healthcare delivery. For example, a number of participants described identifying specific needs in their patient populations and they established new services to accommodate these needs, such as

out of hours clinics for young adults transitioning from paediatric to adult care services. The perception of leadership for NPs in the current research is directed toward continued healthcare transformation by applying and implementing evidence-based practice (EPB) with a patient-focused purpose. van Kraaij et al. (2019) also found that NPs leadership attributes focused on improving patient care. Lowe, Plummer, and Boyd (2018), attest this finding as they report that the NP role has the ability to increase access to patient services and is successful at meeting healthcare service gaps as part of the dynamic responsive leadership roles. There is some debate as to whether this process of innovative change management and quality improvement are management task for NPs rather than a leadership activity. Van Hecke et al. (2019) report change management and quality improvement are traditionally associated with management activities. Despite the ongoing debate about the difference in leadership and management, NPs have added these to their clinical expertise and perceive that they demonstrate through these activities they are clinical leaders in healthcare.

In addition to this NPs also provided validation of Elliott et al. (2013) leadership activities for Nurse Practitioners. Building on Elliott et al. (2013's) work, the current research has added the voice of NPs, validated the leadership activities among a larger number of Irish NPs; and, for the first time, among Australia NPs. The primary leadership activities reported by NPs included: increased use/application of research evidence in clinical practice; evaluation of quality patient care; training and mentoring multidisciplinary colleagues and initiating new and improved clinical practices. This research adds new knowledge to the nursing profession as it has identified leadership priorities for NPs from their perspectives.

Supplementary to clinical leadership expertise NPs in this research described skills associated with transformational leaders. Transformational leaders, as described by Bass and Riggio (2005), motivate team members to support new healthcare practices and patient pathways to achieve the best outcomes for their patient groups. Transforming healthcare service delivery was not a term used for leadership activity by Elliott et al. (2013). However, Elliott et al. (2016) acknowledge that NPs are effective as change agents in healthcare. The literature describes this activity of changing healthcare delivery as transformational leadership (Bass & Riggio, 2005; McCaffrey & Reinoso, 2017; Poghosyan & Bernhardt, 2018). This research confirms the role of

transformational leadership for NPs. Earlier research supports these findings describing transformational leadership as an effective healthcare leadership style for NPs (Leggat et al., 2015; McCaffrey & Reinoso, 2017; Poghosyan & Bernhardt, 2018). Recent research from Clifford, Lutze, Maw, and Jennings (2019) supports the nature of the NP role and revealed that NPs perceive their purpose is to address gaps in healthcare. This is consistent with the descriptions provided by NPs in this research, where they described identifying gaps in services and leading service change to improve healthcare delivery by addressing the gaps. Initiating new clinical practices for specialist patient populations was articulated in this research as innovative leadership. This research adds to the existing knowledge supporting that NPs are innovative clinical leaders delivering on healthcare transformation. This is the first research to report that NPs, irrespective of their specialty, identify themselves as clinical leaders and have a clear understanding of the activities that define their clinical leadership as NPs.

This research identified that autonomy in decision making is associated with transformational leadership where participants described having the autonomy not only in clinical decision making but in transforming patient pathways. Autonomy is articulated as the ability to self-direct and make one's own decisions (Varjus, Leino-Kilpi, & Suominen, 2011). Autonomy in the current research included independent clinical decision-making, leading, transforming, and improving healthcare delivery for specialist patient groups. The literature reports that autonomy is an essential ingredient in clinical leadership for NPs that enables independent clinical decision-making for a defined patient caseload (Begley et al., 2013; Gardner, Duffield, Doubrovsky, & Adams, 2016; Poghosyan & Liu, 2016; van Kraaij et al., 2019; Weiland, 2015). Previous research supports the findings of the importance of autonomy for NPs, establishing that autonomy in decision making is integral to the NP clinical leadership role (Poghosyan & Liu, 2016; Wang-Romjue, 2018; Weiland, 2015). However, this study further identified that NPs recognise the importance of autonomy and clinical decision-making as integral to the success of their role. This is more in line with the NP leadership capabilities described in earlier research by Carryer et al. (2007) where professional efficacy was supported by autonomous, accountable clinical decision-making in the delivery of patient care. Lamb et al. (2018) have explored leadership

capabilities among APN in Canada, although it is unclear how many participants were NPs.

Autonomy in clinical decision-making and healthcare transformation is integral to leadership for NPs; however, NPs work collaboratively with a myriad of healthcare professionals. Leadership exists only within the context of relationships (Manion, 2015). Nurse Practitioners in this research worked in teams yet provided independent management of identified patient groups. Participants reported aligning themselves with interdisciplinary colleagues who provided support and encouragement to overcome adversities, including role isolation, to become clinical leaders. Comments from NPs in this research acknowledged the importance of support from colleagues in the development of their leadership skills, particularly during the early stages of role development. Mentoring NPs has demonstrated positive outcomes in the development of leadership capabilities (Leggat et al., 2015). While participants in the current research made no direct references to mentoring, they inferred mentoring relationships with other interdisciplinary colleagues throughout the interviews. Previous research supports these findings reporting that interdisciplinary relationships have an impact on patient outcomes and role clarity and maturity in NP roles have a positive effect in such relationships (Heale, James, Wenghofer, & Garceau, 2018). Kvarnström et al. (2018) support the current research findings, as they too reported the ability of NPs to successfully negotiate to working in teams, whilst leading care for specified populations. Consistent with the findings in this research, NPs developed an ability to become experts at traversing medicine and nursing domains which contributes to successful interdisciplinary relationships (Brooks & Skiem, 2017; Kvarnström et al., 2018). The findings in this research are supported by a significant body of evidence recommending that the nature of the NP role functioning in both the nursing and medical domains requires clarity and collaboration and organisational arrangements for successful implementation (Fox et al., 2018; Kilpatrick, Lavoie-Tremblay, Lamothe, Ritchie, & Doran, 2013; Metzger & Rivers, 2014; Poghosyan, 2018; Schadewaldt, McInnes, Hiller, & Gardner, 2016).

Nurse Practitioners in Ireland and Australia perceived themselves as clinical leaders. The focus of the NP role was related to transforming healthcare delivery to improve access to quality health for specialist patient populations. Autonomy and clinical



decision-making are essential leadership attributes for NPs. Healthcare transformation requires transformational leadership and change management skills to motivate interdisciplinary colleagues to support the NP role and services associated with it.

### **6.3 Nurse Practitioner Research**

More than half (n=55, 57%) of NPs that participated in this research reported they were research active, and there was no difference between NPs in Ireland and Australia. Despite the majority of NPs stating they were research active, over half (n=55, 57%) reported having no work time allocated to research in the previous working week. Research activity accounted for only 4% of NP's reported work time. This is consistent with previously reported NP research work time (Chattopadhyay, Zangaro, & White, 2015; Gardner et al., 2010; Johnson, Brennan, Musil, & Fitzpatrick, 2016; Martin-Misener et al., 2015; Middleton et al., 2011). There is a lack of research to date examining the NP research role, including determining the barriers to engagement with research in their work. The consensus from previous publications supports the findings in this research that work of the NP role is clinical and the focus is delivery of patient care (Jennings, Clifford, Fox, O'Connell, & Gardner, 2015; McCrory, Patton, Moore, O'Connor, & Nugent, 2018; Skrobanski, Ream, Poole, & Whitaker, 2019; Smigorowsky et al., 2019).

The definition of research used was the discovery of knowledge that is or can be applied to real-life healthcare settings, which was included in the NONPF survey tool (Buchholz, et al., 2015). It emerged during the second phase of the research, during interviews, that this definition was not consistent with NPs' interpretation of research. This finding led the researchers to believe that the use of this definition in the phase one survey may have limited the number of participants completing the research questions in the survey. Participants described a number of research activities that were not consistent with research as defined in the survey.

Nurse Practitioners in Ireland and Australia believe that research is an important part of their role despite the scope of the research role not being clearly defined in the NP Standards and requirements in Ireland and Australia (Nursing and Midwifery Board of Australia, 2014; Nursing and Midwifery Board of Ireland, 2017). The Australian NP

Standards are clinically focused on domains of leadership, education, and research couched within four clinically focused Standards (NMBA 2014). This document specifies that NPs are to contribute to research that addresses and identifies gaps in care provision (NMBA 2014). Research is absent from the overarching NP standards and requirement document in Ireland (NMBI 2017). The word research receives only one mention in the Irish NP Standards document where the Standard states the vision for the NP role is developing a knowledge base through research (NMBI 2017). Interestingly, the previous Competency Standards Framework for NPs in Ireland and Australia clarified that NPs were required to critically appraise, integrate and conduct research (Australian Nursing and Midwifery Council, 2006; National Council for the Professional Development of Nursing and Midwifery, 2008). Arguably, the research role of the NP has been downgraded in the updated Standards and Requirements for NPs in Ireland and Australia. Original Competency Practice Standards identified research as a core concept of the NP role (Carryer et al., 2007; National Council for the Professional Development of Nursing and Midwifery, 2008). This is consistent with the perceptions of NPs in this research, where participants described the importance of research in their role as clinical leaders, however, they reported not being given time to research. The earlier Practice Standards specified NPs lead, conduct, and disseminate NP research. New NP Standards frameworks were developed through extensive consultation with the nursing profession, but it is unclear why the research role of the NP has been relegated. The lowered standard for research is confusing for a clinical nursing leadership role in healthcare, who should be demonstrating outcomes of changes in healthcare practices. This is of particular concern, as the NP role transcends a very research-focused profession, such as medicine, where research is embedded in the role, to continually contribute to healthcare knowledge. The absence of clear and significant research in standards and requirements for clinical nurse leaders is concerning, as it neglects to research the importance of nursing contribution to healthcare delivery (Carrick-Sen et al., 2015). Lowering research practice standards for clinical leaders of the profession is not in keeping with an evidence-based profession.

Participants in this research study expressed they would like a larger proportion of their role for research, including larger research projects. Masso and Thompson (2017) report that Australian NP research, to date, restrains the capacity to make an

informed decision about the wider implementation of models of care (Masso & Thompson, 2017). The lack of clarification of the nature and extent of research activities in the NP role in national frameworks does not support this in practice.

The findings in this research identified that research-active NPs participated in a broad range of research activities, with clinical outcomes research being the most frequent and a smaller number undertaking qualitative or quantitative research. Clinical outcomes research was concerned with quality improvement and patient healthcare, which was not defined further in the survey tool. Quality improvement involves a process of systematic data-guided activities designed to bring about an improvement in health care settings and changing practice by implementing evidence-based care (Arndt & Netsch, 2012; Gregory, 2015). This can be related to NP standards which require the implementation of evidence-based practice. The same research tool used in this research study, to explore NP research activities, was distributed in the USA to NP faculty members, who have a greater emphasis on research in their academic role (Buchholz, Bloch, et al., 2015). It was determined that the use of quantitative research methods was the most common among NP faculty members (Buchholz, Bloch, et al., 2015). In contrast, NPs in this study were clinical NPs and reported participating in clinical outcomes research.

Nurse Practitioners, in this research, expressed that research was perceived to include both the generation of new knowledge and translational research, where research findings are translated into practice or policy. Clinical outcomes research can be described as researching knowledge relevant and applied to real-life healthcare settings, also referred to as translational research (Rubio et al., 2010). Van Hecke et al. (2019) report that NPs in Belgium use their research skills to translate research findings into evidence-based practice. The authors also reported that over two-thirds of NPs initiated and cooperated in nursing research in their domain, although the research activities were not elaborated (Van Hecke et al., 2019). This is a higher proportion of research-active NPs than found in Ireland and Australia in the current study. For the purpose of this research, the discovery of knowledge that is, or can be applied to real-life health care settings, was defined as research. The definition of research used in this study is that used in the survey tool that was replicated with permission from Buchholz, Bloch, et al. (2015). However, the definition of research

used for the purpose of Van Hecke et al. (2019) study was not stated, therefore it is difficult to assess how this compares with the research activity in the current research. Participants may not have reported research relating to clinical outcomes in the survey, resulting in the lower reported research rate.

Nurse Practitioners in Ireland and Australia expressed their leadership role included national and international engagement with evidence-based policy development and professional associations. Policy development to enable the implementation of evidence-based practice is considered a part of the role of research. Begley et al. (2015), determined that research activities were interpreted by Nursing Management as conducting audits, however, a definition of research was not provided by the authors. This is supported in previous research by Begley et al. (2013) who reported that the NP research role included implementing evidence-based practice (EBP), conducting audits and leading, conducting, and disseminating research to advance nursing practice. Clinical audit is described as a quality assurance process to generate findings to benefit patients and their programmes of care (Grainger, 2010). Participant's interviews expressed frustrations towards management's lack of support for research within the NP role with comments such as "*the director said he wanted facts and figures about the provision of treatment*" (IRL 1). Similar frustrations were recently reported by Dutch NPs where organisational structures did not support NP research (van Kraaij et al., 2019). Participants also reported nursing management prioritise audit over research, as audits provided figures that they required for reporting requirements. It is evident that there is a significant element of confusion pertaining to the NP role in research. This is unsurprising considering the changes to the research requirements of NPs in recent standards documents.

Definitions of what constituted research were also seen as a challenge for research by participants. It was previously stated, that a disparity between management and NPs interpretation of what is constituted as research was determined. Participants expressed this as a barrier to engagement with traditional research approaches in a meaningful manner. This is a similar finding in recent research of Dutch NPs, where due to difficulties becoming involved in research within their organisation, NPs became involved in research elsewhere (van Kraaij et al., 2019). Education on the translational research continuum would provide clarity for both NPs and management to identify

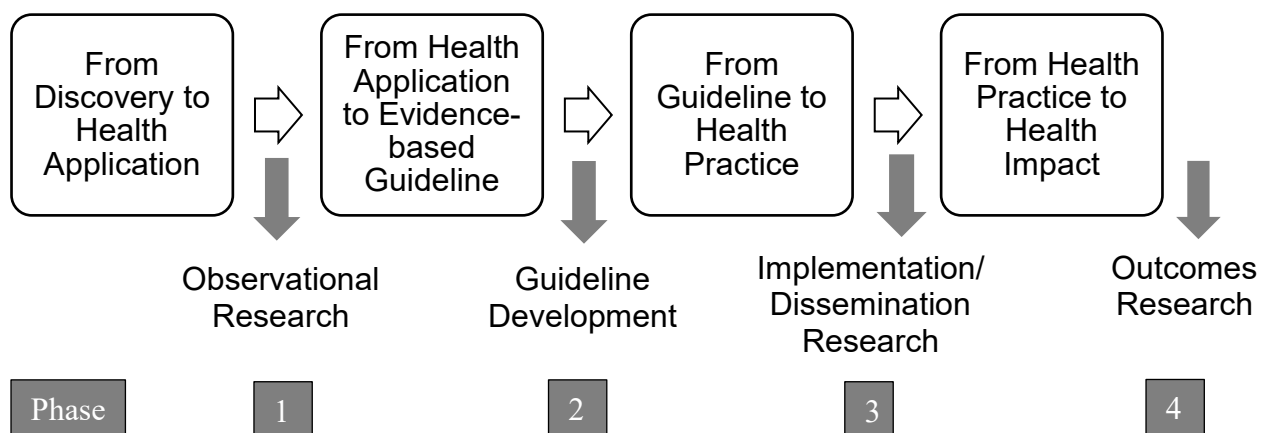
and negotiate research within the role. Translational research is defined in the literature as a continuum in which research findings are translated from the researchers' desk to the patient's bedside, where the findings improve health (Rubio et al., 2010). This, in addition to clarifying the NP research role in National Standard and Requirements, would support NPs in their research role.

Quality improvement, a sub-category of clinical outcomes research, was the most prevalent research method reported by NPs in this research. Forty-five percent (n=34) of all research-active participants had engaged with quality improvement projects. Quality improvement research has evolved into what is now commonly referred to as implementation research (Peters, Adam, Alonge, Agyepong, & Tran, 2013). Implementation research is the scientific study of methods to support the uptake of research findings and other evidence-based practices into clinical practice, to improve the quality and effectiveness of health services (Demiris, Oliver, Capurro, & Wittenberg-Lyles, 2014; Eccles & Mittman, 2006; Peters et al., 2013). Implementation research is part of the translational research continuum (Lane-Fall, Curran, & Beidas, 2019). Khoury et al. (2007) were the first to present a widely accepted and understood continuum of translational research in genomic medicine. The authors suggested that there were different steps in enabling evidence-based research to be implemented into clinical practice: discovery, guideline development, implementation, evaluation of health impact and dissemination (Khoury et al., 2007). This distinction between research activities was not provided in the survey for this research project, yet participants indicated that implementation research was required as part of their role. A limitation of this research may be that the survey used for this research did not distinguish research along a continuum, instead, it was focused on research methodologies and methods, hence may have missed some of the research activities undertaken by NPs.

The majority of NPs across Ireland and Australia (n=78; 81%) reported as a leadership activity undertaking evidence-based practice activity such as guideline preparation. Guideline preparation is traditionally seen as an evidence-based practice or a quality improvement project rather than research (Carter, Mastro, Vose, Rivera, & Larson, 2017; Kredo et al., 2016). This reinforces the need for research approaches such as Khoury et al. (2007) translational research continuum to be applied to NP research as

it determines that knowledge, after discovery, is first applied to guideline development, which then is implemented in practice. This would endorse the use of guideline development and implementation practices which provide knowledge from practice to health impact for a proportion of a population as part of the role of NPs. The final stage of Khoury et al., (2007) translational research continuum is outcomes research, to determine if there is an improvement, benefits, and risks in a larger population (Figure 5), the main research seen to be undertaken by NPs in this research.

**Figure 5: Continuum of translational research for Nursing [adapted from (Khoury et al., 2007)]**



During this research, some participants identified they were participating in clinical outcomes research. It is not possible to determine whether this was implementation /dissemination research at a single centre or outcomes research across multiple sites due to limitations with the survey, although interview data would suggest that it is single centre research. Additionally, participants reported work related to guideline development and implementation at a local level. All of these activities are phases reflected in the translational research continuum (Figure 5). It is a reasonable assumption that this related to the translation of knowledge into clinical practice.

To reiterate, the definition of research used in this research was the discovery of knowledge that is or can be applied to real-life healthcare settings. This definition is arguably transferrable across the translational research continuum, from the discovery of new knowledge, in phase one to knowledge related to the health impact, in phase

four research. By using the proposed translational research continuum NPs are using the same research language as clinical colleagues with terms such as clinical audits and quality improvement. Carter et al. (2017) acknowledge that nursing leadership struggles to differentiate between the range of scholarly endeavours along the continuum proposed by the authors. The authors acknowledge that evidence-based practice, quality improvement, and research are all part of a research continuum and enable nurses to contribute to evidence to improve patient outcomes (Carter et al., 2017). The findings in this research extend the work of Carter et al. (2017) where NPs in Ireland and Australia reported that quality improvement projects were the most frequent research methods participants engaged with. Using the different stages in the translational research continuum can provide clarity for NPs in identifying gaps in knowledge which, in turn, would support research grant applications (Proctor, Powell, Baumann, Hamilton, & Santens, 2012).

Research active interview participants reported disseminating their findings nationally and internationally, both at conferences and in peer-reviewed publications. Dissemination of research is an important step in the research continuum as it is the mode of sharing knowledge among healthcare professionals. Nearly one third (n=24; 31.5%) of NPs were publishing their research in peer-reviewed journals. Similarly, Van Hecke et al. (2019) reported that 30% of NPs in Belgium published their research work, which is consistent with the findings of this research. Participants in this research reported their perceptions of publishing was related to publishing in peer-reviewed journals.

Participants in this research reported that positive interdisciplinary working relationships were essential not only for NP leadership but also for research. A small number of research-active interview participants referred to an element of scepticism from their colleagues that NPs have the ability to conduct research. Participants reported that this was particularly felt from medical colleagues and ethics committees, which are generally significantly composed of medical physicians. This contradicted the survey responses where participants reported they had received support from colleagues in educational institutions and medical consultant colleagues. Positive support with research also resulted in more research publications from NPs. A number of international research projects published by NPs demonstrate the collaborative

relationship with medical colleagues has a positive impact on the NP research role (Cohen et al., 2012; Grant et al., 2004; Lacny et al., 2016; van der Sluis, Datema, Saan, Stant, & Dijkstra, 2009; Ward et al., 2013). Engaging with interdisciplinary research teams has been identified as one method to overcome these challenges and would provide an opportunity for NPs to engage with research in their role (Lambert & Housden, 2017). In the majority of published research projects, identified during the integrative review process, the medical consultants were identified as the project lead and the NP participated in research by directing and prescribing treatment of patients. Whilst this was consistent with the findings from this research, interview participants indicated a preference for research collaborations with nursing academia as opposed to consultant colleagues.

#### **6.4 Comparing Nurse Practitioners in Ireland and Australia**

This research has demonstrated that the role is comparable across Ireland and Australia. NPs from both countries undertake mainly clinical roles, perceive that they provide strong leadership, and agree that research is an important component of the role. This is new knowledge for the role. Previous research has compared NP education and regulation (Carney, 2016; Pulcini et al., 2010). Additional research comparing the NP role has largely focused on comparing NP patient management to that of physicians (Osborn, Jones, Gower-Thomas, & Vaughan-Williams, 2010; Pirret, Neville, & La Grow, 2015; van Vugt et al., 2018). The NP role has been examined across two countries previously, through literature review (Alotaibi & Al Anizi, 2019), and comparing the role by examining regulatory frameworks, education, and role descriptions (Currie, Edwards, Colligan, & Crouch, 2007). However, when regulatory frameworks are absent, as in the United Kingdom (UK), it is difficult to provide an accurate comparison. Regulatory frameworks for the NP role in Ireland and Australia are similar (Nursing and Midwifery Board of Australia, 2014; Nursing and Midwifery Board of Ireland, 2017). Perceptions of leadership were also consistent among NPs in Ireland and Australia, where the leadership role was perceived to be clinical and patient focused. The research role of NPs was also perceived to be similar among participants in this research, as all NPs perceived research to be an important component of the role. Participants in Ireland and Australia described similar feelings of fear related to leading research and instead expressed a desire for support from



nurse faculty. No differences were identified among NPs in Ireland and Australia in their leadership and research activities and preferences. Core components of the NP role have not previously been explored or compared among participants of two countries.

## **6.5 Research leadership**

An important finding in phase one of this research was that research-active NPs had a higher leadership score, with 78.5% (n=44) reported a leadership score of eight or higher. Research leadership in this research meant identifying and leading nursing research opportunities in their respective clinical specialist areas. Nurse Practitioner research aligned with phase three and four of the translational research continuum. However, when NP interview participants were asked to explain their understanding of the term research leadership, they expressed they were unfamiliar with the term. Evans (2014) explains that research leadership is a complex role for University academics as it requires extensive knowledge and competence with the research processes and motivation to seek research grants and be research active. This suggests that research leadership is the role of academics, not clinicians. However, while NPs were keen to participate in research, data indicated they supported the view of Evans (2014) where research leadership seemed to belong to academic colleagues. Participants also identified a need for assistance from research experts such as nursing faculty colleagues in universities to improve research outputs from NPs across Ireland and Australia.

All interview participants proposed collaborative supportive relationships with the nursing faculty as a positive solution to increasing NP research. They also requested support described as assistance, guidance, encouragement, and release of time from clinical caseloads for NPs. Nursing professors, in particular, were identified as research experts and research leaders who were best placed to support NP research. Carlson, Staffileno, and Murphy (2018) propose a collaborative research relationship between NPs and nursing faculty to support the clinical research role for NPs in the USA. Support from nursing professors who understand the nursing role and nursing legislation can provide an opportunity to increase the research outputs from NPs.

NPs described their role in research projects as collaborative or supportive of an academic colleague. The lack of leadership of research may disputably be due to a lack of confidence or knowledge of research processes for NPs to undertake a leadership role. In the current research, some NPs in Australia reported that they had not undertaken any research modules during their educational preparation for the role. All NPs in Ireland and the majority of Australian NPs had a master's degree which included units in research preparation. The literature suggests that Master level prepared nurses are not adequately prepared to undertake research (Gallen, Kodate, & Casey, 2019; Kim & Hayat, 2015). Masters prepared nurses not only lack adequate statistical foundations in research, but they also lack preparedness in the methods and tools required to undertake quality and safety improvement projects (Gallen et al., 2019; Kim & Hayat, 2015). In the USA, the NP academic preparation is now at Doctoral level, however, research would indicate that this also does not prepare the NP to fulfil or lead a research role, as it is a practice-focused doctoral preparation as opposed to research-focused (Carlson et al., 2018; Sebach & Chunta, 2018; Tuaoi, Cashin, Hutchinson, & Graham, 2011). The findings of this research would indicate that NPs in Ireland and Australia do not feel prepared to lead clinical nursing research with Master's degree preparation.

One suggestion to overcome this lack of research preparation is to pair Doctorate Nurse Practitioner (DNP) and Doctor of Philosophy (PhD) to work in collaboration to provide mentoring for research (Carlson et al., 2018). The findings of the current research have identified the same conundrum among Master prepared NPs as those identified by Carlson et al., (2018) for Doctoral prepared NPs in undertaking research related to their role. The PhD and DNP nursing roles are reported as complementary to one another and collaborative toward reducing the knowledge gap through research by complementing doctoral prepared clinical DNP with research prepared PhD nurses (Buchholz, Yingling, Jones, & Tenfelde, 2015; Falkenberg-Olson, 2019). This perhaps supports collaborative relationships with NPs and PhD nursing faculty in Ireland and Australia to support clinical nursing research.

Findings in this research, suggest that one of the main challenges to research for NPs was the lack of allocation of research into their workload. Although half of NPs in this research reported being research active, consistent with previous research findings,

little time was reported as dedicated to research in their work practices (Chattopadhyay et al., 2015; Gardner et al., 2010; Johnson et al., 2016; Martin-Misener et al., 2015; Middleton et al., 2011; van Kraaij et al., 2019). Research participants reported that clinical caseload was prioritised over research. In keeping with earlier discussions, the focus on clinical caseload over research concurs with the National Standards and Requirements specified by the respective Nursing and Midwifery Boards (Nursing and Midwifery Board of Australia, 2014; Nursing and Midwifery Board of Ireland, 2017). The clinical focus provides little opportunity for individual NPs to negotiate for increased research time in their role. This research identified that it is accepted by stakeholders that NPs engage with phases one and two of the translational research continuum, yet NPs in Ireland and Australia expressed a desire to fulfil all phases of the continuum in their role. Research participation across all four phases of the translational research continuum is important for the profession to lead on clinical nursing research. This research found that while NPs are [sic] in a strong position to provide research participation as the clinical leaders of the profession, the capacity in the current role is not evident.

## **6.6 Summary of Chapter Six**

This chapter provided a discussion on the results and findings of the two phases of the research, how they addressed the research questions, and have enhanced existing knowledge on leadership and research for NPs. Nurse Practitioners perceive themselves as clinical leaders. Leadership capabilities of NPs are clinically focused and directed toward transforming healthcare delivery for specialist patient populations. A translational research continuum is proposed as a definition for nursing research that would assist in understanding the different research parts of the research process. The proposed continuum is inclusive of nursing research from the discovery of new knowledge to health practice and health impact, outcomes research. Nurse Practitioners have the potential to become more involved in research, given the appropriate support with academic collaboration and increased work time for research activities. The NP role and perceptions of leadership and research are similar across Ireland and Australia.

## **6.7 Chapter to Follow**

The following chapter presents the conclusion of the dissertation. This is presented by presenting an overview of the research project and a summary of the findings to answer the research questions. The limitations of the research will also be discussed and recommendations for future research.

## **7 Chapter Seven: Conclusion**

### **7.1 Introduction**

This chapter presents a conclusion to the mixed-methods research exploring leadership and research among NPs across Ireland and Australia. The purpose of this chapter is to provide a summary of the findings. An overview of the research project will be provided followed by a summary of answers to the research questions.

### **7.2 Overview of Research Project**

The first three chapters identified that leadership and research are core components of the NP role internationally. The NP role is designed to transform healthcare by improving access to quality healthcare and clinical decision-making. A regulatory framework is essential for the NP role, not only to protect the public but to provide clarity pertaining to the nature and scope of the role. There is an increasing volume of research emerging pertaining to the NP leadership role, however, the research to date has not explored NPs perceptions of leadership. There is a paucity of research related to the NP research role, and a lack of research comparing the role between countries.

The literature review identified a small volume of research from NPs internationally reporting research outcomes related to healthcare transformation by NPs. Reviewing the literature recognised that NPs were regularly part of an interdisciplinary research team, where physicians were the leaders of the research team and NPs worked as the clinical lead implementing EBP in specialist areas. Results of the NP healthcare interventions were largely positive; however, it was difficult to determine if the positive outcomes could be transferrable to alternative healthcare settings.

A mixed-methods study using a sequential explanatory approach was designed. Phase one included a cloud-based survey distributed via two professional NP associations in Ireland and Australia respectively. Responses were analysed and elements requiring further exploration were identified. Interviews with NPs were used to further explore the areas of leadership and research identified through the surveys. A summary of the results is presented in this chapter.

### **7.3 Nurse Practitioner Leadership**

NPs perceive they provide strong leadership for the nursing profession. Leadership activities previously identified amongst Irish NPs have been validated by Australian NPs. The primary leadership activities reported by NPs reveal that NPs are clinical leaders, focused on increasing the use of EBP in clinical practice, evaluating quality patient care, and transforming healthcare delivery by initiating improved care services. There were no differences between NPs in Ireland and Australia.

Nurse Practitioners' work time and leadership activities were patient-focused and aimed at improving healthcare experiences for defined patient populations. Autonomy and clinical decision-making are embedded in the NP leadership role. Autonomy is not only captured in clinical decision-making for defined patient populations but also reflected in the freedom to change healthcare delivery for these defined patient groups. In establishing the NP role, it is evident that there is a reliance on the leadership and assistance from interprofessional colleagues to embed the role within a service and ensuring its subsequent success.

### **7.4 Nurse Practitioner Research**

Nurse Practitioners identified barriers and enablers to research engagement within their role. Challenges identified by NPs to research included lack of allocation of research in their workload due to the focus on the provision of patient care, a lack of research support from organisational structures and nursing faculty, and finally a lack of research preparedness.

Over half of NPs reported being research active, yet only 4% of work time was allocated to research activities. Participants believed that research is important to the NP role, which reiterated survey findings that reported translational research and the generation of knowledge were both in the NP research role. Clinical outcomes research was the most reported research methods and supportive relationships with consultants and nursing academia increased research activity and publications. Interviews exposed a strong desire for increased support, in particular from nursing academia. The preparedness of NPs to conduct independent research projects in their

clinical area is questionable. The ability of NPs to accept the responsibility of research leadership is not in the capacity of the NP role at present.

A lack of clarity pertaining to the research requirements of NPs has been identified. A translational research continuum is proposed to define NP research, as an alternative to the traditional definition of knowledge generation used in this research. The research continuum provides clarity not only for NPs but for managers to support research in NPs workload. Whilst NPs perceive research as important to the role, collaboration, and support from academic nursing colleagues is identified as the solution to increase research gaps in NPs services.

## **7.5 Limitations**

A number of limitations were identified regarding the research definition used, sample size, and response.

### **7.5.1 Research definitions**

Research was defined as the discovery of knowledge that is or can be applied to real-life health care settings, for this research project. There was a risk that participants misinterpreted this definition for research. Clinical outcomes research included quality improvement and outcomes research, which may not have been understood in the definition of research provided. The research tool did not provide definitions of research methodologies including clinical outcomes research concerned with quality improvement and patient healthcare.

### **7.5.2 Sample Size**

At the time of data collection, the Nursing and Midwifery Boards identified there were 1,380 endorsed NPs in Australia and 208 registered NPs in Ireland. The researcher selected accessing the sample population via the respective professional associations. Less than half of authorised NPs were members of the respective professional associations. This may have biased the results as membership of professional associations may be attractive to nurses who want to have greater input

into the development of the NP role. The wording of the email from the professional association may also have influenced participant response.

The survey was emailed to the members of the respective professional associations including a link to the electronic survey. This method of distribution immediately biased the younger population in both countries who are seen to have greater computer literacy.

### **7.5.3 Response rate**

Twenty-five percent of responses were eliminated due to incomplete data. The final response rate reflected 10% of registered NPs in Ireland but only 5% of endorsed NPs in Australia. However, the demographic of this population reflected that of previous NP research populations. Using a mixed-methods explanatory sequential approach provided an opportunity to validate reports from the survey.

## **7.6 Recommendations**

The findings from this study reflect the two core components of the NP role examined, namely leadership and research. There are four key recommendations reflecting the findings of this study.

### **7.6.1 Recommendation for Nurse Practitioner Leadership**

Nurse practitioners are clinical leaders and have the ability to transform healthcare delivery for identified specialist patient populations. It is important that healthcare policy reflects the ability NPs have to transform services and improve access to specialist services. Further research is recommended to demonstrate the effects on patients and health services of the changes in the delivery to healthcare services by NPs.

### **7.6.2 Recommendation for Nurse Practitioner Research**

This research proposed the definition of research needs to be expanded to incorporate a translational research continuum for nursing to capture the different types of research undertaken by NPs. The broad nature of NP research must be acknowledged



and reflected in future standards and requirements for NPs. Policy development is required to promote and support NP research. Further research is recommended to examine the NP research role using the translational research continuum identified in this study. It is proposed that the researcher will engage with continued research focused on exploring NPs engagement with activities in each of the four phases defined in this research continuum, in addition to determining NP perceptions of the translational research continuum proposed in this study.

### **7.6.3 Recommendation for International Comparison of the Nurse Practitioner role**

This research proposes that the NP role is similar across Ireland and Australia in work, leadership, and research activities. Recommendations include a responsibility of Nursing leaders, such as Chief Nursing Officers, and Nursing Boards to support the development of national standards and develop evidence-based national frameworks to provide clarity pertaining to the role. The need for further research is identified to expand this new knowledge to include patient outcomes and direct role comparisons in similar specialty areas.

### **7.6.4 Recommendation for Research Leadership for Nurse Practitioners**

Research leadership was not identified in the NP role across Ireland and Australia. A lack of time allocated to research and a lack of confidence to undertake research were identified as barriers. Implementing collaborative working relationships between the Higher Education Institutions and healthcare organisations are the key to strengthening clinical nursing research. Research focused collaborations between and within organisations, promoting academic and clinical partnerships would provide support to strengthen NP confidence to undertake and lead research. It is acknowledged that time is required to build and foster the relationships. A period of three to five years is substantial to demonstrate outcomes from academic and clinical partnerships. Further research is recommended to examine the outcome of such relationships to the NP role.



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## **Chapter Nine: Appendices**

### **Appendix 1: Integrative Review Article Under Review**

This Appendix is not included in this version of the thesis.

**Appendix 2: Response to IJNS Reviewers for Integrative Review: IJNP-2020-00121**

This Appendix is not included in this version of the thesis.



### **Appendix 3: Candidature and Ethics Committee Approval**

This Appendix is not included in this version of the thesis.

## **Appendix 4: Irish Association of Advanced Nurse and Midwife Practitioners Approval**

This Appendix is not included in this version of the thesis.

## **Appendix 5: ACNP Approval**

This Appendix is not included in this version of the thesis.

## Appendix 6: Statement and Survey Participant Information



### Statement and participant information letter for online survey email

**Name of Project:** Exploring leadership and research in Nurse Practitioner roles across Ireland and Australia.

**Institution:** Edith Cowan University, 270 Joondalup Drive,  
Joondalup WA 6027. Telephone: (61 8) 6304 0000

**Researcher:** PhD student Mary Ryder: [REDACTED]

**Principal Supervisor:** Dr. Elisabeth Jacob: [e.jacob@ecu.edu.au](mailto:e.jacob@ecu.edu.au)

Dear ACNP or IAANMP Member,

Your professional organisation has kindly sent you this email on my behalf, to request your participation in an online survey that I am conducting as part of my PhD.

My name is Mary Ryder and I am currently completing a Doctor of Philosophy degree at Edith Cowan University. I am a registered Advanced Nurse Practitioner in Ireland and an endorsed Nurse Practitioner (NP) in Australia. I am interested in exploring NP leadership and research activities in both Ireland and Australia.

The online survey involves answering 30 questions and should take no more than 20 minutes to complete. The survey has three sections. The first section will ask demographic questions, the second will ask you to identify leadership activities related to your role, and the third section will ask you about research activities related to your role.

Your involvement in the research is entirely voluntary and anonymous. You may choose to leave any questions unanswered. You are under no obligation to complete the survey. The results of this study will be used for my PhD thesis and published in

an academic journal and as such available for your viewing. There are no right or wrong answers; just the way you see the answers based on your current responsibilities. So please take a few minutes and complete this survey now. Your consent is implied on completion and submission of the survey. At the end of the survey you will be asked if you wish to participate in a telephone interview to expand on the information gathered from the survey. If you wish to consent to telephone interview, please enter your name and contact details at the end of the survey, you will then receive a consent form and information sheet about the interview.

The link for the survey is:

[https://ecuau.qualtrics.com/jfe/form/SV\\_8GiBXCmHUWOYtvf](https://ecuau.qualtrics.com/jfe/form/SV_8GiBXCmHUWOYtvf)

The study has been approved by Edith Cowan University, Human Research Ethics Committee. If you require any further information, please do not hesitate to contact:

<http://intranet.ecu.edu.au/research/research-ethics/contact>

Mary Ryder: [REDACTED] or alternatively contact my supervisor:

Dr. Elisabeth Jacob: [e.jacob@ecu.edu.au](mailto:e.jacob@ecu.edu.au)

## **Appendix 7: Nurse Practitioner Research and Leadership Survey and Informed Consent**

This Appendix is not included in this version of the thesis.

## **Appendix 8: Permission to use the Australian Nurse Practitioner Study Nurse Practitioner Survey**

This Appendix is not included in this version of the thesis.

## **Appendix 9: Permission to Use the Nurse Practitioner faculty research Survey**

This Appendix is not included in this version of the thesis.



## Appendix 10: Participant Information Letter for Interview



### Participant Information Letter for Interview

**Name of Project:** Exploring leadership and research in Nurse Practitioner roles across Ireland and Australia.

**Institution:** Edith Cowan University, 270 Joondalup Drive,  
Joondalup WA 6027. Telephone: (61 8) 6304 0000

**Researcher:** PhD student Mary Ryder: [REDACTED]

**Principal Supervisor:** Dr. Elisabeth Jacob: [e.jacob@ecu.edu.au](mailto:e.jacob@ecu.edu.au)

My name is Mary Ryder and I am currently completing a Doctor of Philosophy degree at Edith Cowan University. I am a registered Advanced Nurse Practitioner in Ireland and an endorsed Nurse Practitioner (NP) in Australia. I am interested in exploring your opinion on the role of NP in leadership and research within nursing.

#### Participation information

You are invited to participate in an interview of approximately 60 minutes. The interview will include the researcher and one participant. Your name will not be used during the recorded telephone interview. You are requested to verbalise your opinions on questions and topics raised during the interview. The interview will be recorded and transcribed verbatim. You will be offered an opportunity to verify the transcripts by email before data analysis.

Your involvement in the research is entirely voluntary. By signing the consent form, you have agreed to participate in a telephone interview. Participation in the interview will allow me to use your data in the research. You are free to withdraw your consent for the interview at any time.

#### Confidentiality

Your personal identity will remain confidential. Your privacy will be protected at all times. No identifying information will appear in any reports from the research. The information you provide will be maintained by the principal researcher in a secured locked cabinet for five years when it will then be destroyed. The information obtained will not be used in any other research project.

The study will be approved by Edith Cowan University, Human Research Ethics Committee (ref. no. 16418). If you require any further information, please do not hesitate to contact:

<http://intranet.ecu.edu.au/research/research-ethics/contact>

Mary Ryder: [mryder0@ecu.edu.au](mailto:mryder0@ecu.edu.au) or alternatively contact my supervisor:

Dr. Elisabeth Jacob: [e.jacob@ecu.edu.au](mailto:e.jacob@ecu.edu.au)

## Appendix 11: Informed Consent to Participate in Interviews



### Informed Consent to participate in interviews

**Name of Project:** Exploring leadership and research in Nurse Practitioner roles across Ireland and Australia.

**Institution:** Edith Cowan University, 270 Joondalup Drive,  
Joondalup WA 6027. Telephone: (61 8) 6304 0000

**Researcher:** PhD student Mary Ryder: [REDACTED]

**Principal Supervisor:** Dr. Elisabeth Jacob: [e.jacob@ecu.edu.au](mailto:e.jacob@ecu.edu.au)

- I have been provided with a copy of the Information Letter, explaining the research study and I have read and understood the information provided
- I have been given the opportunity to ask questions and have had any questions answered to my satisfaction
- I am aware that if I have any additional questions, I can contact the research team and I understand that participation in the research project will involve participation in a telephone interview that will be recorded and transcribed verbatim
- I understand that the information provided will be kept confidential, and secure and that my identity will not be disclosed without my consent
- I understand that any personal information which may identify me will be de-identified at the time of analysis
- I understand that the information provided will only be used for the purposes of this research project, and I understand how the information is to be used
- I understand that I am free to withdraw from further participation at any time, without explanation or penalty prior to publication of the data. In the event of withdrawing my consent any materials, written or recorded, collected from my participation will be destroyed and will not be used in the research project

- I understand I can contact the principal researcher and or supervisor at any time with additional inquiries if necessary
- I have read the above information and I freely agree to participate in the project
- I am over 18 years of age

If you have any complaints or reservations about any ethical aspects of this research project you may contact the Ethics Committee through the Ethics Complaints Officer at Edith Cowan University. Complaints will be treated in confidence and you will be informed of the outcome: <http://intranet.ecu.edu.au/research/research-ethics/contact>

Name of Participant \_\_\_\_\_

Signature of Participant \_\_\_\_\_

Date \_\_\_\_\_

## **Appendix 12: Submission to Contemporary Nurse Journal**

This Appendix is not included in this version of the thesis.

**Appendix 13: Response to reviewers of Contemporary Nurse: A Survey  
Identifying Leadership and Research Activities Among Nurse  
Practitioners**

This Appendix is not included in this version of the thesis.

## **Appendix 14: Qualitative Article**

Appendix 14 is not included in this version of the thesis.

## Appendix 15: Supplementary File 1: COREQ Checklist for Leadership and Research

Number	Item	Description	Page
<b>Domain 1: Research team and reflexivity</b>			
<b>Personal Characteristics</b>			
1	Interviewer	The first author conducted the interviews	
2	Credentials	The researcher has an MSc in Nursing, is a Nurse Practitioner, a Nurse Prescriber, a lecturer	1
3	Occupation	Director of Nurse Education & Practice Development and a PhD Student	1
4	Gender	The researcher was female	1
5	Experience and training	The researcher has previously used interviews for a masters' dissertation and two other research projects	n/a
<b>Relationship with participants</b>			
6	Relationship established	The researcher was also a Nurse Practitioner and had worked in both countries, therefore there was a deep understanding of participant issues. There was no working relationship with the participants. Relationship was established via telephone	6
7	Participant Knowledge of the interviewer	The participants were advised at the time of consent that the interviewer was completing the research as part of a PhD. Participants were also advised that the interviewer was a Nurse Practitioner and had experience working in the role in both countries.	n/a
8	Interviewer characteristics	The interview schedule and transcripts were reviewed by the research team to ensure the interviewer was objective.	6



<b>Domain 2: Study Design</b>			
<b>Theoretical Framework</b>			
9	Methodological orientation and theory	Inductive methodology was used to bring meaning to the phenomena of leadership and research for Nurse Practitioners. Data was analysed using the Braun and Clarke approach to thematic analysis.	5-7
<b>Participant Selection</b>			
10	Sampling	Purposive sampling was used willingness to participate was indicated at the end of a previous survey.	5
11	Method of approach	Participants were approached via email	5
12	Sample size	Ten participants were interviewed	6
13	Non-Participation	No email address was provided for eight participants. Five did not reply to the first email to request participation. An additional 15 participants were not contacted as data saturation had been reached.	5-6
<b>Setting</b>			
14	Setting of data collection	Nine interviews were conducted on the telephone at a time chosen by the participants. One participant requested a skype interview, again at a time chosen by the participant.	6
15	Presence of non-participants	Participants did not indicate that another person was present at the time of the interview.	n/a
16	Description of sample	Eight participants were in the 45-64-year-old age category whilst two were in the age category 25-44-year-old. Six participants were authorised to practice as NPs within	7

		the last five years, two within 5-10 years, and one in each category 10-15 years and 15-20 years respectively. Six participants stated they were research active, whilst four stated they were not. Participants worked in a variety of specialist areas including women's health, prison service, paediatrics, acute hospital care, mental health, midwifery and older person care. There was only one male participant. All but two participants worked as the only NP in their service.	
<b>Data Collection</b>			
17	Interview guide	The interview guide consisted of 11 open ended questions (Table 1). The questions were generated following data analysis of the previous survey responses. All participants were asked the same questions and were probed inductively on key responses, by using broadening or process questions	6
18	Repeat interviews	No repeat interviews were conducted	n/a
19	Audio/visual recording	Audio recording was used to collect the data.	6
20	Field notes	Field notes were made by the researcher during the interviews	n/a
21	Duration	Interviews varied between 26-48 minutes	6
22	Data saturation	Data saturation is discussed in the paper. Data saturation was reached after 10 interviews	7
23	Transcripts returned	All transcripts were returned to participants for accuracy, verification and to ensure identity was protected.	6

Domain 3: Analysis and findings			
Data Analysis			
24	Number of data coders	One person coded the data. All codes were discussed and agreed with the research team. NVivo software was used for data analysis.	7; Table 2
25	Description of the coding tree	A description of coding is provided in the article. The coding trees are represented in diagrams.	7; Figure 1
26	Derivation of themes	Themes were derived from the data	7
27	Software	NVivo for Mac 11.4.3 was used to manage the data.	7
28	Participant checking	Participants have not been consulted with the findings	n/a
Reporting			
29	Quotations presented	Participant quotations were presented to illustrate the themes. All quotations are identified using a participant number.	8-19
30	Data and findings consistent	There is consistency between the data presented and the findings	8-19
31	Clarity of major themes	Major themes are clearly presented in the findings	8-19; Figure 1
32	Clarity of minor themes	Descriptions of minor themes are discussed in the findings	8-19; Table 2

## Appendix 16: Poster Presentation 1: RCSI 38<sup>th</sup> Annual International Conference

Declaration:

I, Mary Ryder contributed to the research by obtaining ethical permission to conduct the research; designing the survey; distributing the survey; conducting statistical analysis of the data; writing the conference abstract; designed prepared the publication entitled

Ryder, M., Jacob, E., Hendricks, J. (2019) Leadership and Research Activities of Nurse Practitioners: Ireland and Australia. Poster Presentation. *RCSI 38<sup>th</sup> Annual International Conference*, January 2019, Dublin, Ireland.

[Redacted signature]

I, as a Co-Author, endorse that this level of contribution by the Candidate indicated above is appropriate.

[Redacted signature]

*Associate Professor Elisabeth Jacob Australian Catholic University 29/06/20*

[Redacted signature]

*Associate Professor Joyce Hendricks, Central Queensland University, 29/06/20*



## Leadership and Research Activities of Nurse Practitioners: Ireland and Australia

Mary Ryder, RANP, MSc Nursing (Advanced Practice<sup>1,2</sup>; A/Prof. Elisabeth Jacob<sup>2</sup>, PhD; A/Prof Joyce Hendricks<sup>2,3</sup>, PhD  
 1. University College Dublin, St. Vincent's University Hospital, Dublin, Ireland. 2 Edith Cowan University, Western Australia. 3 Central Queensland University, Queensland, Australia.

**Introduction:** Nurse Practitioners (NP) are identified as the ideal conduit to transform healthcare delivery internationally. Healthcare transformation requires the application of leadership and research skills. The literature to date has limited information on NPs as leaders or researchers in the nursing profession.

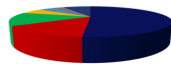
### Aims & Objectives:

- Establish the leadership and research activities of NPs in Ireland and Australia.
- Establish if there is a difference in leadership and research activities of NPs in Ireland and Australia.
- Identify if there is a relationship between leadership and research activities.

### Methods:

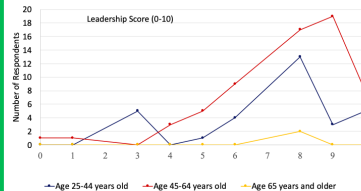
An electronic cloud-based survey was developed by amalgamating two separate survey tools to measure NP work and research. Leadership activities previously identified in Ireland were included in a Likert scale. The survey was distributed to NPs in Ireland and Australia between May and June 2017.

### Comparison of Percentage of NP work time allocation

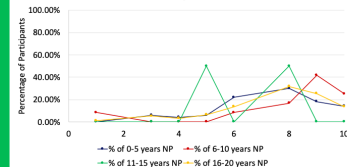


- Direct patient care
- Administration and management
- Education of patients
- Education of nurses
- Education of medical/and/or allied health colleagues
- Research
- Other

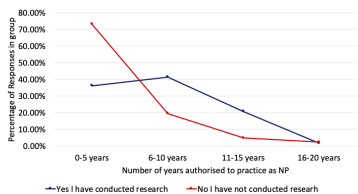
### Leadership Score and Age Category



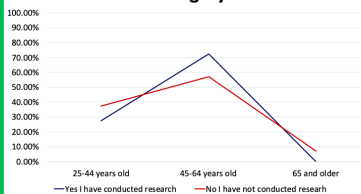
### Leadership Score for years authorised to practice as NP



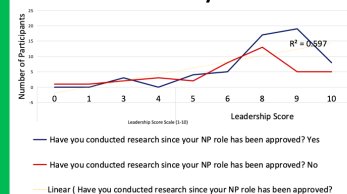
### Research Activity and Years Authorised to Practice as NP



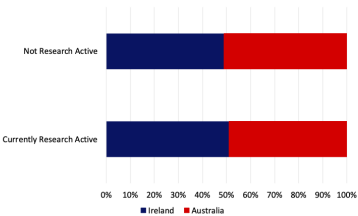
### Research Activity and Age Category



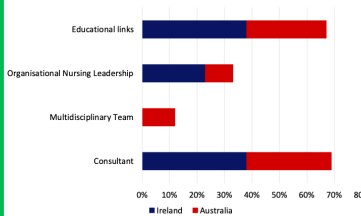
### Leadership Score and Research Activity



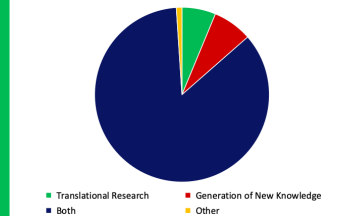
### Research Activity per Country



### Research Support Per Country



### Research for Nurse Practitioners



**Conclusion:** Nurse Practitioners in both Ireland and Australia identify themselves as leaders of the nursing profession. NP work practices are primarily focused on provision of direct patient care. Research activity is lacking among NPs. Leadership ability influences research outcomes for NPs in both Ireland and Australia.

## **Appendix 17: Poster Presentation 2: RCSI 38<sup>th</sup> Annual International Conference**

Declaration:

I, Mary Ryder contributed to the research by obtaining ethical permission to conduct the research; conducting interviews; transcribing interview recordings; conducting thematic analysis of the data; writing the conference abstract; designed and printed the poster to the publication entitled

Ryder, M., Jacob, E., Hendricks, J. (2019) Exploring how Nurse Practitioners implement Leadership & Research. Poster Presentation. *RCSI 38<sup>th</sup> Annual International Conference*, January 2019, Dublin, Ireland.

[Redacted]

I, as a Co-Author, endorse that this level of contribution by the Candidate indicated above is appropriate.

[Redacted]

*Associate Professor Elisabeth Jacob, Australian Catholic University 29/06/20*

[Redacted]

*Associate Professor Joyce Hendricks, Central Queensland University, 29/06/20*



## **Appendix 18: Poster Presentation International Council of Nurses Conference.**

Declaration:

I, Mary Ryder contributed to the research by obtaining ethical permission to conduct the research; conducting interviews; transcribing interview recordings; conducting thematic analysis of the data; writing the conference abstract; designed and printed the poster to the publication entitled

Ryder, M., Jacob, E., Hendricks, J. (2019) Nurse Practitioners views on leadership and research. Poster Presentation. *ICN Congress 2019*. June 2019, Singapore.



I, as a Co-Author, endorse that this level of contribution by the Candidate indicated above is appropriate.



*Associate Professor Elisabeth Jacob, Australian Catholic University, 29/06/20*



*Associate Professor Joyce Hendricks Central Queensland University, 29/06/20*





## **Appendix 19: Oral Presentation, International Council of Nurses Conference**

Declaration:

I, Mary Ryder contributed to the research by obtaining ethical permission to conduct the research; designing the survey; distributing the survey; conducting statistical analysis of the data; writing the conference abstract; designed and presented the publication entitled

Ryder, M., Jacob, E., Hendricks, J. (2019) Nurse Practitioner Leadership and Research. Oral Presentation. *ICN Congress 2019*. June 2019, Singapore



I, as a Co-Author, endorse that this level of contribution by the Candidate indicated above is appropriate.

A redacted signature box for Associate Professor Elisabeth Jacob.

*Associate Professor Elisabeth Jacob, Australian Catholic University 29/06/20*

A redacted signature box for Associate Professor Joyce.

*Associate Professor Joyce, Central Queensland University, 29/06/20*

# Mary Ryder

RANP, RNP MSc Nursing (Advanced Practice)  
A/Prof.. Elisabeth Jacob, PhD  
A/Prof. Joyce Hendricks, PhD

## Nurse Practitioner Leadership and Research Activity C13 - Advanced Practice

### Background



Nurse Practitioners are identified as the ideal conduit to transform healthcare delivery internationally.



Healthcare transformation requires the application of leadership and research skills.



The literature to date has limited information on NPs as leaders or researchers in the nursing profession.

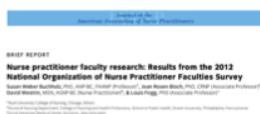


#ICNcongress



# Design

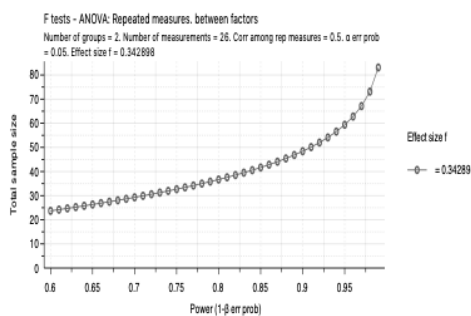
- An anonymous electronic survey was used using cloud-based software Qualtrics®
- The instrument was developed from a modified version of two validated instruments:
  - Australian Nurse Practitioner Study Nurse Practitioner Survey (Gardner et al 2009)
  - The National Organization of Nurse Practitioner Faculties (NONPF) Research Special Interest Group (SIG) Survey (Buchholz et al 2012)
- Leadership activities described in the SCAPE report were used using a Likert scale
- Final instrument 30 items:
  - Demographics (9),
  - Professional development (6),
  - Leadership (2), covering 26 measurements
  - Research (11)



# Methods



- A purposeful sample was used for the research. The sample was determined by eligibility criteria in both Ireland and Australia which includes:
  - Having practiced as a Nurse Practitioner in Ireland or Australia within the last five years
  - Being a current member of an NP professional association.
- Power analysis using f-test ANOVA repeated measure between factors identified 85 participants were required for 95% confidence interval
- Following Research Ethics Approval data was collected in May and June 2017 from members of two professional NP national associations.





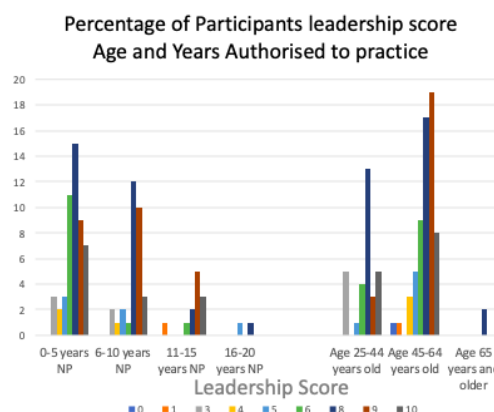
# Demographics Results

		Australia	Ireland	Total
Sex	Male	13	3	16
	Female	61	19	80
Age Category	25-44 years of age	17	12	29
	45-64 years of age	54	10	60
	65 years or older	3	0	3
Number of Years Authorised to Practice	0-5 years	32	16	48
	6-10 years	28	4	32
	11-15 years	12	1	13
	16-20 years	1	1	2

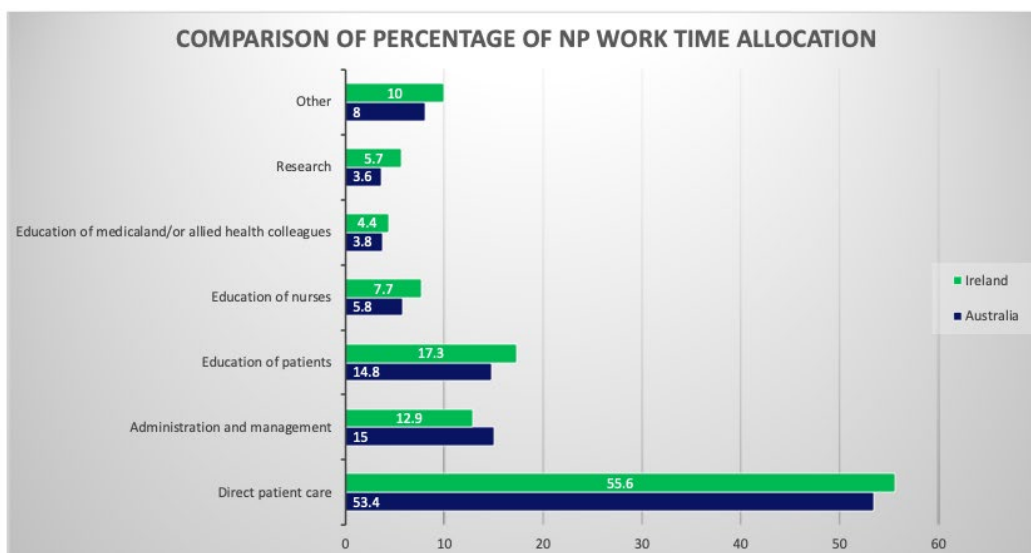
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# Leadership Results

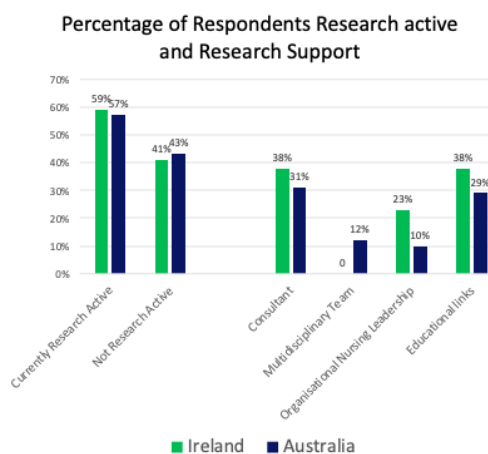
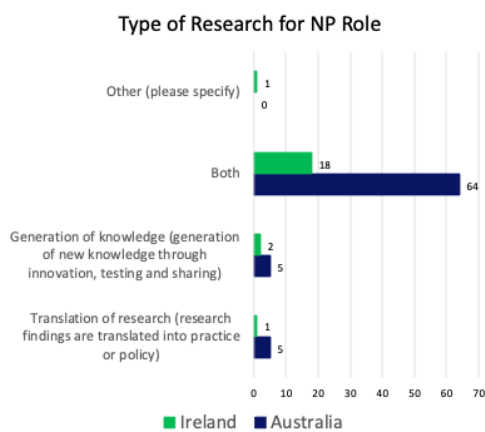


#ICNcongress



#ICNcongress

## Research Results

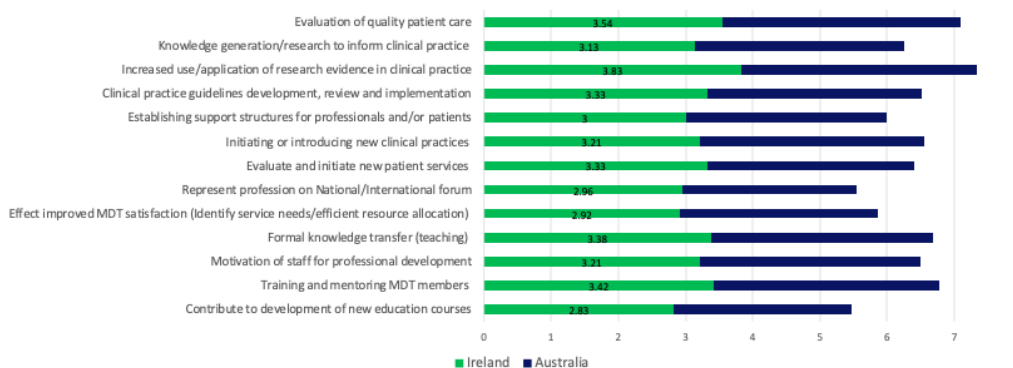


#ICNcongress



# Leadership Activity Between Countries

### Compare Mean leadership activity between country

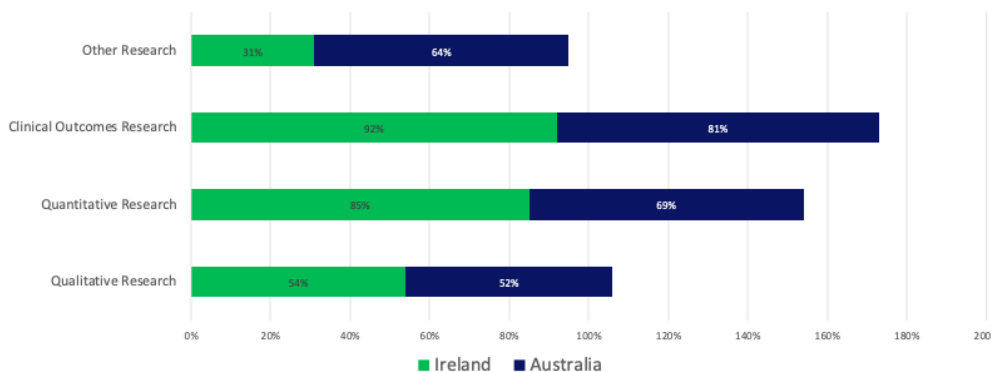


#ICNcongress



# Research Activity Between Country

### Percentage of Research Activities



#ICNcongress



#ICNcongress

## Conclusion

Nurse Practitioners in both Ireland and Australia identify themselves as leaders of the nursing profession.

NP work practices are primarily focused on provision of direct patient care.

Research activity is lacking among NPs.

Leadership ability influences research outcomes for NPs in both Ireland and Australia.



Follow **@ICNurses** on Twitter and use **#ICNcongress** on Social Media!





**Appendix 20: Poster Presentation, Australian College of Nurse Practitioners Conference**

Declaration:

I, Mary Ryder contributed to the research by obtaining ethical permission to conduct the research; designing the survey; distributing the survey; conducting statistical analysis of the data; writing the conference abstract; designed and prepared the publication entitled

Ryder, M., Jacob, E., Hendricks, J. (2019) A Survey of Leadership and Research activities of Nurse Practitioners. Poster Presentation. *ACNP National Conference - Transforming Healthcare*. September 2019, Melbourne, Australia. Winner of Best Poster.



I, as a Co-Author, endorse that this level of contribution by the Candidate indicated above is appropriate.



*Associate Professor Elisabeth Jacob, Australian Catholic University 29/06/20.*



*Associate Professor Joyce Hendricks, Central Queensland University, 29/06/20*



Authors: Ryder, M<sup>1</sup>.; Jacob, E<sup>2</sup>.; Hendricks, J<sup>3</sup>.  
<sup>1</sup>UCD, Ireland, <sup>2</sup>ECU, WA, <sup>3</sup>CQU, QLD



UCD School of Nursing, Midwifery and Health Systems

**Introduction**

Nurse Practitioners (NP) provide improved access to quality healthcare for identified patient populations. NPs are identified as the ideal conduit to transform healthcare delivery internationally. Transforming healthcare requires the application of leadership and research skills. The literature to date has limited information on NPs as leaders or researchers in the nursing profession.

**Aims**

1. Identify Leadership and research activities of NPs in Ireland and Australia.
2. Establish if leadership and research activities are the same for NPs in Ireland and Australia
3. To ascertain if there is a link between NP leadership and research.

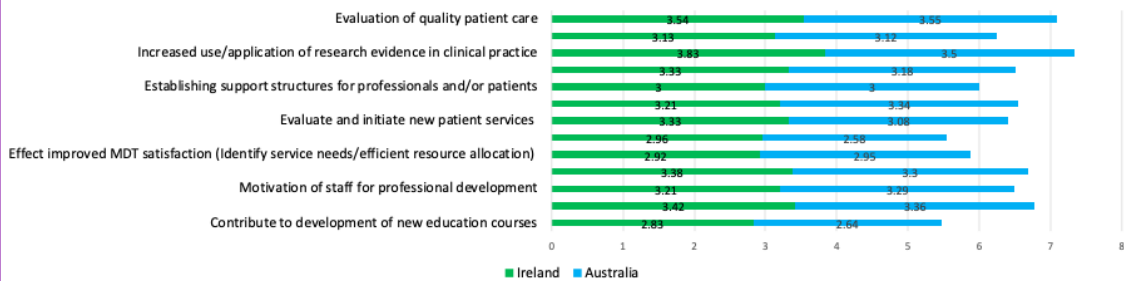
**Methods:** An anonymous electronic survey was used. Data was collected in May and June 2017 from members of two professional NP national associations.

# A survey of leadership and research activities of Nurse Practitioners

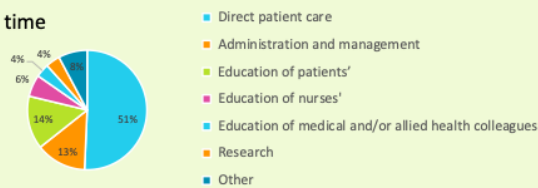
**Results:**

96 (77%) valid responses Mean Leadership Score 7.5 (0-10), participants from both countries identified themselves as leaders. Leadership score significantly increased with each age category and number of years authorized to practice as NP. Leadership and research activities for NPs in both countries were similar.

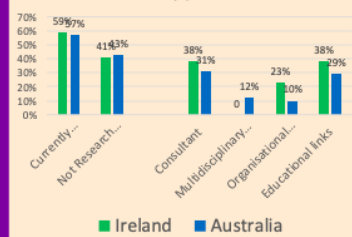
Compare Mean leadership activity between country



Mean % of work time



Percentage of Respondents Research active and Research Support



**Conclusion:**

Nurse Practitioners in both Ireland and Australia identify themselves as leaders of the nursing profession. NP work practices are primarily focused on provision of direct patient care. Research activity is lacking among NPs. Leadership ability influences research outcomes for NPs in both Ireland and Australia. Research support increases research activity.

References: Buchholz, S. W., Bloch, J. R., Westrin, D., & Fogg, L. (2015). Nurse practitioner faculty research: Results from the 2012 National Organization of Nurse Practitioner Faculties Survey. *Journal of the American Association of Nurse Practitioners*, 27(12), 664-670. Elliott, N., Higgins, A., Begley, C., Lalor, J., Sheerin, F., Coyne, J., & Murphy, K. (2013). The identification of clinical and professional leadership activities of advanced practitioners: findings from the Specialist Clinical and Advanced Practitioner Evaluation study in Ireland. *J Adv Nurs*, 69(5), 1037-1050. Gardner, G., Gardner, A., Middleton, S., & Della, P. (2009). AUSPPAC: The Australian Nurse Practitioner Study. Australia



## **Appendix 21: Oral Presentation, Australian College of Nurse Practitioners Conference**

Declaration:

I, Mary Ryder contributed to the research by obtaining ethical permission to conduct the research; conducting interviews; transcribing interview recordings; conducting thematic analysis of the data; writing the conference abstract; designed and presented the publication entitled

Ryder, M., Jacob, E., Hendricks, J. (2019) Nurse Practitioner Perceptions on Leadership and Research. Oral Presentation. *ACNP National Conference - Transforming Healthcare*. September 2019, Melbourne, Australia.



I, as a Co-Author, endorse that this level of contribution by the Candidate indicated above is appropriate.

A rectangular box containing a handwritten signature.

*Associate Professor Elisabeth Jacob Australian Catholic University 29/06/20*

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*Associate Professor Joyce Hendricks Central Queensland University, 29/06/20*

# Nurse Practitioners perceptions on leadership and research

Mary Ryder, RANP, RNP,  
Supervisors Associate Professor Elisabeth Jacob and  
Associate Professor Joyce Hendricks

Conference App: acnp19

Tweet Us @acnp\_national #acnpnational



## Background



NP Solution  
to spiraling  
costs

Implementing  
change requires  
leadership



Researching  
outcomes of change  
contributes to  
healthcare  
knowledge



Leadership and  
Research are core  
components of NP role



NP Role in IRL and AUS  
is highest clinical  
nursing role. Similar  
framework.

Conference App: acnp18

Tweet Us @acnp\_national @WePublicHealth #acnpnational



## Aims



- To explore Irish and Australian Nurse Practitioners (NP) understanding of leadership and research in their roles.
- To explore how NPs implement leadership and research into their roles.
- To identify opportunities and barriers to leadership and research in the NP role.

Conference App: acnp18

Tweet Us @acnp\_national @WePublicHealth #acnpnational



## Methods

A qualitative inductive research methodology, using an interpretative descriptive approach. Inductive methodology was used to bring meaning to the phenomena through the subjective views of participants.



Conference App: acnp18

Tweet Us @acnp\_national @WePublicHealth #acnpnational



## Data Collection



How do NPs implement leadership and research in nursing? Is there a difference in how leadership and research are demonstrated between NP in Ireland and Australia?

Item	Topic
1	Examine NPs perceptions of leadership within their role <ol style="list-style-type: none"> <li>Explain your understanding of leadership in the NP role?</li> <li>Describe an incident where you were able to or should have been demonstrate leadership in your role as a NP</li> <li>One of the roles of NP is to bring about change s in health care—Can you give me an example of how you have fulfilled this?</li> <li>Can you give me an example (s) of the opportunities and challenges you have encountered when fulfilling the role of change agent in health care?</li> </ol>
2	Examine NPs perceptions of research within the NP role <ol style="list-style-type: none"> <li>Explain your understanding of undertaking research in the NP role?</li> <li>Describe an incident where you were able to or should have been demonstrate doing research in your role as a NP</li> <li>Research is a part of the NP's role. What is your understanding of the type of research NP's should undertake?</li> <li>Have you been the principal investigator in any research? If so what type?</li> <li>Can you describe opportunities and barriers you have encountered to doing research; and; how can NPs maximise or overcome these?</li> <li>Do you think NPs have a role in sharing the findings of research they are doing? If so how do you feel this should occur?</li> <li>Describe your understanding of NP's research leadership</li> </ol>



Lacono et al., 2016; Ward, Gott, & Hoare, 2015; Oltmann, 2016; Guest et al 2016; Clark et al., 2017



Conference App: acnp18

Tweet Us @acnp\_national @WePublicHealth #acnpnational

## Data Analysis

Phase	Application of steps
1. Familiarisation with data	The researcher conducted the interviews but became re-familiar with the data listening to the recordings and jotted down initial thoughts and ideas whilst transcribing, editing and verifying transcripts. Verified transcripts were shared with research supervisors
2. Generating initial codes	The researcher exported the transcripts to NVIVO for Mac (11.4.3) software and began to manually generate initial codes whilst re-reading transcripts using an inductive approach where codes were generated without a pre-existing framework
3. Searching for themes	Visual hierarchy charts of collated codes and were explored using NVIVO software and maps of potential themes were generated
4. Reviewing themes	Two primary themes were identified as the overarching focus of the interview questions was leadership and research; however, additional major themes were also present  All identified themes were explored and searched in the hierarchy charts exploring the codes and sources and the dataset as a whole  Thematic maps were produced of themes, codes and their relationships  Themes were reviewed, discussed and agreed with research supervisors
5. Defining and naming themes	Ongoing review of codes and individual datasets refined the themes and provided clear definitions for each emerging theme. When the analysis of each data set was completed, the themes were compared across all data sets. The process was completed and validated with research supervisors

Ryder et al (2019)

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# Results



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## Innovative Leadership

- **More than just leadership:** capabilities at adapting skills and experience to change services  
 “What we’re doing at the moment is we’re trying to setup transitional services” IRL 4  
 “I’ve just introduced a new model of care” AUS 3
- **NP work:** autonomy and independence  
 “I have total autonomy, I see my own patients, I make my own diagnosis, I prescribe my own medication.” AUS 4
- **Clinical Focus:** Improving patient experiences  
 “I think we lead in terms of developing care pathways and practices” IRL 5
- **Trailblazers:** Pioneers and breaking traditional mould of nursing  
 “the role is that bit different, you are straddling the two roles.” IRL 3

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## Research

- **Research Role:** Very mixed response  
 “I couldn’t face doing any research now.” AUS 5  
 “Its audit and change of practice that absolutely counts.” IRL 2  
 “We do research all the time really” AUS 2
- **Research Challenges:** Confidence  
 “Over time I will pluck up the courage” IRL 2  
 “I think of ethics and instantly I’m like...I’m done” AUS 3
- **Research Opportunities:** A desire for support  
 “it made a massive difference to me to be working with people who were research minded” IRL 1
- **Research Leadership**  
 “I guess leading the way” AUS 1

## Resilience

“the ability to persist in the face of challenges and to bounce back from adversity” (Reivich, Seligman, & McBride, 2011, p. 25).

- **Resistance:** Generally from nursing

“nurses have a reputation for eating their own young” AUS 4

“Seen as a trouble maker, seen as pushing the boundaries” IRL 3

“we don’t fit in to typical management structures.” AUS 4

- **Isolation:** Often sole practitioner

“I just felt very isolated” AUS1, IRL1, AUS 2, AUS 4, IRL 4

- **Positive Support:** Gradual acceptance

“They are gradually buying in.” IRL 2

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## Optimism

- **Pride in achievements**

“I’ve changed quite a lot in the last couple of years” AUS 3

“Developing the DVT pathway and taking leadership on it and driving it forward” IRL 5

- **The future of the NP role**

“I think the time has come for us to be a little bit more vocal on the political side of things in terms of how services are constructed, what the possibilities are for nursing within a new health service and where we have the vision for nursing to go.” IRL 3

- **Continued Innovation**

“We’re pushing forward with that pathway all the time and now the next step” IRL 5



## Conclusion



Participants identified themselves as clinical leaders focused on direct patient care.



The NP role was misunderstood.



Support from nursing academics and management was identified as a research opportunity.



Confidence in research abilities was a barrier to research.



The NP role was similar in Ireland and Australia.

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Thank you  
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