DCU School of Nursing, Psychotherapy and Community Health

Title: An Exploration of the Levels of Clinical Autonomy amongst Advanced Nurse Practitioners in Ireland.

By

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This Thesis is submitted to Dublin City University to fulfil the requirements for the degree of Doctor of Philosophy.

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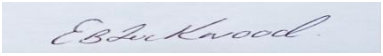
January 2022

Declaration

I hereby certify that this material, which I now submit for assessment to the programme of study leading to the award of Doctor of Philosophy is entirely my own work, and that I have exercised reasonable care to ensure that the work is original, and does not to the best of my knowledge breach any law of copyright, and has not taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of my work.

Signed:  ID No: 18213330 Date: 12th January 2022.

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List of Abbreviations

Abbreviation	Explanation
ADON	Assistant Director of Nursing
AHP	Allied Health Professionals
ANP & RANP	Advanced Nurse Practitioner
ANPC	Advanced Nurse Practitioner Candidate
CNS	Clinical Nurse Specialists
CNM3	Clinical Nurse Manager 3
CNM2	Clinical Nurse Manager 2
CPA	Collaborative Practice Agreement
CPD	Continual Professional Development
CT	Computer Tomography
CXR	Chest X-Rays
DoH	Department of Health
DoHC	Department of Health and Children
DON	Director of Nursing
MAU	Medical Assessment Unit
MRI	Magnetic Resonance Imaging
MDT	Multidisciplinary Team
NCNM	National Council for the Professional Development of Nursing & Midwifery
NMBI	Nursing and Midwifery Board of Ireland
NMPDU	Nursing and Midwifery Planning and Development Unit
OPD	Outpatients Department
RANP	Registered Advanced Nurse Practitioner
RAMP	Registered Advanced Midwife Practitioner
SHO	Senior House Officer

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Acknowledgements

Firstly, thank you to my supervisors Dr Daniela Lehwaldt and Dr Mary Rose Sweeney. They have inspired my self-determination that this study matters. Their ability to bring out the best in my adeptness as a supervisor is a wonderful gift to a complex process. I am eternally grateful.

I would especially like to acknowledge all of the Advanced Nurse Practitioners in Ireland who participated in this study, I am so grateful to them all for their contributions and assistance especially in the middle of the COVID-19 pandemic. With gratitude to the Advanced Nurse Practitioner trailblazers particularly previous project officer Ms Karen Brennan.

Many thanks to Dr Thérèse Leufer my PhD transfer examiner her advice and encouragement was so very valuable. Also with gratitude and immense thanks to my Viva examiners Prof Anthony Staines and Dr Verna Hendricks-Ferguson and my Viva chair Dr Patricia Johnson. Thanks to senior technician officer Mr Patrick Doyle, DCU for all of your help. With thanks to my independent panel chair Dr Pamela Hussey and Prof Anne Matthews. With thanks to Dr Madrean Schober a global Advanced Nursing Practice consultant and a wise owl.

Thanks to Dr Mark White, who has been a good friend and professional colleague from the beginning and end of this PhD journey. Many thanks to the NMPDU Kilkenny and Dr Judy Ryan who supported and part-funded this study. Also with thanks to the Irish Association of Advanced Nurse Midwife Practitioners for their support in this study. With thanks to DCU, who part-funded the final year. Additionally, with thanks to Mr Horani for statistical advice.

Furthermore, I would like to mention and thank University Hospital Waterford and most sincerely all of my Advanced Nurse Practitioner colleagues. Particular gratitude to the Director of Nursing, Ms Orla Kavanagh, for her continued support and championing my abilities and continuing professional development.

With thanks to all my good friends. A very special thank you to friends Róisín and Niamh Briggs, who took the time to read this thesis. Your feedback, support and comments were invaluable, but most of all your time.

I dedicate this PhD thesis to my Mum and Dad. My mum was a nurse who led the way in my nursing career choices. Also, with thanks to my sister Hannah, Barry, Freddie, and Lilly. My twin Aunties Mary and Bernie and Uncle Fintan, they hold the gift of kindness. I cannot forget Scoobie, my loving black Labrador that has spent many hours by my computer snoring and often sighing, trying to get my attention to go for a swim.

To my wonderful Uncle Bill who dedicated his life as head of props at the Royal Shakespeare Theatre for 40 years and encouraged me greatly he often reminded me ‘it’s all about the stage darling the stage’ *‘we are such stuff as dreams are made on’* (The Tempest, William Shakespeare). Mr William Robert Lockwood (RIP) ‘Uncle Bill’ who passed away a few days after my PhD graduation. He was so proud.

Abstract

An Exploration of the Levels of Clinical Autonomy amongst Advanced Nurse Practitioners in Ireland.

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Background: In Ireland and across all continents, we are experiencing significant shifts in healthcare population profiles with longer life expectancies and people living with a myriad of chronic illnesses. Advanced nursing practice has been viewed as one 'panacea' for solutions to the healthcare crisis first established in Ireland in 2002. There is, however, a lack of understanding of advanced nurse practitioners (ANP) clinical autonomy.

Aim: This study set out to explore the levels of clinical autonomy amongst ANPs in Ireland.

Methods: A cross-sectional study design was used in a representative National sample of ANPs in Ireland across the full range of healthcare settings. A bespoke quantitative survey instrument was developed and administered to the sample ANPs. This was informed by a literature review, an existing scale measuring ANP clinical autonomy and a new bespoke advanced nurse practitioner clinical autonomy in practice scale (ANPCAPS) developed for this study. As part of the survey, open comments about ANPs views of their clinical autonomy were captured and informed by thematic analysis and mind mapping.

Results: One hundred and forty-eight ANPs completed the survey giving a response rate 33% of all ANPs Nationally.

The findings illustrate high and extremely high levels of clinical autonomy impact in areas such as completing full episodes of care, discharging patients with or without a physician's consultation and independently referring onwards to other specialists. ANPs clinical autonomy requires clear understanding and collaboration to reduce constraints to their role. High and extremely high levels of ANP clinical autonomy were significant in ANPs with longer ANP experience. There were no differences between gender and ANP clinical autonomy.

Recommendation for Education: Educational strategies at the undergraduate and postgraduate levels should foster ANP self-determination and resilience approaches. Increasingly experienced ANPs with a hybrid ability between educational and ANP active clinical practice is critical to improve ANP clinical autonomy to its fullest capacity.

Recommendation for Policy Makers: Encourage ANP structures with an ethos of embracing a generic advanced practice strategy rather than speciality or silo developments. Organisational supports are necessary after the ANP has registered to enable effective transition into their ANP clinical autonomy. Following qualification a six month internship is a strong recommendation of this study.

Recommendation for Organisational Policy: All Irish Healthcare organisations and universities should encourage ANP full utilisation and realistically prepare ANPs clinical autonomy. Organisational culture can constrain ANPs when there are limited supports and a lack of knowledge regarding ANP clinical autonomy. Utilising experienced ANPs in newer role developments should be encouraged.

Conclusion: This study underlines several fundamental motivators required to encourage, fully utilise and sustain clinical autonomy: competence, relatedness, and autonomy.

Chapter One - Introduction

1.1 Introduction

Chapter one presents this study: exploring advanced nurse practitioners (ANP) clinical autonomy in Ireland. The characteristics of ANP clinical autonomy and a brief discussion of the global and national focus of the ANP is explained. This study's meaning and terms of ANP, and ANP clinical autonomy are identified in the study definitions. The chapter also reveals the researchers' personal experiences, the motivation for the study, the epistemological and ontological position of the researcher, and the research question, aims, and objectives. Finally, the layout of the chapters to follow are outlined. Firstly, section 1.2 will briefly discuss the development of ANPs in the healthcare system.

1.2 ANP Clinical Autonomy Introduction

Globally the healthcare system is in crisis, with the World Health Organization (WHO) (2014) estimating that by the year 2030 the demand for health workers will have risen to 80 million with a worldwide shortage of around 18 million, more than one in five of the people needed (Britnell, 2019). Nevermore have health professionals been required to practice at the upper limits of their clinical licence, which regulators encourage (WHO, 2014; Britnell, 2019).

Hippocrates (460-370) considered an oath (historically taken by physicians) to 'do no harm' and 'improve patients health' within the realms of safeguarding the patient (Markel, 2004), which is still relevant today. In the current day, this extends to other healthcare professionals in the determination of a changing clinical autonomy and professionals' levels of independent

practice. Indeed the public safeguard is to ensure that clinical autonomy is given to only those that possess expert knowledge and that the practitioner is educated to the required level and is equipped with legal professional qualifications within the realms of safe practice (Turner, Keyzer and Rudge, 2007; Baille and Maxwell, 2017).

The European Union (EU) documents regarding the nursing profession is a Directive of 2005 (amended in 2013) which recognises professional qualifications, to enable mutual recognition of nursing qualifications among EU countries (Directive 2013/55/EU). For example, in Ireland, the Nursing and Midwifery Board of Ireland (NMBI) registers ANP on the NMBI register and has deemed the ANP educationally and professionally credentialed to practice within their own right and independent practice (NMBI, 2017).

Over many decades ANP's have been reported as a 'panacea' to health access, service, and budgeting (Schober, 2017; Kazakidis and Kryczka, 2021). The implementation of the role has however, been perturbed with strategic debates, professional boundary challenges and role confusion (Begley et al., 2013; McDonnell et al., 2015; MacLellan, Levett-Jones and Higgins, 2016). ANPs have narrated a 'straddling' in-between medicine, nursing and other allied health professions resulting in the underutilisation of ANP clinical autonomy (McDonnell et al., 2015; MacLellan, Levett-Jones and Higgins, 2016; Ryder, Jacobs and Hendricks, 2019; Lockwood et al., 2021). The debates have been expansive in the empirical literature, with little mention of ANP clinical autonomy in the strive for ANP capacity-building and implementation strategies (Gerrish, McDonnell and Kennedy, 2013; Weiland, 2015; MacLellan, Lovett-Jones and Higgins, 2016).

This thesis explores ANP clinical autonomy in the Irish context by utilising the 'Dempster Practice Behavioural Scale' (DPBS) (Dempster, 1990). Furthermore, this PhD study has explicitly developed a bespoke 'Advanced Nurse Practitioner Clinical Autonomy in Practice Scale' (ANPCAPS). Additionally, thematic analysis (Braun and Clarke, 2006) reported verbatim comments by the practitioners themselves. Deci and Ryan's (2008) 'self-determination' theory (SDT) is the scaffold to the conceptual framework of this study. The following section will discuss competencies to ANPs in Ireland.

1.3 Competencies for Advanced Practice Nursing in Ireland

In 2017, the NMBI published the *Advanced Practice (Nursing) Standards and Requirements* (NMBI, 2017). These requirements set out the following competencies: maintaining professional values and conduct of the advanced nurse practitioner; clinical decision-making skills, knowledge and cognitive competencies, communication and interpersonal competencies, management and team competencies, leadership and professional scholarship competencies (NMBI, 2017). The ANP must also demonstrate accountability and responsibility for professional practice and, as lead healthcare professionals, articulate safe boundaries and referrals with collaboration if needed; leadership to support the well-being and health of those with acute and chronic disorders, disability, distress and life-limiting conditions; and articulate and promote the ANP role in clinical, political and professional contexts (NMBI, 2017; Office of the Nurse and Midwifery Services Director (ONMSD), 2020). Interestingly when the ANP role was initially developed in Ireland, autonomy was a central core concept which was subsequently removed from the ANPs domains of practice in 2017 (NCNM, 2008; NMBI, 2017).

The level of clinical decision-making competencies includes a comprehensive, holistic health assessment, using evidence-based frameworks to determine a diagnosis and inform autonomy, and utilising diagnostic investigations to inform clinical decision-making and display comprehensive knowledge of therapeutic interventions, including pharmacological and non-pharmacological advanced nursing interventions (NMBI, 2017). Furthermore, knowledge and cognitive competencies which embrace extensive clinical experience, ongoing reflection, clinical supervision, and engagement in continuous professional development are requirements from NMBI (Aiken et al., 2008; NMBI, 2017).

Communication and interpersonal skills competencies are also required by the ANP, who must maintain effective communication with the healthcare team by the legal, professional, and regulatory requirements (NMBI, 2017). The ANP is expected to facilitate clinical supervision, mentorship and utilise information technology by legislative and organisational policies (NMBI, 2017; Canadian Nurses Association (CNA), 2019). The management and team competencies require the ANP to manage risk for those who access the service through collaborative risk assessments and promoting a safe environment. The NMBI also recognises the importance of leadership and professional scholarship competencies and provides details of these in its *Advanced Practice (Nursing) Standards and Requirements* (NMBI, 2017). Requirements of clinical leadership include engagement in health policy development; implementation and evaluation; identifying gaps in the provision of care and services about the ANP area of specialism; and leading in the management and implementation of change (Aiken et al., 2008; Chang et al., 2010; Nursing and Midwifery Board of Australia (NMBA, 2014; NMBI, 2017; CNA, 2019). The following sub section will discuss collaborative practice agreements (CPA).

1.3.1 Collaborative Practice Agreements

Historically, ANP CPA have been attached to physicians registration which has been a contentious issue in many countries, particularly reports of the CPA's constraining ANP clinical autonomy (Sangster-Gormley et al., 2011; Faraz, 2017; Torrens et al., 2020; Lockwood et al., 2021). The New Practice Standards and Guidelines for Nurses and Midwives with Prescriptive Authority in Ireland (MBI, 2019) integrated removal of CPA attachment to a physicians registration (NMBI, 2019). The Board of the NMBI approved removing CPAs in 2017 as a requirement for nurses and midwives registration and authority to prescribe. The clinical governance for prescribing medicinal products is now determined by the local health service provider's medicinal product prescribing policy, procedures, protocols, or guidelines (PPPGs).

The registered nurse or midwife prescriber must prescribe within their scope of practice and continue maintaining and demonstrating their competency while fulfilling their role (NMBI, 2017). The registered nurse or midwife prescriber must also continue to audit their prescribing practice, and this must be documented and reported to the person who has the overall responsibility and authority for the governance of the registered nurse or midwife specified in their health service provider (NMBI, 2017). The Director of Nursing/Midwifery/Public Health Nursing/Services or their designated person, must have overall responsibility and authority for the governance of registered nurse and midwife prescribing to ensure due diligence in their health service provider (NMBI, 2017; ONMSD, 2021). The following section will discuss the educational requirements for ANPs.

1.4 Educational Requirements of Advanced Nurse Practitioners

There is a general requirement that nurses registered as ANP have undertaken extended post-registration education and hold a minimum of a master's degree in most countries (Begley et al., 2013; Elliott et al., 2016; Steinke et al., 2017). Given the depth of their knowledge in their area of practice, ANP not only operate in a clinical function, but they are also tasked with roles in leadership, management, education, and research (Elliott et al., 2016; NMBI, 2017; Steinke et al., 2017). In addition to, qualifying as a registered nurse or midwife, ANP candidates must have completed a minimum of two years post registration in the specialist area of practice which is a prerequisite in Canada, Ireland, New Zealand and Australia (Sheer and Wong, 2008; Small, 2010; Carney, 2014; Stasa et al., 2014; ICN et al., 2020; ONMSD, 2021).

1.4.1 National Educational Requirements of Advanced Nurse Practitioner

The characteristics and educational requirements of the ANP roles in Ireland (NCNM, 2008, p. 5) are as follows:

> ANPs highly experienced in clinical practice are educated to master's degree level (or higher). The postgraduate programme must be in nursing/midwifery or an area that is highly relevant to the specialist field of practice (educational preparation must include substantial clinical modular component(s) about the relevant area of specialist practice.

In Ireland, completion of an MSc in advanced nursing practice programme additionally comprises independent nurse prescribing, ionising and radiation prescribing, and significant hours of clinical supervision undertaken by a qualified ANP or physician, usually at consultant level (Delamaire and Lafortune, 2010; Begley et al., 2014; Elliott et al., 2016; Department of Health (DoH) 2017; NMBI, 2017; ONMSD, 2021). The purpose is to enable the ANP to assimilate a wide range of knowledge and understanding applied to clinical practice and hold

expert clinical decision-making skills. Impact of ANP clinical autonomy has demonstrated ANPs improve patient outcomes which will be discussed in the following section.

1.5 Impact of ANPs Clinical Autonomy

The term ‘impact’ is somewhat amorphous and includes both the outcomes of an innovation or intervention, and the broader effects of that innovation (Glor, 2014). With the necessity for practitioners in healthcare to demonstrate their impact, there is a requirement that verifiable evidence is firmly underpinned by empirical research (McKenna, 2015). The term ‘population health’ includes needs assessment in healthcare that gather information required to bring about change (Stevens and Gilliam, 1998; DoH, 2019a). This change needs to be however, beneficial to the health of the population for the allocation and provision of quality care, which is economically driven (Stevens and Gilliam, 1998; Baille and Maxwell, 2017; Britnell, 2019). Recently, a more innovative approach such as integrated care models, have called for multi-disciplinary approaches to primary and acute care. The shifting of solo-practitioners and costly skill-mix to qualified health professionals that can integrate and complete episodes of care independently has been realised as an effective use of a workforce (Chrisholm and Evans, 2010; Nolte, Knai and Saltman, 2014; United Nations (UN), 2015; Connelly et al. 2020; WHO, 2020).

Studies such as Begley et al. (2010) and Gerrish, McDonnell and Kennedy (2013) have demonstrated cost-effectiveness of the ANP, particularly concerning improved healthcare indicators. Similarly, studies have reported difficulties measuring the impact of ANP due to the varying competencies they are required to be adept in (Begley et al., 2010; Lalor et al., 2013; Higgins et al., 2014; Bryrant-Lukosius et al., 2016). Nevertheless, ANPs have been

reported as improvers of communication within the multidisciplinary team (MDT), improving accessibility of care services, cost improvements, enhancing clinical leadership and improving activities such as developing innovative practice and improving patients pathways (Begley et al., 2010; Gerrish, McDonnell and Kennedy, 2013; ONMSD, 2021). Recently ONMSD (2021) reported newly qualified ANP and ANP candidates as improving key performance indicators (KPI) and reducing waiting times. Furthermore, Gerrish, McDonnell and Kennedy (2013) reported ANP services as economically valid to the organisation in managing patient caseloads and streamlining patient services. Reports of role confusion and role title have hampered the full utilisation of ANP clinical autonomy in practice, which leads me to the motivation for this PhD study. The following section, 1.6, will briefly discuss the motivation for undertaking this research.

1.6 Motivation to Conduct the Study

My own experience is that I have been practising as an ANP in the Irish healthcare system for over 17 years which commenced in 2004, working in the discipline of Emergency Nursing. During this time, I have developed my own clinical autonomy and managed the tensions created by organisational culture. This included other healthcare professionals and my own nursing colleagues in a myriad of professional, political, and personal views. For example, where ANPs should sit in the hierarchy of decision-making (organisational and clinical), the profession, the pay-structure and of course the Academy (with some ANPs opting to educate themselves to PhD or professional doctorate levels). My experiences of constantly managing clinical autonomy across several professional boundaries has ignited an inquisitive journey over many years. Regular changes in medical personnel often require ANPs to re-establish clinical autonomy and reaffirm clinical integrity. Senior nursing structure pay scales have

recognised the ANP in Ireland as the same grade as an assistant director of nursing to support the leadership role of the ANP, which is often misunderstood at nursing leadership levels. Additionally, the author's interest in the topic comes from her previous role in the Irish Association of Nurse Midwife Practitioners (IAANMP) and her more recent international role in ANP as the Co-Chair of the educational subgroup for the International Council of Nursing Advanced Nursing Practice (ICN/APN/NP) for education. The following section will discuss the statement of the problem.

1.7 Statement of the Problem

Although many studies have demonstrated a wealth of patient satisfaction and ANP governance frameworks, particularly implementation and impact of ANPs roles in the early phases of ANP development; the one area sparsely researched is ANP clinical autonomy (Gerrish, McDonnell and Kennedy, 2007, 2013; Begley et al., 2010; Lockwood et al., 2021). Furthermore, constraints and enablers to ANP roles as well as comparison of ANPs to physicians, has been evidenced (Lindblad et al., 2010; Chang et al., 2011; Kapu and Kleinpell, 2013; Gardener, Gardener and O'Connell, 2013; Gerrish, McDonnell and Kennedy, 2013; Kleinpell, 2013; Poghosyan, Shang and Berkowitz, 2015; Weiland, 2015; Elliott et al., 2016; Schadewaldt et al., 2016; Fox, Gardener and Osbourbe, 2018; Torrens et al., 2020). Moreover, autonomy, nursing autonomy, nursing professional autonomy, and nursing clinical autonomy have added to this confusion in exploring clinical autonomy (Wilkinson, 1997; Kramer and Schmalenberg, 2008; Gagnon et al., 2010; Weston, 2010; Oshodi et al., 2019). Authors have reported that the lack of clear distinction of ANP clinical autonomy has created difficulties recognising it in practice settings which remain complex (Wilkinson, 1997; Kramer, Maguire and

Schmalenberg, 2006; Kramer and Schmalenberg, 2008; Gagnon et al., 2010; Weston, 2010; Oshodi et al., 2019).

Additionally, no scale that specifically measured ANP clinical autonomy was found in the literature. The DPBS was the closest to measuring behaviours relating to ANP clinical autonomy (Cajulis and Fitzpatrick, 2007; Bahadori and Fitzpatrick, 2009; Maylone et al., 2011). To determine the clinical components of ANP clinical autonomy as identified in the literature was more than sparse (Cajulis and Fitzpatrick 2007; Turner, Keyzer and Rudge, 2007; Bahadori and Fitzpatrick 2009; Burgess and Sawchenko, 2011; Maylone et al., 2011; Sangster-Gormley et al., 2013; Yee et al., 2013; Weiland, 2015; Athey et al., 2016; Cowley, Cooper and Goldberg., 2016; Gardener et al., 2016; MacLellan, Lovett-Jones and Higgins, 2016; Poghosyan and Liu, 2016; Schadewaldt et al., 2016; Spetz, Skillman and Andrilla., 2017; Fox, Gardener and Osbourbe, 2018; Park et al., 2018; Anderson, Birks and Adamson, 2019; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020).

1.7.1 Epistemological and Ontological Position of the Study

Autonomy is a complex and nebulous concept. The epistemological and ontological positioning of this study required a theoretical understanding of the importance of the research question. Deci and Ryan (2008) proposed SDT in grasping the concept of autonomy, which is entrenched in an organismic dialectic stance. In determining a concept, an organismic dialectic utilises stances to be the most useful to answer the question, which may or may not require one or both the constructivist and positivist lens (Deci and Ryan, 2012). The praxis of SDT is of an organismic dialectic stance, one which this study and worldwide lens align (Gagné and Deci, 2005; Creswell, 2018). The underlying principle of SDT is that all individuals have three basic needs to achieve self-motivation, namely: autonomy, competence, and relatedness, which best

promotes the maintenance of autonomy when an individual is supported in all three basic needs (Deci and Ryan, 2008; La Guardia, 2017).

1.8 Overview of the Following Chapters

Chapter 2: presents the background to the study of ANP clinical autonomy, ANP characteristics, definitions, and the study's ANP clinical autonomy definition.

Chapter 3: presents the background to autonomy, introduction to nursing autonomy, factors of nursing autonomy, concept analysis of nursing autonomy, and clinical nursing autonomy.

Chapter 4: presents a narrative literature review of ANP clinical autonomy. It examines various papers included in the review. Steps to ensure rigour in the review are explained, followed by themes that emerged from the literature on ANP clinical autonomy.

Chapter 5: presents the philosophical underpinnings of the study including the theoretical, conceptual framework of SDT which is embedded in an organismic dialectic stance.

Chapter 6: presents the study methodology, including aims and objectives, hypotheses', ethical considerations, and research design.

Chapter 7: presents the tool development of the DPBS survey utilised in this study. This chapter also includes the extensive development and testing of the new scale explicitly developed for this study: ANPCAPS.

Chapter 8: presents the quantitative findings of demographics, DPBS and ANPCAPS practice scale. Additionally, the open-ended comments that were thematically analysed are outlined.

Chapter 9: presents the discussion, recommendations, and conclusion to the study.

Chapter Two - Background

2.1 Introduction

This chapter sets out the background to the study, and ANP characteristics are discussed. The study definitions of ANP and ANP clinical autonomy are also be presented.

2.2 Background to the Study of ANP Clinical Autonomy

In healthcare all over the world, there is a focus on the most appropriate practitioner to provide quality, clinical effectiveness with the governance to do so (World Health Organisation (WHO), 2020). The United Nations (UN) (2020) have reported that deficits in the healthcare workforce needs to be addressed due to the increasing population and economic growth worldwide. Additionally, a more chronic and complex population in the healthcare systems has transpired into a dearth of care providers and the increasing need for nursing and other health professionals to transform, expand and adapt to the required service and most importantly, the population needs (Delamaire and Lafortune, 2010; Nolte, Knai and Saltman, 2014; Schober, 2017; WHO, 2020). The positioning of the ANP has increasingly accelerated with the recent era of healthcare change, mainly in an attempt to be the panacea for or in-part address a solution to patient waiting times, access to care, shortage of physicians and healthcare costs (Delamaire and Lafortune, 2010; Nolte, Knai and Saltman, 2014; Schober, 2017; United Nations (UN), 2020; WHO, 2020).

In Ireland, the country of this study, the Report of the *Commission on Nursing* (Government of Ireland (GoI), 1998) provided the most significant expansion of services in the history of Irish nursing and midwifery (Lockwood and Fealy, 2008; NCNM, 2008; DoH, 2019a,b).

Recently, the main goal in healthcare both globally and in Ireland in 2020 is efficiency, effectiveness, sustainable operational governance, workforce planning and reduction in patient waiting times (Health Service Executive (HSE), 2013; Baillie and Maxwell, 2017; DoH, 2017; DoH, 2019a; DoH, 2019b; WHO, 2020). In Ireland, the reduction in medical staffing necessitated a transformation in healthcare and an opportunity for the nursing profession to expand roles such as the ANP, which would impact the healthcare targets mentioned above (Mac Lellan, 2007; Pulcini et al., 2010; Delamaire and LaFortune, 2010; Stasa et al., 2014; DoH, 2017; DoH, 2019a).

Due to the success of ANP development in Ireland over the last 22 years, the DoH (2017) launched 'ANP capacity-building strategy' to increase the capacity of ANPs in all areas of healthcare. Additionally, the 'Sláintecare Action Plan' (DoH, 2019b) directly identified the ANP as a solution to delivering care closest to the patients' home, with the governance to do so (DoH, 2017; DoH, 2019a; DoH, 2019b). A recent evaluation of ANP candidates in Ireland was undertaken to review the impact and implementation of these roles, findings recommended, and performance to improve patient access to services (ONMSD, 2021).

The last year, 2020, marked the WHO as the 'year of the nurse and midwife'. Little did the world realise the catastrophic impact that a pandemic was about to bring (WHO, 2020). At the time of this study, ANPs were seen as valuable, frontline decision-makers who will 'step up' and play their part in dealing with COVID-19 and many other diverse healthcare challenges. However, this requires full utilisation of ANPs clinical autonomy in healthcare and reports of underutilisation of this has been evidenced in healthcare literature (Fox, Gardener and Osbourne, 2018; Ryder, Jacobs and Hendricks, 2019; Rosa, 2020).

The following section will outline the characteristics of the ANP. The term ‘characteristics’ is married to domains and competencies, and for clarification of these terms, the use of characteristics will be applied. This study also acknowledges the domains and competencies to include those discussed in ANP characteristics.

2.2.1 ANP Characteristics

In most countries, descriptions of ANP characteristics indicate they are educated to a minimum of a master’s degree, specific advanced nursing practice education, and hold expert levels in clinical decision-making skills. Furthermore, ANPs are required to be involved in research that improves patient outcomes and service development, regularly undertake continuing professional development (embodied in evidence-based practice), and acquire high nursing clinical and strategic leadership (NMBI, 2017; ICN et al., 2020). The characteristics of the ANP should be notable and recognisable between ANP versus general nursing practice and other specialist nursing roles, particularly regarding their levels of clinical autonomy (ICN et al., 2020).

While the core of ANP practice is based on advanced nursing roles, education, and knowledge, expertise may also occur with other healthcare professionals, such as those in medicine (Schober, 2016; ICN et al., 2020; Rosa, 2020). The degree of ANP clinical autonomy may evolve and expand over time as the concept of ANP gains recognition. The individual develops into the level of clinical autonomy required, depending on the country of origin (Schober, 2016; ICN et al., 2020). In Ireland, there are only two titles connected to the advanced nursing practitioner roles, namely ANP or advanced midwife practitioner (AMP) (other countries with the same title are associated with a nurse practitioner (NP) (ICN et al., 2020). When referring to the ANP and NP roles, this study will use the umbrella term of ANP (ICN et al., 2020).

In 2017, the NMBI published the Advanced Practice (Nursing) Standards and Requirements (NMBI, 2017), as explained in chapter one, which set out the competencies required to practice as an ANP. The NMBI report has also recognised the operational and strategic role and responsibility of the ANP (NMBI, 2014). The patient population commonly identifies ANP practice in primary or acute care settings. Most importantly, the service drives the developments of ANP clinical autonomy (NCNM, 2008; NMBI 2017; Schober, 2017; ICN et al., 2020; ONMSD, 2021). The ICN et al. (2020) concurred with similar competencies in their advanced nursing practice guidelines. These guidelines clarify the necessity for these practitioners to promote their clinical autonomy such as, engaging in knowledge translation that facilitates evidence-based practice (Chang et al., 2010; Kapu and Kleinpell, 2013; Gardener, Gardener and O'Connell, 2013; Cashin et al., 2014; ICN et al., 2020). The following section will discuss the ANP role globally.

2.2.2 ANP Global and National Overview

An estimated 70 countries worldwide have implemented or are developing advanced practice nursing roles, including the ANP (DiCenso et al., 2010; Pulcini et al. 2010 et al., 2010; Stasa et al., 2014; Schober, 2016). The ANP role initially started in the 1960s in the United States (US) in response to healthcare needs in rural areas of Colorado (Ford, 2015). Loretta Ford saw a deficit in care in the community for paediatric patients and an uneven distribution of healthcare resources (Ford, 1997; Ford, 2015; Schober, 2017). As the first ANP globally, Loretta Ford pushed the boundaries of ANP and clinical autonomy to include diagnostics, collaborative prescribing, medical interventions, and expert decision-making skills in her practice (Mantzoukas and Watkinson, 2007; Sheer and Wong, 2008; Ford, 2015).

The USA has moved towards a Doctorate of Nurse Practitioner (DNP) (ICN et al., 2020). Hendricks-Ferguson (2015) recommended that DNP programs should include specific supports for practitioners professional development: published evidence-based research for translation into clinical practice; time allotted for clinical practice and scholarship (or research) activities (80% clinical practice role, 20% research role); a defined DNP-prepared nurse's role, responsibilities, and proposed salary; and describe the significance of recruiting ANPs with a DNP degree in a collaborative practice (Barry, 2009; Mackey and Estala, 2008; Hendricks-Ferguson, 2015).

The development of ANP roles is also evident since the 1980s in the United Kingdom (UK), and has been ad hoc with roles and titles developed under the umbrella of APN, which also encompasses many other nursing roles (Delamaire and Lafortune, 2010; Pulcini et al. 2010; et al., 2015). Currently, Africa, Cyprus, Germany, Hong Kong, and Switzerland are in the developmental stages of these roles (Pulcini et al. 2010 et al., 2009; Delamaire and Lafortune, 2010; Carney, 2014).

The level of clinical autonomy and titles can differ considerably (Schober, 2016). It has been acknowledged that the lack of registration in the UK with the Nursing and Midwifery Board and differing role titles and education created significant problems (Delamaire and Lafortune, 2010; Carney, 2014; Jennings et al., 2015; Schober, 2016). More recently, the UK has incorporated ANP nursing roles under the term 'Advanced Clinical Practitioner' (ACP) which includes other professional bodies such as physiotherapy, pharmacy, and occupational therapy, to reduce barriers to obtaining registration as a practitioner.

In Ireland, the emergence of the first ANP role was established in 1998 in emergency nursing with a farsighted pioneer named Ms Valerie Small, accredited as an ANP with the NCNM in 2002 (NCNM, 2008; Small, 2010). ANPs in Ireland must currently register with the NMBI and hold a minimum of a master's degree (2017) which also allows the ANP to work within acute or primary care. The ANP role has been established within solid governance frameworks of accreditation due to the work of the NCNM (Mac Lellan, 2007; NCNM, 2008; Small, 2010; NMBI, 2017). In 2017, CPA attached to a physician were removed as a requirement of ANP registration in an attempt to limit constraints to ANP clinical autonomy (NMBI, 2017).

Similar to Ireland, Australia has successfully established legislation and delineated the ANP role from other advanced practice roles (Gardner et al., 2016; Ryder, Jacob, and Hendricks, 2019). Australia and Canada are currently reviewing the CPA attachments to physicians due to its restrictions in practice (Nurse Practitioners 'Association of Ontario (NPAO), 2010; NMBA, 2015). In both Ireland and Australia, the role is recognised as the definitive clinical nursing standard, incorporating leadership and research as its core components (NMBA, 2015; NMBI, 2017). Currently, Cyprus, Finland, Germany, Hong Kong, Sweden, and Switzerland are in the developmental stages of these roles (Pulcini et al. 2010; Delamaire and Lafortune, 2010; Carney, 2014).

Some Scandinavian countries, such as Sweden and Finland, have developed but remain in their infancy regarding ANP roles (Fagerström, 2009; Andregård and Jangland, 2015; Freund et al., 2015). In Finland, the development of the ANP began in 2006 (Lindblad et al., 2010; Nieminen, Manneraara, and Fagerström, 2011). More recently, the Nursing Association in these Scandinavian countries introduced the separation of the CNS and ANP role (Kotila et al., 2016; Freund et al., 2015). Similar to Ireland, the ANP clinical autonomy differs from the CNS in

that the ANP incorporates research, expert clinical decision-making skills, diagnosis and independent practice without a physician and is required to have a strategic, operational role in service development (Andregård and Jangland, 2015; Kotila et al., 2016; Schober, 2016).

In Hong Kong, the advanced nursing practice role includes the nurse consultant (NC), but the role itself and the level of clinical autonomy is poorly defined (Delamaire and Lafortune, 2010; Christiansen, Vernon, and Jinks, 2013; Schober, 2017). Other countries are initially developing the ANP role and are currently still working towards legislation and registration within Nursing and Midwifery Boards for ANPs. These include Israel, Saudi Arabia, France, Japan, Latin America, Oman, and South Africa (Delamaire and Lafortune, 2010; Lowe et al., 2012; Schober, 2017). The most fundamental importance of ANP clinical autonomy, as maintained by Schober and Affara (2006), Mac Lellan (2007), and Small (2010), is that the ANP clinical autonomy should be defined and shaped by the service needs of the patient and not the difficulty of the task. The following subsection will present a definition of ANP.

2.2.3 The ICN NP/APN Definition

The ICN NP/APN definition 2020 is as follows:

> ‘A/NPs are generalist nurses who are autonomous clinicians after additional education (minimum master’s degree for entry level). They are educated to diagnose and treat conditions based on evidence-informed guidelines that include nursing principles that focus on treating the whole person rather than only the condition or disease. The level of practice autonomy and accountability is determined by, and sensitive to, the context of the country or setting and the regulatory policies in which the A/NP practices (ICN et al., 2020, pg,12).

2.2.3.1 Distinction between CNS and ANPs in the Irish Context

This definition is a benchmark for many countries, particularly in the early stages of development. Hameric, Spross and Hanson (2009) have suggested defining ‘advanced nursing

practice' as a concept, thus excluding reference to a specific role, but this aligns more with clinical nurse specialist (CNS) understanding. Additionally, Sheer and Wong (2008) purported that the advanced nursing practice definition has acted as an umbrella term for roles such as NP, ANP and APN, creating confusion. Not all countries have reached the goal of a master's degree education as a requirement. Donato (2009) and Schober (2017) sought to narrate ANPs as being widely accepted as an advanced level of their characteristics such as independent diagnosis, prescribing and referral rights to acute and primary care.

The difference between CNS and ANP roles in Ireland, for example, pertains to ANPs' characteristics as aforementioned by Donato (2009) and Schober (2017) and additionally, in the driving of and leading to improve patient outcomes, and developing new and innovative service initiatives in healthcare (Begley et al., 2013; Gerrish, McDonnell and Kennedy, 2013; Schober, 2017; ICN et al., 2020). The ANP is required to provide improved service delivery, more significant clinical and professional leadership and research, and higher levels of clinical autonomy (Begley et al., 2013; Lockwood et al., 2021).

Additionally, a clear distinction between CNS and ANP roles in the Irish context is that the ANP is legally required to register and provide evidence of ANP standards, education and professional advanced nursing practice evidence with the NMBI to register as a practitioner (NMBI, 2017). While both the CNS and ANP are highly educated and experienced in various roles (and to reduce confusion), only ANP and NP roles will come under the umbrella of this current study. The study definition of ANP clinical autonomy specifically is presented in the following subsection. The study definition of 'ANP clinical autonomy' specifically, is presented in the following subsection.

2.2.4 ANP Clinical Autonomy Definition

Numerous definitions of autonomy, in general, are offered by theorists and philosophers such as Plato, Phaedo 75c-d, Symposium 211 e, Republica V.476cc; Aristotle, XI.9, 1065b5-15 (Kant, 1785; Ross, 1954; Dworkin, 1988). Definitions of nursing autonomy (Wilkinson, 1997; Wade, 1999; Skår, 2010; Cotter, 2016) and ANP autonomy (Dempster, 1994; NMBI, 2008; ICN et al., 2020) also exist.

The definition adopted for this study is by Dempster (1994), who describes ANP clinical autonomy as:

> 'a dynamic process demonstrating varying amounts of independent, self-governed, not controlled, or not subordinate behaviours and sentiments related to readiness, empowerment, actualisation and valuation for autonomous practice'. (Dempster, 1994, pg. 227).

Clinical autonomy has been considered the core of the ANP (Weiland, 2015; Steinke et al., 2017; Kerr and Macaskill, 2020). Across the nursing spectrum, the development of the ANP has been significant for assisting in health services reform. This is in terms of clinically autonomous practitioners who will step up and manage patient caseloads with the governance to do so (Small, 2010; Gerrish, McDonnell and Kennedy, 2013; Steinke et al., 2017). However, the evidence for ANP clinical autonomy is more than sparse, leading me to chapter three: understanding autonomy, nursing autonomy and ANP clinical autonomy.

Chapter Three - Autonomy

3.1 Introduction

This chapter will begin with a general overview of autonomy and then explore the notions of nursing autonomy and nursing clinical autonomy. The importance of this chapter was to examine autonomy and additionally to give me time to review all theories of autonomy and gain a clearer understanding of clinical autonomy itself. This chapter critically discuss nursing autonomy, theories of autonomy, context, and general literature on nursing autonomy, including concept analysis and clinical nursing autonomy.

3.2 Background to Autonomy

Autonomy refers to one of the vital human concepts debated in the literature, dating back to ancient Greece. According to philosophers such as Plato (Plato, Phaedo 75c-d, Symposium 211e; Republic V.476c) and Aristotle (XI.9, 1065b5-15; Ross, 1954), autonomy has its roots in self-mastery, which has been depicted as a masculine concept (Kenny, 1991; Preus and Anton, 1992; Gilligan, 1993). Over the centuries, there have been many terms used to describe autonomy, including freedom and independence (Kenny, 1991; Preus and Anton, 1992) and, more recently, self-determination (Deci and Ryan, 2008). Self-determination in Deci and Ryan's (2008) theory is championed by components such as the individual's authority within the realms of society to act in a manner that achieves their 'own end' and in regard to a role such as nursing, have been deemed professionally fit to practice within their own right (Turner, Keyzer and Rudge, 2007).

In connection with nursing, autonomy has been linked to clinical decision-making and self-regulation (Wilkinson 1997; Wade 1999; Cotter 2016), the latter more relative to professional rather than clinical autonomy (in practice). Authors such as Wilkinson (1997), Kramer and Schmalenberg (2008), and Weston (2010) suggest that clinical nursing autonomy refers to nurses working at the frontline of care, including working with other health professionals, the patient and their relatives. Another view, depicted by Kramer, Maguire and Schamalenberg (2006) is that nursing autonomy includes clinical, professional and organisational factors, some of which may be out of the control of the individual nurse. Furthermore, nursing autonomy has been reported as comprising professional, clinical, and organisational aspects of autonomous practice. Authors have cautioned that they should not be viewed as the same, even though they share similar features (Wilkinson 1997; Wade 1999; Kramer and Schmalenberg, 2004; Gagnon et al., 2010; Weston, 2010; Cotter 2016; Oshodi et al., 2019).

There are some concept analyses of nursing and ANP autonomy that mainly employ Walker and Avant's (2019) framework (Wilkinson, 1997; Wade, 1999; Cotter, 2016; Peacock and Hernandez 2020). Concept analysis has been helpful regarding definitional content by assisting in defining the terms of nursing autonomy. However, Paley (1996) offered an alternative approach by suggesting that using concept analysis in complex topics such as autonomy may be 'putting the cart before the horse', in that concepts are not building blocks of theory, but the niches created by theory (Paley, 1996, p.572). Overall, there is a lack of consensus on the meaning of nursing autonomy from the literature, including those concept analyses (Wilkinson, 1997; Wade, 1999; Cotter, 2016; Peacock and Hernandez, 2020). Part of the problem may be that examining nursing autonomy and covering all aspects mentioned above may be too broad.

Autonomy has generally been connected to the idea of developing one's own individual self, a viewpoint also adopted by psychologists such as Maslow's human motivation theory (1958) and Rogers diffusion of innovations theory (Rogers, 1995). They suggested that the goal of human development is 'self-actualisation'. The definitions offered in the mainstream literature centre around two key aspects: (i) that autonomy is a personal process; and (ii) that it is something that every grown person possesses (Dworkin 1988). Furthermore, according to Dworkin (1988), to attain autonomy is the ability to make independent choices, freedom from coercion, rational choice, thinking, and reflective thoughts with adequate information and knowledge-base. The following section will discuss Kantian theory of autonomy.

3.2.1 Kantian Theory of Autonomy

Immanuel Kant was a German philosopher who added a moral component to the existing definition of autonomy. In doing so, he began to explore the interplay of factors related to autonomy, an area that has received much attention in the empirical literature and which will be referred to in various forms in this chapter.

Kant formulated the positive conception of freedom as the free capacity for choice in prospecting a person's self-autonomy. It asserts the absolute value of the freedom to set one's ends. Autonomy of the will is the supreme principle of. Still, there is an assumption that the individual has a moral compass within the realms of their morality and a necessary condition to be a moral agent (Kant, 1785). Additionally, Kant viewed autonomy as the ability to deliberately self-rule independently without following others (Kant, 1785; Fieser and Dowden, 2012).

In his seminal writings on autonomy, Kant (1785) suggested that religion and morality are essential factors that need to be taken into account when exploring the notion of autonomy. He viewed them as an unpleasant mixture in determining autonomy and suggested that if anything; religion and morality should be kept apart. Kant argued that to determine what is right for themselves, individuals need to use reason and a sense of consideration for others (Kant, 1785).

Even though Kant's ideas might appear dated and influenced by the period in which they were developed, they remain important theories to consider. For example, his belief that all individuals should be mutually respected translates into today's healthcare, for example, all healthcare professionals, regardless of position, should achieve mutual autonomy that is equally respected. Furthermore, Kant (1785) postulated that autonomy could only be maintained when it works as goodwill (Fieser and Dowden, 2012). In addition, Kant (1785) concluded that goodwill and conscience are fundamental to humankind, in people working autonomously together.

Kant's (1785) theoretical ideologies maintain that people have a moral obligation to act on generally accepted principles such as 'to do no harm' and this is a concept that still applies in healthcare today. Another theorist however, Aaron T. Beck, argued that Kant's theory of pure practical reasoning does not follow that one's virtue is necessarily connected to happiness and freedom (Beck, 1970). It becomes evident throughout the early literature on the subject that there are mixed views on the characteristics of autonomy. Another related argument from Kant's work on autonomy is that humans use others for education and knowledge to pursue their autonomy, as a part of learning and developing oneself (Kant, 1785). For example, a student needs to use others to understand a topic, which helps them develop their autonomous

practice. On the other hand, the student is self-governed to learn. We can set our own goals and make our own free decisions based on our rational wills to achieve these goals. Involved in this is a moral worth, which means that we should not be manipulated or manipulate others autonomy in the pursuit of our benefit. Kant interestingly also purported that control and deception are never acceptable concepts, as a person could not make an autonomous decision without the mutual autonomy of others (Kant, 1785).

Dworkin (1988) offers an alternative to Kant's (1785) ideas. He stipulated that autonomy could control one's desires (first-order) through higher-level desires or preferences (second-order). According to Schwartzman (1999), Dworkin's (1988) definition of autonomy is also problematic as nothing prevents a violation at the second level by being caused by a strong first-order desire. For example, a patient with addiction problems knows it harms their health and relationships but cannot change the first-order desire. Dworkin (1988) however also concurred with Kant (1785) in that he believed that individuals could be autonomous if they treat each other equally.

According to Dworkin (1988), to attain autonomy is the ability to make independent choices and freedom from coercion, which is rational and reflective through adequate information and knowledge. Jaworska and Krishnamurthy (2009) argued that making a choice, contrary to one's accepted values, does not constitute an abandonment of autonomy, even if a choice contradicts a person's values. In line with this argument, Stevens (1984) asserted that a person could be autonomous if they know this when external factors control them. Furthermore, Kamii (1984) explained personal autonomy as someone's right to rule themselves which is the opposite of heteronomy (being governed by someone else). This is also relayed by Beauchamp and Childress (2013) who define autonomy as self-rule that is free from controlling interference

and the autonomous individual acts freely through a self-chosen plan.

The view depicted in the literature that autonomy implies a right to self-determination (Brown, Kitson and McKnight, 1992; Deci and Ryan, 2008; Beauchamp and Childress, 2013) suggests that individuals can act on their own decisions. It also assumes that the individual has the authority within society to act in a manner that achieves their own end (Maas, et al., 1975; Neuhouser, 2011; Beauchamp and Childress, 2013). Whilst the authors of the sourced literature disagree in parts, they all refer to autonomy in the sense of personal autonomy. As posited by theorists Deci and Ryan (2008), 'Self Determination Theory' (SDT) resides in a dialectic stance, as earlier discussed, in that all stances are important, no ideology is superior to the other, and all stances are functional (Deci and Ryan, 2008; Greene and Hall, 2010; Creswell, 2018).

SDT examines the best way to motivate someone, which is to support a person in their autonomous decisions in Deci and Ryan's (2008) view. An example of this may be to allow individual personal freedom to carry out tasks autonomously. This freedom to make autonomous decisions will stimulate interest and commitment. According to Deci and Ryan (2008) a supportive approach to autonomy is more effective than the reward and punishment (controlled) approach. Indeed, SDT describes autonomous motivation as what a person is doing when they have freedom of choice and a sense of empowerment (Deci and Flaste, 1995; Deci and Ryan, 2008). Controlled motivation is described as when a person does so because they are pressured, obliged, controlled, constrained, or dominated (Deci and Ryan, 2008).

As demonstrated in this section, autonomy is a complex phenomenon with many nuances and related factors, all of which contribute to the extent of autonomous behaviour that a person may

display. Much of the literature published in the early phases assumed that autonomy is a 'gender-neutral' process. As such, personal autonomy is not defined based on their gender. The following section will discuss gender notions of autonomy.

3.2.2 Gender Notions of Autonomy

Whilst early theorists based their work on the idea that autonomy applies to all human beings equally (Kant 1785; Dworkin, 1988), the concept of gender-neutrality came under increasing scrutiny in more modern literature. Several writings published from the 1980s onwards focused on challenging the idea that autonomy is a 'gender-neutral' (Grimshaw 1986; Benjamin 1988, Gilligan, 1993; Harding and Hintikka, 2003. One such author sourced in the literature stands out. The feminist theorist Gilligan (1993) was particularly critical of the work of early autonomy researchers and put forward the idea known as 'pattern reflectiveness'.

In pattern reflectiveness, there is no distinct exploration of female identity related to autonomy. The 'gender-neutral' models of autonomy have perhaps tended to overlook the social relationships and dependencies that women face when they attempt to act freely and make their own decisions (Grimshaw 1986; Benjamin 1988, Harding and Hintikka, 2003). Donchin (2000) also contends that it is the vital concept of relational autonomy that offers the most helpful account of decision-making in healthcare, a notion that will be further explored in the thesis. The debate on 'gender-neutral' viewpoints on autonomy stemmed from the development of feminist theories, which will be discussed next.

3.2.3 Feminist View of Autonomy

Feminist writers postulate that the concept of autonomy requires narratives of women, because women and men develop and conceptualise differently (Wollstonecraft, 1792; Woolfe, 1915;

Moraga and Anzaldua, 2015). As depicted by early Greek philosophers and later by Kant (1785), autonomy is viewed as being ill-defined (Wollstonecraft, 1792; Woolfe, 1915; Moraga and Anzaldua, 2015).

Feminist theorists have purported that women will often encounter constraints and controls in female-dominated professions (Grimshaw, 1986; Gilligan, 1993; Donchin, 2000). Gilligan (1993) explains that female relationships are often judged by a standard of responsibility such as the 'carer' rather than a 'professional'. Furthermore, Gilligan (1993) suggests that the social reality of autonomy for women depends on relationships, attachments, responsibilities, and indeed 'caring'. Dworkin (1988) also included the social construct that autonomy is a function of attitudes and beliefs affected by social class, the mass media, and economic institutions. A critique of Gilligan's feminist theory (1993) of autonomy is that it does not show that moral reasoning has anything to do with gender (Clement, 2018). However, Gilligan (1993) responds to this criticism stating that her theory was never intended to be a moral philosophy but a theory to 'seek the truth' of human development in an exploratory manner, not as a closed book approach.

Indeed, in a predominantly female profession such as nursing, the culture may perhaps be undervalued due to the connection of caring. The feminine (female identity) interpretation of autonomy elucidated by Gilligan is culturally constructed and closely linked to female identity (Gilligan, 1993). Furthermore, Gilligan (1993) argues that the fusion of identity and intimacy formation is defined through relationships, with some understanding and interpretation of the significance of autonomy particularly for professions such as nursing. In fact, Gilligan and Zappone (2021) recently discoursed an awareness of the social construction of gender and a historical and hierarchical pathway of how gender has been shaped up until the present day.

The authors further account that the more women in society accept and comply with the stereotypical images of the dominant cultures, the more we oil the wheels of patriarchy (Gilligan and Zappone, 2021).

The view of feminist perspectives on autonomy has come from many *seas and tides* such as women from the suffrages, inequalities, and women's identities. The current focus in 2021 and women's emancipation of autonomy and freedom has moved the discourse, further into gender equality (Benjamin, 2007; Shadbolt, 2020). Interestingly the world economic forum (2020) has purported that gender equality will take a further 100 years until it is realistically accepted. Indeed, women and autonomy have some way to go, as alluded to by the feminist voices of Gilligan (1993), Benjamin (2007), Shadbolt (2020) and Gilligan and Zappone (2021).

Moreover, Mackenzie and Stoljar (2000) however, have suggested a paradigm shift has occurred and autonomy is no longer male-orientated or alien to women. Additionally, Christman (1991), Fredman (2000), Benjamin (2007) and Shadbolt (2020) point out that ideas behind autonomy conversely remain hierarchical and gender imbalanced, leaning towards masculine dominances. This depicts a lack of consensus in the literature on the issue of gender in autonomy. Apart from autonomy itself and the factors influencing autonomy, the literature has focused on the context in which autonomy occurs, which will be explored in the following section.

3.3 Contexts of autonomy

Logicians have demonstrated that autonomy is a dynamic process in a logical sense, which develops over time within a person's lifespan (Kant, 1781; Dworkin, 1988; Gilligan, 1993).

Theorists in child development for example Piaget (1976), explored the wider societal contexts such as the impact of poor education and social circumstances (including abuse and other factors) on autonomy. His research is based on case studies and observations (Piaget, 1990). Piaget observed how children from lower economic backgrounds answered questions differently to children from higher economic backgrounds, which resulted in lower educational achievement due to poor health and poverty (Piaget, 1976). Similarly, Piaget (1976) observed that autonomy itself cannot be taught, but its development can be facilitated by fostering critical thinking. Also, he found that children cannot be expected to understand concepts until they have reached a certain developmental level and stages of development in an organic process (Piaget, 1976). In nursing, the fostering of critical thinking is essential for clinical decision-making. This is developed through a systematic and logical manner, with openness to question and reflect on the reasoning process used to ensure safe nursing practice and quality care (Heaslip, 1992). Thus, reflection is critical from child development and up to one's profession.

A critique of Piaget's theory stems from contention between the stages of the model. For example, Weiten (1992) narrated that Piaget underrated the development of young children. Additionally, Bower (1982) and Harris and Ferrari (1983), found that some children developed object permanence earlier than Piaget reported and they may have been less egocentric. For example, Flavell, Green and Flavell (1990) reported a three-year-old child as being aware that an adult is looking at a card from the opposite side of the child who will see this from a different perspective. In addition, cultural and social differences were not included in the studies by Piaget.

Regarding autonomy in healthcare, according to Beauchamp and Childress (2013), is embedded in healthcare ethics. Patient's rights, particularly in bioethics, are where autonomy

for the patient is a fundamental human right. The bioethical literature has contributed to the understanding of autonomy. The patient is an integral part of their health decision-making process and not, as previously seen, the healthcare professional's decision (Beauchamp and Childress, 2013). The central belief in the bioethical literature is that autonomy is the exercise of free will among healthcare users. The following section will introduce nursing autonomy.

3.4 Introduction to Nursing Autonomy

The literature on nursing autonomy was particularly prominent in the late 1990s and 2000s with a variety of textbooks, empirical research articles, and concept analyses published within that timeframe (Wilkinson, 1997; Keenan, 1999; Wade, 1999; McParland et al., 2000; Wade, 2003; Lewis, 2006; Skår, 2010). This was also the time when feminist theories of autonomy were flourishing (Grimshaw, 1986; Gilligan, 1993; Donchin, 2000). The nursing autonomy literature can be categorised into general literature and more specific types, such as concept analyses. Three concept analyses on nursing autonomy were sourced (Wilkinson, 1997; Wade, 1999; Cotter, 2016), which will be discussed later in the thesis. Firstly, this section will discuss the general literature relating to nursing autonomy. Firstly, developing autonomy nursing practice over time will be explained next.

3.4.1 Developing Autonomy in Nursing Practice Over Time

Nursing autonomy and responsibility is the ability to develop and implement professional practice independently or collaboratively within the realms of safe professional practice (Kramer, 2006; Turner et al., 2007; Lockwood et al., 2021). Furthermore, it is clarified in the nursing literature as the freedom to use judgement and decision-making skills to make clinical decisions regarding patient needs, dependent on their scope of practice and professional

practice to clinically autonomously practice to the level of their qualification (Turner et al., 2007; NMBI, 2017; Lockwood et al., 2021). Accountability is different to responsibility in that the nurse or ANP for example, moves into and accepts advanced nursing practice roles and clinical responsibilities (Lockwood et al., 2021).

3.4.1.1 General Literature on Nursing Autonomy

Nursing autonomy has been described as the ability to control one's conduct by self-rules or self-values and freedom (Downie and Calman 1987; Beauchamp and Childress 2013). Similarly, autonomy was examined by Brown et al. (1992) in a textbook on 'ethics in nursing', and they concluded that 'self-determination' is the central defining concept. In an additional nursing ethics book autonomy is referred to as "control over one's practice" (MacDonald, 2002, p.194). McParland et al. (2000) stated that individuals and nurses could attain autonomy with the independent choice to be free from coercion. Within nursing literature, there are various types of autonomy discussed. While McParland et al. (2000) focus on autonomy in nursing in general, Kramer, Maguire and Schamalenberg (2006) focus more on nursing with clinical autonomy.

To examine issues related to autonomy McParland *et al*. (2000) used both surveys and interviews for both patients (n=700) and nurses (n=700) in their mixed-methods study. The authors defined autonomy as understanding one's situation regarding feeling free and having the purpose in one's actions. Internal factors influencing nursing autonomy reported were: choices, goals, understanding one's choices made, and having the freedom to act autonomously Additionally, in regard to the nursing view, they purport that external factors are essential, as they influence nurses' autonomy. External factors include employees, managers, professional

associations, and policymakers, all of which affect the nurse when making choices. Finally, they argue that tensions may arise when external influences attempt to control nurses' autonomy (McParland et al., 2000).

Self-determination and the freedom to act are defined in the literature as central components of general nursing autonomy and clinical autonomy. Using a grounded theory approach, Kramer, Maguire and Schamalenberg (2006) interviewed staff nurses (n=278) to explore and to describe how they practice autonomously. A ranked order category system utilising the Essentials of Magnetism Scale (EOMS) was used to establish the overlap between nursing and physician clinical autonomy. The nurses in this study perceived decision-making in the nursing sphere as patient comfort, ambulation, home care, teaching, and activities of daily living (Kramer, Maguire and Schamalenberg, 2006). Furthermore, the nurses' clinical decisions in their study reported an overlap with medicine, which involved completing care, diagnosis, and management episodes, which were shared with the medical model and, therefore, not autonomous nursing practice. However, 60% of the nurses did not know what the medicine scale overlap between nursing and medicine autonomy was, or they disagreed that the concept was essential to autonomous nursing practice (Kramer, Maguire and Schamalenberg, 2006).

Similarly, in Ireland, Cotter (2013) conducted a descriptive correlational study with a survey design with a sample of Emergency Department (ED) staff nurses (n=141). The findings highlighted that nurses lacked an understanding of clinical autonomy, which could negatively impact patient care. Interestingly, this could also impact nurses' working environments and nurses' expectations regarding expanded roles (Cotter, 2013). Those determining the meaning of nursing autonomy (McParland et al., 2000; Wade, 2003) have relied on theorists such as Gillon (1986) and Dworkin (1988). Gillon (1986) reports autonomy as the capacity to think,

decide, and act based on thought, and to make decisions independently without hindrance. Dworkin (1988) argues that autonomy is a concept, which can rarely be found in a pure form. The following section will explore factors of nursing autonomy.

3.4.2 Factors of Nursing Autonomy

In a book on the freedom to learn, Rogers (1983) proposed that autonomy about teaching and learning entailed having independent thought and control over choice to study. There is a social level of autonomy described as another factor in the nursing autonomy literature. It highlights that although social outcomes can be a direct result of an individual's intended actions, authors have reported that a model of autonomy must consider constraining factors (Stevens, 1984; Gilligan, 1993; McParland et al., 2000). Furthermore, constraining autonomy factors include being aware of the extent to which one is controlled, for example, in clinical practice (Stevens, 1984; Gilligan, 1993; McParland et al., 2000).

Nursing autonomy includes the freedom to use one's clinical decision-making skills, especially direct patient care. Central to a nurse's autonomy is one's self-determination and freedom to act (McParland et al., 2000; Kramer, Maguire and Schamalenberg, 2006, Cotter, 2013). The following section will discuss the concept analysis literature in an attempt to clarify nursing autonomy further.

3.4.3 Concept Analyses of Nursing Autonomy

The purpose of a concept analysis is to produce a consistent operational definition of a concept and to contribute to a mutual understanding of a nursing phenomenon in detail, including its antecedents, attributes, and consequences (Walker and Avant, 2019). Walker and Avant developed a process that clarifies the essential elements of a concept such as

autonomy. Moreover, nursing autonomy in the concept analyses sourced for this study related to different ideas such as professional, clinical, and patient autonomy. Hence, they did not result in finding a consistent definition of nursing autonomy. Clinical autonomy could be viewed as being married to professional autonomy; for example, it could be considered that professionalism, regulation, and education level influence clinical decision-making in nursing (Wade, 1999; Wilkinson, 1997). However, professional autonomy and clinical autonomy can be separated, and it is this concept that has confused the literature.

In line with this notion, Wade (1999), Wilkinson (1997) and Cotter (2016) reported determinants of autonomy such as clinical decision-making ability and self-regulation. They viewed it as the nurse being empowered in their decision-making and self-regulated within their profession. The authors determined that nursing autonomy is complex and multidimensional. It results in one's beliefs, experiences and socialisation processes. Concerning patient autonomy, nurses are being described as advocates for this (Wade, 1999; Wilkinson, 1997). Antecedents and attributes of patient autonomy include caring, the relationship with the patient, being responsible, collaboration with others and proactively promoting autonomy for patients (Wade, 1999; Cotter, 2016).

As an alternative to concept analyses, based on discussions with the supervisory team, this study chose not to conduct a concept analysis and concur with the view taken by Paley (1996), who suggests that clarification of a concept should be constructed as the meaning of words, particularly in complex lines of enquiry such as autonomy. The most essential point Paley (1996) suggested in qualitative or quantitative studies is the context of the study itself, which is important to note. Perhaps this is one of the reasons why there are limited numbers of concept analyses on the topic, and perchance, is why there appears to be a lack of consensus about the

constitutes of nursing autonomy. While the concept analyses sourced for this study did begin to unpick the complexities of nursing autonomy, they did not help much in developing one consistent understanding. The topic was presented in a diversified manner. The kind of nursing autonomy that appears most helpful for this review is clinical nursing autonomy. Clinical nursing autonomy describes how autonomy is applied to the frontline levels of patient care; for example, it represents the nurse's clinical decision-making skills and the contexts and relationships in which it occurs (Wade, 1999; Skår, 2010; Cotter, 2013). The following section will focus on clinical nursing autonomy.

3.4.4 Clinical Nursing Autonomy

According to Wade (1999), Wilkinson (2003), and Weston (2008), clinical autonomy refers to the nurses working at the frontline of care, which includes working with other health professionals, the patient, and their families. Clinical autonomy is discussed within the nurse autonomy literature regarding clinical accountability i.e., the power to act freely and take responsibility for those actions (Wilkinson, 2003; Kramer, Maguire and Schmalenberg, 2006; Skår, 2010). Accountability is accepted by the nurse when they qualify to practise. Professional factors of nursing autonomy also include legislation, policies and code of conduct, such as Ireland and the Nursing and Midwifery Board of Ireland (NMBI, 2014). The NMBI generally governs nurse's standards and conduct. These factors help define autonomy as they hold nurses responsible and accountable for their actions (NMBI, 2014).

Both Kramer, Maguire and Schmalenberg (2006) and Skår (2010) reported that clinical autonomy refers to how nursing work is organised to provide holistic care. It can be implied from their findings that clinical autonomy requires nurses to be competent. This requires clinical decision-making skills, whatever the nurse's level of experiences may or may not be

as they have been deemed competent in the registration process to become a nurse (Skår, 2010; Cotter, 2013). Skår (2010) sought to understand the meaning of autonomy in nursing by utilising a qualitative approach to examine eleven female nurses (n=11) in Norway. Nurses in the study had 2-3 years of professional experience since graduating from their nurse-training programme. The nurses in this study participated in one-to-one interviews (n=11) and focus groups (n=2). A qualitative hermeneutic approach, inspired by Gadamer's feminist philosophy (Gadamer, 1988) guided the research process, analysis, and interpretation of the data. Skår (2010) found that even when nurses are somewhat experienced, they still avoid situations with high levels of accountability. The study also highlights the need for more knowledge about the connection between experience and expertise when developing individual nurses competence in creating autonomous practice (Skår, 2010).

Similar to Wade (1999) and McParland *et al*. (2000), Skår (2010) reported that for nurses to be clinically autonomous, they must have the 'courage' to take charge of the care that they provide. The most relevant theme reported as autonomy was the ability of the nurse 'to dare'. Indeed, this occurred when the nurse expressed personal endeavours in new and challenging situations with no standards or routines to follow and had to rely on personal resources to deal with problems independently (Skår, 2010). Overall, there appears to be confusion within the literature about what exactly constitutes clinical autonomy in nursing other than it being set within the context of other healthcare professionals. There appears to be restrictions on nursing autonomy evident from the research conducted on the topic, which include the ability of the nurse to act on unfamiliar clinical situations with some nurses not wanting or daring to accept clinical autonomy due to the level of accountability.

There is inconsistent evidence in the literature on the meaning of nurse's autonomy. The literature has relied on concept analysis, which seems to have limitations for exploring the concept in a meaningful way. What appears to have become evident from the literature on nursing autonomy and clinical autonomy, is a concept that cannot be reduced to simple explanations. Due to the complex topic and limited literature of ANP clinical autonomy, a narrative literature review was carried out, presented in the following chapter.

Chapter Four - Literature Review

4.1 Introduction

This literature review describes the literature concerning ANP clinical autonomy. A narrative literature review was conducted to synthesise the evidence comprehensively, critically, and objectively. Secondly, the purpose of the narrative literature review was to assist in developing a methodology for this study.

Over many decades ANPs have been proposed as a solution to healthcare access for all. However, the discourse of the levels of ANP clinical autonomy is limited (Weiland, 2015; Schober, 2017; Park et al., 2018). The ANP evidence has focused on patient satisfaction reports, professional boundary challenges and role confusion (Begley et al., 2014; Cashin et al., 2014; Elliott et al., 2016; Gardner et al., 2016). ANPs themselves have narrated a 'straddling' in-between medicine, nursing and other allied health professions resulting in ANP clinical autonomy underutilisation in clinical practice (Turner, Keyzer and Rudge, 2007; MacLellan, Levett-Jones and Higgins, 2016; Ryder, Jacobs and Hendricks, 2019; Lockwood et al., 2021). For this review, ANP clinical autonomy is defined as "a dynamic process demonstrating varying amounts of independence, self-governed, not controlled, or not subordinate behaviours and sentiments related to relatedness, empowerment, actualisation and valuation for autonomous practice" (Dempster, 1994, p.227).

4.2 Background

The development and expansion of the ANP roles have transpired due to the global healthcare workforce challenges, shortage of staffing levels coupled with an ageing patient demographic

(Steinke et al., 2017; ICN et al., 2020; Torrens et al., 2020; Lockwood et al., 2021). The ICN has defined the ANP role as a 'registered nurse who has acquired the expert knowledge base, complex decision-making skills and clinical competencies for expanded practice, the characteristics of which are shaped by the context and country in which s/he is credentialed to practice' (2020, p.10). A minimum of a master's degree in most countries is recommended for entry-level as a ANP (ICN et al., 2020). ANP clinical autonomy is associated with independence, collaboration and practising as professionals in their own professional right, including maintaining active clinical practice (Dempster, 1990; Dempster, 1994; Turner, Keyzer and Rudge, 2007). ANP clinical autonomy has been defined as 'a dynamic process demonstrating varying amounts of independence, self-governed, not controlled, or subordinate behaviours and sentiments related to relatedness, empowerment, actualisation and valuation for autonomous practice' (Dempster, 1994, p.227). ANP and NP are protected role titles (ICN et al., 2020) and for this narrative review, ANP is used to cover ANP and NP collectively.

This literature review employed a systematic review methodology to explore existing research relating to ANP clinical autonomy. A narrative review approach seeks to 'summarise, explain and interpret evidence on a particular topic or question' using qualitative, quantitative or both evidence' (Mays, Pope and Popay 2005, p. 1).

4.3 Databases and Methods

4.3.1 Search Process

Original research and literature published between 2005 and 2020 were searched using the following databases via EBSCO host: the Cochrane Library, CINAHL, MEDLINE and Web of Science using the keywords ANP or NP and clinical autonomy. Initial scoping of the

keywords ‘ANP clinical autonomy’ found considerably limited papers. Therefore, the search was expanded using ANP, NP, advanced nursing practice, autonomy, clinical autonomy and professional autonomy. Papers of interest were those written in English and empirical research papers examining ANP clinical autonomy. Keywords used in the search had ‘ANP’, ‘NP’, advanced nursing practice either together or alone, with a combination of clinical autonomy, autonomy, or professional autonomy.

4.3.2 Inclusion Criteria

Date of publication 2005-2020 inclusive.

English Language papers.

Original Research.

Primary papers relating only to the title of ANP and NP’s clinical autonomy.

Review of Grey Literature

4.3.3 Exclusion criteria

Papers relating to other advanced practice levels such as clinical nurse specialists, advanced clinical practitioners, and physician assistants.

All other nursing roles, specialist, and nurse specialist roles.

Not primary research reports, for example, conference abstracts, editorials and commentaries, discussion papers and systematic/scoping reviews of original research.

4.3.4 Search terms

The PICO framework is commonly used in evidence-based medicine and nursing (Yensen, 2013) and was adapted and utilised to structure the narrative review’s keywords. ‘P’ in the PICO framework refers to advanced nurse practitioners ‘or’ nurse practitioners; ‘I’ refers to an

intervention (Table 1); ‘C’ refers to comparison or control groups, which were not included in this narrative review; and ‘O’ refers to the outcomes and includes terms such as the impact of the advanced nurse practitioners. Search terms were used in combination and on their own (Table 1). Boolean operators such as ‘AND’ and ‘OR’ were used to maximise inclusion.

The following journals were hand searched for relevant articles: Clinical Journal of Nursing, Journal of Advanced Nursing, Journal of Nursing Management, Journal for Nurse Practitioners, International Council of Nursing Review, Journal of the American Association of Nurse Practitioners, and the Journal of the American Academy of Nurse Practitioners. Reference lists of relevant articles were also searched to identify related studies. The database searches and hand searches were undertaken adhering to the PRISMA guidelines (Moher et al., 2009). Please see Appendix A which includes the databases searched.

Question PICO sand search strategy used for EBSCO host, Cochrane Library, CINAHL and PubMed (MEDLINE) was searched
PICO search terms P ‘advanced nurse practitioner’ AND/OR ‘nurse practitioner’ AND/OR ‘advanced nursing practice.’ I AND autonomy AND/OR professional AND/OR clinical autonomy O AND/OR impact of Advanced Nurse Practitioner clinical autonomy, AND/OR in clinical practice ANP/OR levels of clinical autonomy
Search terms and combinations S1: Advanced Nurse Practitioner or ANP ‘AND’/’OR’ nurse practitioner or NP ‘AND’/’OR’ advanced nursing practice S2: Clinical autonomy ‘AND’, ‘OR’ ‘Autonomy’ ‘AND’/’OR professional autonomy S3: AND/OR impact of Advanced Nurse Practitioner clinical autonomy, AND/OR in clinical practice ‘AND’/’OR’ S1: ‘advanced nurse practitioner’ AND/OR ‘nurse practitioner’ AND/OR ‘advanced nursing practice.’ S2: AND autonomy AND/OR professional AND/OR clinical autonomy S3: AND/OR impact of Advanced Nurse Practitioner clinical autonomy, AND/OR in clinical practice S4: Change S1 and S2 S1 and S3 S2 and S3 S3 and S1

Table 1: Databases and Methods

The PRISMA checklist and flow diagram (Appendix B) guided the manuscript development (Moher et al., 2009). Quality assessment was achieved by rating each paper using the appraisal tool from Hawker et al. (2002).

4.3.5 Summary table of included articles and quality appraisal

After removing duplicates and non-research papers, 324 abstracts were scrutinised. Articles relating to other nursing and non-nursing specialist roles were subsequently excluded (n = 208) (Figure 1). The remaining full-text papers were retrieved and reviewed by the two reviewers (E. Lockwood and D. Lehwaldt) (n = 116), and the application of the inclusion criteria further limited the number of articles in the final review to 19. The two researchers independently assessed each article. According to PRISMA guidelines, the articles were categorised (Moher et al., 2009) (Figure 1). Quality assessment was achieved by rating each paper and critically appraising the literature using Hawker et al.'s (2002) appraisal tool (Appendix C). This checklist was used to extract and appraise the abstract and title, introduction and aims, methods and data, sampling, data analysis, bias, results, transferability, implications and usefulness. The score for each paper was recorded when the reviewers reached a consensus (Appendix C). The Hawker et al. (2002) tool scores derive from nine questions scored as very poor (1), poor (2), fair (3) to very good (4).

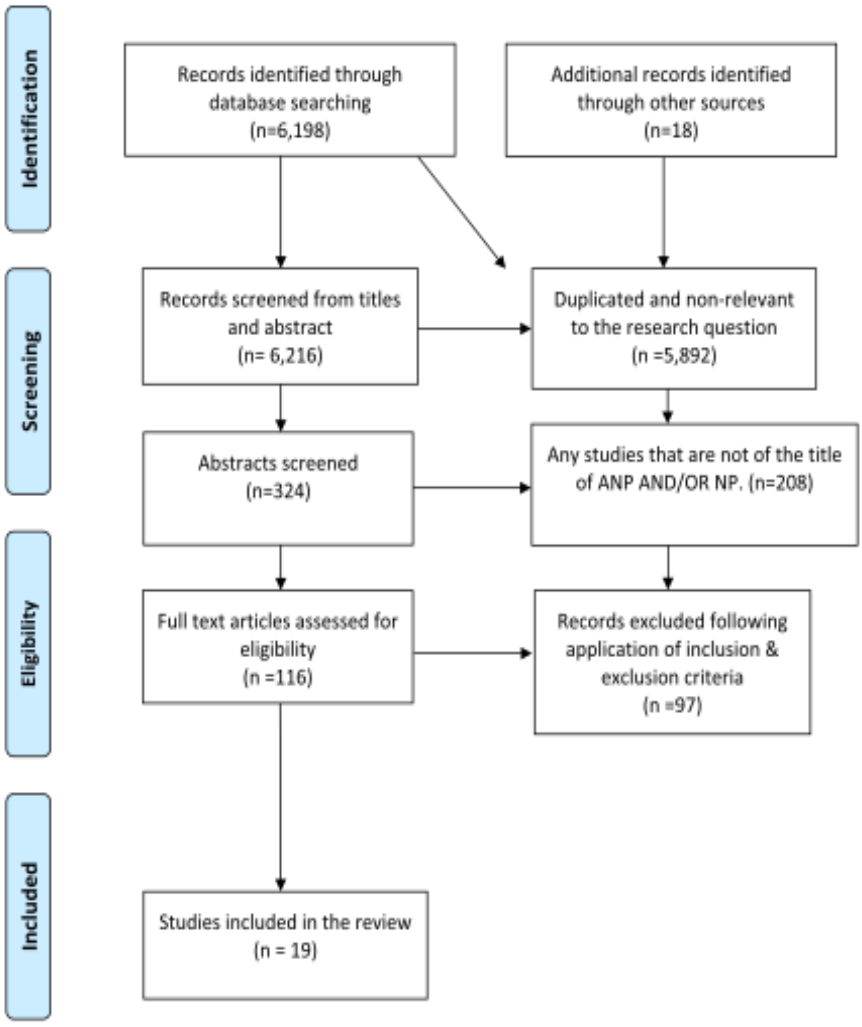

Figure 1: PRISMA Flowchart

The 19 papers scored satisfactorily on methodological rigour assessment, with no papers scoring less than 27 from a maximum score of 36. Details of the 19 papers and methodological assessment scores are provided in Appendix D. An iterative consensus-building approach was used to synthesise the literature and illustrate the social context of the findings. This approach consisted of read and reread papers, documenting repetition of the literature, whereby the initial development of sub themes were identified, with final agreement on major themes (Jones, 2004).

4.4 Results

The 19 articles were from a variety of countries. There were nine from the USA, four from Australia, two from the UK, two from Canada, one from Ireland, and one from Ireland and Australia. The research designs of all papers are included in Appendix D. The following themes emerged from the data analysed.

4.4.1 'ANP Stepping Up'

One theme of ANP clinical autonomy emerging from the literature is summarised as 'stepping up'. The ANPs 'stepping up' is demonstrated by the nurse moving from their current role into a new ANP role (Sangster-Gormley et al., 2011; MacLellan, Levett-Jones and Higgins, 2016; Poghosyan and Liu, 2016; Schadewaldt et al., 2016; Fox, Gardener and Osbourbe, 2018). Additionally, it referred to ANPs 'stepping up' and accepting advancing clinical responsibilities and expanding their scope of practice to enhance healthcare provision (Sangster-Gormley et al., 2011; MacLellan, Levett-Jones and Higgins, 2016; Poghosyan and Liu, 2016; Schadewaldt et al., 2016; Fox, Gardener and Osbourbe, 2018).

Ten papers referred to the inclusion of medical and nursing activities for patients as one major part of ANP 'stepping up'. This also includes independent history taking, diagnosis, independent prescribing of medications and ionising radiation, referral and discharge of patients without the need for a physician's consultation or assessment (Turner, Keyzer and Rudge, 2007; Bahadori and Fitzpatrick, 2009; Weiland, 2015; Cowley, Cooper and Goldberg, 2016; MacLellan, Levett-Jones and Higgins, 2016; Spetz, Skillman and Andrilla, 2017; Park et al., 2018; Anderson, Birks and Adamson., 2019; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020). Eight papers similarly included ANP 'stepping up' as physical examination, diagnostic and curative intervention, prescribing, admission rights, patient referral and discharge (Sangster-Gormley et al., 2011; Weiland, 2015; Cowley, Cooper and Goldberg, 2016; MacLellan, Levett-Jones and Higgins, 2016; Poghosyan and Liu, 2016; Anderson, Birks and Adamson., 2019; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020).

Additionally, on referral or discharge of a patient, 'stepping up' ANPs clinical autonomy was discoursed as completing full episodes of care, including making the clinical decisions without conferring with a physician and commencing a treatment plan and diagnosis collaboratively, or entirely without a physician independently (Bahadori and Fitzpatrick, 2009; Burgess and Purkis, 2010; Weiland, 2015; Cowley, Cooper and Goldberg, 2016; Anderson, Birks and Adamson., 2019; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020). Some of the papers focus was on depicting how activities could enhance ANPs' clinical autonomy.

Diagnosing a patient, for example, was reported in five studies as an activity whereby ANPs use their cognitive deductive skills to independently identify their reason for referring a patient from primary to acute care or vice versa (Turner, Keyzer and Rudge, 2007; Weiland, 2015;

Schadewaldt et al., 2016; Spetz, Skillman and Andrilla, 2017; Fox, Gardener and Osbourbe, 2018). Four studies described the overarching goal of 'stepping up' as providing timely care to patients, improving patient flow, initiating care pathways and continuity of services, which is cost-effective and ensures quality patient care (Athey et al., 2016; Fox, Gardener and Osbourbe, 2018; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020). Additionally, nine studies reported ANPs clinical autonomy as 'stepping up' regarding diagnosis, completion of full episodes of care with or without a physician's over- sight (Maylone et al., 2011; Weiland, 2015; Athey et al., 2016; Schadewaldt et al., 2016; Spetz, Skillman and Andrilla, 2017; Fox, Gardener and Osbourbe, 2018; Park et al., 2018; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020).

Eleven of the 19 papers included in this review explore the use of complex decision-making skills as part of 'stepping up' (Cajulis and Fitzpatrick, 2007; Turner, Keyzer and Rudge, 2007; Bahadori and Fitzpatrick, 2009; Yee et al., 2013; Weiland, 2015; Athey et al., 2016; Cowley, Cooper and Goldberg, 2016; Poghosyan and Liu, 2016; Spetz, Skillman and Andrilla, 2017; Fox, Gardener and Osbourbe, 2018; Park et al., 2018).

Seven papers referred to ANPs clinical autonomy as practising from a deeper level of experience and understanding, to support their clinically autonomous decision-making in clinical practice (Bahadori and Fitzpatrick, 2009; Weiland, 2015; Cowley, Cooper and Goldberg, 2016; Fox, Gardener and Osbourbe, 2018; Anderson, Birks and Adamson., 2019; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020).

Finally, 12 studies reported continuing professional development as a key factor in developing clinical decision-making associated with ANPs' clinical autonomy (Cajulis and Fitzpatrick,

2007; Turner, Keyzer and Rudge, 2007; Bahadori and Fitzpatrick, 2009; Yee et al., 2013; Weiland, 2015; Athey et al., 2016; Poghosyan and Liu, 2016; Fox, Gardener and Osbourbe, 2018; Park et al., 2018; Anderson, Birks and Adamson., 2019; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020).

4.4.2 'ANP Living It'

Having an environment that enables the ANP to clinically practice autonomously formed a significant part of the literature reviewed. It is summarised under the theme 'living it'. ANPs described it in the literature as a sense of one's own ability to act independently and to exert control over one's environment, including an understanding of task mastery and self-determination (Turner, Keyzer and Rudge, 2007; Yee et al., 2013; Weiland, 2015; Athey et al., 2016; Spetz, Skillman and Andrilla, 2017). Similarly, ANP 'living it' was reported as enabling their clinical autonomy within their working environments, giving them professional support and a sense of achievement (Weiland, 2015; Athey et al., 2016; Spetz, Skillman and Andrilla, 2017).

ANPs' clinical autonomy was experienced as real when the ANPs felt supported in their clinically autonomous practice, including managing their patient caseloads and acting as the first point of contact for their patients and relatives (Weiland, 2015; Schadewaldt et al., 2016; Spetz, Skillman and Andrilla, 2017; Ryder, Jacobs and Hendricks, 2019). Two ethnographic studies reported that ANP clinical autonomy occurred when the ANP felt they had the authority to practice as professionals in their own right (MacLellan, Levett-Jones and Higgins, 2016; Anderson, Birks and Adamson., 2019). This was also reported by Turner et al. (2007) in a discourse analysis paper.

Organisational supports were identified in nine studies as enabling the ANP to live their clinical autonomy in practice (Cajulis and Fitzpatrick, 2007; Turner, Keyzer and Rudge, 2007; Bahadori and Fitzpatrick, 2009; Burgess and Purkis, 2010; Maylone et al., 2011; Cowley, Cooper and Goldberg, 2016; Schadewaldt et al., 2016; Fox, Gardener and Osbourbe, 2018; Park et al., 2018). Five studies reported organisational supports as an enabler of living it when all healthcare team levels advocate for ANPs clinical autonomy (Cajulis and Fitzpatrick, 2007; Turner, Keyzer and Rudge, 2007; Bahadori and Fitzpatrick, 2009; Maylone et al., 2011; Park et al., 2018). The theme of 'living it' was also reported in influences of behavioural change, reducing constraints to ANPs clinical autonomy (Cajulis and Fitzpatrick, 2007; Turner, Keyzer and Rudge, 2007; Bahadori and Fitzpatrick, 2009; Burgess and Purkis, 2010; Maylone et al., 2011; Cowley, Cooper and Goldberg, 2016; Fox, Gardener and Osbourbe, 2018; Schadewaldt et al., 2016).

However, six studies reported ANP clinical autonomy as complex within the organisation when implementing the role with inter-professional and intra-professional relationships, and role territory enforcing restrictions to ANPs living their clinical autonomy (Turner, Keyzer and Rudge, 2007; Sangster-Gormley et al., 2011; Weiland, 2015; MacLellan, Levett-Jones and Higgins, 2016; Schadewaldt et al., 2016; Anderson, Birks and Adamson., 2019). Seven studies reported a fundamental lack of recognition of ANP clinical autonomy by other health professionals as an incapacitating factor of 'living it' (Bahadori and Fitzpatrick, 2009; Burgess and Purkis, 2010; Weiland, 2015; Cowley, Cooper and Goldberg, 2016; Schadewaldt et al., 2016; Anderson, Birks and Adamson., 2019; Kerr and Macaskill, 2020).

Improvements in the organisational context were reported when there was a collaborative working relationship, as opposed to a hierarchical structure, and this was depicted in six of the

studies as empowering in terms of ANPs' clinical autonomy (Cajulis and Fitzpatrick, 2007; Bahadori and Fitzpatrick, 2009; Weiland, 2015; Anderson, Birks and Adamson., 2019; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020). Additionally, studies reported positive factors for the organisation of ANPs' clinical autonomy, such as advanced clinical decision-making and extensive ANP knowledge (Burgess and Purkis, 2010; Sangster-Gormley et al., 2011; Schadewaldt et al., 2016).

Thirteen papers indicated that a lack of policy implementation of ANPs' clinical autonomy had created role ambiguity and resistance to their clinical autonomy amongst healthcare teams (Turner, Keyzer and Rudge, 2007; Maylone et al., 2011; Sangster-Gormley et al., 2011; Weiland, 2015; Athey et al., 2016; MacLellan, Levett-Jones and Higgins, 2016; Poghosyan and Liu, 2016; Schadewaldt et al., 2016; Fox, Gardener and Osbourbe, 2018; Park et al., 2018; Anderson, Birks and Adamson., 2019; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020). Constraints to ANPs clinical autonomy depicted in the literature suggest that nurses in ANP roles require a 'bounce-back ability'.

4.4.3 'ANP Bounce-Back Ability'

'Bounce-back ability' was identified as another theme in the ANP clinical autonomy literature. It is depicted as the ANPs' ability to bounce back from challenges that threaten their ability to practice clinically autonomously, as discussed in the themes of 'stepping up' and 'living it'. ANP 'bounce-back ability' is required when ANPs encounter challenges that impede their ability to practice clinically autonomously (Bahadori and Fitzpatrick, 2009; Maylone et al., 2011; Yee et al., 2013; Weiland, 2015; Poghosyan and Liu, 2016; Schadewaldt et al., 2016). Four studies reported high levels of ANP satisfaction when their clinical autonomy was a reality in practice in terms of being utilised to their fullest capacity (Cajulis and Fitzpatrick,

2007; Bahadori and Fitzpatrick, 2009; Maylone et al., 2011; Athey et al., 2016). Additionally, four studies reported that a more liberal approach towards ANPs' clinical autonomy was linked to an element of trust that develops between physicians and ANPs (Cajulis and Fitzpatrick, 2007; Bahadori and Fitzpatrick, 2009; Maylone et al., 2011; Weiland, 2015).

The implementation of CPAs in some countries were outlined in six papers as confining ANPs' clinical autonomy (Cajulis and Fitzpatrick, 2007; Bahadori and Fitzpatrick, 2009; Yee et al., 2013; Athey et al., 2016; Spetz, Skillman and Andrilla, 2017; Park et al., 2018). Additionally, CPAs were used by physicians and other allied professionals to restrain ANPs' patient caseloads, prescribing activity, and scope of practice (Cajulis and Fitzpatrick, 2007; Turner, Keyzer and Rudge, 2007; Bahadori and Fitzpatrick, 2009; Maylone et al., 2011; Yee et al., 2013; Weiland, 2015; Poghosyan and Liu, 2016; Schadewaldt et al., 2016).

Eight studies reported evidence of the level of ANP clinical autonomy such as providing direct patient care (Cajulis and Fitzpatrick, 2007; Bahadori and Fitzpatrick, 2009; Maylone et al., 2011; Athey et al., 2016; Cowley, Cooper and Goldberg, 2016; Anderson, Birks and Adamson., 2019; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020). One study reported gender as a significant factor influencing ANPs clinical autonomy with a socio-cultural belief that ANPs have less autonomy due to their caring role in a female-dominated profession than the physicians' role in science and independent practice (Weiland, 2015).

A sense of 'bounce-back ability' has been reported in the literature describing situations whereby ANPs regain control over their clinical autonomy despite experiencing sociocultural and service-level challenges (Cajulis and Fitzpatrick, 2007; Bahadori and Fitzpatrick, 2009; Maylone et al., 2011; Weiland, 2015). Five studies reported 'bounce-back abilities' were

required to stay in the position of ANP and to continue practicing at an advanced nursing practice level (Turner, Keyzer and Rudge, 2007; Bahadori and Fitzpatrick, 2009; Yee et al., 2013; MacLellan, Levett-Jones and Higgins, 2016; Spetz, Skillman and Andrilla, 2017).

Two studies reported ANP trainees leaving the positions due to 'bounce-back' inability in terms of restraint to ANP clinical autonomy (Turner, Keyzer and Rudge, 2007; MacLellan, Levett-Jones and Higgins, 2016). Similarly, four studies reported that ANPs are more likely to leave their positions without 'bounce-back ability' and revert to roles with less clinical autonomy (Cajulis and Fitzpatrick, 2007; Turner, Keyzer and Rudge, 2007; Bahadori and Fitzpatrick, 2009; MacLellan, Levett-Jones and Higgins, 2016).

In five studies, ANP clinical autonomy was narrated as a balancing act of straddling in-between nursing and medicine with reports of ANPs feeling isolated in clinical practice (Turner, Keyzer and Rudge, 2007; MacLellan, Levett-Jones and Higgins, 2016; Anderson, Birks and Adamson., 2019; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020). Additionally, six studies reported that one of the main constraints of ANPs clinical autonomy was when intra-professionals and inter-professionals incessantly challenged their confidence and competence, creating an element of self-doubt in their knowledge base (Turner, Keyzer and Rudge, 2007; Burgess and Purkis, 2010; MacLellan, Levett-Jones and Higgins, 2016; Schadewaldt et al., 2016; Anderson, Birks and Adamson., 2019). Reports of physicians lacking confidence in ANP education, clinical autonomy abilities and knowledge base were reported in three studies (Cowley, Cooper and Goldberg, 2016; Poghosyan and Liu, 2016; Schadewaldt et al., 2016).

The requirement imposed in many areas of being supervised by physicians was perceived to negatively impact ANPs' clinical autonomy and physicians' perceived workload (MacLellan,

Levett-Jones and Higgins, 2016; Poghosyan and Liu, 2016). Furthermore, qualified ANPs as well as physicians being a supervisor to ANPs in training, was reported as positive to their ANP clinical autonomy development (Anderson, Birks and Adamson., 2019; Kerr and Macaskill, 2020).

4.4.4 'ANP Setting in Motion'

The literature reviewed showed that ANP clinical autonomy also requires the 'setting in motion' of indirect care activities, quality initiatives and service-level improvements for quality patient care (Fox, Gardener and Osbourbe, 2018; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020). Additionally reported was the ANP as the 'setter in motion', driving quality initiatives and leading service-level improvements to improve patient care (Cowley, Cooper and Goldberg, 2016; Poghosyan and Liu, 2016; Schadewaldt et al., 2016; Fox, Gardener and Osbourbe, 2018; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020).

Apart from direct patient activities and expanded scope of practice, ANP clinical autonomy was demonstrated in six papers as engaging in nursing leadership, education of self and others, improved holistic approach to patient care, and facilitation of collaboration within teams (Cowley, Cooper and Goldberg, 2016; Poghosyan and Liu, 2016; Schadewaldt et al., 2016; Fox, Gardener and Osbourbe, 2018;; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020). 'Setting in motion' was reported in six papers as ANPs initiating new care initiatives such as improvements in patient pathways, which reduced organisational cost and improved efficiency (Cowley, Cooper and Goldberg, 2016; Poghosyan and Liu, 2016; Schadewaldt et al., 2016; Anderson, Birks and Adamson., 2019; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020). Other studies reported the ANP being the 'setter in motion' to enhance patients' quality of life (Yee et al., 2013; Fox, Gardener and Osbourbe, 2018; Kerr and

Macaskill, 2020). Three studies reported senior nursing colleagues dismissing the ANPs' ability to set in motion operational activities as well as driving change, and viewed them in a predominantly clinical role (Poghosyan and Liu, 2016; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020).

Five studies reported ANP 'setting in motion' as favourable when ANP relationships improved with all members of the healthcare team (Sangster-Gormley et al., 2011; Weiland, 2015; Cowley, Cooper and Goldberg, 2016; Schadewaldt et al., 2016; Fox, Gardener and Osbourbe, 2018). Four studies reported the need to focus on promoting ANPs' clinical autonomy to improve full utilisation of the role (Park et al., 2018; Spetz, Skillman and Andrilla, 2017; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020).

ANP 'setting in motion' was shown in eight papers as improving patient satisfaction and reducing patient waiting times (Athey et al., 2016; Cowley, Cooper and Goldberg, 2016; Poghosyan and Liu, 2016; Schadewaldt et al., 2016; Fox, Gardener and Osbourbe, 2018; Park et al., 2018; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020). All 19 studies reported implementation and full ANP clinical autonomy as enabling delivery of patient care when there is clear differentiation and understanding of the role with all members of the healthcare team.

4.5 Discussion

The four themes have contributed to a new understanding of the overall meaning of ANP clinical autonomy. The limited research in this area is a crucial finding of this review. One

plausible explanation is that ANP clinical autonomy is an elusive concept: hard to grasp and difficult to measure (Dempster, 1994).

Evidence from the literature denotes that ANP clinical autonomy means more than just the shifting of medical tasks from one professional group to another, which is a view that has described ANP clinical autonomy in previous nursing literature (Maier et al., 2016). For example, the theme of 'stepping up' is a notion of advanced levels of nursing professional practice, including independent prescribing, diagnosis, and expert levels of clinical decision-making skills (Anderson, Birks and Adamson., 2019; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020). 'Stepping up' has been reported as utilising a holistic approach to clinical autonomy in that ANPs incorporate nursing and medical activities such as being alone with the patient, health promotion and physical assessment, diagnosis, and treatment initiatives (Sangster-Gormley et al., 2011; Weiland, 2015; Kerr and Macaskill, 2020).

However, the authors in some papers reported that the full capabilities of ANP clinical autonomy is not consistently implemented in clinical practice (Maylone et al., 2011; Yee et al., 2013; Weiland, 2015; Poghosyan and Liu, 2016; Anderson, Birks and Adamson, 2019; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020). All healthcare professionals are required to hold a level of education and professional qualifications to undertake their roles safely for the patient. Additionally, it appears that ANPs are a professional group who are and will be challenged regarding their clinical autonomy in practice (Bahadori and Fitzpatrick, 2009; Sangster-Gormley et al., 2011; Yee et al., 2013; Weiland, 2015; MacLellan, Levett-Jones and Higgins, 2016; Poghosyan and Liu, 2016). Indeed, some ANPs in studies within the narrative review reported that they left their training as ANPs and returned to their previous nursing roles due to an inability to 'bounce back' from restraints to their practice (Turner,

Keyzer and Rudge, 2007; MacLellan, Levett-Jones and Higgins, 2016). The reported lack of knowledge of ANP clinical autonomy may link to the reported control over practice in the role, resulting in a negative effect on their confidence and competence (Turner, Keyzer and Rudge, 2007; Burgess and Purkis, 2010; Poghosyan and Liu, 2016; Schadewaldt et al., 2016).

The themes ‘living it’ and ‘bounce-back ability’ have resulted in ANP constraints in the form of the attachment of CPA agreements to physicians (Turner, Keyzer and Rudge, 2007; Bahadori and Fitzpatrick, 2009; Maylone et al., 2011; Sangster-Gormley et al., 2011; Athey et al., 2016; MacLellan, Levett-Jones and Higgins, 2016; Schadewaldt et al., 2016; Spetz, Skillman and Andrilla, 2017; Fox, Gardener and Osbourbe, 2018; Park et al., 2018). This was particularly evident in some studies reporting ANPs having to agree their clinical diagnostics, prescriptions, referral, and discharge decisions with a physician (Bahadori and Fitzpatrick, 2009; Cajulis and Fitzpatrick, 2007; Maylone et al., 2011; Yee et al., 2013; Weiland, 2015; Athey et al., 2016; Poghosyan and Liu, 2016; Park et al., 2018). Additionally, ‘setting in motion’ is a theme identified as ANPs clinical autonomy to improve patient care pathways and service delivery. The ‘setting in motion’ of ANPs clinical autonomy is a significantly important part of their ANPs clinical autonomy (NCNM, 2008; Begley et al., 2014; ICN et al., 2020).

The year 2020 was marked by the World Health Organisation (WHO) as the year of the nurse and midwife (WHO, 2020). However, at the time of writing this narrative review, the world is dealing with the COVID-19 pandemic. ANPs are valuable frontline decision-makers who do and will ‘step up’ and play their part in dealing with COVID-19, including the diversification and desire to keep patients closest to their homes with a quality patient focus (ICN et al., 2020).

4.6 Future Research

There needs to be greater clarity about what is being explored regarding autonomy, as autonomy. Nursing autonomy, ANP professional, and ANP clinical autonomy are all closely linked but are not the same which contributes to confusion in the literature. However, the literature reviewed for this narrative review showed that specific tools developed to measure ANP clinical autonomy are sparse. Additionally, the ANP role is specific to high levels of clinical autonomy, which includes completing full episodes of care without a physician's oversight, including ANPs making a diagnosis, and independent prescribing. Furthermore, ANP clinical autonomy also includes leadership with a strategic operational position to drive and lead service provision that should be championed in all layers of healthcare. The title of ANP roles need to be recognised as a protected role in future research. Other specialist nursing and non-nursing functions under the same umbrella can add to the literature's existing confusion.

4.7 Limitations

A narrative review can be undertaken where there is divergent data and an area of interest that needs to be identified (Onwuegbuzie and Frels, 2016). However, the diverse datasets found in the current study, the variety of settings for the studies, the cultural influences and the context of qualitative and quantitative studies, may have influenced the findings, making interpretation and generalisation about ANP clinical autonomy difficult.

4.8 Conclusion

The review identified that ANP clinical autonomy includes a sense of self-determination in clinical practice, and this requires support to prepare and strengthen future directions. The findings reveal that ANP clinical autonomy identifies as being an individual practitioner as well as collaborating with other healthcare professionals. A clearer understanding of ANPs' clinical autonomy would help strengthen healthcare professionals' understanding and increase full utilisation in clinical practice. Further research into ANP clinical autonomy could help develop a more in-depth understanding and expand on the themes that emerged in this review. Subsequent to the literature review findings, this study successfully published this narrative review as shown below in Figure 2 (Lockwood et al., 2021). Additionally, further status publications from this PhD study are included in Appendix E.

Check for updates

Received: 29 September 2020 | Revised: 30 April 2021 | Accepted: 12 May 2021

DOI: 10.1111/ijn.12978

LITERATURE REVIEW

INTERNATIONAL JOURNAL of NURSING PRACTICE WILEY

'An exploration of the levels of clinical autonomy of advanced nurse practitioners': A narrative literature review

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Abstract

Aims and Objectives: The aims of the review are to synthesise current evidence about advanced nurse practitioner clinical autonomy and consider how this may inform clinical practice and research.

Background: Clinical autonomy is one of the cornerstones of advanced nursing practice globally, yet there is limited synthesis of clinical autonomy in the literature.

Design: This is a narrative literature review.

Data sources: The databases Cumulative Index to Nursing and Allied Health Literature, EBSCO host, Cochrane Library, CINAHL and MEDLINE were searched for publications between 2005 and 2020 inclusive.

Review methods: A systematic approach was used to analyse the literature reviewed. Two reviewers undertook quality appraisal.

Results: Nineteen articles were selected. Four major themes emerged: (1) 'ANP Stepping Up'—moving into and accepting advanced nursing practice roles and clinical responsibilities; (2) 'ANP Living It'—ANPs' ability to act independently including an understanding of task mastery and self-determination; (3) 'ANP Bounce-back ability'—depicted in challenges that threaten their ability to practice clinically autonomously; (4) 'ANP Setting in Motion'—indirect care activities and service-level improvements.

Conclusion: A clearer understanding of advanced nurse practitioner clinical autonomy could help develop more in-depth knowledge. Research of advanced nurse practitioners' clinical autonomy would improve full utilisation in clinical practice.

KEYWORDS
advanced nurse practitioners, advanced nursing practice, autonomy, nurse practitioners, levels of clinical autonomy

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Figure 2: International Journal of Nursing Practice (Lockwood et al., *2021).*

Chapter Five - Philosophical Underpinnings

5.1 Introduction

This section will discuss the philosophical underpinnings of the study. The first section will present the theoretical considerations and conceptual frameworks significant for this study including ANP governance frameworks. The chapter will additionally present SDT and this study's conceptual framework.

5.2 Theoretical Considerations

A conceptual framework for this study was an important consideration for a structure to the thesis and to organise the direction of the research inquiry. Rallis and Rossman (2012) reported that a conceptual framework organises the research idea and central concepts of the theory and key findings of the study, which threads the study together throughout the process. Firstly, the perspective, relevant research and then the generation of theory and theoretical constructs are presented and considered. Indeed, building a conceptual framework starts with the researcher's own knowledge as a thinker (Rallis and Rossman, 2012; Charmaz, 2014), followed by a literature review and finally the theoretical construct itself.

This research journey considered many other conceptual underpinnings and theories outlined in the narrative literature review (chapter three). Consideration was also given to street-level bureaucracy (Hupe, Hill and Buffat, 2016), grounded theory (Charmaz, 2014), participatory action research (PAR), particularly the PEPPA Plus framework adapted from the Donabedian framework (Donabedian, 1988, 2005; Bryrant-Lukosious et al., 2016), feminist theory (Gilligan, 1993), case study approaches of ANP impact and the inclusion of all key

stakeholders within the study (Gerrish et al., 2007; Begley et al., 2010; Gerrish, McDonnell and Kennedy, 2013), ethnography, (Schober, Gerrish and McDonnell, 2013) and the Donabedian framework (Donabedian, 1988, 2005; Gardener, Gardener and O'Connell, 2013; ONMSD et al. (2020)), PEPPA PLUS and logic model framework (Bryrant-Lukosious, 2016; NHS, 2016).

The initial research proposal for this PhD study was presented to the study's DCU supervisors in 2017. The proposal at that time was an analysis of the impact of ANPs on care services of micro, meso and macro layers utilising the Gerrish, Kennedy and Mc Donnell (2013) and Donabedian (1988) conceptual framework. The student had also previously suggested Gerrish, Kennedy and Mc Donnell (2013) in a research proposal on the organisational impact of ANPs in 2015. The initial proposal in DCU was reviewed by the PhD student's supervisors and it was agreed to focus on the ANPs actual clinical autonomy as a PhD study.

After significant advice and consideration of the research question and complexity of autonomy itself, I narrowed the study to consider the exploration of ANPs clinical autonomy. Furthermore, implementation of ANP roles and professional ANP autonomy developments have been researched to a significant level as demonstrated in Table 2. The current evidence of actual ANP clinical autonomy is limited. Again, due to the nebulousness of the topic area, refining the study to explicitly exploring ANP clinical autonomy by the practitioners themselves was the chosen perspective for this study,

My supervisors and I engaged in supervision collaboration with Dr Madrean Schober in DCU, a leading nurse consultant advisor on ANP developments globally, visiting the IAANMP from the USA. This was extremely helpful in the development and focus of the topic area.

Additionally, the DCU student explored governance and policy frameworks before developing the research and conceptual framework of this study. Table 2 below includes some of the ANP policy and governance frameworks reviewed and considered for this study.

ANP Policy and Governance Frameworks Reviewed for this study	**Year and Author**
'Framework utilised in the SCAPE (Begley et al., 2010) evaluating CNS and ANP roles' Case Study (All key stakeholders included).	Gerrish, Kennedy and Mc Donnell (2007) framework and Donabedian within the methodology of the 'SCAPE Report'.
'Donabedian Framework to determine impact of ANP' (All key stakeholders included).	Gardener, Gardener and O'Connell (2013) ANP Implementation Research.
'Framework to determine patient, organisational and professional significance of ANP/nurse consultants' Case Study approach and a useful toolkit. (All key stakeholders included).	Gerrish, Kennedy and Mc Donnell (2013) Case Study ANP Impact Research.
Ethnographic Study (all key stakeholders included) to develop a conceptual framework for policy and governance of ANP	Schober, Gerrish and McDonnell (2013).
Framework for Evaluating the Impact of Advanced Practice Nursing Roles 'PEPPA PLUS' Evaluation framework matrix (Australia/Switzerland). (Adapted Donabedian framework).	Bryant and Lukosious et al. (2016), APN Roles Implementation Research.
Development of a conceptual framework ANP Policy & Governance Framework: an ethnographic study.	Schober, Gerrish and McDonnell (2013).
'Strategic Planning for Advanced Practice Nursing' Framework.	Schober (2017) Based on the Ethnographic framework (Schober, Gerrish and McDonnell, 2013).

Table 2: ANP Policy and Governance Frameworks

Additionally, all stakeholders were considered, and significant time was spent reviewing the literature pertinent to ANP clinical autonomy. My supervisors and I believed that policy and organisational levels would be a beneficial research study. This firstly concentrated on an exploration of ANP clinical autonomy until a study about the exploration of ANP clinical autonomy was first established.

Finally, after reflecting on all theoretical considerations, it was decided that the best lens for this study was a theoretical framework that could be adaptable and consider the total population of ANPs in Ireland. Additionally, unearthed in chapter three is the limited evidence of actual ANP clinical autonomy. Although this was an extensively lengthy process, it grounded the

students' thinking and crystallised the study to concentrate on the ANPs clinical autonomy by the practitioners themselves. The following section will discuss the ontological and epistemological position of the researcher in this study.

5.3 Dialectic Stance

The terms used to describe philosophical worldviews previously considered such as paradigms, are more recently understood from a philosophical stance such that it has distinct elements of epistemology (how we know what we know), ontology (the nature of reality), axiology (one's values) and methodology (the process of research) (Charmaz, 2014; Bryman, 2016; Creswell, 2018).

Researchers who hold different worldviews will approach research in different ways to construct knowledge, interpret information and make methodological choices within the research process itself (Bryman, 2016; Creswell, 2018). It was determined by Bryman (2016) that a stance is a cluster of beliefs that dictates which influences should be studied, how research should be carried out, and how the findings should be interpreted. One's worldviews or belief systems reflect and guide decisions that researchers make (Guba and Lincoln, 2005; Tashakkori and Teddlie, 2010; Maxwell, 2011).

In the social and behavioural sciences, traditionally, these philosophical views have aligned into two divides, with writers proposing various terminologies to distinguish these stances; for example, Guba and Lincoln (2005) use the terms 'scientific' and 'naturalistic', while Tashakkori and Teddlie (2010) use 'scientific' and 'constructivist'. An alternative approach to the scientific and constructivist worldviews was proposed by authors Greene and Caracelli (2003), Teddlie and Tashakkori (2010) and Creswell (2018). These authors are known for the

more modern alternatives of the scientific and constructivist approaches such as mixed methodologies and ideologies considered as the ‘phoenix’ of the paradigm wars (Greene and Caracelli, 2003; Teddlie and Tashakkori, 2010; Creswell, 2018). These include pragmatism, constructivism, and dialectic stances (Johnson, Onwuegbuzie and Turner, 2007; Johnson, 2011; Creswell, 2018).

In 1979, Burrell and Morgan distinguished between design approaches and the underlying assumptions (Johnson, Onwuegbuzie and Turner, 2007; Tashakkori and Teddlie, 2010; Creswell, 2015). For example, a quantitative approach implies the holding of scientific beliefs, whereas a qualitative approach implies having beliefs associated with constructivist paradigms (Greene, 2007; Tashakkori and Teddlie, 2010; Charmaz, 2014).

More recently however, the most important part of research is aligned with the question itself, yet if required, singular or both scientific and constructivism should align, if necessary, in one study, either convergently or in a phased process of combining stances such as, explanatory, exploratory, embedded, convergent, and triangulation studies (Creswell, 2015). As purported by Bryman (2016), research inquiry gives rise to particular methods of investigation, which in turn reflect the researcher's beliefs about the real world and how it can be empirically investigated. The following section will discuss the methodological choice for this study.

The first decision choosing the methodology and conceptual framework for this study was to ascertain the best approach to suit the research question and the findings of the literature review presented in chapter four (Creswell, 2018). The theoretical lens of a dialectic researcher considers all stances as legitimate and argues that multiple or single stances in a single study can often contribute to a better understanding of the phenomenon being studied (Greene, 2007;

Greene and Hall, 2010; Teddlie and Tashakkori, 2010). Similarly, this study's research questions required a quantitative perspective with the addition of a qualitative thematic analysis. A quantitative study can utilise a survey and incorporates a descriptive element from a qualitative viewpoint; for example, in an open-ended section approach (Greene and Hall, 2010; Creswell and Plano-Clark, 2011; Shannon-Baker, 2016). The design in the current study is intended to utilise a quantitative survey to establish the constitutes of ANP clinical autonomy (Tashakkori and Teddlie, 2010; Creswell, 2018). As May (2011) also explained, surveys have their origin in the scientific tradition; thought to describe surveys in modern day as an oversimplification. Furthermore, acknowledged by Creswell (2018) was the addition of a dialectic stance which advocates, if required, that scientific and constructivist positions are essential and not the 'stand-off' of both approaches.

It is important to understand the conceptual lens of this study before the research design is presented and this will be explained in the following sections, beginning with the organismic dialectic stance.

5.3.1.1 Organismic Dialectic

In grasping autonomy, Deci and Ryan (1985; 2008) forwarded SDT entrenched in an organismic dialectic stance which is best for the research question, and this studies philosophical underpinnings (Deci and Ryan, 2012). The root of an organismic dialectic and its ideologies is essential in searching for the truth, that humans are active organisms and hold tendencies towards growing and mastering challenges (DeCharms, 1968; Deci and Ryan, 2008). Additionally, the organismic dialectic sees all paradigms and stances as important and equal (Deci and Ryan, 2008; Creswell, 2018). In the determination of a concept a organismic

dialectic sees stances to be utilised in regard to what is the most useful to answer the question which may or may not require one or both theoretical lens (Deci and Ryan, 2012).

Autonomy involves acting with a sense of volition and having the experience of choice and acknowledging both the scientific and constructivist paradigms in an equal stance (Deci and Ryan, 2008; Creswell, 2018). The organismic dialectical theoretical lens and this study's lens sees between the active organism and the social context as the basis of SDT about predictions of ones behaviour, experiences and development (Deci and Ryan, 2008). In simpler terms, 'from the root up'. The following section will discuss SDT.

5.3.2 Self-Determination Theory

SDT is a theory that can be applied to understanding motivation in behaviour, education, elite sports, and healthcare (Deci and Ryan, 2008). Furthermore, Deci and Ryan's theory and motivation proposes that the intrinsic and extrinsic continuum meet the basic needs of an individual's autonomy, competence, and relatedness (Deci and Ryan, 2008). SDT is a macro-theory that attempts to explain groups and individuals' human motivation concerned with the development and functioning of personality within social contexts (Deci and Ryan, 2008). Macro-theories can be defined as seeking to explore all aspects of a subject or phenomenon and are particularly useful when the area of study is sparse. For example, in nursing, intrinsic levels of ANP are measured when the individual is motivated and enabled to develop their full clinical autonomy (Lockwood et al., 2021). A central scheme of SDT is that all people are born with three fundamental psychological needs: competence, autonomy, and relatedness (Ryan and Deci, 2008). The following paragraphs will clarify the three basic elements.

Competence is essential to wellness and refers to people's intrinsic desire, meaning a behaviour is driven by satisfying internal rewards (Deci and Flaste, 1995; Deci and Ryan, 2016). For example, a person is not motivated by a reward but one enjoys doing an activity (Deci and Ryan, 1985; Deci and Ryan, 2008), which in turn makes a person feel capable of influencing the outcomes of their lives and contributing to their community (Deci and Ryan, 2012; Deci and Ryan, 2016). Relatedness refers to people's need for satisfying and supportive relationships, for example, people need to care and be cared about by others with a sense of belonging and a feeling that you matter, which is a reciprocal relationship. Being able to matter to each other is vital to one's self-determination (Deci and Flaste, 1995; Ryan et al., 2009). Finally, the most central to one's psychological and actual behaviour is a person's autonomy (Deci and Ryan, 2012). When a person is fully autonomous, they are wholeheartedly behind what they are doing (DeCharms, 1968; Deci and Ryan, 2016). For example, in a work environment, a person's performance is improved when a person is behaving entirely autonomously as autonomy is concerned with people's freedom to make choices (Deci and Ryan, 2012).

In research, SDT can predict positive outcomes of quality of services and behaviours and experience. For example, an organisation encourages three essential functions, as aforementioned (Deci and Ryan, 2016). 'Competence', which seeks to control the outcome and experience of mastery. 'Relatedness', connected to and interacting with others (Deci and Ryan, 2016). Finally, the central component 'Autonomy' refers to a person's life and their work life. However, this is not done in isolation or independence of others but is 'free' to make decisions autonomously about life and work life. Additionally, constraints to one's autonomy in life or work does not equate to autonomy and will hinder it, impacting on less favourable outcomes (DeCharms, 1968; Deci and Ryan, 1985; Vansteenkiste, Williams and Resnicow, 2012). There

are two factors that establish self-determination of a person, one that enables full autonomy and the other that constrains autonomy. The following section will discuss the extrinsic and intrinsic motivation of SDT.

5.3.3 Extrinsic and Intrinsic Motivation

As discoursed by the philosopher Dworkin (1988), autonomy means endorsing one's actions at the highest level of reflection. Intrinsic motivation is an example of autonomous motivation (Deci and Ryan, 1985). When people engage in an activity because they find it interesting, they do the activity wholly volitionally (I work because it engages me which promotes full utilisation). In contrast, being controlled involves acting with a sense of pressure and having to participate in the actions but not autonomously (I work but am not free to be autonomous or work to my fullest ability) (Gagné and Deci, 2005; Vansteenkiste, Williams and Resnicow, 2012). Deci and Ryan (2008; 2012) purport that individuals have the potential to be either 'extrinsically motivated', which includes involvement in an activity to obtain external rewards; or 'intrinsically motivated', which refers to activity undertaken to satisfy a person's core values or interests. Additionally, SDT explains the best way to motivate someone, which is to support a person in their autonomous decisions (in Deci and Ryan's (2008) view). An example of this autonomous decision-making is evident in a qualified professional such as an ANP, where the person has been deemed safe to function as an autonomous practitioner (Deci and Ryan, 2008). This freedom to make autonomous decisions will stimulate interest and commitment (within the realms of safe practice).

According to SDT a supportive approach to autonomy is more effective than a reward and punishment (controlled) approach (Deci and Ryan, 2008, 2012). The controlled system will not support oneself and risks an autonomous individual not conforming or being constrained.

SDT makes a critical division between autonomous and controlled motivation (Deci and Ryan, 2008). For example, if an ANP reports they were autonomous in their clinical decision-making skills, autonomous (intrinsic) motivation is measured but if the ANP reported lower levels such as controlled motivation, low levels are reported (extrinsic) autonomy levels.

It was postulated by Deci and Ryan (2012) that when a person is fully autonomous, they embrace activities with a sense of commitment and self-control. In contrast, 'controlled' means to be subjected to being pressured (Deci and Ryan, 2012). When controlled people work without a sense of personal or professional endorsement, their behaviour is not an expression of self, but subjugated to the organisation's controls (Deci and Flaste, 1996; Deci and Ryan, 2012). This ultimately leads to low levels of decision-making and a lack of motivation/autonomy. In this condition, Deci and Flaste (1996), in their experiments to determine factors of SDT, described extrinsic motivators as individuals, including professionals, often being alienated from colleagues and portrayed as a 'rebel', or 'not coping in their workplace' or assumed to be 'unhappy in their work' (Deci and Flaste, 1996; Deci and Ryan, 2016). In simpler terms, when an individual is controlled in a professional capacity, this will not encourage or nurture autonomous behaviour, but the exact opposite. The following section will discuss SDT and controlled behaviour.

5.3.4 Controlled Behaviour

Two types of controlled behaviour were examined by Deci and Ryan (2008), namely: compliance (doing what you are constrained to do because you are told to do it) and, secondly, defiance (doing the opposite of what you are expected or required to do). Additionally, SDT theory discourses where there is one type of control (compliance), there is usually a tendency for the other (resistance) (Deci and Ryan, 2012). SDT authenticity is related to autonomy as it

means that one acts by oneself (Deci and Flaste, 1995; Deci and Ryan, 2012). The opposite of this is autonomy and authenticity, indicating the integration of the person (professional) in harmony with autonomy (no constraints). Autonomous motivation is what a person is doing when they have freedom of choice and a sense of empowerment (Deci and Flaste, 1995; Deci and Ryan, 2008). Controlled motivation is when a person does so because they are obliged, controlled, dominated, or covertly expressed (Deci and Ryan, 2008). In a discussion paper on nursing autonomy it was stressed that autonomous practice involves self-directed treatment, including nursing diagnosis, meaning self-determined actions which do not require authorisation (Lyon, 2005). Indeed, ANPs require intrinsic motivators for the individual to practice clinically autonomously.

These autonomous practices purported by Lyon (2005) however, clearly point out that these actions must be intrinsically motivated. In other words, ANPs who are clinically autonomous are intrinsically motivated and free to make clinically autonomous decisions. Controlled motivation will create the contrary based on contingencies that guide the individual's behaviour as it will not encourage the person to make these decisions in an autonomous way. The most controlled motivation is extrinsic regulation, which reflects the desire to perform a behaviour due to contingent rewards or punishment. For example, an ANP who is extrinsically motivated will not fully utilise their ANP clinical autonomy due to constraints to their practice. Furthermore, an ANP in training will be unable to develop expert levels of clinical decision-making as they are not encouraged to be self-determined in their development. The following section will discuss theoretical considerations of SDT.

5.3.5 Theoretical Considerations of SDT

As postulated by Aristotle, the human development of people is assumed to possess a progressive tendency towards growth and self-development (Aristotle, XI.9, 1065b5-15). Indeed, Deci and Ryan (2016) discoursed that humans' innately strive toward exercising one's interests, seeking challenges in life and work, which will actively internalise and transform cultural practices. As theorised by Deci and Ryan (2012) all human beings (if highly motivated) strive towards stretching their capabilities, talents and actualisation, which aims towards the autonomy of themselves (being faithful to oneself) and indeed autonomy in their work practices. Certainly, if constrained, Deci and Ryan (2016) reported adverse effects on the individual, which ultimately negatively impacts the organisation or groups for which they work.

Other theorists, including humanistic psychologists, have synthesised this in a person's synthetic growing function of the ego (Freud, 1927; Maslow, 1955; Rogers, 1983, 1995). This was previously debated by cognitive development theorists such as Werner (1948) and Piaget (1976) who emphasised an organisational tendency as an endogenous (growing from a deep root) of an organism. Critics such as Skinner (1953) disagree with Werner (1948) and Piaget (1976; 1990) stating instead that the process of development is organised and systematic. Theorists have found discrepant viewpoints; on the one hand, humanistic views such as the psychological developments (Maslow, 1958; Rogers, 1983) and on the other hand, behavioural, cognitive and post-modern theories that do not include humanistic viewpoints (Rogers, 1995).

Philosophers such as Frankfurt (1995; 2005) and Friedman (2012) have aligned to Kant's philosophy. In a discussion paper of Kantian capitalism, Bowie (2015) describes a moral responsibility of one's actions only if the person could have done otherwise, meaning

individuals are intuitively responsible for their own actions (Kant, 1785). In other words, individuals within society and as a professional should, in the ideal, be treated with respect within the realms of their autonomy. When this is constrained, the result is the opposite heteronomy (Bowie, 2015). Philosophers such as Kant (1785), Rousseau (1754) and Castoriadis (1991) referred to heteronomy as an action that is influenced by an external force (for example, an organisation/person) beyond the individual's control, in other words, being ruled.

However, when an individual is aware of a control within the realms of safe professional practice, for example, autonomy is still then possible. But when an individual is deemed to be a safe practitioner within the realms of professional qualifications and is still controlled, this is when the opposite to autonomy occurs known as heteronomy which replaces the individual's autonomy. Quite simply meaning, the individual will be powerless to achieve their fullest potential. Both Frankfurt (1995) and Friedman (2012) highlighted that when one works the course of one's action autonomously (or would be), this is reflectively self-endorsed. Based on the concept of higher-order violations, in other words, sometimes learning requires more cognitive processing (Frankfurt, 2005). However, the SDT considers alternatives to a more organismic stance discussed in the following section (Deci and Ryan, 2008).

As Deci and Ryan (2008) reported, the use of extrinsic rewards in their early experiments were found to induce what was reported as 'controlled motivation' (Deci and Ryan, 2008). SDT postulates that autonomous and controlled motivations differ in their underlying regulatory processes and their accompanying experiences. It further suggests that behaviours can be characterised by 'autonomous' versus 'controlled behaviour' (Deci and Ryan, 2016). Additionally autonomous motivation and controlled motivation are intentional both

individually and together. They stand in contrast to amotivation, which involves a lack of intention and motivation (Deci and Ryan, 2012).

In summary, SDT concerning ANP clinical autonomy would consider ANPs seeking to engage and challenge their environment, profession, and other professions to actualise their true potential, capabilities, and autonomy. However, this is only one viewpoint of the SDT, and the other is the social environment in which they practise (Deci and Ryan, 2008). There are three basic needs explained earlier, namely competence, relatedness and autonomy, are necessary for all 'autonomous' individuals (Deci and Ryan, 2008). SDT research focuses not on the consequences of the strength of those needs for different individuals, but rather on the extent to which individuals can satisfy the levels requirements within their social environments, such as clinically autonomous practice. Regarding factor analysis of SDT in studies, this can be studied utilising covert and overt behaviours and actualisation; for example, if an ANP replied to an autonomous activity related to their role. The notion of ANP clinical autonomy appearing to be overt (controlled/hidden) and covert (autonomous/intrinsic) relates to the research design discussed in the following chapter.

The conceptual underpinnings of this study have been presented with the chosen organismic dialectic stance entwined within SDT as the scaffold of the research design and interpretation of the findings of this study. Chapter six will present the research design for this study.

Chapter Six - Methodology

6.1 Introduction

This chapter gives an outline of the research problem, aims and objectives of the study, and the research methods that were employed. The study was developed from the research question and narrative literature review and subsequently, aims and objectives were identified and are detailed in this chapter. Based on the objectives of the study consideration was given to the research design, sampling, data collection and analysis as well as rigor of the study. All the methodological elements will be discussed and will provide information about the ANP participants and the criteria for inclusion in the study and why all ANPs were included. The ethical considerations are also outlined. According to Polit and Beck (2020) the conduct of a study should be consistent with the ethical principles for research and the identification of the research problem. The following section will detail the research problem.

6.2 Research Problem

A research problem is often generated from something observed in the everyday world of the researcher (Rallis and Rossman, 2012; Creswell, 2018; Polit and Beck, 2020). The issue this DCU student observed was in her clinical practice as an ANP where clinical autonomy is a core element of the nurse's clinical decision-making skills and decisions. ANPs have recently been seen as a solution to healthcare which is innovative and economic in the health service (DoH, 2017). However, this requires individuals to be highly motivated and fully utilised (Deci and Ryan, 2008). Britnall (2019) reported that by the year 2030 the demand for healthcare workers will rise to 80 million. The WHO global health force alliance (2014) have projected a shortage of around 18 million (more than one in five people are needed). Indeed, we are facing

a world crisis which requires us all to think, work and collaborate in different ways than ever before (Britnell, 2019). However, this requires health professionals to practice at the very upper limits of their clinical licence, which is encouraged by the legislators (WHO, 2014; Britnell, 2019).

The issue and research problem of this study is that there is limited evidence of ANP clinical autonomy and what this actually means in clinical practice. This leads me to the aims and objectives of this study which are outlined below.

6.3 Aims and Objectives

6.3.1 Aims

The aims of the study are to:

- To develop a bespoke tool to measure ANP clinical autonomy, validate and polit test in a small sample of ANPs in Ireland.
- To explore self-perceived clinical autonomy amongst ANP in a nationally representative sample.

The aims are fulfilled via the study objectives outlined below.

6.3.2 Sub Study Objectives

6.3.2.1 Sub Study 1 Objective:

To conduct a literature review exploring the concept of, and literature related to, ANP clinical autonomy nationally and internationally.

6.3.2.2 Sub Study 2 Objective:

To develop, validate and pilot test the ANPCAPS in a small sample of ANPs working in Ireland.

6.3.2.3 Sub Study 3 Objective:

To administer the validated survey to a nationally representative sample of ANPs.

6.3.2.4 Sub Study 4 Objective:

To explore the constraints and enablers of clinical autonomy.

6.3.2.5 Sub Study 5 Objective:

To compare ANP specialist groups and their levels of DPBS and ANPCAPS with regard to their intrinsic clinical autonomy.

6.4 Hypotheses

The study is scaffolded in SDT and built upon the relationship between autonomous behaviours and intrinsic clinical autonomy (autonomous motivation). The hypothesis was utilised to examine objectives 2, 3, 4 and 5. According to Polit and Beck (2018), a hypothesis is an expectation regarding the relationship between the variables and is usually expressed in a null hypothesis. All the null hypotheses tested in this study are all $H_0$1 – $H_0$56 which are included in Appendix F.

6.5 Research Design

The overall aim of this study was to explore ANP clinical autonomy from all ANPs in Ireland. This study involved and benefitted a survey research design. The research methodology was to

elicit an exploration of ANP clinical autonomy through a cross-sectional survey which was utilised, and additionally, a subscale was tested and validated. Furthermore, open comments were analysed using thematic analysis. The survey design was used to obtain quantitative data with the addition of ANP open comments in the survey. The underpinnings and methodological considerations are discussed in the following section.

6.5.1 Features of Survey

The study design was a descriptive correlational study with a cross-sectional survey with a purposive sample of 148 ANPs in Ireland. The survey design used different statistical analysis between some of the bivariable which will be discussed in chapter seven. The following section will discuss the features of surveys. Firstly, a cross-sectional survey is an exploratory study that analyses data from a specific population at a specific point in time (Matthews et al., 2006; Bryman, 2016; Harkiolakis, 2019).

As suggested by Bryman (2016), the purpose of surveys is to produce statistics that are quantitative or numerical descriptions of aspects of the study population. Also, as explained by Clark-Carter (2009) when reviewing the research question and literature review when there are limited groups of enquiry, a quantitative approach is necessary. Quantitative research is also the basis for the other essential features of surveys, namely causality, generality, and replication (Harkiolakis, 2019). Regarding causality, Bryman (2016) states that in quantitative research is preoccupied with establishing the causal relationships between concepts. Furthermore, the experiment or line of enquiry involves an intervention or independent variable being introduced or altered, and the effects of this on the dependent variables that are being measured (Bryman, 2016). Fink (2013) identified that there are two strands to test differences in quantitative research. Firstly, between groups, for example, control and intervention groups which have

been created for the research (experimental), or secondly between variables (correlational), carried out on results from existing groups (non-experimental, observational design) (Fink, 2013). The logic behind correlational designs is based on the logic behind experimental designs (Punch, 2015). Furthermore, Punch (2015) explained that researchers had applied the principles of experimental reasoning to non-experimental situations. For example, with the use of techniques such as multiple linear regression, which also applies the same principles and statistical assumptions that are used to examine differences between groups within experiments. Indeed, this is not to suggest that there are no differences between experimental and survey designs, but their shared evolution needs to be acknowledged (Matthews et al., 2006).

Generalisability is another significant feature of quantitative research (Bryman, 2015). Within surveys, Harkiolakis (2019) also adds that generalisability can be achieved when certain conditions, mostly relating to sampling strategies, are met. This requires that attention should be paid to sampling procedures and the representativeness of samples, as most statistical inferential techniques only make sense in the context of randomly selected samples (Bryman, 2016). Related to generalisability of a study is its replication, meaning checking the extent to which findings apply to other contexts beyond those claimed by the study, which acts as a check for the bias of the researcher, as replicating others studies is an identical way to improve the chance of seeing the same things and of confirming or rejecting the findings produced by the original research (Bryman, 2016). However, as explained by Matthews et al. (2006), this is not always possible as long as one recognises the existence of the phenomenon in a sense, is more extensive than that dictated by the research design, thus the limitations of the knowledge generated within that design become very clear.

Additionally, because a particular design depends on the operationalisation way of viewing a topic Kerlinger (1997) and Matthews et al. (2006) caution against a measure of a phenomenon becoming how that phenomenon is defined, rather than the explicit acknowledgement that the definition came before the measure. Alternatively, Paley (1996) describes this as simply putting the cart firmly in front of the horse. The philosophy of science literature echoes this, with Popper (1968) stating that it can be shown that measurements presuppose theories.

As purported by Couvallis (1997) there is no measurement without a theory and no operation that can be satisfactorily described in non-theoretical terms. Contrary to a naive theory of value-ladenness, we do not always perceive what we expect and just because our attention is directed towards the observation of specific things does not mean we are not objective (Popper, 2008). Similarly, in a nursing theory context, Paley (1996, pg.1) has disputed the arguments of those who seek theoretical understanding by examining how they measure a phenomenon, stating that they have the order wrong and that there is only theory, with meaning and methods of measurement being part of what a decent theory provides. What these authors highlight is that operational definitions are indispensable ingredients of scientific research. This is so because they enable researchers to measure variables and because they are bridges between the theoretical level and the level of observation. However, we need to recognise their limitations in terms of yielding only limited meanings of constructs (Kerlinger 1997; Matthews et al., 2006).

Alongside causality, generalisability and replication, the last assumption relating to quantitative research outlined by Bryman (2016) is individualism. Quantitative research tends to focus on the individual as the unit of inquiry, and responses are aggregated to form overall reactions, rather than the unit of an inquiry being other social groups such as families and

various other collectives. This is in contrast to other approaches such as ethnography and focus group methods of data collection, where the explicit emphasis is on the group and cultural context. This is not to discount either approach but to acknowledge another assumption of quantitative research can work well in dialectic ideologies if the research requires it (Creswell, 2018).

The defining features of quantitative research are also at the core of their limitations with their inherent focus on measurement. A central limitation of surveys is that they are generally non-interactive (Creswell, 2015). They are leaving little opportunity for researcher or participant to seek clarification regarding uncertainties in interpretation (May, 2011). According to May (2011) the survey method has been criticised as it rules out the possibility of understanding the processes by which people come to adopt particular values or behaviours. However, as May (2011) and Harkiolakis (2019) explain, scales are usually generated through theory and or qualitative developmental work. They are therefore based on an understanding of agents' perspectives, social processes, and context (May, 2011). The lack of interactivity should not be confused with objectivity, and this is expanded by examining the potential of social surveys to elicit subjective data (Harkiolakis, 2019).

6.5.2 Subjectivity in Surveys

Surveys using questionnaires can elicit objective, verifiable data. However more often than not, all questions contain some level of subjectivity on the part of respondents, despite apparent objectivity (Harkiolakis, 2019). For example, asking how many hours people work or how they view their clients, are open to subjective interpretation and response and may or may not be objectively or indeed accurately answered (May, 2011). To concentrate on subjectivity, we focus on the meanings that people give to their environment, not the environment itself (May,

2011). The following section will discuss the importance of sampling strategies, followed by sections discussing reliability and validity of surveys.

6.5.3 Sampling Strategies

How well a sample represents a population depends on the sample frame, the sample size, and the specific design of the selection procedures (Fowler, 2009). As discussed above, central to the basis of the quantitative approach to research is a search for representativeness and therefore, generalisability (Harkiolakis, 2019). A critical factor that influences the extent to which this is achieved is the sampling strategy (Harkiolakis, 2019). For this study, the sampling strategy was a probability sample meaning the total population of ANPs in Ireland.

6.5.4 Reliability and Validity of Surveys

The key indicators of the quality of measurement tools are usually reliability and validity (Harkiolakis, 2019). Indeed, a reliable instrument is consistent and valid when it is accurate (Fink, 2013). Reliability is seen to reflect the accuracy and precision of an instrument. This was explained by Nuttall (1979) who draws the attention to the essential and lob-sided relationship between reliability and validity.

Within quantitative research, validity is often portrayed in an objective light (Harkiolakis, 2019). However, Irvine et al. (1999) usefully reminds one that although we can never prove validity, we can develop and demonstrate support for it. Significantly, Pearl and Bareinboim (2014) reported that when variables are measured without error, a structural equation model can be tested and diagnosed systematically by examining how well the data agrees with each statistical constraint that the model imposes on the joint distribution (or covariance matrix).

The most common type of constraint is conditional independence relations (or zero partial correlations). For each missing edge in a diagram for example, between X and Y, the model dictates the conditional independence of X and Y given a set Z of variables that d-separates X from Y in the diagram; these independencies can then be tested individually and systematically (Pearl, 2009; Pearl and Bareinboim, 2014). Importantly, Pearl's (2009) work reported how measurement bias can be removed by creating synthetic samples from empirical samples, and inverse-probability weighting can be modified to account for measurement error.

Furthermore, Nuttall (1979) contends that the validity of a measuring instrument is dependent on context meaning; an instrument may be appropriate for one context or application and not another. The various aspects of validity, as described in the literature, is face validity, content validity, criterion validity and construct validity (Harkiolakis, 2019). Such an evaluation suggests that there is an element of subjectivity in most aspects of validity evaluation (Matthews et al., 2006). Face validity is dismissed as a cursory review by untrained judges and said to be worthless by Litwin (1995). Seale (1999) states that even in measurement theory, the concept of face validity depends on a view that we live in human communities that have constructed a system of linguistic symbols to refer to our common experiences, so that we can talk to each other about them (Matthews et al., 2006).

Additionally, this highlights the socially constructed nature of the language used in questionnaires. Content validity is described by Irvine et al. (1999) as a qualitative validity where the domain of a concept is made clear, and the analyst judges whether the measure fully represents the domain. Criterion validity assumes a gold standard measure against which a new instrument is measured (Matthews et al., 2006). Criterion validity can be either concurrent or predictive (Harkiolakis, 2019). Concurrent criterion validity is assessed using concurrent

measures and predictive by reference to outcome measures at a later stage (Harkiolakis, 2019). They are both established by examining the correlations between existing and new instruments (Matthews et al., 2006). An underlying assumption about how a gold standard measure could be identified is hinted at in the definition of construct validity which Litwin (1995) states could be said to result from the ongoing use of a survey instrument to measure a characteristic. He further states that over time the survey instrument may itself define the way we think about the variable (Litwin, 1995). Furthermore, Litwin (1995) states that construct validity is said to assess how meaningful the scale is in practical use and acts as a theoretical measure of how meaningful a survey instrument is.

6.5.5 Online Survey Design

The online survey was developed using the DCU google form. The DCU operations, as earlier discussed, advised that the data protection risk was low. The Senior Technician of the School (DCU) assisted in the setting up of the survey in google forms with the DCU student and her supervisors so that it was set up in a secure manner. Consideration was given to administering the survey. The online survey was utilised as it reduced costs and the margin of error was significantly reduced as online survey participants enter their responses directly into the system (Solomon, 2001; Dillman, 2007). Additionally, time was saved due to the results being imported directly from excel into SPSS for analysis. As the ANPs were working at the frontline of patient care in the middle of a pandemic, every opportunity to make it easier for the ANPs to be included in the study was considered. In addition, due to COVID-19 and to limit any contact other than completion of the survey, handheld surveys were not utilised. It was reported by Solomon (2001) and Dillman (2007) that in designing and sending relevant and targeted surveys, people are more likely to respond with honest answers.

This research design was also chosen as the study leaned towards a generic approach and inclusion of all ANPs in Ireland. Additionally, there is no subscale developed to measure ANP clinical autonomy, and this study aimed to create such a subscale. An open-ended section was included to capture further comments from ANPs regarding their ANP clinical autonomy. Additionally, the relationship between the ANP and their clinical autonomy was served best by focusing on the relationships between ANP behaviours and on a specific subscale to measure actual ANP clinical autonomy. This survey predicted that ANP clinical autonomy is influenced by gender, education, experience, and organisational issues. Corresponding with the overall aims of this study, some correlational statistics were employed.

6.5.6 Correlational Research

According to Grove, Burns and Gray (2012), a descriptive design can be chosen to identify problems with current practice. It was determined by Fink (2013) and Punch (2015) that there are two groups of quantitative research; firstly, between groups (control, intervention groups) which the researcher has created. Additionally, between variables (correlational) carried out on results of existing groups without the creation of new groups. The latter are described as non-experimental, observational designs (Matthews et al., 2006). Cross-sectional studies are observational in nature and known as descriptive and correlational research in regard to determining actual evidence (Grove, Burns and Gray, 2012). Cross-sectional studies additionally allow the researcher to explore numerous characteristics for example, ANP and their levels of clinical autonomy (Fink, 2013).

Non-experimental research lacks manipulation of an independent variable; control of extraneous variables through random assignment, or both. As purported by Creswell (2018), there are three types of nonexperimental research: 1) Single variable, where research focuses

on a single variable rather than a relationship between variables; 2) Correlational and quasi-experimental research which focuses on a statistical relationship but lacks manipulation or random assignment; and 3) Qualitative research that focuses on broader research questions, typically collecting large amounts of data from a small number of participants and analysing the data non-statistically (Creswell, 2018).

Correlational designs involve the systematic investigation of the nature of relationships or associations between and among variables rather than direct cause-effect relationships. Correlational designs are cross-sectional (Grove, Burns and Grey, 2012; LoBiondo-Wood and Haber, 2017). These designs are used to examine if changes in one or more variables are related to changes in another variable (s) (Grove, Burns and Grey, 2012; LoBiondo-Wood and Haber, 2017). This is referred to as co-variance (Grove, Burns and Grey, 2012). Correlations analyse the direction, degree, magnitude and strength of the relationships or associations. The results from correlational studies provide the means for generating hypotheses to be tested (Grove, Burns and Grey, 2012; LoBiondo-Wood and Huber, 2017). This study chose correlational analysis as it allowed for many variables to be compared simultaneously; for example, gender, age and years of experience as an ANP to be compared with clinical autonomy. A longitudinal study was considered, but sequences of events over a long time were not required. Correlational designs involve the systematic investigation of the nature of relationships or associations between and among variables rather than direct cause-effect relationships. The following section will discuss the features of surveys and essential consideration of DCUs understanding and level of enquiry.

The Likert scale will be used within this study (Likert, 1932) which consists of a set of specific opinions and statements about a particular issue, event or person (Johnson and Morgan, 2016). In the DPBS of the survey, participants were asked to rate their responses of 'Not at all True' to 'Extremely True'.

The Likert scale commonly ranges from, 'Strongly Disagree' to 'Strongly Agree' across a four-point scale. Likert scales are used in both stages of this study (Johnson and Morgan, 2016). These scales are generally considered to be ordinal rather than interval scales, which has implications for data analysis (Johnson and Morgan, 2016). As explained by Edelman (2000), there is no assumption that the intervals on Likert scales are equal, since the difference between points on the scale vary, according to respondents' perceptions. There is therefore an inherent interpretative process in the use of surveys (Johnson and Morgan, 2016). However, authors such as Kerlinger (1997) and Johnson and Morgan (2016) state that it is probable that many scales and tests used in psychological and educational measurements are approximate interval measurements which are enough for practical and academic purposes.

Another difficulty relating to the calculation of scores based on scales relates to the calculation of scores of responses whereby the aggregated total score on the scale may reflect very different patterns of responses (Johnson and Morgan, 2016). For example, a person who 'strongly agrees' with 5 items (1 point each = 5 points) and strongly disagrees with 5 items (5 points each = 25 points) on a 10-item scale (total score of 30) would have the same score as someone who neither agree nor disagreed with all 10 items (3 points each=30 points). This will be highlighted in the analytical phase of this study (Johnson and Morgan, 2016).

The Likert scale was utilised to gain data that can be analysed whilst offering anonymity and to reduce social pressure for the participants. Due to the anonymity of the survey the respondents answering the questions unpressured, will enhance the possibility of openness when responding (Johnson and Morgan, 2016). The Likert scale in the ANPCAPS has no neutral point and zero was not included so that we could see between the agreement and disagree status. Only positive and negative were included. The aim was to find the positive and negative as one entity. In this case the neutral point would have scattered the data and interpretation, so this was omitted. Neutral was not the aim on the ANPCAPS tested.

This following section will discuss thematic analysis utilised in this study to analyse the open comments.

6.6 Thematic Analysis

This section explores and develops an understanding of thematic analysis and the approach adopted within the framework of this study to analyse ANPs open comments, included in the National survey deployed to all ANPs in Ireland for this study. Firstly, the background of thematic analysis will be discussed in the next section.

6.6.1 Thematic Analysis Background

According to Clarke (2018), the term thematic analysis originates in the 1930's and was designed initially to analyse musical scores. It was used by sociologists in the 1940's, corpus literature and psychotherapists in the 1940's, 1950's and 1960's to analyse the results of objective tests (Clarke 2018). As Clarke (2018) purported, thematic analysis aims to find patterns of meaning and reflectiveness in the data. Similar meaning and reflectiveness have

been utilised in qualitative approaches, such as Gilligan's feminist theories and Charmaz's work on constructed grounded theory (Gilligan, 1993; Charmaz, 2014). As Joffe (2012) and Clarke (2018) both purport that thematic analysis evolves from qualitative content analysis, it is essential to understand that thematic analysis is not bound in an authoritarian qualitative theory but a process to be used with qualitative analysis information. The definition and purposes of thematic analysis are considered relevant in the following section.

6.6.2 Thematic Analysis Purpose

As earlier conversed, thematic analysis has been reported as a process to be used with qualitative information (Boyatzis, 1998), yet it is essential to note that thematic analysis is not another qualitative method, but a process that can be used with most, if not all qualitative methods and allows the translation of qualitative information into quantitative data (Boyatzis, 1998). Braun and Clarke (2006) referred to thematic analysis as a method for identifying, analysis and reporting patterns (themes) within data. Similarly, Bryman (2016) further reported that thematic analysis, as qualitative data, refers to the extraction of key themes. Similarly, thematic analysis is a way to identify, analyse and report themes within data (Braun and Clarke, 2006). This perspective is also reported by Boyatzis (1998), who proposed that thematic analysis has several overlapping or alternative purposes which move beyond identification of themes alone to develop interpretation and understanding of the data.

There are multiple purposes for thematic analysis outlined by Boyatzis (1998) discussed as follows: firstly, providing a way of seeing; secondly, it aids interpretation of the material that appears; and thirdly, it enables analysis of qualitative information. It also facilitates observation of a person, interaction, group, situation, organisation, or culture. Finally, it can aid researchers to convert qualitative information into quantitative data, which can unite between the datasets

(Boyatzis, 1998; Clarke, 2008). Additionally, Alhojailan (2012) reported thematic analysis using interpretations and providing a systematic element to data analysis. In the quest to reduce confusion of thematic analysis with the many approaches, Braun et al. (2019) identified thematic analysis approaches and evaluation of thematic analysis. The following section will discuss these approaches.

6.6.3 Thematic Analysis Approaches

It has been reported that over 25-30 thematic analysis approaches are evident in the literature, and confusion abounds when the thematic analysis is viewed as a singular approach (Braun et al., 2019). The term thematic analysis should be considered within a parasol term to describe various processes that differ in words of procedure and their underlying philosophical stance (Clarke, 2018). There are three leading schools of thematic analysis, namely: coding reliability, reflexive/organic, and codebook (Clarke, 2018). The distinctions between these pertain to the conceptualisations of qualitative research outlined by Kidder and Fine (1987) as Small q and Big Q qualitative research.

Small ‘q’ qualitative research uses qualitative data collection methods within a positivist or dialectic paradigm and uses qualitative questions within a primarily quantitative data collection method (Braun and Clarke, 2013). Big ‘Q’ qualitative research is the qualitative data collection method within a qualitative paradigm rather than a positivist one (Braun and Clarke, 2013). Coding reliability, reflexive/organic, and codebook thematic analysis are outlined and compared in the following section.

6.6.4 Coding Reliability Thematic Analysis

Coding reliability thematic analysis as presented by Boyatzis (1998) represents the small ‘q’ as mentioned above a technique utilised in qualitative data collection. Boyatzis (1998) further discoursed thematic analysis as a translator for those speaking the language of qualitative or quantitative analysis. Coding reliability shares the values of positivism. There is an emphasis on reliability, replicability, and accurate coding, structured from a codebook or coding frame developed at the start of data analysis or before the analytic process and application to the data (Clarke, 2018).

6.6.5 Reflexive/Organic Thematic Analysis

Organic thematic analysis includes the seminal framework initially proposed by Braun and Clarke (2006) key features relate to the meaning being situated in acknowledging multiple realities and researcher subjectivity (Clarke, 2018). Despite its widespread use in many contexts and disciplines, thematic analysis has only recently recognised the more common forms of analysis such as grounded theory and interpretative phenomenological analysis (Braun and Clarke, 2013).

The Braun and Clarke (2006) approach is organic and is an iterative approach to undertaking thematic analysis. Clarke (2018) highlighted that coding may be undertaken during several sweeps of the data and should be flexible and fluid so that codes can evolve and change. This process demonstrates how the researcher is conceptualising the data. Clarke (2018) describes the researcher as the storyteller actively engaged in interpreting the data. The following section will discuss codebook approaches.

6.6.6 Codebook Thematic Analysis

Codebook approaches include template codebook (Brooks et al., 2015), codebook framework (Gale et al., 2013), and matrix analysis (Miles and Huberman, 1994; Nadin and Cassell, 2004; Miles, Huberman and Saldini, 2014). These are positioned between coding reliability and reflexive thematic analysis viewed as a medium q as they have quantitative and qualitative research (Clarke, 2018). Codebook thematic analysis shares a structured approach to coding similar to coding reliability approaches, for example, putting the data into codes reflecting a quantitative influence. This approach is more flexible as codes and themes can continue to be developed, and the overarching philosophy tends to be qualitative.

Codebook approaches have been used extensively in applied research as they have practical advantages for research answering predefined questions/comments quickly without the requirement for coding consensus (Ritchie and Spencer, 1994). This approach facilitates an understanding of the variety of thematic analysis approaches and the underlying philosophical influences, which informs the researcher's choice, including the research question, methodology, sampling, data collection, and analysis methods.

6.6.7 Thematic Analysis Groups

As previously outlined, thematic analysis falls within three main groups: coding reliability, reflexive (organic), and codebook thematic analysis. The emphasis in this approach is placed on measuring the accuracy or reliability of coding through a structured codebook and a multitude of independent coders (Boyatzis, 1998; Guest, MacQueen and Namey, 2012; Joffe, 2012). In coding reliability approaches, themes are viewed as analytic inputs, or pre-existing themes developed early in the analysis process, commonly based on data collection questions before the analytical method or following data familiarisation (Boyatzis, 1998; Guest,

MacQueen and Namey, 2012). Therefore, utilising this approach when undertaking thematic analysis coding is represented as searching for evidence of themes, frequently described as domain summaries (Clarke, 2018). Braun et al. (2019) further reported that codebook reliability methods might result in the development of superficial codes as multiple researchers apply the codes in the same way without in-depth engagement or knowledge of the data, and themes are viewed as pre-existing in the data.

Similar standard features of code reliability are also shared with matrix analysis (Miles and Huberman, 1994), framework analysis (Ritchie and Spencer, 1994) and template analysis (Kings and Brooks, 2017). Codebook thematic analysis is placed on a continuum between a positivist coding reliability stance at one end, and reflexive thematic analysis at the other. They all share commonalities with codebook reliability regarding how themes are viewed as analytic inputs and domain summaries (Braun et al., 2019). However, they do not share positivist concerns regarding coding reliability (Braun et al., 2019). Codebook thematic analysis shares commonalities with reflexive thematic analysis by adopting a broadly qualitative philosophy or paradigm.

In comparison, Braun and Clarke's (2006) reflexive approach to coding is flexible and organic in which coding continues to evolve throughout the process, sharing features with grounded theory (Charmaz, 2014). In reflexive thematic analysis, coding is iterative and subjective whereby the researchers interpretative lens with the data is actively engaged and acknowledged. This is in direct contrast to coding reliability and codebook thematic analysis approaches. The researcher is separate from the development of codes and not actively engaged in the interpretation of the data (Braun et al., 2019). Braun and Clarke (2006) describe this as a flexible approach and could be viewed as a Dionysian approach as outlined by Heron (1996).

A Dionysian approach is described by Coghlan and Brannick (2014) as an explicit approach to integrating reflection and action. This is the opposite of an Apollonian approach whereby the cycles are systematic in manner (Coghlan and Brannick, 2014). Although there are many different thematic analysis approaches, a common feature is developing codes, descriptions, and themes. The following section will discuss codes in thematic analysis.

6.6.8 Codes

Codes are labels that have been assigned to for example, paragraphs, sentences, or words, to help catalogue key concepts whilst preserving the contexts in which they occur (Bradley, Curry and Devers, 2007; Saldana, 2015). Boyatzis (1998) reported a code as an essential element of the raw data that can be assessed in a meaningful way regarding the topic area. The data can consist of for example, open comments, interviews, participant observation, field notes, journals, emails, documents, internet sites, drawings, artefacts, photographs (Saldana, 2015). Braun and Clarke (2013) explained that a code captures a single idea associated with a segment of data and consists of a label identifying what is of interest within the data connected to the research topic.

6.6.9 Themes

A theme has been described as a unit of data that is structurally meaningful found in the data (Streubert and Carpenter, 2011; Joffe, 2012). Boyatzis (1998) reports themes at a minimum level as a means by which to identify a pattern in data. Similarly, according to DeSantis and Ugarriza (2000), a theme is an abstract entity that brings meaning and identity to a recurrent experience and unifies the nature or basis of the experience into a meaningful whole.

Braun and Clarke (2006) report themes as important information that can be captured or a pattern within the data can be captured related to the research question or meaning dataset.

Braun et al. (2019) describe a theme as capturing a typical, recurrent pattern across a dataset that is clustered around a central organising concept. A theme describes the different facets of a singular idea, demonstrating the themes patterning across the dataset.

The following section will discuss deductive and inductive thematic analysis.

6.6.10 Deductive and Inductive Thematic Analysis

A common feature in published research is that the processes used to undertake thematic analysis are poorly defined (Braun and Clarke, 2013). Poor quality thematic analysis processes frequently state that themes emerged without insufficient detail. It can be argued that themes do not emerge from the data (Clarke, 2018; Clarke and Braun, 2018). Themes are developed through the interpretive lens of the researcher from the data on a continuum from theoretical (theory determined) to inductive (data determined) approaches (Boyatzis, 1998). As theoretical thematic analysis is also referred to as deductive thematic analysis (Gray, 2014.

The researcher's interest explicitly leads to theoretical thematic analysis in the area which is to provide a semantic analysis of some aspect of the data (Gray, 2014) in respect to a specific theory defined by the researcher (Gray, 2014; Javadi and Zarea, 2016). When using theoretical thematic analysis, the emphasis is not placed on extracting themes or the richness of the data but on extracting data pertinent to the theory utilised by the researcher.

An inductive thematic analysis approach identifies embedded themes and is directly linked to the data (Patton, 1999; Gray, 2014; Javadi and Zarea, 2016). An inductive approach to coding is helpful for researchers using thematic analysis particularly junior researchers as it avoids the issue associated with the rigidity of a theoretical approach (Lapadat, 2010). Researchers should also be conscious that there may be a discrepancy between the emerging themes and the specific questions to which participants responded (Connelly and Peltzer, 2016).

This study examined the views and experiences of participants and was not defined by the researcher or pre-defined theory. Adopting an semantic analysis approach was deemed appropriate to identify themes and codes.

6.6.11 Theme Prevalence

A theme may be present or repeated a finite number of times in the data and may be significant for providing information or answers to the research question (Javadi and Zarea, 2016). Themes can be developed from raw data, theory, and prior research (Boyatzis, 1998; Clarke, 2006). Clarke and Braun (2013) suggested that distinguishing between themes and features of the data are essential. Whilst both capture recurrences in aspects of the data, the difference is that themes have a central organising concept. Indeed, Nowell et al. (2017) proposed that themes are not dependent on quantifiable measures, but their importance lies in capturing information relating to the research question. According to Braun and Clarke (2006), it is not a question of how often the theme is present or the proportion of data in which it is represented in the understanding of the theme. This is not dependent on quantifiable measures but is significant in terms of the research question. It is about meanings, rather than numbers, referred to as the importance of the data (Braun and Clarke, 2013).

The following strategies were identified by Braun and Clarke (2006) as appropriate to assist theme identification such as utilising descriptors, provision of a detailed description or a more complex and nuanced account of the dataset. Using descriptors such as ‘many participants’ or ‘several participants’ enables researchers to demonstrate that a theme existed in the data without attaching a numerical or quantifiable measure.

6.6.12 Theme Depth

Semantic (utilised in this study) and latent themes refer to the level of depth at which themes are identified (Boyatzis, 1998). According to Braun and Clarke (2006), themes related to a specific area of interest or research question within the data, are referred to as a semantic theme compared to a particular theme throughout the data, which is a latent theme. When utilising a semantic approach to identify themes, the researcher relies only what the participant has said or recorded in the text (Javadi and Zarea, 2016). This has been referred to as the manifest level directly observable either visually, verbally or written in the information (Boyatzis, 1998). When using a semantic approach, themes are identified within the data's explicit meanings, and the analyst is not looking for anything beyond what the participant has written or verbalised (Braun and Clarke, 2006).

Identifying themes at the latent level goes beyond what is obtained in the semantic level (Javadi and Zarea, 2016). However, this study was not focused on a latent analysis but the actual verbatim comments in a semantic level. Therefore, for this study, the semantic level was utilised to identify themes relating only to what the participant (ANP) had commented in the open comments in the text. The thematic analysis was not looking for anything beyond what the ANP had written, the themes identified were within the explicit surface meaning of the data.

It should be noted that when undertaking analysis of qualitative data, themes may be presented at semantic and latent levels relevant to answering the research questions (Braun and Clarke, 2013). This approach was considered in the current study, informed by the fact that the study purpose was to utilise and include ANP open comments to identify their comments.

6.6.13 Benefits and Limitations of Thematic Analysis

The freedom of some thematic analysis approaches from the imposition of methodological and epistemological constraints could be viewed as positive or negative. According to Vaismoradi, Turunen and Bondas (2013) there is a stereotypical response amongst qualitative researchers to portray thematic analysis as a simplistic approach. This does not mean that it produces low-quality and straightforward findings, as data analysis requires reflection from varying perspectives. The flexibility of thematic analysis as a data analysis method used across various theoretical and methodological perspectives may lead to inconsistencies in how it is used as themes are developed (Nowell et al., 2017). If themes overlap or are not clearly defined, this may produce an analysis that is weak or unconvincing (Braun and Clarke, 2006). If themes are underdeveloped, they limit what they are meant to convey (Connelly and Peltzer, 2016). The potential may also arise for a disconnection between analytical/theoretical claims not supported in the data (Braun and Clarke, 2006).

Current literary discourse highlights several inconsistencies regarding undertaking thematic analysis and include a dearth of information on how themes are defined or how thematic analysis is conducted (Attride-Stirling, 2001; Connelly and Peltzer 2016; Javadi and Zarea, 2016). In addition, Maguire and Delahunt (2017) and Vaismoradi, Turunen and Bondas (2013) reported a lack of clarity regarding how to undertake thematic analysis. Further, there is confusion regarding the definition and procedure when undertaking thematic analysis of qualitative data (Gray, 2014; Connelly and Peltzer, 2016).

Thematic analysis has many benefits and is particularly useful for research teams with mixed analysis experience and open comment research, partly due to freedom from theoretical constraints (Clarke and Braun, 2018). Maguire and Delahunt (2017) shared the view that

thematic analysis is a flexible and useful data analysis method that researchers can readily adopt through its freedom from imposed theoretical or methodological constraints.

Thus, whilst thematic analysis is not attached to any particular methodology or theoretical paradigm, it can be utilised in the context of a theoretical framework. However, the theoretical framework should be identified including its underlying theoretical, ontological, and methodological perspectives (Braun and Clarke, 2006).

6.6.14 Thematic Analysis and Trustworthiness

According to Maxwell (1992) and Nowell et al. (2017) trustworthiness is a means by which researchers can demonstrate that their research findings are valid and truthful. Additionally, the assumptions, theoretical and epistemological perspectives of this study and the research methodology enabled semantic thematic analysis (Braun and Clarke, 2006). Thematic analysis was beneficial to this study as it provided a way for reporting the ANPs open comments regarding ANP clinical autonomy. Additionally, thematic analysis is flexible and was a useful framework for the methodological underpinnings of this study as it is an organismic dialectical stance, which required the research question to be the most essential criteria for obtaining part of the data obtained. The following section will discuss the thematic analysis approach used in the study.

To extrapolate meaning and understanding from qualitative data, it was necessary to begin by reporting the data and organising the codes, categories, and eventual themes (Cohen, Manion and Morrison, 2018). Qualitative data analysis is a process in which there are no right or wrong approaches or precise formulae (Patton, 1999). Holloway and Todres (2003) also reported qualitative approaches to data analysis as diverse, complex, and nuanced. Nonetheless,

although qualitative data is varied, appropriate data analysis is central to credible qualitative research (Maguire and Delahunt, 2017). This ends the section and theoretical considerations of quantitative and qualitative data analysis. The following section will discuss the ANP target population of this study.

6.7 Ethical Considerations

To consider the ethical issues in this study, the researcher was bound by the four main ethical principles outlined by Beauchamp and Childress (2013) namely; respect for autonomy, non-maleficence, beneficence, and justice.

6.7.1 Autonomy

To maintain a participant's right to autonomy, they were given a choice to participate in the research study or decline at the beginning of the survey. The ANPs were under no obligation to complete the survey and consent was requested prior to commencement of the survey. A completed survey was deemed consent for the data to be used in the study. Participants were also given the opportunity to contact the researcher and her supervisors or the REC DCU ethics committee if they wanted to discuss any aspect of the study.

6.7.2 Beneficence and Non-Maleficence

The concepts of beneficence and non-maleficence are interlinked with the researcher's main obligation to do no harm (Polit and Beck, 2020). This was considered and the DCU student emphasised the safeguards for control and use of the data to all participants in the plain language statement. There was no coercive, persuasive, or inductive methods involved to encourage participation in the study. This study will be published on the DCU website

(http://doras.dcu.ie) and a copy will be given to the NMPDU on completion. Additionally, the findings of the study will be published in academic journals.

6.7.3 Justice

Polit and Beck (2020) discuss justice, including a participants' rights to fair treatment and privacy. All information provided has been treated with strict confidentiality between the researchers.

6.7.4 Ethical Approval

The ethical approval was submitted to the research and ethics committee at Dublin City University (DCU) on January 10th 2020. The DCU REC ethics application approval letter from DCU is included in Appendix I. Chapter seven will present the tool development for this study. Full ethical considerations are included in the DCU REC ethics approval form submitted to DCU, which included the following: participant considerations, anonymity, data protection and confidentiality, data retention and disposal, risk management procedures and considerations of risk to the researchers. The chief operations officer at DCU office was consulted regarding data protection and GDPR issues (Appendix J and K).

The REC assessment was also carried out for this study (DCU, REC Flow Chart, 2020). Based on the DCU REC flow chart, the following decision was made: the level indicated following discussions with the student and her supervisor on the cover page of this application is expedited. There were no recommendations or amendments following ethics approval. The committee secured ethics on the first submission. DCU REC approval number: DCU/REC/2020/013.

The participants in this study were not given an incentive to complete the survey and qualitative comments as it is not advised in the DCU ethical considerations. In Ireland, Research Ethics Committees do not encourage or support incentives to research participants (DCU, REC, 2020).

6.8 Sampling

6.8.1 Target Population

The targeted population for this study are all registered ANPs in Ireland. In addition, ANP and ANP candidates from the NMPDU list were also targeted. To identify the target population, NMBI was contacted, who informed me there were 409 (100%) ANPs in Ireland (Appendix G), and 39 ANP candidates (100%). Figures were obtained from the area NMPDUs (Appendix H). This gave a population sample of 448 (100%). The study used nonprobability sampling concerning the entire population. It included the total population due to it being small, thus improving the statistical data analysis, and providing generalisability of the sample (Field, 2018; Harkiolakis, 2019). The entire population of ANPs and ANP candidates were invited to participate in the study. However, some inclusion and exclusion criteria were applied.

Inclusion Criteria
All ANPs registered with NMBI
ANPs Candidates
ANPs Working in Ireland

Exclusion Criteria
Any Nurse not registered with NMBI as an ANP
Not an ANP Candidate
Not working in Ireland
Not clinically Active as an ANP

The reason the total population of ANPs in Ireland was sought, was because a generalisability of the constitutes of ANP clinical autonomy could be established. Additionally, all ANPs from generic specialities could be represented. The following section will discuss the sampling strategies used in this study.

6.8.2 Sampling strategies

How well a sample represents a population depends on the sample frame, the sample size and the specific design of the selection procedures (Fowler 2009; Field, 2018). As discussed above, central to the basis of the quantitative approach to research is a search for representativeness, and therefore, generalisability (Harkiolakis, 2019). A critical factor influencing the extent to which this is achieved is the sampling strategy (Harkiolakis, 2019). For this study, the sampling strategy used was a probability sample, meaning the total population of ANPs in Ireland.

6.8.2.1 Potential Subject Burden Perceptions

In the pilot testing, a flyer was sent from the NMPDU requesting ANPs participate in an online tool testing a pilot study. It was up to the ANPs to contact the NMPDU if interested. In the piloting and eventual study, this was also addressed in the plain statement at the beginning of the survey asking if the ANP wished to decline to complete the survey. Participants could choose to not continue to the survey following declining to participate in the survey and could

withdraw at any time. Additionally, the chief operations advisor in DCU was consulted, and the ANPs were given information in the plain statement regarding potential subject burden (Appendix, N).

After the ANPs completed the consent part of the survey and read the plain statement, all ANPs in this study completed all survey sections. There were no ANPs that refused to participate after consenting to participate or did not respond. There was no missing data in the analysis. All (n=148) fully completed the surveys. However, if there had been parts of the survey conducted and not others, this data would have also been analysed.

6.8.3 Sample Size

The required sample for the study was calculated using the population formula (see Table 3).

Sample Size Calculation: N=Estimated sample size 50% N= The portion in Ireland (ANP/ANP Candidates) N=448 N=Estimated sample size Margin of error = 10% actual (7%) Confidence Level = 95% Population sample size = Estimated sample size = 80 Actual sample size = n=148)

Table 3: Sample Population Formula

From the statistical formula, the minimum size of the sample required for this study was approximately 80 persons from the sample of (n=448) (Raosoft, 2004; Johnson and Morgan, 2016). The number 80 was based on 10 percent standard error (actual 7 percent, n=148). The 80-population sample size was the minimal sample that could be accepted to generate the statistics. As more completed the survey it was considered that this would help the data to generate and gain reliability or real significant date. However, all ANPs in the sample were included. The study yielded 148 which added more significance to the data. And was accepted in the study as they met the criteria, namely, no missing data within those surveys. The

justification for this sample size is to target a probability sample of general ANPs in Ireland, to allow for generalisability of the findings. Both genders and all age groups of registered ANPs were included. There were (n=141) registered ANPs and (n=7) ANP candidates in post that were included in the final sample.

6.9 Access to the Population

Following ethical approval, the DCU student contacted the Director of the NMPDU to request the NMPDU assistance and involvement in the study and access to participants (Appendix L). The NMPDU Director agreed and circulated all the study information to the population sample (Appendix L). The survey link was distributed by the NMPDU Directors to all area NMPDUs, ONMSD Office, IAANMP and ANPs and ANP candidates from March to April 2020. As Morgan and Johnson (2016) explained, to assist in the increase of participant response, it is anticipated that the pilot flyer will heighten the awareness of the study. Flyers were sent via the NMPDU to recruit ANPs involved in the ANPCAPS tool development and piloting (Appendix M).

The NMPDU circulated the online survey and plain language statement. The ANP full survey is included in Appendix N. Consent to use the DPBS in this study was obtained by Dr. Dempster's daughter (Appendix O). The DCU student, via the NMPDU, thanked all ANPs who completed the online survey. The NMPDU followed up initial circulation of the survey in discussion with the study author, additionally circulating the information and online link at 2 and 4 weeks (Morgan and Johnson, 2016; Field, 2018).

Using three contacts within the sample, a modified Dillman method was utilised to maximise the response rates from the study sample (Dillman, 2007). Two and four weeks after initial circulation, a second reminder email was sent by the NMPDU with the link to the survey. Considering the ANPs and ANP candidates all working on the frontline in the middle of a pandemic, the response rate was satisfactory.

The following section will discuss data analysis of the quantitative and qualitative data. Firstly, quantitative data analysis in the next section.

6.10 Quality, Rigour, Validity, and Trustworthiness Qualitative

The qualitative researcher considers rigor and validity (Morse, 1999). Bryman (2016) and Seers and Toye (2012) suggest that the desire for high-quality qualitative research is universal for all professionals, organisations and healthcare researchers. These areas are reflected upon in the research ethics proposal and the methods of data collection and analysis.

6.10.1 Quality, Rigour, Validity and Trustworthiness Quantitative

Quantitative research relies on reliability and validity (Bryman, 2016) as the most important part of the research findings. These areas are reflected upon in the research ethics proposal and the methods of data collection and analysis.

6.11 Quantitative Data Analysis

Data was analysed using the Statistical Package for the Social Sciences (SPSS) version 25, which the DCU supervisors for this study and a statistician advised, regarding the tests for

analysis. The study assumed the population mean to be within the 95 percent confidence interval. The sampling error was assumed at a level of ± 10 percent.

6.12 Open-Ended Question

The open-ended section of this survey included additional comments that ANPs provided about ANP clinical autonomy in a qualitative format. As explained by Johnson and Morgan (2016), there are essential factors in the open-ended section that can assist in the interpretation of data in the analytical phase of the study; qualitative data in the form of individual written comments, and/or explanations for individual quantitative responses were sought. This data was analysed using a thematic analysis to identify any essential emergent themes.

6.13 Qualitative Thematic Data Analysis

As explained earlier in this chapter, thematic analysis is a method of analysing data to gain meaningful interpretations of ANP perceptions in this study. The thematic analysis looked for communication that was not constrained by any limitations in the responses and were a valued method for examining the content of responses in open-ended questions (Braun and Clarke, 2006; Creswell, 2018). The open-ended section of the survey was included to elicit knowledge of ANP through verbatim comments of their own words, to provide insight into their thinking, and add to a meaningful understanding of ANPs point of view of their ANP clinical autonomy (Creswell, 2018).

Furthermore, the open-ended section allowed the ANPs to express their understanding of ANP clinical autonomy using their language, terms and expressions. Significantly, as proposed by

Sutton and Austin (2015), a researcher needs to be aware and acknowledge personal views and biases on the topic being explored. For this reason, the DCU student was aware of this and shared their positionality in chapter one to comprehensively position the data, analysis and findings and provide context to the understanding of the topic area. Thematic analysis was used to analyse the data following Braun and Clarke's (2006) phases as follows: (1) using familiarity of the data; (2) generating initial codes/labels (3) searching for themes or central ideas (4) reviewing themes (5) defining the themes and (6) producing the report. The initial step for analysing the open-ended responses from ANPs was to read and reread the comments to gain an understanding, awareness and familiarity of the data (Braun and Clarke, 2006). The data was then inputted into excel under colour codes generated in the form of phases to represent important data. The codes chosen aimed to identify the main elements that the ANPs noted as crucial to them in their responses.

The codes were then collated to determine an overarching idea under which to organise the phases identified, explained as 'searching for themes' (Braun and Clarke, 2006). The themes constituting the main ideas were reviewed at this stage to confirm that they each contained clear, accurate phases of importance. The themes were labelled, colour coded and reviewed to ensure that they were appropriate and comprehensive in describing the data. For this study, the ANP responses of the open-ended section were analysed using the Braun and Clarke (2006) six steps. Themes were identified from the responses to the open-ended comments and reviewed by the DCU student and her supervisor.

The most repetitive statements were considered the highest theme amongst all, followed by the next repetitive information. Guest, Bunce and Johnson (2006) recommend that the number of individuals expressing a recurrent theme is a preferable indicator of the theme's significance.

Data saturation was complete when no additional codes were emerging or themes generated (Braun and Clarke, 2006; Guest, Bunce and Johnson 2006; Boddy, 2016). The findings of the thematic analysis are presented in chapter eight. A further gain, particularly from a learning perspective, is that it is a method rather than a methodology and is not within a particular epistemological or theoretical perspective (Braun and Clarke 2006; Clarke and Braun, 2013). This is also beneficial to a dialectic researcher.

For this study, Braun and Clarke (2006) semantic themes (used in this study) were explicit findings of the data, and the researcher was not looking for anything beyond what a participant has said or written. The latent level looked beyond what was said and identified and examined underlying ideas, assumptions, conceptualisations and ideologies. Braun and Clarke (2006) have purported that a manual interpretation of the results is vital in establishing themes without using Nvivo software. Braun and Clarke (2018) indicate in their online tutorials that the use of NVivo is not a prerequisite and advise that using a computerised programme with their framework may prove unnecessarily time consuming and distracting, leading to incomplete engagement or distancing from the data. The following section will discuss the use of thematic analysis in the current study.

6.13.1 Analysing and Synthesising Interview Data

It was necessary to provide an overview of how the semantic thematic analysis framework developed by Braun and Clarke (2006) was used to analyse and synthesise the qualitative comments (see Figure 3).

Phase	Study Context
Phase 1: Becoming familiar with the data	· Preparation of the survey comments collected via survey. Inputted into excel spreadsheets. · Check accuracy of transcripts against the survey and excel spreadsheet. · Immersion in the data through repeated reading of transcribed texts. · Note taking, highlight potential codes. · Utilise colour coding.
Phase 2: Generate initial codes	· Familiarity with open comments · Coding data driven. · Generation of initial codes linked to the open comments data. · Name codes developing a description. · Experienced supervisor review code and assumption reflection. · Final code structure completed.
Phase 3: Search for themes	· Considered the codes at a broader level, identified potential themes, and collated this information. · Reviewed the narrative literature review published in this study and consider those themes. · Consider codes relevant to individual themes · Consider different levels/sub themes within themes.
Phase 4: Review themes	· Review themes at level of coded extracts and across entire data set. · Researcher reflective
Phase 5: Define and name themes	· Define, refine, name, themes and description within themes. · Develop a detailed account and analysis of each theme, provide a coherent and consistent account with accompanying narrative. · Relate themes to underlying research questions. · Relate themes to each other.
Phase 6: Produce the report: write up.	· Consider themes concerning the research questions. · Consider how the data support analytical claims and outcomes. · Consider new information in relevance to current literary discourse. · Develop under main themes

Figure 3: Thematic Analysis Study Context

6.13.1 Doing the Thematic Analysis

The themes using Braun and Clarke (2006) provided a six-phase guide which was a useful framework for conducting this kind of analysis. The following Chapter will discuss tool development, validation, and pilot testing for the survey.

Phase 1. Familiarity with the Data

The researcher assisted in the data collection and analysis, as proximity of the researcher to the data promoted the ability to link and interpret data as a whole, rather than a sum of its parts (Boyatzis, 1998; Braun and Clarke, 2006). This facilitated the researcher to examine and explore links or patterns between categories (Connelly and Peltzer, 2016). This step was

followed by researcher immersion in the data through repeated reading of the open comments, which facilitated identifying potential codes and themes.

Phase 2. Generate Initial Codes

Codes were constructed to be concise, capturing the essence of the data whilst also operating when separated from the data. For example, Clarke and Braun (2013) highlight that ‘good codes’ should provide enough information to capture what was in the data and an analytic take on it, if one should lose data. This process continued for each data item coded across the entire dataset. Codes were distinct and where there was considerable overlap between codes, a broader code was considered to reflect the general issue.

Code names were assigned and linked to the associated text portion. This step was followed by the generation of an excel table which was imported from the survey responses and associated text. Following this review, coding was completed and the final code structure for each dataset was developed, how codes contributed to the development of themes within and across the dataset was considered. The codes were then categorised and finally a theme developed.

Phase 3. Search for Themes

Hierarchical relationships between themes occur at three levels, overarching themes, themes and subthemes or categories (Braun and Clarke, 2013). Overarching themes provide structure and organise the data. They tend not to contain codes or data, but instead simply capture an idea encapsulated within a number of themes (Braun and Clarke). Themes do not need to be the same size, as some will be less complex with a core aspect in comparison to more complex themes (Braun and Clarke, 2013). In contrast, sub themes or categories are positioned underneath the umbrella of a theme, sharing the same central organising concept but focussing

on a specific element and should be used minimally and specifically when there is a specific component pertinent to the theme.

Consistency is recommended by Clarke and Braun (2013) in the identification of themes within a particular analysis. Within this study, all of the data was coded, and themes developed and analysed at the same level of specificity using the same technique for thematic analysis. This phase was completed when the researcher had collated all coded data relevant to each theme and an initial thematic analysis was colour coded, constructed, and shared with her supervisors for review and feedback.

Phase 4. Review Themes

When all themes were developed, they were reviewed as recommended by Braun and Clarke (2006). According to Braun and Clarke (2006), themes and subthemes/categories should be reviewed at the level of coded extract and across the entire dataset. The purpose of which is to consider if themes tell a compelling story regarding the data and reflect the researcher's ability to articulate the nature of the theme including a relationship to other themes (Clarke and Braun, 2013).

Phase 5. Define and Name Themes

It is advised by Braun and Clarke (2013) that themes should be named, and the specifics of each theme identified including their contribution to the overall analysis.

Phase 6: Produce the Research Report

This final phase pertains to how the themes were developed in relation to the research questions and existing literature. Outcomes and analytical claims were identified and considered in the

context of how these were supported by the data and the new information which emerged is outlined fully in the study findings, conclusions, and recommendations.

6.13.2 Data Analysis Approach Rationale

Consideration was afforded to the consistency of the data analysis methods with the epistemological and methodological stances of an organismic dialectic researcher. In comparison to other thematic analysis frameworks, Braun and Clarke (2006) provided a toolkit to undertake thematic analysis, including potential problems and how these may be addressed. While undertaking thematic analysis, consideration was given to the quality and trustworthiness of the research process and evidence was produced on how this could be demonstrated. All of the content was shared with the supervisors of this study.

Chapter Seven - Tool Development, Validation and Pilot Testing

7.1 Introduction

This chapter is concerned with the tools utilised in this study and the phases of validation and piloting of the survey. Operationally, the ANPCAPS was developed additionally, to measure ANP clinical autonomy. The conceptual definition for this study has used the Dempster definition as explained in chapter one. This chapter describes the subscale development of the ANPCAPS firstly, the validation and testing of the subscale. The DPBS is also presented and the piloting phase of the study including survey demographics. Finally, the data analysis in the form of SPSS and open-ended comments and analysis approach will be presented. Firstly, the following section will detail the ANPCAPS development phase.

7.2 ANP Clinical Autonomy Practice Scale Development

As identified in the literature review, ANP clinical autonomy has been a complex, nebulous concept to explore, with significant confusion in the literature of actual ANP clinical autonomy. Actual ANP clinical autonomy pertains to the levels of clinical practice that the ANP utilises, and a decision was made to include a validated tool for the DPBS and develop an additional subscale pertaining to the levels of ANP clinical autonomy.

The ANPCAPS subscale followed an extensive narrative literature review and discussion with experts in the field of ANP (n=4), which initially developed a 31 item ANP clinical autonomy scale (Appendix P). When evaluating ANP clinical autonomy and selecting a valid instrument, ANPs must be clearly distinguished between ANP measures due to the level of clinical autonomy. This study considered testing the ANPCAPS using a multitrait-multimethod

(MTMM) matrix (Kenny and Kashy, 1992). This was discussed with the study's supervisor and a statistician who was consulted due to the minimum of 200 participants to give an accurate statistical finding (accuracy and not a positive/negative result). This test was not utilised as the number of ANP respondents in this study was (n=148). Alternatively, the best approach for this study was the deductive process and Cronbach's alphas in the construct validity development.

Clarity of the measurement of ANP clinical autonomy and improving the validity of instruments for measuring ANP clinical autonomy enhanced the accuracy of the determinants of ANP clinical autonomy. By clarifying the components of ANP clinical autonomy in Ireland, one can develop constitutions within the literature of ANP clinical autonomy and improve the synthesis of knowledge in this area, contributing to and adding to the body of knowledge.

7.2.1 Rationale of the ANPCAPS

ANP clinical autonomy has been a complex concept to explore contributing to an absence of literature available on the topic. With significant confusion in the literature of ANP clinical autonomy and, indeed, the components of ANP clinical autonomy, this tool will contribute to a specific measure for ANP clinical autonomy (Bahadori and Fitzpatrick, 2009; Cajulis and Fitzpatrick, 2009; Maylone et al., 2011). The additional ANPCAPS was developed in an attempt to explore the actual ANP clinical autonomy, which was an objective of this study. Additionally, the subscale was developed to assist in measuring ANP clinical autonomy for all specialisms.

7.2.2 Validation of the ANPCAPS

Based on the generation of the scale items from published research and initial review by experts in ANP, face validity was assumed for the instrument. The approach recommended by Polit and Beck (2016) involves each item on a scale relevant to the construct. Phase two and three Gantt chart presents the ANPCAPS Tool Development in Figure 4.

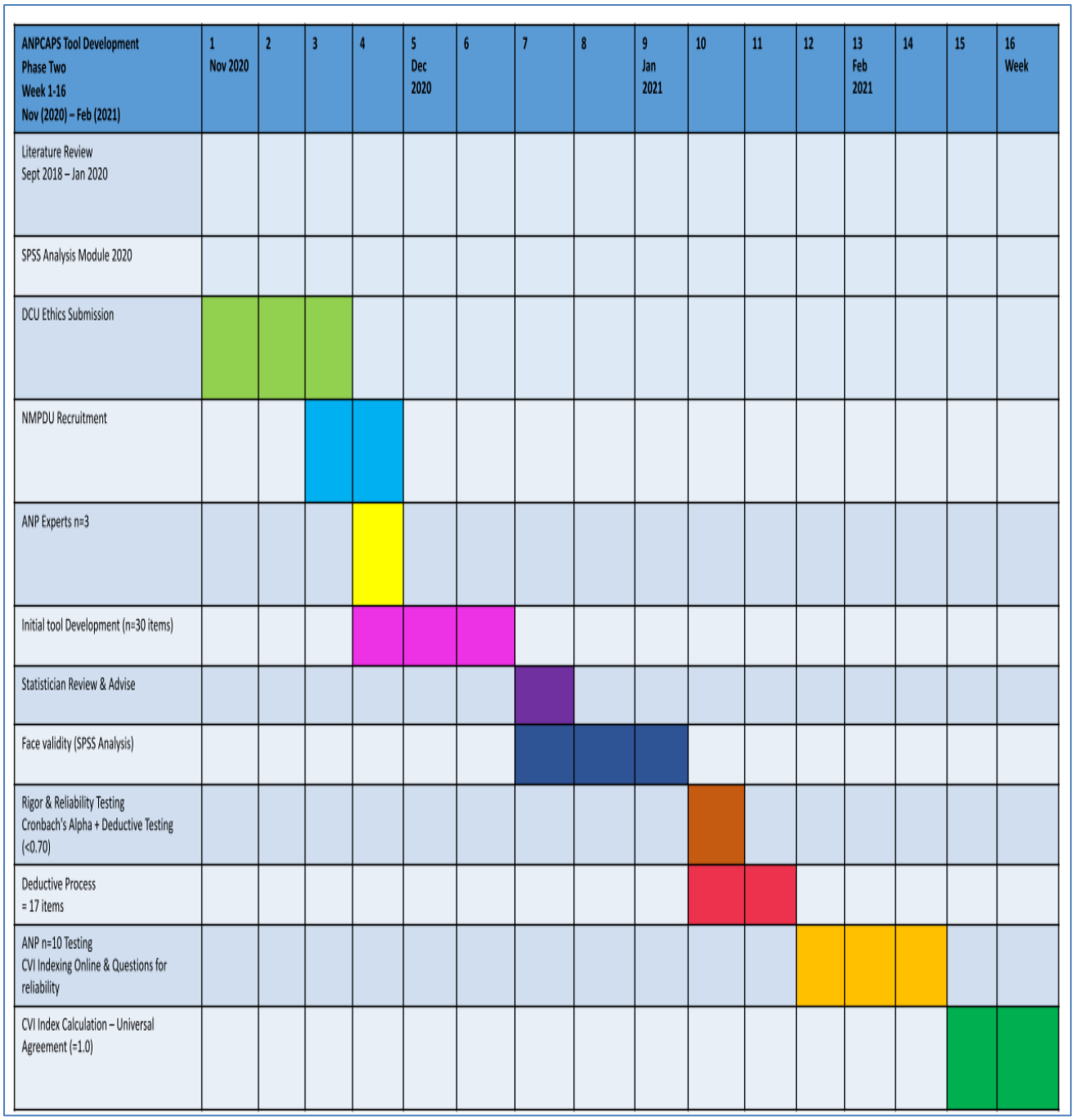

Figure 4: Phase Two and Three: Gantt Chart

7.2.3 Initial ANPCAPS Development

The main goal of the development of the ANPCAPS was consistency and that the process of the scale development was valid, reliable, and as straightforward as possible. A best practice for developing and validating scales for health, social and behavioural research employed the work of Boateng et al. (2018). They suggest three phases in developing a tool the first being, items generated, and the validity of the content assessed. The second phase is how the scale is constructed and thirdly, scale evaluation including testing, reliability, and validity.

7.3 Scale Development Overview

Identification of the domain and item generation was the first step in the development of the scale. This was initially articulated in the objective of developing a subscale to measure ANP clinical autonomy. The literature review was included in the development and the clinical autonomy definition by Dempster (1990). The item generation included literature review, and experts in the area of ANP (n=4). Additionally, a nursing professor specialised in scale development was consulted and additionally a statistician. An initial subscale was developed (n=31 items) and then tested for reliability (see Appendix P).

7.3.1 Method

It is recommended that the scale developer utilises or combines a deductive and inductive method (Boateng et al., 2018). Firstly, inductive in the inclusion of experts in the field discussions and secondly deductive in the literature review and statistical approaches (Loevinger, 1957; Clarke and Watson, 1995). Similarly, in the initial tool development items on the scale that do not quite fit should be included as successful evaluation will eliminate them

(Loevinger, 1957; Clarke and Watson, 1995). Kline (1993) and Schinka, Velicer and Weiner (2012) recommend that the initial tool should be nearly twice as long as the desired final scale. Fowler (1995) reported five items that should be included in the development of a tool/scale, firstly the need for the items to be consistency understood, consistently administered to the respondents, the consistent communication of what constitutes an answer, access to the information needed, and willingness for responses to provide the correct answers. For example, a Likert-type scale should include an ordinal manner in an ascending order without any overlap in the same way for all responses.

The initial 31 items were developed following the literature review followed by expert advisors who finally tested rigorously. Firstly, with statistical advice from a statistician and the decision to use utilise a deductive process to test for reliability to assess the items for a satisfactory Cronbach's alpha. Cronbach's alpha assesses the internal consistency of the scale items for example, the degree of which the set of items co-vary relative to their sum score (Cronbach, 1951; Cronbach and Meehl, 1955; DeVellis, 2016). The 31 item ANPCAPS were inputted into SPSS for testing to determine the items for an acceptable Cronbach's alpha score (any item below 0.70 was deducted from the subscale). This was performed to correlate, assess for statistical analysis and for reliability to each other. Additionally, the questions deducted were also, on reflection, more specialist to certain areas of ANP practice, so this stage of the tool development helped broaden the tool for all specialities of ANPs in acute and primary care specialists. The 31-item original ANPCAPS is included in Appendix P.

The DCU student and her supervisors reviewed the details of the SPSS data. Of the 31 items, one item was an open-ended section which was not included in SPSS. The deduction process resulted in 17 questions with a satisfactory Cronbach Alpha of 0.786 (see Table 4). The 17

items were in a positive quantitative format, while only one item was an open-ended question. Following review by the panel of ANPs, some word changes were made, shown below in blue colour.

ANPCAPS	Cronbach's Alpha
I… (practice to the full capacity of my registration as an ANP)	0.770
I… (regularly discharge patients without a (the need of a) physician's consultation)	0.785
I… (regularly complete full episodes of care for patients (without the need) without a physician)	0.791
I… (refer patients to other specialities without the need of a physician's consultation)	0.778
I… (regularly make an independent diagnosis for patients)	0.792
I… (am constrained in my clinical autonomy practice due to my organisation)	0.763
I… (regularly make a treatment plan for patients)	0.777
I… (can request all (required tests) diagnostic tests I need for patients as part of their treatment plan if required)	0.758
I… (adopt high levels of (expert) clinical decision-making skills)	0.770
I… (find my gender impacts on me positively at the level of clinical autonomy with which I am trusted)	0.763
I… (adopt high levels of clinical leadership which influences and guides other members of the organisation)	0.770
I… (practicing at full ANP clinical autonomy enables confidence in my clinical decision-making skills)	0.779
I… (am involved in organisational management decisions about ANP	0.785
I… (can prescribe all medications I need for patients if required)	0.774
I… (regularly take time away from the clinical area to undertake research)	0.769
I… (regularly take time away from the clinical area to undertake professional development)	0.797
I… am constrained in my clinical autonomy practice due to other health professionals	0.760.

Table 4: Alpha Cronbach's Testing ANPCAPS

The next consideration of the ANPCAPS was how to score the scale. Runyon and Haber's (1991) procedure for assigning scores to classes was utilised and presented in Table 4.1.

4th Rank	3rd Rank	2nd Rank	1st Rank
1.00-1.75	1.76-2.50	2.51-3.25	3.26-4.00
Slightly Disagree	Disagree	Agree	Strongly Disagree

Table 4.1: Score for Positive & Negative Statements for ANPCAPS.

7.3.2 ANPCAPS Questions

A four-point Likert scale used to explore the ANPCAPS of the respondents ranged from (Strongly Disagree =1, Disagree =2, Agree =3, and Strongly Agree =4) in the format of the positive questions. The rationale for using the four-point Likert scale was considered, and due to ANPs requirement to carry out the items listed in the ANPCAPS and registration with NMBI, the 'unsure' or 'prefer not to answer' was removed. Additionally, this was considered in the feedback from the content validity testing as no ANP commented to include a five-point scale. To obtain the range of scores for the four classes of perceptions (Strongly Disagree, Disagree, Agree and Strongly Agree perceptions), Runyon and Haber's (1991) procedure for assigning scores to classes was used. This procedure is shown in Table 4.2.

Step 1. Find the difference between the highest and lowest score values contained in the original data. Add one (1) to obtain the total number of scores.
Step 2. Determine the number of classes required. Divide the total number of scores by the number of classes of score to obtain the number of scores in each class (i).
Step 3. Take the lowest score in the original data as a minimum value in the lowest class. Add (i – 1) to this minimum value to obtain the maximum score for the lowest class.
Step 4. The next highest class begins at the integer following the maximum score of the lowest class. Follow the same step as in Step 3 to obtain the maximum score for the second class.
Step 5. Follow these procedures for each successive higher class until all the scores are included in their appropriate classes.

Table 4.2: Procedure for Scoring ANPCAPS

Additionally, the ANPCAPS was ranked and interpreted by calculated means. A four-point Likert scale used to explore the ANPCAPS of the respondents ranged from (Strongly Disagree =1, Disagree=2, Agree=3, and Strongly Agree=4) in the format of the positive questions (see Table 4.3).

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	3	4

Table 4.3: ANPCAPS Score for Positive & Negative Statements

There are 17 items in a positive quantitative format, while only one item was an open-ended question. The outcome of applying this procedure to the items contained in the ANPCAPS instrument is as follows. Table 4.4 below reveals the range of scoring that represents the four categories determined due to the procedures established by Runyon and Haber (1991). The ANPCAPS was also ranked and interpreted by calculated means.

7.3.3 ANPCAPS Results

Table 4.4. Below reveals the range of scoring that represents the four categories determined due to the procedures established by Runyon and Haber (1991).

4th Rank	3rd Rank	2nd Rank	1st Rank
1.00-1.75	1.76-2.50	2.51-3.25	3.26-4.00
Slightly Disagree	Disagree	Agree	Strongly Agree

Table 4.4: ANPCAPS Answers to Questions Ranking

This was then itemised and categorised into themes. Due to the sections of the survey being adapted and developed, a pilot phase was necessary to determine the survey's validity and reliability and test-retest requirements (Johnson and Morgan, 2016; Field, 2018). The following section will discuss the content validity of the ANPCAPS.

7.3.4 Content Validity Testing of ANPCAPS

Content validity also referred to as the theoretical analysis is reported by Henkin (1995) and Boateng et al. (2018) as the need for content adequacy so that the items measured are what they

are presumed to measure. For this study, a panel of (n=10) experts were included in the content validity testing prior to the pilot study. The panel of experts included ten ANPs, and the non-face-to-face approach was utilised to ensure a systematic approach. The ANPs were selected with the help of the NMPDU who sent out an invitation for ANPs to be involved in testing the tool and pilot study (Appendix N, M).

The 17-item scale was sent electronically with the ANPCAPS scale link, to a panel of (n=10) ANPs from generic practice areas. The instruction information for the panel is included in Appendix Q. One panel was a previous ANP advisor to the NCNM and emergency medicine programme. Another panel member was a committee member of the IAANMP with extensive experience in advanced nursing practice. Additionally, ANPs on differing specialties with more than 5-10 years-experience as an ANP were included. The areas of ANP specialist practice included: adult emergency, paediatric emergency, adult and paediatric emergency, diabetes, general medical and surgical specialities, elderly, and primary care. All ANPs are required in Ireland to hold a Master's degree. The panel chosen represented a generalisability of a varied cross-section of generic ANPs who were experienced and clinically active as ANPs.

Content validity is defined as the degree to which the elements of an assessment instrument are relevant to and represented by the target construct for a particular assessment purpose (Cook and Beckman, 2006). An assessment instrument refers to the specific method of acquiring data, such as a survey. The elements of an assessment instrument refer to all aspects of the measurement process that can affect the data obtained in the study. The concept relates to the construct, domain or variable that is the target of measurement (Yusoff, 2019). Davis advocates the relevance of a survey (following the deductive process, the content validity was tested). The most widely used measure of content validity is the content validity index (CVI) (Polit and

Beck, 2006; Yusoff, 2019). The relevance of a survey has been frequently used to measure content validity which is an integral part of subscale development (Davies, 1992).

The inclusion of experts in the development of a tool represents the domain of interest and should be independent of those that initially developed the item pool, and multiple experts can be used (ranging from 5-7) (Boateng et al., 2018). Lynn (1986) advises that relevance/relevant responses are dichotomised to not relevant (including responses indicating 'not relevant' and 'somewhat relevant') and relevant (including responses indicating 'quite relevant' and 'highly relevant'). Items scored 3 or 4 (quite relevant and very relevant) by the panel were rated as content valid. Lynn (1986) supports that there is a panel of at least 6-10, and an acceptable CVI should be at least 0.78. Following the literature review and advice from the expert advisors a further 10 ANPs were additionally included in the initial testing of the ANPCAPS. The following section will detail the validation assessment tool.

7.3.5 Validation Assessment Tool

The panel members were given a reviewer form that asked them to rate the consistency in terms of wording (1=not relevant, 2=somewhat relevant, 3=quite relevant, and 4=highly relevant). Furthermore, the panel were asked if the items were representative of the concepts relating to ANP clinical autonomy (1=not relevant, 2=somewhat relevant, 3=quite relevant, and 4= highly relevant). Then the ANPs were asked if the items were relevant to ANP clinical autonomy (1=not relevant, 2=somewhat relevant, 3=quite relevant, and 4=highly relevant). Additionally, clarity in terms of wording was asked (1=not relevant, 2=somewhat relevant, 3=quite relevant, and 4=highly relevant). Then the ANPs were asked if the items were essential (1=not necessary, 2=useful but not essential, 3=essential). Finally, the ANPs were asked about the overall validity of the tool (1=yes and 2=no). Please see Appendix U for the complete scores

of the validation assessment. Figure 5 details the total ANP validation tool. The validation instructions to the panel of experts are included in Appendix P and the results of all validation assessment scores are included in Appendix U.

ANPCAPS Validation Assessment Tool						
Items	Has each item in the ANPCAPS consistency in terms of wording?	Are the items representative of the concepts related to ANP clinical autonomy?	Are the items relevant to concepts related to ANP clinical autonomy?	Are the items clarity in terms of wording	Are the items not necessary, useful but not essential or essential?	Overall Validity of the items of the ANPCAPS
Q1	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3	1 2
Q2	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3	1 2
Q3	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3	1 2
Q4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3	1 2
Q5	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3	1 2
Q6	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3	1 2
Q7	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3	1 2
Q8	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3	1 2
Q9	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3	1 2
Q10	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3	1 2
Q11	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3	1 2
Q12	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3	1 2
Q13	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3	1 2
Q14	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3	1 2
Q15	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3	1 2
Q16	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3	1 2
Q17	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3	1 2
Key	1 = Not Relevant	1 = Not Relevant	1 = Not Relevant	1 = Not Clear	1 = Not Necessary	1 = Yes
	2 = Somewhat Relevant	2 = Somewhat Relevant	2 = Somewhat Relevant	2 = Somewhat Clear	2 = Useful but not Essential	
	3 = Quite Relevant	3 = Quite Relevant	3 = Quite Relevant	3 = Quite Clear		2 = No
	4 = Highly Relevant	4 = Highly Relevant	4 = Highly Relevant	4 = Highly Clear	3 = Essential	

Figure 5: ANPCAPS Validation Assessment Tool

The ANP panel all indicated that the instrument was consistent in measuring ANP clinical autonomy. However, two-panel members questioned the clarity of some of the items. The items revised concerned the wording of the meaning of 'diagnostic procedures' and ensuring that the 'without a physician' was clear. The comments also supported the inclusion of the items by stating that the items were consistent in the wording. The items were left unchanged following slight wording amendments. The ANPCAPS was again tested in the pilot study, in regard to SPSS testing and content validity. The content validity index will be discussed in the following section.

7.3.6 Content Validity Index

The content validity index (CVI) was used to calculate the scale. The following formula was utilised as recommended by Lynn (1986), Davies (1992), Polit and Beck (2006), Polit, Beck and Owen (2007) and Yusoff (2019). The ANPCAPS I-CVI scores were added together and divided by the number of items on the scale. The S-CVI generated for this new scale is 1.00 above the 0.78 reported by Lynn (1986). This indicates an excellent content validity for this scale. As shown below in Table 4.7, there are two CVI forms, CVI for item (I_CVI) and CVI for scale (S-CVI). Two methods for calculating S-CVI: the average of the I-CVI scores for all items on the scale (S-CVI/ave) and the proportion of items on the scale that achieve a relevance scale of 3-4 by all of the ANP experts (S-CVI/UA). The content validity questions are summarised in Appendix Q.

The S-CVI/UA, which is the average universal agreement (UA) was 1.0 as concurred by Lynn (1986), Polit and Beck (2006), Polit, Beck and Owen (2007) and Yusoff (2019). Based on the above calculation, the ANPCAPS met a satisfactory level for content validity. Please see Table

4.7 below as per Lynn, (1986), Polit and Beck, (2006), Polit, Beck and Owen, (2007). The piloting questions following the total survey tested are included in Appendix R.

CVI Index Calculation		
The CVI indices I-CVI (item-level content validity index)	The Definition The portion of content experts giving item relevance of 3-4	Formula I-CVI = (agreed item)/ (number of expert)
S-CVI/Ave (scale-level content validity index based on the average method)	The average of the I-CVI scores for all items on the scale or the average of proportion relevance judged by all experts. The proportion relevant is the average of relevance rating by individual experts.	S-CVI/Ave = (sum of I-CVI scores)/(number of item) S-CVI/Ave = (sum of proportion relevance rating)/ (number of expert)
S-CVI/UA (scale-level content validity index based on the universal agreement method)	The proportion of items on the scale that achieve a relevance scale of 3 or 4 by all experts. Universal agreement (UA) score is given as 1 when the item achieved 100% experts in agreement, otherwise the UA score is given as 0.	S-CVI/UA = (sum of UA scores)/(number of item)

Table 4.5: CVI Index Calculation

7.4 Pilot Study Phase

The purpose of a pilot study was to detect any design issues completed after the CVI testing before data collection was conducted. The pilot study was also to test the ANPCAPS before the total sample was shown, to inform the study's developers if there were any problems with the survey, need for a retest, to test for comprehensibility and to make sure that the respondents understood the study (Johnson and Morgan, 2016; Polit and Beck, 2020). According to Connelly (2008) extant literature suggests that a pilot study sample should be 10% of the sample projected for the study. However, Hertzog (2008) cautions that this is not a simple or straightforward issue to resolve because many factors influence studies. Nevertheless, Isaac and Michael (1995) suggested 10-30 participants. Hill (1998) suggested 10-30 participants for pilots in survey research, whereas Julious (2005) and Field (2018) advise 12 participants. There were (n=16) participants chosen that were included in the pilot study (Johnson and

Morgan, 2016). As explained in chapter 4, the ANPs were recruited by the NMPDU Kilkenny for the pilot test's content validity and total testing.

The respondents were asked if any of the questions were confusing or misleading or were there ambiguous terms in the survey (Johnson and Morgan, 2016). Please see Appendix R, which details the questions asked in the pilot study. The DCU office of chief operations advised on the phase concerned with data protection and GDPR procedures (Appendix J). Additionally, DCU senior technician was instrumental in assisting and advising for safety and setting procedures of the survey in the online format. The ANPs (n=16) completed the total survey, and this was tested for time, consistency, reliability and relatedness of the variables of the study (Appendix M). Completion of the pilot surveys were then inputted into SPSS (Version 25) and a Cronbach's alpha testing procedure was performed. Following the pilot phase, the reliability statistics were tested for mean, variance, standard deviation (SD) and Cronbach's alpha (Field, 2018) (see Figure 6 which presents the piloting phase in the form of a Gannt chart).

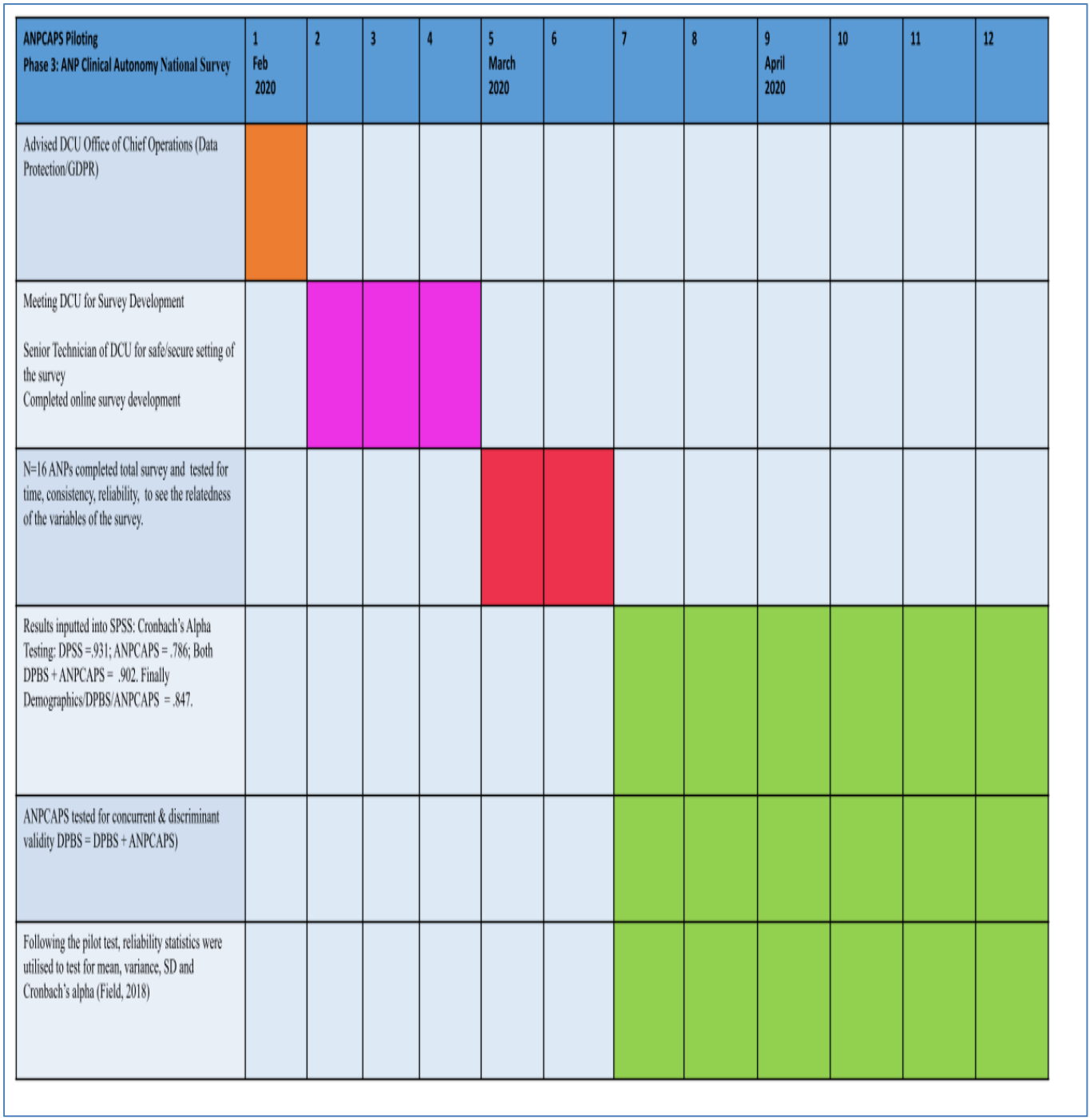

Figure 6: Phase Three and Four: ANP Clinical Autonomy Survey Development

7.4.1 Main Points of Survey Use in Methodologies for Piloting

The main point of using a survey in research is to crystallise an area of concern and be consistent in its measurement (Bryant, 2015). Furthermore, Johnson and Morgan (2016) state that this must be specific to the area of interest as it is of futile use if the measures do not measure what is of interest for this study i.e., ANP clinical autonomy. Regardless of empirical evidence, it has been suggested that while surveys gather quantitative data, they are not specifically objective. For example, in this study, data will reflect respondents' perceptions and beliefs about what is asked within the DPBS and ANPCAPS. This pilot study tested the reliability of the survey. A reliability test is needed to see the relatedness of the variables in the study. This is important so that the information produced is clear, consistent, and meaningful. As no other confusing and/or misleading questions were pointed out, no changes were made for the final survey, meaning that the survey was reliable for the data collection (Johnson and Morgan, 2016).

The ANPs reported the survey was very relevant and precise. The only change was in the registration requirements. To include the NCNM, before the NMBI, the registration for ANPs in Ireland was subsequently revised, which was amended in the survey before distribution to all ANPs. Additionally, the pilot data from the ANP pilot testing was inputted into SPSS and a Cronbach's alpha for the DPBS and ANPCAPS combined.

The content validity testing and subsequently, pilot testing was completed and analysed in the above mentioned CVI indexing and additionally, SPSS for the total survey was utilised to assess for Cronbach's Alpha and validity and reliability. Cronbach's Alpha for the DPBS and ANPCAPS are included in Table 5 below.

No of items	Cronbach's Alpha
DPBS no of items = 30	.931
ANPCAPS no of items = 17	.786
Combined DPBS and ANPCAPS = 47	.902

Table 5: Cronbach's Alpha Pilot Testing

7.5 National Survey Design and Pilot Testing of the Survey

7.5.1 Consent and Demographics

Consent to undertake the study followed the participants clicking a link and reading a plain language statement. The plain language statement is included in Appendix M and read: 'I have read and understood the plain language information about the study: An Exploration of Advanced Nurse Practitioner Clinical Autonomy in Ireland'. Participants were asked: Do you consent to participate in this study and responded with a 'yes' or 'no' answer. If the participant clicked 'no' then they were thanked for considering the survey and advised that if they were there by mistake, to click the back button to start again. At this stage they were unable to view the full survey details until they consented.

The next section of the survey was designed to provide demographic information. The first question asked respondents to which gender they identify, ANPs were then asked to indicate their age. The third question asked ANPs to select the year they qualified as an ANP prior to the NMBI taking over ANP registration with the NCNM or subsequently, the NMBI. Question four pertained to the highest academic degree. Question five asked about their specialism in advanced nursing practice. ANPs were then asked to indicate the setting in which they were currently employed in, and also the health region. This was established by a link which included a map of the regions to view the geographical locations which is included in Appendix N. Question nine concerned ANPs supervisors and finally, the gender of their supervisors. The

following section will discuss the DPBS firstly by providing a rationale for the scale. The author's consent to use the DPBS is included in Appendix O.

7.5.2 Rationale of the DPBS

The literature review firstly led to previous tools and surveys utilised to understand constitutes of nursing autonomy. In a review of psychometric properties, Weston (2009) measured autonomy and control over practice (also known as professional autonomy) in nursing, published in peer reviewed journals between 1990 and 2007. In her findings, Weston (2009) reported a lack of understanding and misunderstanding of autonomy in nursing. This was also evidenced by Kramer, Maguire and Schmalenberg (2006) and Kramer and Schmalenberg (2008) in a grounded theory study aforementioned in chapter two, where the confusion has been created by measures not distinguishing between autonomy, nursing autonomy, professional nursing autonomy, and clinical nursing autonomy.

Weston (2009) suggested that a number of instruments have been used inappropriately as they were designed to measure patient autonomy and not nursing autonomy namely: 'Nurse Autonomy and Patient rights Questionnaire' (Pankratz and Pankratz, 1974), Caring Perspective' (Boughn, 1995), and the 'Job Characteristics Inventory' (Sims, Szilagyi and Keller, 1976). One instrument not included in Weston's analysis is the DPBS (Dempster, 1990). According to Dempster (1990) the instrument seeks to focus on advanced nursing practice and overt and covert behaviours relating to the extent of an individual's autonomy in a practice setting. The content validity of the DPBS was assessed through content validity index (CVI) of the initial 40 items. The maximum CVI score achievable is a 1.0 which was achieved by Dempster (1990).

Additionally, Dempster (1990) additionally assessed for convergent and discriminant validity through the distribution of the instrument along with 3 existing instruments measuring autonomy with a sample of (n=1,000) nurses. With a response rate of (n=569), the DPBS was reduced to 30 items. Construct validity was established through construction of a multitrait-multimethod (MTMM) matrix (Kenny and Kashy, 1992). Other studies that have utilised the DPBS to measure professional and clinical autonomy and their Cronbach's Alpha results are included in Table 6. Additionally, this study tested the DPBS in the ANP pilot phase for reliability with a Cronbach's Alpha of .931 and in the main study, Cronbach's Alpha .932.

Research Author	**Cronbach's Alpha**
Cajulis and Fitzpatrick (2007)	0.92
Bahadori and Fitzpatrick (2009)	0.79
Maylone et al. (2010)	0.95
Cotter (2013)	0.86

Table 6: DPBS Cronbach's Alpha

7.5.3 Dempster Practice Behavioural Scale

The DPBS is a 30-item instrument. Participants are asked to rate their response to each of the 30 items on a 5-point Likert (from 'not at all true' to 'extremely true') scale giving a possible range of scores from 30 to 150. The higher the score, the higher the level of autonomy in practise. ANP clinical autonomy is the total score achieved by a participant on the DPBS. Scores on this scale range from 30 (lowest levels of clinical autonomy) to the highest 150 (high levels of clinical autonomy). Furthermore, the DPBS was selected for assessing ANPs behaviours, actions and conduct in terms of their clinical autonomy and overt and covert impacts on their clinical autonomy (Dempster, 1990; Dempster 1994).

7.5.4 Instrument Developing and Testing

With regard to rigor, Dempster (1990) used experts in the field to complete a literature review of instrument development where the literature of autonomy was reviewed for this development. Furthermore, a grounded theory was also utilised with in-depth interviews of (n=28) subjects to elicit qualitative data associated with autonomous practice behaviours (Dempster, 1990; Dempster-Gonzalez, 2017). Four dimensions of readiness, empowerment, actualisation, and valuation related to autonomy in practice (Dempster, 1990; Dempster-Gonzalez, 2017). Reliability analysis evidenced a Cronbach's alpha (standardised item alpha) for the 30- item instrument of .95 with an overall inter-item correlation mean of .39. The corrected item total correlation range was .45 to .73 (Dempster, 2010).

7.5.5 Dempster Theoretical Subscales

Readiness for autonomy refers to elements of growth, development, competence, mastery and movement from one level to another (Cajulis and Fitzpatrick 2007; Bahadori and Fitzpatrick 2009; Maylone et al. 2011). Empowerment includes sanctions, legal status, legitimacy, and having rights and privileges (Cajulis and Fitzpatrick 2007; Bahadori and Fitzpatrick 2009; Maylone et al. 2011). Actualisation encompasses the exercise of autonomy and applies it in practice (Cajulis and Fitzpatrick 2007; Bahadori and Fitzpatrick 2009; Maylone et al. 2011). Valuation is expressed as having merit, worth, and usefulness, and without it, autonomy would not matter (Cajulis and Fitzpatrick 2007; Bahadori and Fitzpatrick 2009; Maylone et al. 2011). The DPBS has demonstrated strong psychometric properties in previous studies (Dempster, 1990). Cronbach's alpha was 0.95; the content validity index of the DPBS was reported to be the maximum of 1.00.

The total scores for the DPBS range from 30 to 150 with a higher score indicating a greater extent of autonomy. There are 25 items that were in a positive format and 5 items (8, 13, 17, 26, and 28) that were in a negative format that needed to be reversed during data analysis. The score for positive and negative statements are detailed below in Table 7.

	Not at all True	**Slightly True**	**Moderately True**	**Very True**	**Extremely True**
Positive Statements	1	2	3	4	5
Negative Statements	5	4	3	2	1

Table 7: DPBS Score for Positive & Negative Statements

A five-point Likert scale was used to explore the DPBS of the respondents and ranged from (Not at all True=1, Slightly True=2, Moderately True=3, Very True=4, and Extremely True=5) in the positive questions format. And (Not at all True=5, Slightly True=4, Moderately True=3, Very True=2, and Extremely True=1) in the negative questions format.

To obtain the range of scores in the DPBS for the four classes of perceptions (that is, Strongly Disagree, Disagree, Agree, and Strongly Agree perceptions) Runyon and Haber's (1991) procedure for assigning scores to classes was used presented below in Table 8.

Step 1. Find the difference between the highest and lowest score values contained in the original data. Add one (1) to obtain the total number of scores.
Step 2. Determine the number of classes required. Divide the total number of scores by the number of classes of score to obtain the number of scores in each class (i).
Step 3. Take the lowest score in the original data as a minimum value in the lowest class. Add (i – 1) to this minimum value to obtain the maximum score for the lowest class.
Step 4. The next highest class begins at the integer following the maximum score of the lowest class. Follow the same step as in Step 3 to obtain the maximum score for the second class.
Step 5. Follow these procedures for each successive higher class until all the scores are included in their appropriate classes.

Table 8: Runyon & Haber's Procedure

The outcome of the application of this procedure to the items contained in the scoring for DPBS is demonstrated as follows in Table 8.1

The sub scales (Readiness, Empowerment, Actualisation and Valuation) were ranked and interpreted by calculated means. Finally, the ANP clinical autonomy section of the questionnaire will be explained. Central tendency statistics were measured as Mean (M) and Standard Deviation (SD). These were used to describe clinical autonomy items DPBS, and ANPCAPS items were analysed using the following in Table 8.1. The DPBS tool is included in Appendix N.

Mean (M) and Standard Deviation (SD) to describe the Autonomy (Readiness 11 Questions, Empowerment 7 Questions, Actualisation 9 Questions, and Valuation 3 Questions).
Pearson's correlation (r) to determine the relationship between Autonomy (Readiness 11 Questions, Empowerment 7 Questions, Actualisation 9 Questions, and Valuation 3 Questions), and the ANP's age, years of experience, and education level.
Mean (M) and Standard Deviation (SD) to describe the Overall Autonomy (Readiness, Empowerment, Actualisation, and Valuation).
Pearson's correlation (r) to determine the relationship between Overall Autonomy (Readiness, Empowerment, Actualisation, and Valuation), and the ANP's age, years of experience, and education level.

Table 8.1: Central Tendency Statistics

7.5.6 Data analysis

The quantitative analysis of data was performed using the Statistical Package for Social Sciences (SPSS) Version 25 for Windows. Descriptive statistics, including percentages, frequencies, means and standard deviation were used to analyse the personal characteristics of the respondents; namely: gender, age, registered years as ANP, education, current position, current employment area, geographical area and main supervisor. Other descriptive and inferential statistics that were used to analyse the data in this study are described below.

Bivariate Correlation is a measure of association that allows the determination of the strength and direction of an association. Pearson's Product Moment Coefficient of Correlation, symbolised as r, and is used in this study. The correlation coefficient, r is produced as a decimal fraction, somewhere between 0.00 and – 1.00 or + 1.00. The closer the coefficient is to + 1.00 or – 1.00, the stronger is the relationship (Fraenkel, Wallen and Hyun, 1993; Fraenkel, Wallen and Hyun, 2012). If the sign is positive, the relationship is positive, indicating that a high score on one variable tends to go with a high score on the other variable. If the sign is negative, the relationship is negative, indicating that a high score on one variable tends to go with a low score on the other variable. Coefficients near to, or at 0.00, indicate that no statistical relationship exists between the variables involved (Johnson and Morgan, 2016).

In this study the *p* value was the cut-off point to interpret whether there is a difference or not between the studied sample and the total population (T-Test and ANOVA) or amongst the sample categories (for example, Chi Square). The hypothesis was to find the associations (Correlations) between 2 variables (x,y). Based on the normality test, my data was normally distributed. Based on the association (Correlation) and normality tests (Normal Distribution) the Pearson Correlation Coefficient Test (*r*) was considered the right statistical measure that presented the findings of this study.

The interpretation of (*r*) is based on 3 important points:

1) Direction: either Positive (if Variable x increases then Variable y increase, and if Variable x decreases then Variable y decreases) or Negative (if Variable x increases then Variable y decreases and vice versa).
2) Strength based on the table 8.2.
3) Significancy, was based on the yielded (*p*) Value.

The following figure (Table 8.2) based on the work of Borg and Gall (1983), uses Pearson's 'r' to predict the strength of the statistical relationship between variables (see Table 8.2). Additionally, Table 8.3 demonstrates the ANPCAPS analysis testing.

Pearson's r		
Positive relation	Negative relation	Strength of relationship
0.91 to 1.00	-0.91 to -1.00	Very strong
0.71 to 0.90	-0.71 to -0.90	Strong
0.41 to 0.70	-0.41 to -0.70	Moderately strong
0.21 to 0.40	-0.21 to -0.40	Not very strong/low
0.01 to 0.20	-0.01 to -0.20	Weak/can be neglected

Table 8.2: Pearson's 'r' Strength of Relationship Interpretation

Mean (M) and Standard Deviation (SD) to describe the Clinical Autonomy Pearson's correlation (r) to determine the relationship between Clinical Autonomy, and the ANP's age, years of experience, and Highest Education Level.

Table 8.3: ANPCAPS Analysis Testing

All of the ANPs found the survey easy to complete. Other factors considered were a simple correlation between the two scales (for concurrent validity). As the DPBS scales' owner and the student had agreed, no changes would be made to the DPBS. Following the pilot testing, reliability statistics were utilised to test for mean, variance, SD, and Cronbach's alpha (Field, 2018). The table included below show the results from the SPSS testing in the pilot phase. Firstly, the DPBS was tested for scale statistics. DPBS scale statistics included the mean, variance, SD, and number of items as shown in Table 9.

Mean	**Variance**	**SD**	**No of items**
135.00	133.600	11.559	30

Table 9: Pilot Results for Scale Statistics DPBS

Secondly, the ANPCAPS was tested for scale statistics. ANPCAPS scale statistics had the mean, variance, SD, and number of items as shown in Table 9.1.

Mean	Variance	SD	No of items
62.50	18.933	4.351	17

Table 9.1: Pilot Results Scale Statistics ANPCAPS

Additionally, scale statistics assessed for a combined mean, variance, and SD of both the DPBS and the ANPCAPS, as shown in Table 9.2.

Mean	Variance	SD	No of items
197.50	155.200	12.458	47

Table 9.2: Pilot Results Scale Statistics DPBS &ANPCAPS

Furthermore, all items, including the demographics section, DPBS and the ANPCAPS were tested for reliability statistics of the complete survey shown below in Table 9.3.

Mean	Variance	SD	No of items
221.75	168.333	12.974	57

Table 9.3: Reliability Statistics of Total Survey

The final reliability testing was Cronbach's alpha. The Cronbach's alpha for the DPBS, ANPCAPS, both combined DPBS and the ANPCAPs and finally, all survey components are included in the Cronbach's alpha shown in Table 9.4 below.

Cronbach's Alpha for Pilot Study	No of items
.931	DPBS no of items = 30
.786	ANPCAPS no of items = 17
.902	Combined DPBA & ANPCAPS = 47

Table 9.4: Cronbach's Alpha Pilot Testing Results.

The deductive reliability test was utilised as an alternative to exploratory factor analysis as discussed earlier, to strengthen the validity and content and achieve a satisfactory Cronbach's Alpha.

Finally, considering why a multi matrix was not conducted is in the justification of the descriptive and inferential analyses carried out in the content validity and pilot testing, which has been significant for the rigour of this study.

7.5.7 Pilot Completion

In relation to the design of this study and according to Polit and Beck (2016) the pilot study was useful in identifying any unforeseen problems as part of the study, design and planning stage. The pilot study was conducted with (n=16) ANPs all in differing specialities and who had been in practice as an ANP for between 5-15 years. The participants were recruited from the NMPDU who were then given the researchers details. Participants were emailed the study link by the researcher and the purpose of the pilot was explained to the ANPs. They were asked to complete the link to the survey and initial consent form and plain statement. Additionally, the participants were asked to consider the readability, clarity of the questions, feasibility of using the link and completion of the survey. Please see Appendix U which explains the list of questions asked.

The ANPs reported no specific changes needed to the survey. Based on the information gained from the pilot study, all items of the questionnaire remained. Additionally, in the ANPCAPS development a Cronbach's alpha had also been included which perhaps influenced minimum changes to the survey. Slight changes were advised in the demographic and registration information. For example, to include NCNM prior to NMBI registration as an ANP. The complete National survey phase will be discussed in the following section.

The National Survey, phase 4 of the study, included the final survey development. At all stages the DCU senior technician and supervisors were advised on the phases of the study. Weekly

communication with DCU supervisors and NMPDU was ongoing throughout the National survey being live. The National survey and data were included on a live link accessible to the DCU student and her supervisors. The NMPDU circulated the link and information about the study including the plain statement. This included a National wide participation of all ANP and ANP candidates in Ireland. Additionally, reminder letters were sent from the NMPDU's at 2 and 4 weeks with follow-up letters. At this stage it was agreed not to send any further reminder letters as the ANPs were in the middle of the COVID-19 pandemic and it was the opinion of the DCU student and her supervisors that this was satisfactory. Please see Figure 7 which outlines the national survey phases and timelines.

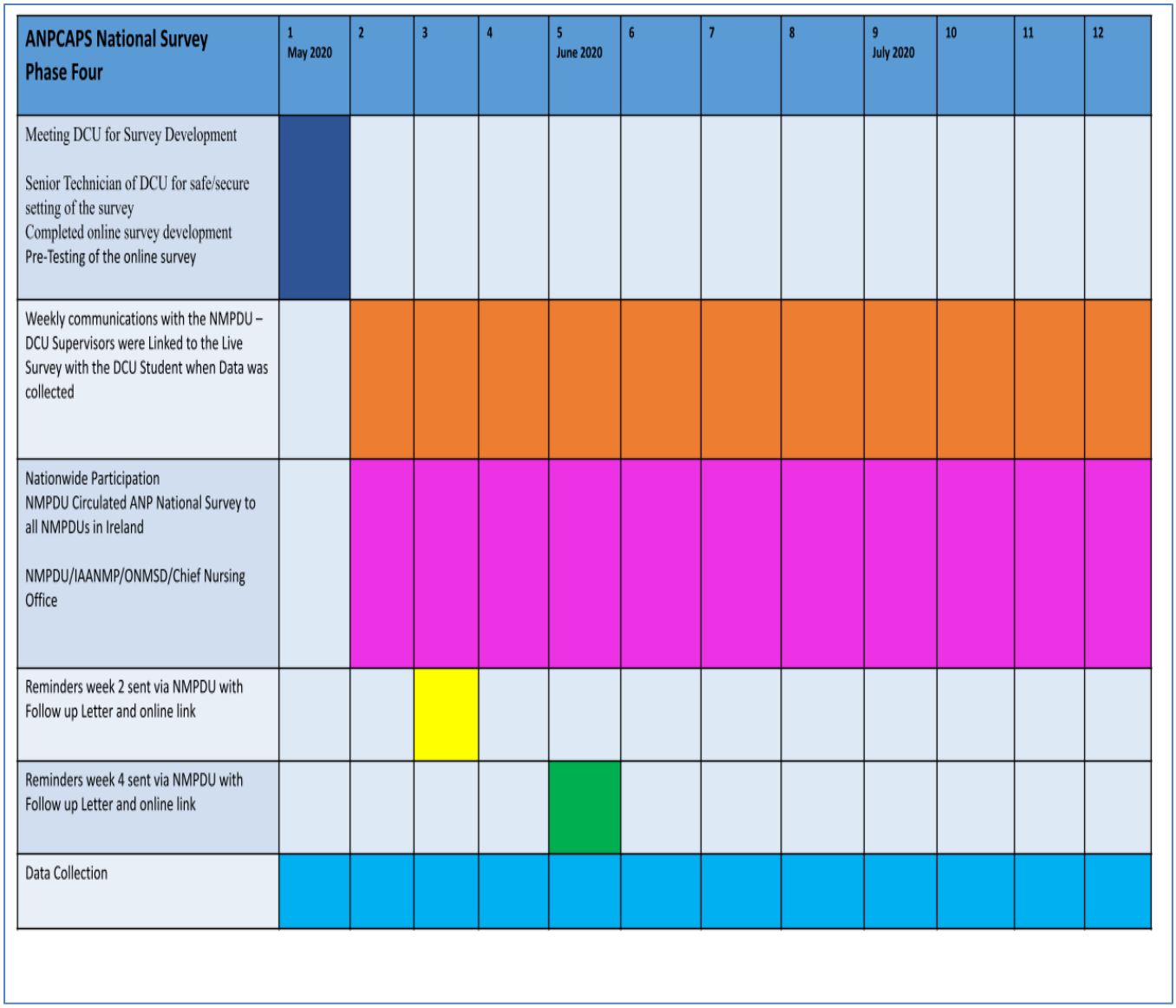

Figure 7: Phase Four ANPCAPS National Survey Development

7.6 Summary

This study aimed to investigate the perceptions of ANP clinical autonomy in Ireland by the practitioners themselves. The specific aims and objectives were to measure ANP clinical autonomy concerning behaviours and overt and covert behaviours of ANPs in Ireland regarding their clinical autonomy; and to measure ANP clinical autonomy levels and ascertain if a relationship existed between these concepts, demographics of age, experience, gender, and

education. Additionally, intrinsic clinical autonomy and levels of ANPs between specialist groups were correlated. And finally, the qualitative open comments from ANPs regarding their ANP clinical autonomy.

The chapter has explained the design and methodological issues in conducting the study. The objectives and specific hypotheses have been described, tested, and are reported in the following chapter. The rationale for the sampling and instrument selection and development was provided. The rigour of the instruments used were justified in the measurements used to investigate ANP clinical autonomy. Data analysis processes were discussed, and descriptive and inferential statistics were explained. The following chapter eight will present the findings and analysis of data from the: ‘Title: An Exploration of the Levels of Clinical Autonomy among Advanced Nurse Practitioners in Ireland.

Chapter Eight - National Survey Findings

8.1 Introduction

This chapter details the study's findings, following the objectives and hypothesis outlined in chapter one. These findings have been obtained through the application of the methods described in chapters six and seven. The findings reported in this chapter are followed by discussions that reference the literature reviewed in chapters two, three and four. This research aimed to explore ANP clinical Autonomy in Ireland and establish relationships between ANP clinical autonomy and demographic variables - age, experience, education and gender. A further objective of the study was to develop a scale to measure ANP clinical autonomy.

Firstly, the descriptive statistics of the study sample are presented. Then the objective of measuring the overt and covert behaviours of ANP clinical autonomy utilising the DPBS and specifically ANP clinical autonomy. Furthermore, the ANPs were grouped into further hypotheses presented in this chapter. Finally, the open-ended comments will be reported following Braun and Clarke's (2006) thematic analysis.

8.2 Quantitative Findings

8.2.1 Demographic Data of the respondents

Respondents' demographic data are discussed in this section as follows: respondent's gender, age, years registered/accredited as an ANP with NCNM, academic degree, current ANP position, current employment area, current employment health region, primary supervisor (Physician, ANP or both), and supervisors' gender. A total of (n=148) completed surveys were analysed.

8.2.1.1 ANP Gender, Age Group, Experience and Academic Degree

Gender	Mean	SD	Frequency	Percentage
Male	1.82	0.388	27	18.2
Female			121	81.8
Age Group	Mean	SD	Frequency	Percentage
<31 years	2.94	0.827	6	4.1
32-40 years			34	23.0
41-50 years			74	50.0
51-60 years			31	20.9
>60 years			3	2.0
ANP Experience	Mean	SD	Frequency	Percentage
0-1 year	2.70	1.542	52	35.1
2 years			20	13.5
3-4 years			24	16.2
5-10 years			26	17.6
11-20 years			25	16.9
>20 years			1	0.7
ANP Academic Degree	Mean	SD	Frequency	Percentage
Master in Nursing Clinical Practice	2.16	1.076	27	18.2
Master in Nursing Advanced Clinical Practice			96	64.9
Research Master's degree			14	9.5
Doctor of Philosophy (PhD)			3	2.0
Doctor of Nursing Practice (DNP)			1	0.7
Other Qualifications			7	4.7

Table 10. ANP Gender, Age, Experience & Academic Qualification

Source	Df	Mean	F	P
Between group	65	0.824	1.440	0.059
Within group	82	0.572		
Total	147			
Source	Df	Mean	F	P
Between group	65	1.213	1.091	0.353
Within group	82	1.113		
Total	147			

Table 10.1. ANOVA, DPBS &ANPCAPS Intrinsic ANP Clinical Autonomy by age & highest academic degree obtained.

8.2.1.2 Gender, DPBS and ANP Intrinsic Clinical Autonomy

The following table 10.2 utilised at-test to determine differences between ANP clinical autonomy and gender.

Gender	Mean	SD	t-test	
			T	P
Male	3.78	0.373	.434	0.665
Female	3.74	0.425		

Table 10.2. T-Test DPBS, ANPCAPS, Gender & Intrinsic Clinical Autonomy

8.2.1.3 ANP Geographical Locations

Table 10.3 shows the frequency and percentage of the respondents according to their current employed area with a standard deviation (SD=0.957) and total Mean of (2.05). There were two sub-groups of respondents based on the currently employed area. ANPs were employed in both urban and rural Ireland. In Urban Ireland, this accounted for 58.8%, while rural Ireland accounted for 41.2%. Please see Appendix N which details the geographical map.

ANP Area	Mean	SD	Frequency	Percentage
Rural Ireland	2.05	0.957	61	41.2
Urban Ireland			87	58.8
Health Region	Mean	SD	Frequency	Percentage
Area A	1.59	0.494	27	18.8
Area B			27	18.8
Area C			31	20.9
Area D			16	10.8
Area E			13	8.8
Area F			34	23.0

Table 10.3. ANP Geographical Area & Health Region ANPs Currently Employed.

8.2.1.4 ANP Supervisors

ANP Supervisors	Mean	SD	Frequency	Percentage
Physician	1.19	0.564	132	89.2
ANP			4	2.7
Both			12	8.1
ANP Supervisors Gender	Mean	SD	Frequency	Percentage
Male	1.89	0.907	70	47.3
Female			25	16.9
Both			53	35.8
Employment Setting	Mean	SD	Frequency	Percentage
Public voluntary hospital	3.43	1.811	30	20.3
HSE hospital			104	70.3
Primary Care Non HSE			2	1.4
Private Hospital			1	0.7
Other Settings			11	7.4

Table 10.4. ANP Supervisors Position, Gender & Hospital Setting

8.2.2 Demographics Summary

To summarise, the majority of participants in the study were female (81.8%). The mean age of the ANPs was between the years of 41-50 years (SD=0,827). The highest academic degree was ANPs that held a PhD (2%), then 0.7% with a DNP and 93.3% had a Master's degree. To register in Ireland as an ANP requires a minimum of a Master's degree. Concerning the level of experience as an ANP, the average mean years of experience was between 3-10 years registered as an ANP, which was 2.70 with a SD of 1.542.

8.3 Descriptive Statistics of DPBS and ANPCAPS

One of the objectives of this study was to measure ANP clinical autonomy. The level of ANP clinical autonomy was calculated as participants' total score of the DPBS and the ANPCAPS. The possible scores of the DPBS and the ANPCAPS have been explained in Chapter Five. The reliability of the DPBS and the ANPCAPS were also assessed in this study. The instruments demonstrated good reliability with Cronbach's alpha of DPBS ANPCAPS and collectively the DPBS and the ANPCAPS.

8.3.1 Dempster Practice Behavioural Scale Results

This section will present the DPBS statements concerning the Means, SDs and Ranks. The readiness statements, empowerment statements, actualisation statements and valuation statements will also be presented.

8.3.1.1 Readiness Statement Results

Table 11 shows the means, SD, and ranks of the respondents according to their Readiness DPBS Statements.

Readiness Statements		Mean	SD	Rank
Q7	In my Practice I am valued for my independent actions.	4.38	0.965	1st
Q2	In my Practice I have developed the image of myself as an independent professional.	4.35	0.522	2nd
Q27	In my Practice I have the respect of those in other disciplines.	4.35	1.027	3rd
Q11	In my Practice I have been professionally socialised to take independent action.	4.14	0.921	4th
Q6	In my Practice I take control over my environment and situations I confront.	4.09	0.755	5th
Q12	In my Practice I function with the authority to do what I know should be done.	4.06	0.836	6th
Q22	In my Practice I have the power to influence decisions and actions of others.	4.05	0.948	7th
Q4	In my Practice I self-determine my role and activities.	3.99	0.522	8th
Q29	In my Practice I establish the parameters and limits of my practice activities.	3.99	0.981	9th
Q21	In my Practice I possess ownership of my practice; that is, my role belongs to me.	3.89	1.005	10th
Q20	In my Practice I make my own decisions related to what I do.	3.84	0.870	11th
Total		4.10	0.981	Very True

Table 11: DPBS Readiness Scores

8.3.1.2 Empowerment Statements Results

Table 11.1 shows all of the means, standard deviations (SD), and ranks of the respondents according to their **Empowerment DPBS Statements**.

Empowerment statements		Mean	SD	Rank
Q28	In my Practice I cannot optimally function because I do not have legal status.	4.25	1.029	1st
Q17	In my Practice I am restrained in what I can do because I am powerless.	4.06	1.202	2nd
Q24	In my Practice I am provided with a legal basis for independent functioning.	4.05	0.921	3rd
Q13	In my Practice I have too many routine tasks to exercise independent action.	3.79	1.150	4th
Q15	In my Practice I have the rights and privileges I deserve.	3.54	1.121	5th
Q26	In my Practice I have my activities and actions programmed by others.	3.37	1.197	6th
Q8	In my Practice I am constrained by bureaucratic limitations.	2.81	1.290	7th
Total		3.70	1.130	Very True

Table 11.1. DPBS Empowerment Means, SDs, Scores & Ranks.

8.3.1.3 Actualisation Statements Results

Table 11.2 shows the means, standard deviations (SD), and ranks of the respondents according to their Actualisation DPBS Statements.

Actualisation statements		Mean	SD	Rank
Q1	In my Practice I take responsibility and am accountable for my actions.	4.72	.522	1st
Q3	In my Practice I base my actions on the full scope of my knowledge and ability.	4.72	.522	1st
Q30	In my Practice I accept the consequences for the choices I make.	4.70	.613	3rd
Q9	In my Practice I provide quality services through my actions.	4.64	.585	4th
Q14	In my Practice I have a sense of professionalism.	4.60	.678	5th
Q18	In my Practice I collaborate with others outside my field when I feel there is a need.	4.60	.592	5th
Q10	In my Practice I am confident in my abilities to perform my role independently.	4.43	.720	7th
Q16	In my Practice I have the professional experience needed for independent action.	4.37	.776	8th
Q25	In my Practice I demonstrate mastery of skills essential for freedom of action.	4.16	.822	9th
TOTAL		4.55	0.648	Extremely True

Table 11.2. DPBS Actualisation Means, SDs, Scores and Ranks.

8.3.1.4 Valuation Statements Results

Table 11.3 shows the means, standard deviations (SD), and ranks of the respondents according to their **Valuation DPBS Statements.**

Valuation statements		Mean	SD	Rank
Q5	In my Practice I derive satisfaction from what I do.	4.51	0.769	1st
Q23	In my Practice I have a sense of self-achievement.	4.34	0.821	2nd
Q19	In my Practice I derive feelings of self-respect and esteem from what I do.	4.27	0.862	3rd
Total		4.37	0.817	Extremely True

Table 11.3. DPBS Valuation Means, SD, Scores & Ranks

8.3.1.5 Summary of overall DPBS Statements

Table 11.4 shows the means, standard deviations (SD) and ranks of the respondents according to their **All DPBS Statements**. Thirty questions were asked to determine the **Overall DPBS**. With a standard deviation (SD=0.817) and a total Mean of 4.37 that is located first in the five Likert Scale as 'Extremely True' perception (between 4.21 – 5.00). The scoring system for studies that have not included a ranking order is included in Appendix S. The following section will present the ANPCAPS Mean, SD, and Rank.

All DPBS Statements: (Readiness, Empowerment, Actualisation, and Valuation)	Mean	SD	Rank
Total	4.21	0.851	Extremely True

Table 11.4. All DPBS Statements

8.4 ANPCAPS Results

This section will present the statement responses regarding the Mean, SD, Score and Rank for the ANPCAPS as shown in **Table 12** below.

ANPCAPS	**Mean**	**SD**	**Rank**
Q7. In my practice I regularly make a treatment plan for patients.	3.75	0.546	1st
Q9. In my practice I adopt high levels of clinical decision-making skills.	3.61	0.634	2nd
Q3. In my practice I regularly complete full episodes of care for patients without a physician.	3.49	0.821	3rd
Q5. In my practice I regularly make an independent diagnosis for patients.	3.49	0.751	4th
Q12. In my practice I practice at full ANP clinical autonomy which enables confidence in my clinical decision-making skills	3.48	0.622	5th
Q4. In my practice I refer to other specialities without the need of a physician's consultation.	3.37	0.867	6th
Q11. In my practice I adopt high levels of clinical leadership which influences and guides other members of the organisation.	3.36	0.66	7th
Q2. In my practice I regularly discharge patients without a physician's consultation.	3.25	0.925	8th
Q1. In my practice I practice to the full capacity of my registration as an ANP.	3.18	0.841	9th
Q14. In my practice I can prescribe all medications I need for patients if required.	2.92	1.06	10th
Q13. In my practice I am involved in organisational management decisions about ANP.	2.66	0.967	11th
Q16. In my practice I regularly take time away from the clinical area to undertake professional development.	2.57	0.89	12th
Q17. In my practice I am constrained in my ANP clinical autonomy practice due to other health professionals.	2.47	1.072	13th
Q8. In my practice I can request all diagnostic tests I need for patients as part of their treatment plan if required.	2.32	1.077	14th
Q6. In my practice I am constrained in my clinical autonomy practice due to my organisation.	2.30	1.007	15th
Q15. In my practice I regularly take time away from the clinical area to undertake research.	1.95	0.928	16th
Q10. In my practice my gender impacts on me positively at the level of clinical autonomy with which I am trusted.	1.90	0.953	17th
Total	2.95	0.860	Agree

Table 12. ANPCAPS Mean, SD, Score & Rank

8.5 Relationship between Gender, DPBS and ANPCAPS

8.5.1 Relationship between Gender and DPBS

Table 13 details the relationship between Gender & All DPBS

Independent Variable	Pearson Correlation R
Readiness	0.023
Empowerment	0.002
Actualisation	-0.036
Valuation	0.049
All DPBS (Readiness, Empowerment, Actualisation, and Valuation)	0.007

* Correlation is significant at the 0.05 level (2-tailed)

Table 13. Relationship Between Gender & All DPBS

8.5.2 Relationship between Gender and ANPCAPS

Independent Variable	**Pearson Correlation R**	**Level of significance P**
ANPCAPS	-0.124	0.134

* Correlation is significant at the 0.05 level (2-tailed)

Table 13.1. Relationship between Gender and ANPCAPS

8.5.3 Relationship between Gender, DPBS and ANPCAPS

Independent Variable	**Pearson Correlation r**	**Level of significance P**
DPBS and ANPCAPS	-0.036	0.665

Table 13.2. Relationship between Gender, DPBS & ANPCAPS.

8.6 Scatter Plot Clinical Autonomy, Gender and ANP Clinical Autonomy

The scatter plot, Figure 8, indicates DPBS scores and gender; and Figure 9 indicates ANP clinical autonomy scores and gender. The scatterplot shows there is no prediction line positively related and both genders answered in the same manner regarding their ANP clinical autonomy. Please see Appendix T which presents all scatterplots tested for the DPBS.

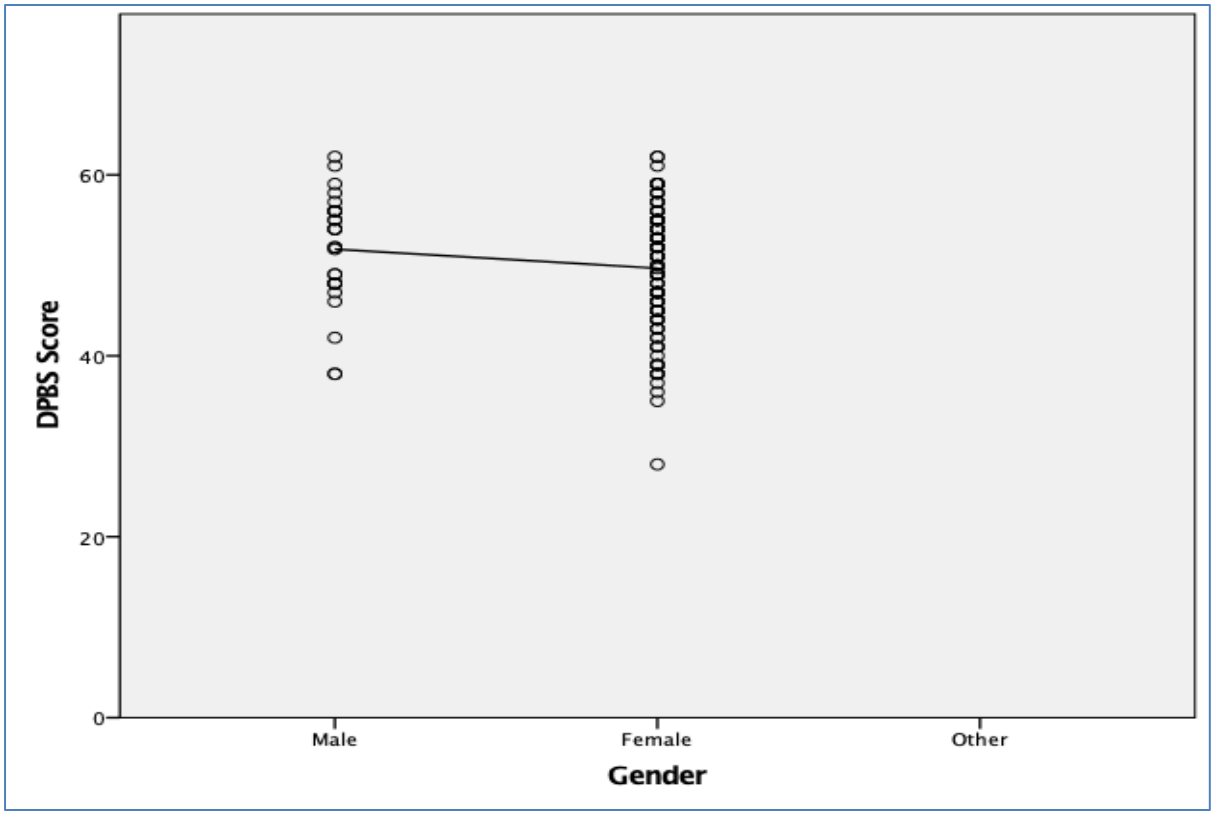

Figure 8: Scatter Plot DPBS & Gender.

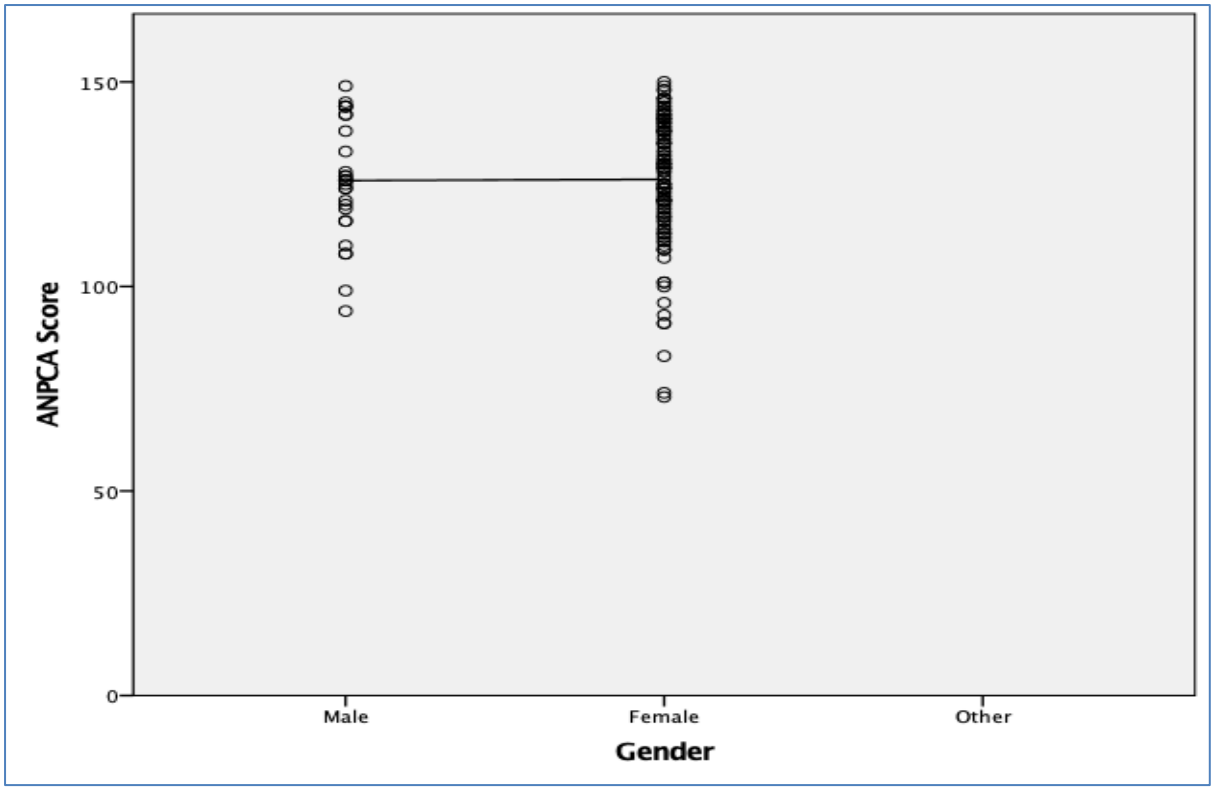

Figure 9: Scatter Plot ANPCAPS & Gender

8.6.1 Relationship of Age & DPBS Levels of Intrinsic Clinical Autonomy

Table 14 reports two variables are statistically insignificant and positively related. Thus, no relationship between Age and Readiness, Empowerment, Actualisation, Valuation and overall DPBS among respondents, failed to be rejected.

Independent Variable	Pearson Correlation r	Level of significance P
Readiness	0.127	0.124
Empowerment	0.029	0.725
Actualisation	0.148	0.072
Valuation	0.139	0.092
All DPBS (Readiness, Empowerment, Actualisation, and Valuation)	0.129	0.118

* Correlation is significant at the 0.05 level (2-tailed)
Table 14: Relationship of Age & All DPBS

Table 14.1 Reveals the 'r = 0.038, at p <0.645', according to Borg and Gall (1983) criteria for the interpretation of Pearson's r (see table 14), a weak relationship that can be neglected exists

between the two variables, namely Age and ANPCAPS. Thus, no relationship between Age and ANPCAPS among respondents, failed to be rejected

Independent Variable	Pearson Correlation r	Level of significance P
ANPCAPS	0.038	0.645

* Correlation is significant at the 0.05 level (2-tailed)
Table 14.1. Relationship of Age and ANPCAPS

Table 14.2 reveals the 'r = 0.114, at p <0.167', according to Borg and Gall's (1983) criteria for the interpretation of Pearson's r (see table 14), a weak relationship that can be neglected exists between the two variables, namely Age and 'DPBS and ANPCAPS'.

Independent Variable	Pearson Correlation R	Level of significance P
DPBS and ANPCAPS	0.114	0.167

Table 14.2. Relationship between Age, DPBS & ANPCAPS.

Table 15 There is no significant difference between the highest academic degree obtained and the levels of all DPBS.

Independent Variable	Pearson Correlation r	Level of significance P
Readiness	0.052	0.529
Empowerment	0.069	0.404
Actualisation	0.156	0.059
Valuation	0.055	0.503
All DPBS (Readiness, Empowerment, Actualisation, and Valuation)	0.099	0.229

* Correlation is significant at the 0.05 level (2-tailed)
Table 15: Relationship between Highest Academic Degree Obtained & All DPBS

Table 15.1 reveals no relationship between Highest Academic Degree Obtained and ANPCAPS among respondents, failed to be rejected.

Independent Variable	Pearson Correlation R	Level of significance p
ANPCAPS	-0.063	0.447

* Correlation is significant at the 0.05 level (2-tailed)
Table 15.1. Relationship between Highest Academic Degree Obtained & ANPCAPS.

Table 15.2 Reveals the 'r = -0.057, at p <0.492', according to Borg and Gall (1983) criteria for the interpretation of Pearson's r 9 (table 14), a weak relationship that can be neglected exists between the two variables, namely Highest Academic Degree Obtained and 'DPBS and ANPCAPS'. This finding also indicates that the two variables are statistically insignificant and positively related. Thus, there is no relationship between Highest Academic Degree Obtained and 'DPBS and ANPCAPS', among respondents failed to be rejected. In Ireland, a Master's degree level is the minimum requirement to practice. Both ANPs with a Master's Degree, Doctorate or PhD were scored similar levels of intrinsic ANP clinical autonomy levels.

Independent Variable	Pearson Correlation R	Level of significance p
DPBS and ANPCAPS	0.057	0.492

* Correlation is significant at the 0.05 level (2-tailed)
Table 15.2: Relationship between Highest Academic Degree Obtained, DPBS & ANPCAPS

8.6.2 Relationship between Years of Experience & ANP Clinical Autonomy

Table 16 below shows the relationship between years of experience and all DPBS. The *'r'* =0.240 at 'p' <0.003. Thus, there is a significant relationship between respondents' years of experience and over DPBS levels of intrinsic clinical autonomy.

Independent Variable	Pearson Correlation r	Level of significance P
Readiness	0.256**	0.002
Empowerment	0.074	0.373
Actualisation	0.239**	0.003
Valuation	0.230**	0.005
All DPBS (Readiness, Empowerment, Actualisation, and Valuation)	0.240**	0.003

Table 16: Relationship between Yrs. of Experience, Readiness, Empowerment, Actualisation & Valuation.

Table 16.1 reveals there is a significant relationship between respondent's Years of Experience and ANPCAPs levels of intrinsic clinical autonomy.

Independent Variable	Pearson Correlation r	Level of significance P
ANPCAPs	0.305**	0.000

Table 16.1: Relationship between respondent's Yrs. of Experience & ANPCAPS levels of intrinsic clinical autonomy

8.6.3 Scatter Plot to Determine ANP Experience & DPBS

Figures 10 and 11 are presented in a scatter plot including the length of experience and ANP clinical autonomy scores. The scatter plot looked for a correlation between the years of experience and intrinsic levels of ANP clinical autonomy dependent on experience. A positive correlation was found, which suggests that years of experience and ANP (intrinsic) clinical autonomy are increased with years of experience. All scatter plots undertaken in the study are included in Appendix T.

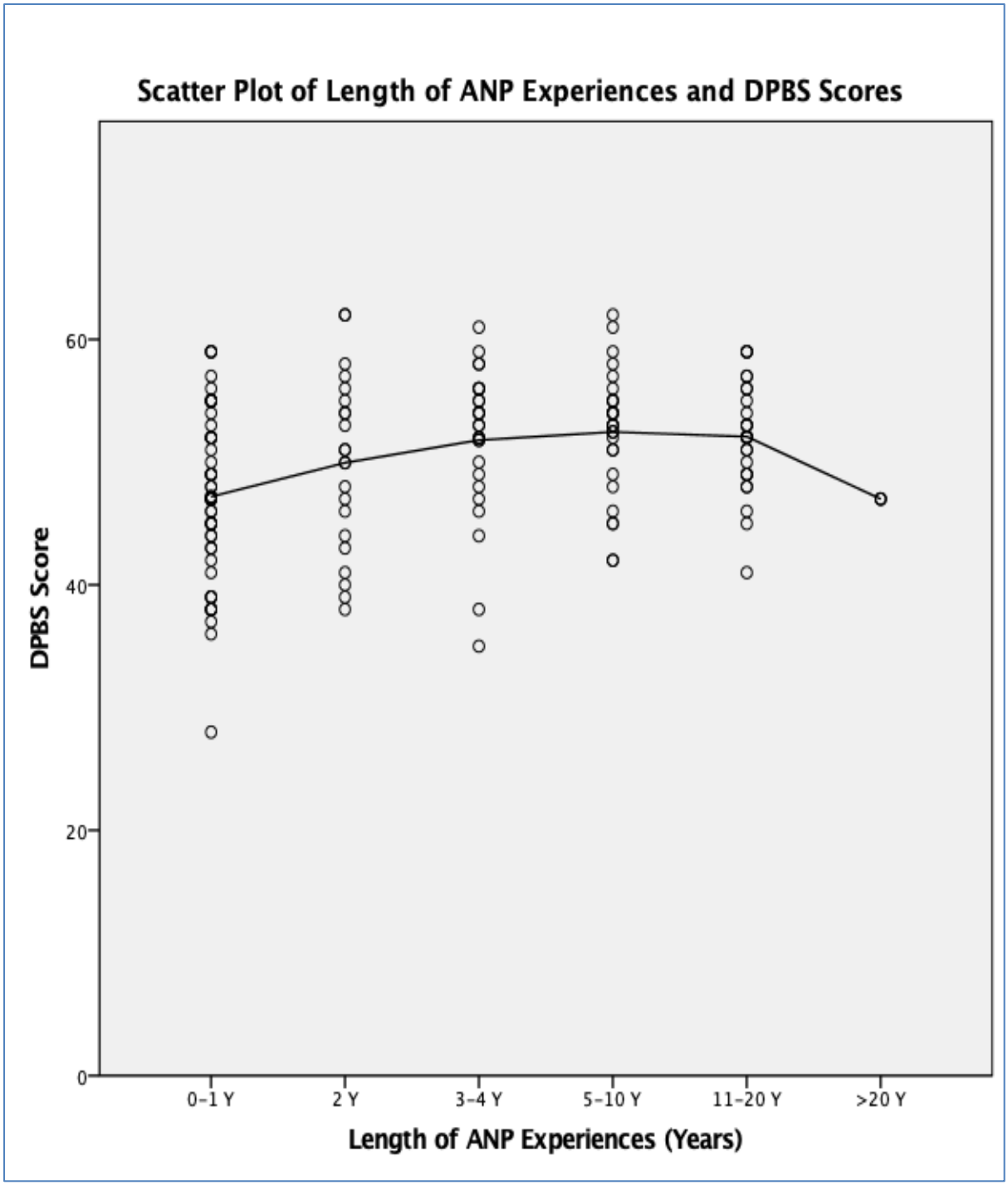

Figure 10: Scatter Plot Length of ANP Experience & DPBS

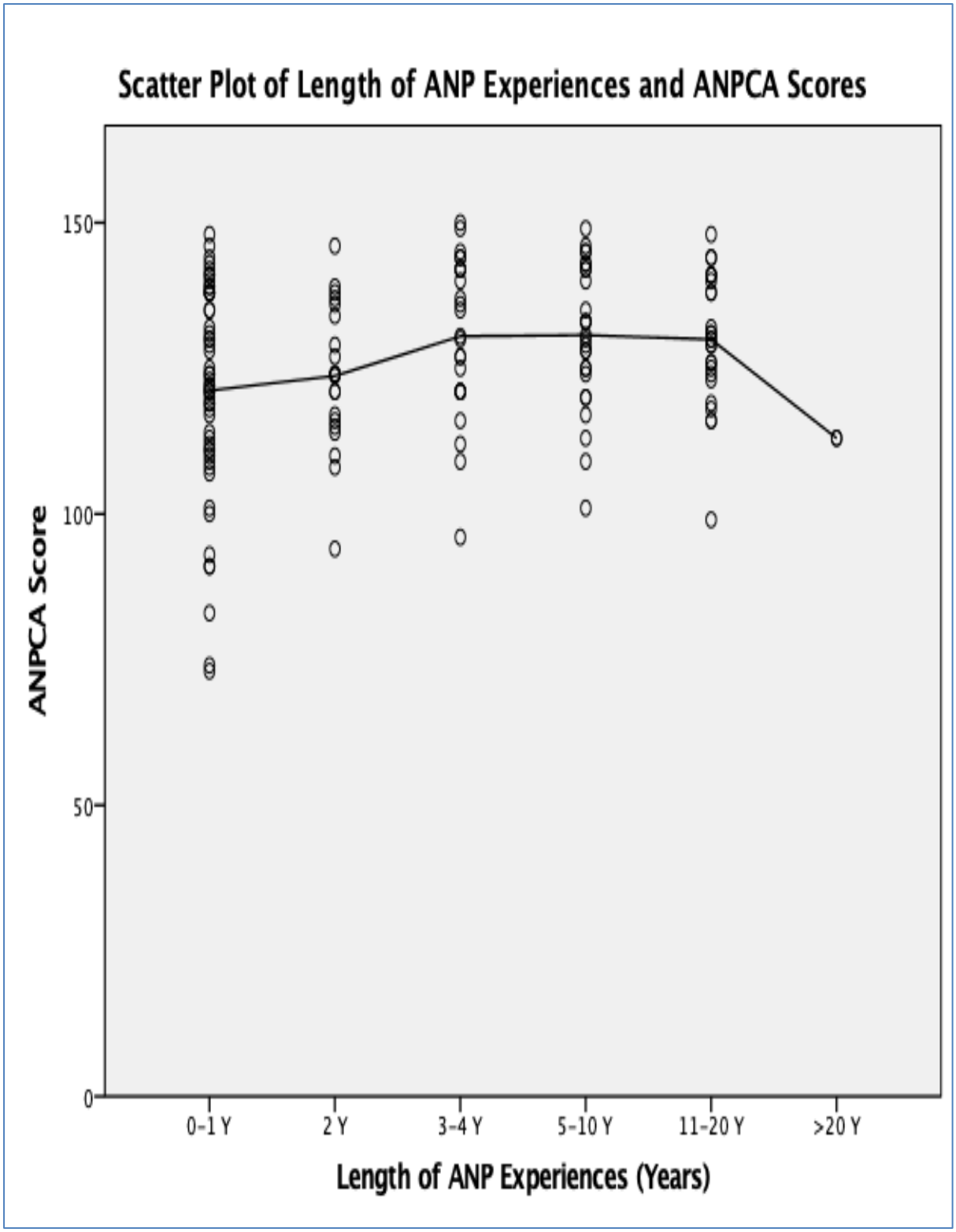

Figure 11: Scatter Plot Length of ANP Experience & ANPCAPS

Table 17 demonstrates the relationship between 'There is a significant relationship between respondent's Years of Experience and 'DPBS and ANPCAPs' levels of intrinsic clinical autonomy perceptions. The following figures demonstrate the histogram figures based on the n=148 ANPs. This represents a good correlation of the DPBS and the ANPCAPS as it is evenly distributed (please see the Pearson's scoring in chapter seven).

Independent Variable	**Pearson Correlation r**	**Level of significance P**
DPBS and ANPCAPs	0.292**	0.000

Table 17: Relationship between respondent's Yrs. of Experience, DPBS & ANPCAPS levels of intrinsic clinical autonomy.

Figures 12 and 13 demonstrate the Histogram for Distribution of DPBS and ANPCA Scores.

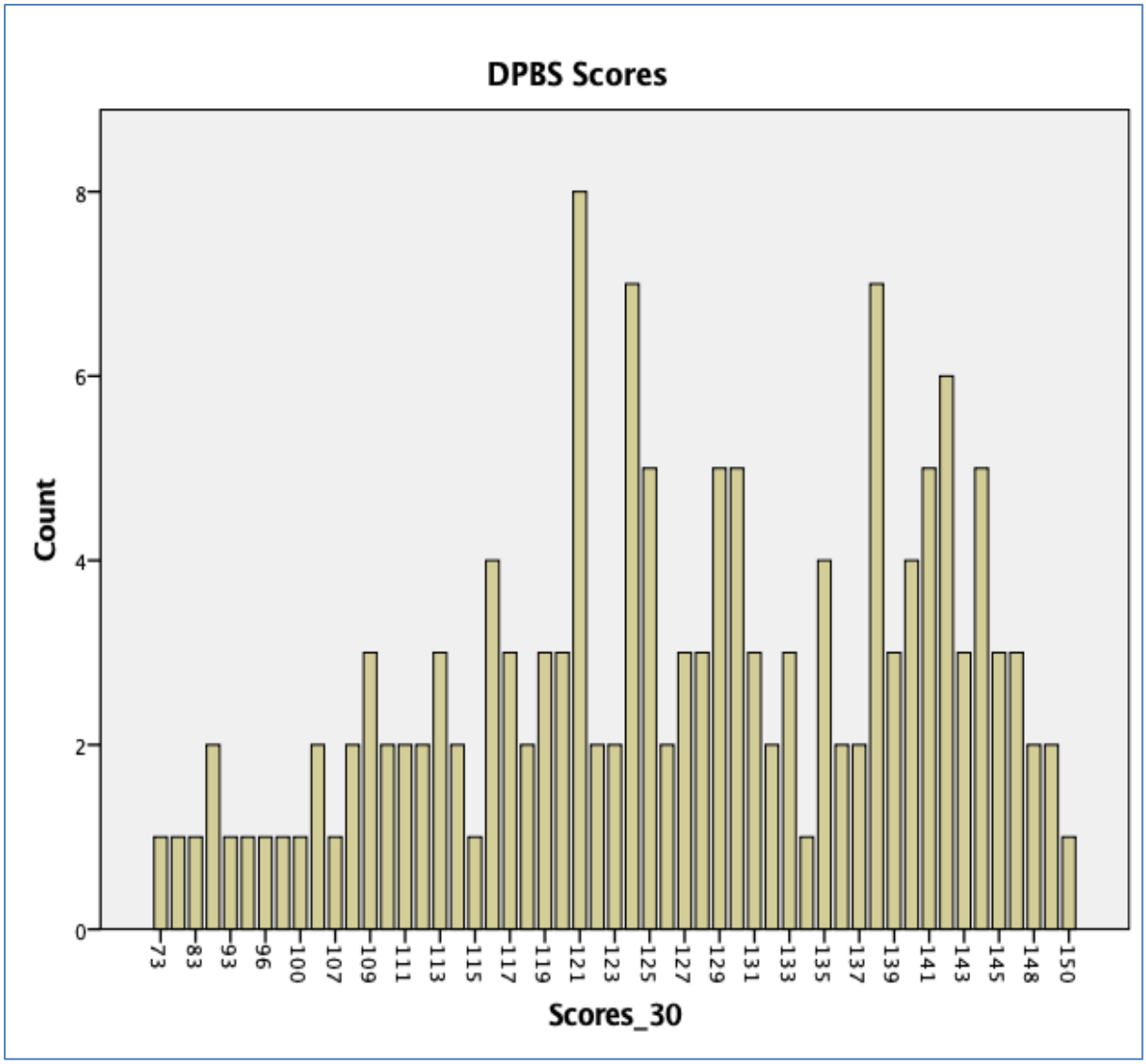

Figure 12: Histogram for Distribution of DPBS Scores

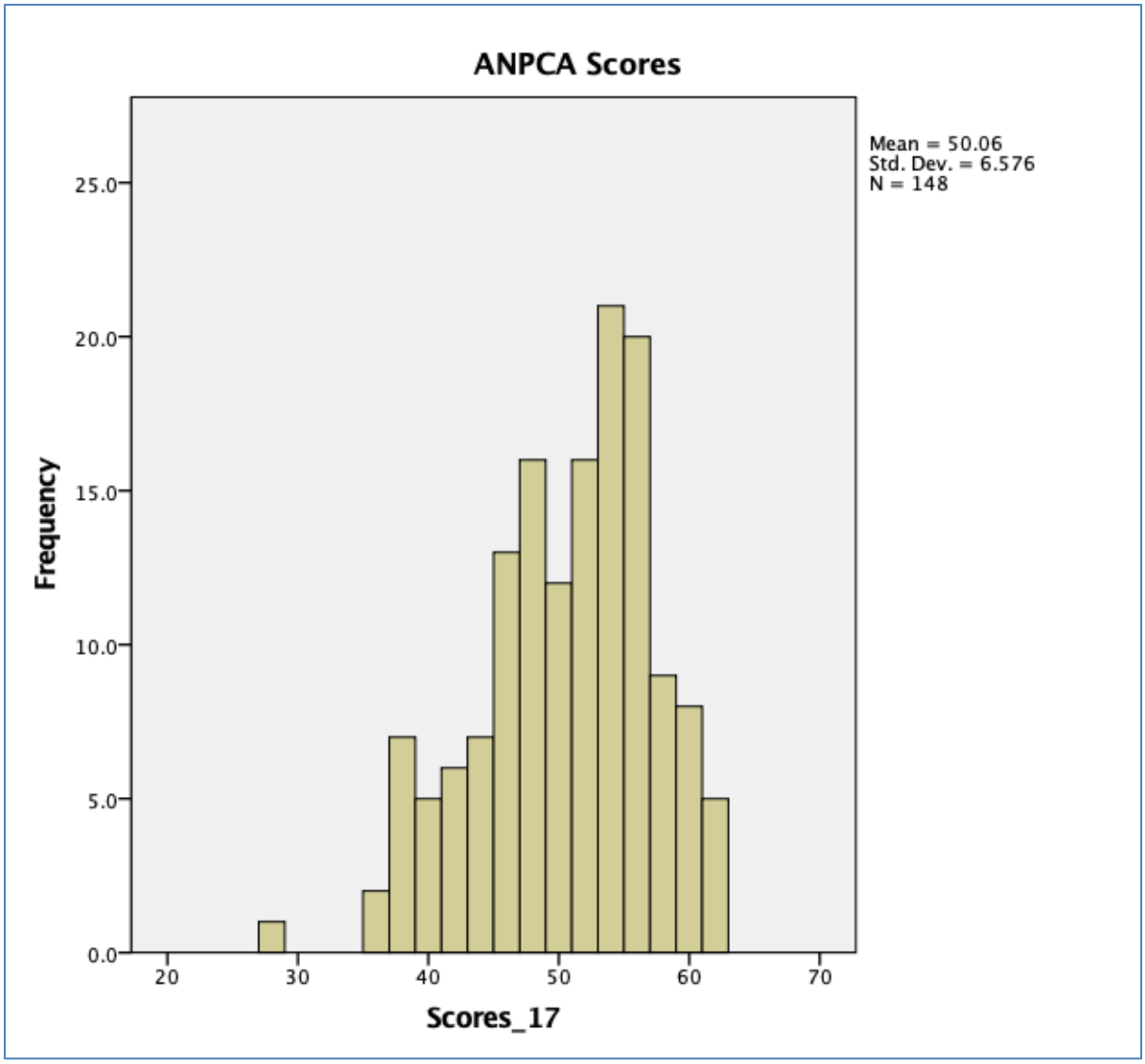

Figure 13: Histogram for Distribution of ANP Clinical Autonomy Scores

Following the results of the above sections and discussion with supervisors, it was decided that further analysis would be advantageous to compare the groups more extensively. The data was categorized into four main groups, namely: ANP Emergency, which included all specialisms of emergency (n= 51), ANP integrated and primary care (n=26), ANP Acute (n=64) and ANP candidates (n=7). That considered, the comparison of the group hypotheses was included. Subsequently, the groups were again re-categorised and inputted for further SPSS analysis and

inputted into groups. Data analysis was further undertaken to see if there was any correlation between groups.

8.7 Comparative between Groups and Experience

Further analysis was undertaken to establish differences in urban and rural areas, gender, and levels of ANP clinical autonomy within different specialities. The SPSS was then categorised into groups, and this section presents the findings of this further analysis. Please see **Table 18** which demonstrates the four groups which were further categorised.

Group Code	Title	No.
(Group I)	ANP Emergency/Injury Units	51
(Group II)	ANP Acute Care (all specialisms)	64
(Group III)	Integrated/primary Care	26
(Group IV)	ANP Candidate	07
Total		148

Table 18: ANP Groups

8.7.1 Relationship between ANP Groups, DPBS, ANPCAPS and ANP Intrinsic Clinical Autonomy

A chi-square test of independence was performed as shown above to examine any differences between ANP Group levels and (DPBS and ANPCAPS) intrinsic levels of ANP clinical autonomy. The result between these variables was insignificant regarding DPBS intrinsic levels of ANP clinical autonomy, X^2 (154, N = 148) 169.06 with $p > 0.05$. Since the Chi-square values are less than the (Critical chi-square value = 186.14) at ($df = 154$ crossed with $p = 0.05$). Thus, 'there is no significant differences between ANP Groups and DPBS intrinsic levels of ANP clinical autonomy'.

However, in terms of ANP Groups (n=148); **Group I** 'ANP Emergency/Injury Units (n=51)', **Group II** 'ANP Acute Care (n=64)', **Group III** 'ANP Integrated/Primary Care (n=26)' and **Group IV** 'ANP Candidate (n=7)'. According to (**DPBS**)'s intrinsic levels of ANP clinical autonomy, **Group I** was the highest ANP intrinsic clinical autonomy with (mean=4.27), followed by **Group II** (mean=4.18), then **Group III** (mean=4.17) and lastly **Group IV** (mean=4.14). Additionally, all group means demonstrated extremely high levels of ANP clinical autonomy. In the ANPCAPS there is a significant difference between ANP Groups and ANPCAPS intrinsic levels of ANP clinical autonomy'. According to (**ANPCAPS**) intrinsic levels of ANP clinical autonomy, Group I was the highest ANP intrinsic clinical autonomy with (mean=3.12), followed by Group II (mean=2.88), then Group IV (mean=2.83) and lastly, Group III (mean=2.79). Please see **Table 18.1** below.

	Mean	**SD**	**X^2**	**df**	**P**
DPBS intrinsic levels of ANP clinical autonomy.	4.21	.851	169.06	156	.225
ANPCAPS intrinsic levels of ANP clinical autonomy.	2.95	.860	122.98	81	.002

Table 18.1: ANP Groups & DPBS/ANPCAPS Intrinsic Levels of Clinical Autonomy

8.7.2 Relationships between ANP Groups and Supervisors

A chi-square test of independence was performed as shown above to examine any differences between ANP Supervisor levels and DPBS intrinsic levels of ANP clinical autonomy. The result between these variables was insignificant regarding DPBS intrinsic levels of ANP clinical autonomy, X^2 (104, N = 148) 94.17 with p >0.05. Since the Chi-square values are less than the (Critical chi-square value = 128.80) at (df = 104 crossed with p = 0.05). Thus, 'there is no significant differences between ANP Supervisor levels and DPBS intrinsic levels of ANP clinical autonomy'.

There were however, three subgroups of ANP supervisors: Group I 'Physician', Group II 'ANP', and Group III 'both (physicians and ANPs)'. Group II (ANP) was the highest ANP intrinsic clinical autonomy (mean=4.41), followed by Group III (Physician and ANP) (mean=4.29) and lastly, Group I (Physician) (mean=4.19).

	Mean	**SD**	**X^2**	**df**	**P**
DPBS intrinsic levels of ANP clinical autonomy	4.21	.851	94.17	104	.745

Table 19: ANP Supervisor Levels & DPBS Intrinsic Levels of ANP Clinical Autonomy

8.7.3 Relationship between ANP Groups & Supervisor's Gender

Table 19.1 shows a chi-square test of independence that was performed as shown below to examine any differences between ANP Supervisor gender and DPBS intrinsic levels of ANP clinical autonomy. The results between these variables were insignificant regarding DPBS intrinsic levels of ANP clinical autonomy, X^2 (104, N = 148) 101.94 with p >0.05. Since the Chi-square values are less than the (Critical chi-square value = 128.80) at (df = 104 crossed with p = 0.05). Thus, 'there is no significant differences between ANP Supervisor Gender levels and DPBS intrinsic levels of ANP clinical autonomy'.

	Mean	**SD**	**X^2**	**df**	**P**
DPBS intrinsic levels of ANP clinical autonomy	4.21	.851	101.94	104	.539

Table 19.1: ANP Supervisor Gender & DPBS Intrinsic Levels of ANP Clinical Autonomy

Table 20 presents a chi-square test of independence that was performed as shown below, to examine any differences between ANP (Rural/Urban) areas and DPBS intrinsic levels of ANP clinical autonomy. The results between these variables were insignificant regarding DPBS intrinsic levels of ANP clinical autonomy, X^2 (52, N = 148) 57.14 with p >0.05. Since the Chi-square values are less than the (Critical chi-square value = 69.83) at (df = 52 crossed with p =

0.05). Thus, there is no significant differences between ANP Area (Rural/Urban) and DPBS intrinsic levels of ANP clinical autonomy'.

	Mean	SD	X^2	df	P
DPBS intrinsic levels of ANP clinical autonomy	4.21	.851	57.14	52	.290

Table 20: ANP (Rural/Urban) Characteristics & DPBS intrinsic levels of ANP clinical autonomy.

A chi-square test of independence was performed as shown above to examine any differences between ANP years of experience levels and DPBS (Empowerment, Actualisation, Readiness and Valuation) intrinsic levels of ANP clinical autonomy.

The results between these variables were insignificant regarding DPBS intrinsic levels of ANP clinical autonomy, X^2 (260, N = 148) 270.69 with p >0.05. Since the Chi-square values are less than the (Critical chi-square value = 298.61) at (df = 260 crossed with p = 0.05). Thus, the null hypothesis failed to be rejected and is retained as 'There is no significant differences between ANP Years of experience levels and DPBS intrinsic levels of ANP clinical autonomy'. However, further analysis between groups is provided below.

There were five subgroups in terms of ANP years of experience: Group I '0-1 Year', Group II '2 Years', Group III '3-4 Years', Group IV '5-10 Years' and Group V '11-20 Years'. According to (DPBS)'s intrinsic levels of ANP clinical autonomy, Group IV was the highest ANP intrinsic clinical autonomy with (mean=4.36), followed by Group III (mean=4.35), then Group V (mean=4.33), then Group II (mean=4.12) and lastly, Group I (mean=4.04).

According to (DPBS: Readiness) intrinsic levels of ANP clinical autonomy, Group IV was the highest ANP intrinsic clinical autonomy with (mean=4.41), followed by Group III

(mean=4.38), then Group V (mean=4.35), then Group II (mean=4.15) and lastly, Group I (mean=3.98).

According to (DPBS: Valuation) intrinsic levels of ANP clinical autonomy, Group IV was the highest ANP intrinsic clinical autonomy with (mean=4.59), followed by Group III (mean=4.58), then Group V (mean=4.53), then Group II (mean=4.20) and lastly, Group I (mean=4.16).

Table 21 presents the findings of the ANP years of experience and DPBS and their intrinsic levels of ANP clinical autonomy.

	Mean	**SD**	**X^2**	**Df**	**P**
DPBS intrinsic levels of ANP clinical autonomy	4.21	.851	270.69	260	.311
DPBS-Empowerment	3.70	1.130	99.57	100	.493
DPBS-Actualisation	4.55	.648	75.92	80	.608
DPBS-Readiness	4.10	.981	127.57	140	.766
DPBS-Valuation	4.37	.817	31.16	50	.983

Table 21: ANP Yrs. of Experience Levels & DPBS of ANP clinical autonomy

8.7.4 Relationships between ANP Years of Experience within Groups & ANPCAPS.

A chi-square test of independence was performed as shown above to examine if there were any differences between ANP Group levels and ANPCAPS intrinsic levels of ANP clinical autonomy top five scores. There were four subgroups in terms of ANP Groups (n=148): Group I ANP Emergency/Injury Unit Group II ‘ANP Acute Care (n=64)’, Group III ‘ANP Integrated/Primary Care (n=26)’ and Group IV ‘ANP Candidate (n=7)’.

According to (In my practice, I regularly make a treatment plan for my patients) intrinsic levels of ANP clinical autonomy, Group I was the highest ANP intrinsic clinical autonomy with (mean=3.92), followed by Group II (mean=2.97), then Group III (mean=2.77) and lastly Group

IV (mean=2.71).The results between these variables were significant in terms of ANPCAPS intrinsic levels of ANP clinical autonomy, X^2 (9, N = 148) 17.18 with p <0.05. Since the Chi-square values are greater than the (Critical chi-square value = 16.92) at (df = 9 crossed with p = 0.05).

There is a significant difference between ANP Group levels and ANPCAPS' 'In my practice, I regularly adopt high levels of clinical decision-making skills' levels of ANP clinical autonomy' is accepted. Group I was the highest ANP intrinsic clinical autonomy with (mean=3.94), followed by Group III (mean=3.31), then Group II (mean=3.27) and lastly, Group IV (mean=2.86). The results between these variables were significant in terms of ANPCAPS intrinsic levels of ANP clinical autonomy, X^2 (9, N = 148) 42.37 with p <0.05. Since the Chi-square values are greater than the (Critical chi-square value = 16.92) at (df = 9 crossed with p = 0.05).

There was a significant difference between ANP Group levels and ANPCAPS' 'In my practice I regularly complete full episodes of care for my patient without a physician' levels of ANP clinical autonomy' is accepted. According to (In my practice, I regularly complete full episodes of care for my patient without a physician) intrinsic levels of ANP clinical autonomy, Group I was the highest ANP intrinsic clinical autonomy with (mean=3.86), followed by Group IV (mean=3.43), then Group II (mean=3.13) and lastly, Group III (mean=3.00).

The results between these variables were significant in terms of ANPCAPS intrinsic levels of ANP clinical autonomy, X^2 (9, N = 148) 33.31 with p <0.05. Since the Chi-square values are greater than the (Critical chi-square value = 16.92) at (df = 9 crossed with p = 0.05). Thus, there is a significant difference between ANP Group levels and ANPCAPS 'In my practice I

regularly make an independent diagnosis for my patients' levels of ANP clinical autonomy' is accepted. Group I was the highest ANP intrinsic clinical autonomy with (mean=3.92), followed by Group II (mean=3.31), then Group IV (mean=3.29) and lastly, Group III (mean=3.12).

According to (Practising at full clinical autonomy enables confidence in my clinical decision-making) intrinsic levels of ANP clinical autonomy, Group I was the highest ANP intrinsic clinical autonomy with (mean=3.92), followed by Group III (mean=3.73), then Group II (mean=3.64) and lastly, Group IV (mean=3.57).

The results between these variables were significant in terms of ANPCAPS intrinsic levels of ANP clinical autonomy, X^2 (9, N = 148) 80.41 with p <0.05. Since the Chi-square values are greater than the (Critical chi-square value = 16.92) at (df = 9 crossed with p = 0.05). Thus, 'there is a significant difference between ANP Group levels and ANPCAPS' and 'In my practice, I regularly discharge patients without a physician consultation' levels of ANP clinical autonomy' is accepted.

According to (In my practice I regularly discharge patients without a physician consultation) intrinsic levels of ANP clinical autonomy, Group, I was the highest ANP intrinsic clinical autonomy with (mean=3.76), followed by Group II (mean=3.59), then Group III (mean=3.46) and lastly Group IV (mean=3.29).

The results between these variables were significant in terms of ANPCAPS intrinsic levels of ANP clinical autonomy, X^2 (9, N = 148) 38.54 with p <0.05. Since the Chi-square values are greater than the (Critical chi-square value = 16.92) at (df = 9 crossed with p = 0.05). Thus, the null hypothesis is rejected and the alternating (actual) hypothesis 'There is a significant

difference between ANP Group levels and ANPCAPS' 'In my practice I refer patients to other specialities without the need of a physician consultation' levels of ANP clinical autonomy' is accepted. Group I was the highest ANP intrinsic clinical autonomy with (mean=3.59), followed by Group II (mean=3.45), then Group IV (mean=3.43) and lastly Group III (mean=3.35).

The results between these variables were insignificant in terms of ANPCAPS intrinsic levels of ANP clinical autonomy, X^2 (9, N = 148) 7.41 with p >0.05. Since the Chi-square values are less than the (Critical chi-square value = 16.92) at (df = 9 crossed with p = 0.05). Thus, the null hypothesis failed to be rejected and is retained as 'There is no difference between ANP Group levels and ANPCAPS 'In my practice I regularly take time away from the clinical area to undertake professional development' levels of ANP clinical autonomy'.

According to (In my practice I regularly take time away from the clinical area to undertake professional development) intrinsic levels of ANP clinical autonomy, Group IV was the highest ANP intrinsic clinical autonomy with (mean=2.14), followed by Group II (mean=2.03), then Group III (mean=1.96), and lastly Group I (mean=1.82). Please see the results of the ANP Group Levels and ANPCAPS Intrinsic Levels of ANP clinical autonomy in **Table 22.**

	Mean	SD	X^2	Df	P
In my practice I regularly make a treatment plan for my patients	3.75	.546	13.73	9	.123
In my practice I regularly adopt high levels of clinical decision-making skills	3.61	.634	17.18	9	.046
In my practice I regularly complete full episodes of care for my patient without a physician	3.49	.821	42.37	9	.000
In my practice I regularly make an independent diagnosis for my patients	3.49	.751	33.31	9	.000
Practising at full clinical autonomy enables confidence in my clinical decision making	3.48	.622	10.32	9	.325
In my practice I regularly discharge patients without a physician consultation	3.25	.925	80.41	9	.000
In my practice I refer patients to other specialities without the need of a physician consultation	3.37	.867	38.54	9	.000
In my practice I regularly take time away from the clinical area to undertake professional development	1.95	.928	7.41	9	.595

Table 22: ANP Group Levels & ANPCAPS Intrinsic Levels of ANP clinical autonomy.

8.8 Quantitative Findings

There is no relationship between age, gender, education, and intrinsic levels of ANP clinical autonomy in this study. This in reality means ANP gender, education and intrinsic levels of ANP clinical autonomy do not appear to have any influence on the levels of ANP clinical autonomy. However, in regard to education, the minimum level of education in Ireland for registration of an ANP is a MSc level so the level of education is high in the participants of this study. There was conversely no difference between MSc level ANPs and Doctorate Nurse Practitioners (DNP) or PhD ANPs in regard to their levels of clinical autonomy.

There was a **significant** difference however, between ANPs experience and their intrinsic levels of ANP clinical autonomy. This would support the view that ANP clinical autonomy is a process that takes time to develop from novice to expert long after the ANP has qualified. This also has significance in measuring impact of ANP clinical autonomy as ANPs in this study

demonstrated higher levels of ANP clinical autonomy when working in the role more than three years and gradually increasing higher as the ANP progresses in years' experience to a maximum of 20 years.

The following section will present the finds of the qualitative data captured in the open comments of the survey. The comments were analysed using semantic thematic analysis as explained in the methodology chapter. Additionally, the comments were verbatim from the ANPs themselves as discussed in the following section.

8.9 Open Comments Findings

The semantic thematic analysis approach adopted within this study as the guidance provided by Clarke and Braun (2013) and Braun and Clarke (2006). Please see the following mind mapping which represents the open comments from the ANPs in this study. Four themes emerged from the data analysis: 1) Growing Into ANP Clinical Autonomy - It Takes Time; 2) Trust and Positioning in the MDT and Organisation; 3) Protected Time for CPD & Research & the Need for ANP Supports/ Mentoring; and 4) ANP Tenacity, Perseverance & Resilience within the MDT & Organisation.

8.9.1 Theme One 'Growing Into ANP Clinical Autonomy - It Takes Time'

Theme one was summarised as '*growing into ANP clinical autonomy- It takes time'*. The total codes and descriptions which contributed to the theme across the ANP open comments are based on the findings of this study, ANPs require time to develop their ANP clinical autonomy. ANPs desire clinical autonomy, however this takes time.

This study identified that the more experienced, in terms of years of experience, the more levels of Clinical Autonomy. Please see Figure 14 which includes the open comments, codes, categories, and eventual themes presented. Please enlarge screen to full view to review the Figures in the following section.

Figure 14: 'Growing into ANP Clinical Autonomy - It Takes Time'

8.9.2 Theme Two ‘Trust and Positioning in the MDT and Organisation’.

This study identified that trust and the ability to act clinically autonomously is connected to open collaboration and all multidisciplinary teams (MDT) being aware of the abilities of ANP clinical autonomy. Additionally, positionality was narrated as a sense of place for ANPs requiring necessary collaboration for ANP clinical autonomy. Please see Figure 15.

Figure 15: 'Trust & Positioning within the Multidisciplinary Team and the Organisation'

8.9.3 Theme Three 'Protected Time for CPD & Research & the Need for ANP Supports/Mentoring'

CPD and Research is an important requirement of the ANPs domains of practice (NMBI, 2017). The ANPs themselves are required to demonstrate a leadership role within the MDT and organisations where they work. ANPs in this study identified the need for CPD and research. However, the frontline clinical workload took priority. This theme demonstrates ANPs struggle to obtain the domain of ANP practice of CPD and research due to the clinical workload taking priority. ANPs are indeed required to take accountability and undertake protected CPD and research time to fulfil all domains of ANP clinical autonomy which requires organisational supports. This theme highlights that protected time for CPD and research requires the Need for ANP Supports and Mentoring. Please see Figure 16 below.

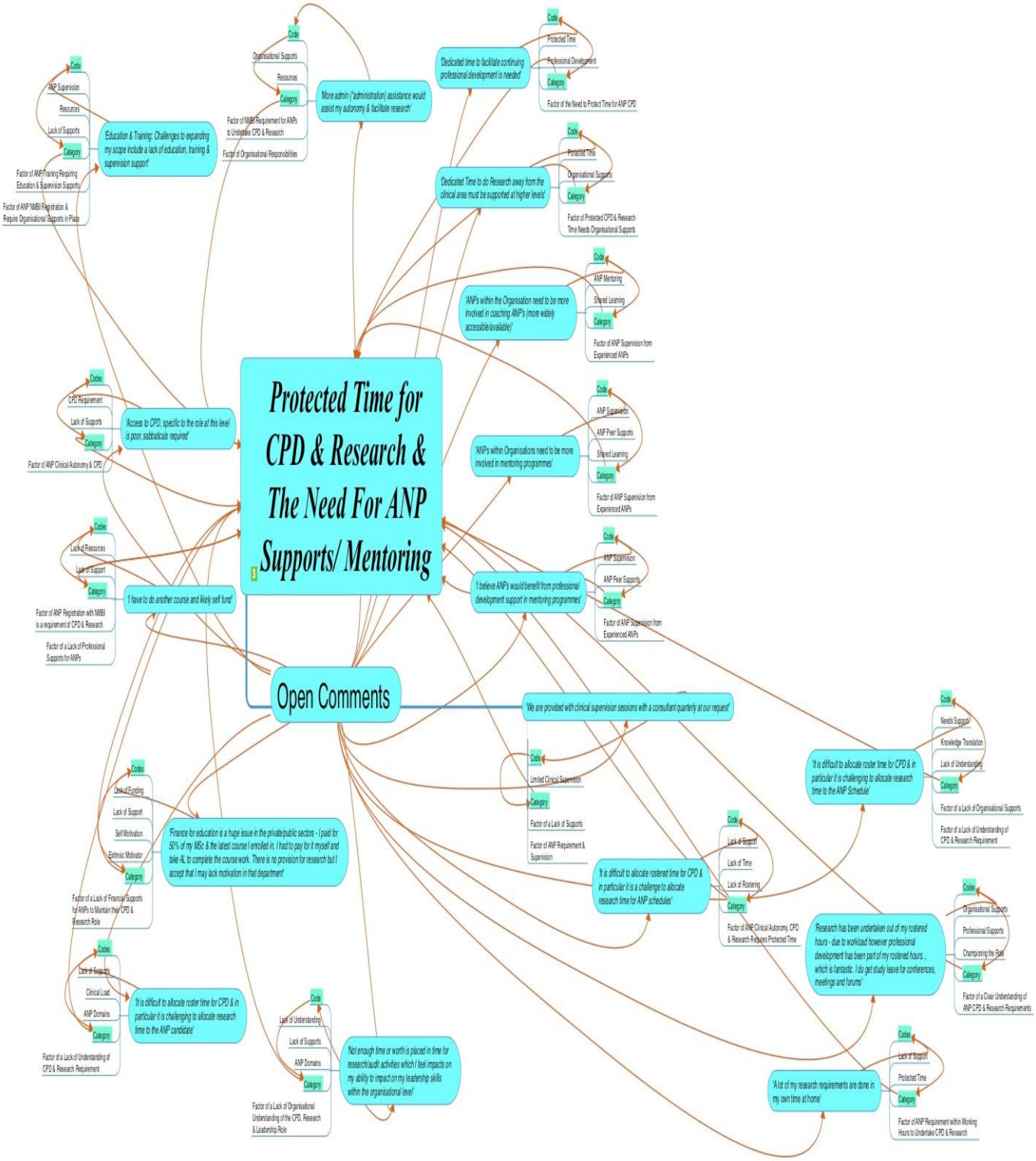

Figure 16: 'Protected Time for CPD & Research & the Need for ANP Supports/ Mentoring'

8.9.4 Theme Four: ‘ANP Tenacity, Perseverance & Resilience within the MDT & Organisation’.

The ANPs verbatim comments included in this theme identified the need for tenacity, perseverance, and resilience to ANP clinical autonomy. ANPs report that their clinical autonomy was when they had the authority to practice as professionals in their own right, including, being self-determined. Please see Figure 17 which outlines theme four.

Figure 17: ANPs Tenacity, Perseverance and Resilience within the MDT & Organisation.

To summarise, this chapter explored ANP clinical autonomy utilising the DPBS and the ANPCAPS. Additionally adding to the body of knowledge are open-ended sections analysed using thematic analysis. ANP clinical autonomy is high when intrinsic motivators are prominent. When extrinsic factors are reported constraints to ANP clinical autonomy are evidenced resulting in lower levels of ANP clinical autonomy.

8.10 Summary of The Study Findings

The inclusion of the DPBS was used as it was recognised as a valuable tool to measure readiness in advanced practice, such as elements of growth, development, competence, mastery and movement from one level to another (Dempster, 1994). Other studies utilising the DPBS reported ANPs as having higher confidence levels in their direct patient practice skills, mastery, and knowledge than their skills in the indirect roles of research and staff development (Cajulis and Fitzpatrick 2007; Bahadori and Fitzpatrick 2009; Maylone et al., 2011).

Similarly, this study reported extremely high levels of ANP clinical autonomy (Mean 4.55/SD 0.648). Actualisation encompassed the exercise of autonomy and applied it in the practice area (Cajulis and Fitzpatrick 2007; Bahadori and Fitzpatrick 2009; Maylone et al. 2011). Previous studies reported actualisation at very high levels of decision-making, responsibility, and accountability (Cajulis and Fitzpatrick 2007; Bahadori and Fitzpatrick 2009; Maylone et al., 2011). This study also reported extremely true actualisation of ANP clinical autonomy (Mean 4.55/SD 0.648).

The valuation was expressed as having merit, worth, and usefulness, and without it, autonomy would not matter (Dempster, 1994). Previous studies reported valuation as high levels of ANP

clinical autonomy (Cajulis and Fitzpatrick 2007; Bahadori and Fitzpatrick 2009; Maylone et al., 2011). The valuation findings in this study reported extremely high levels of ANP clinical autonomy (mean4.37/SD 0.817) regarding self-respect, achievement and satisfaction. Empowerment included legal status, legitimacy, and having rights and privileges (Cajulis and Fitzpatrick 2007; Bahadori and Fitzpatrick 2009; Maylone et al., 2011). Similar to other studies, empowerment was reported as complex for ANPs to achieve (Cajulis and Fitzpatrick 2007; Bahadori and Fitzpatrick 2009; Maylone et al., 2011).

Interestingly, the USA studies and additionally the findings support the same findings of lower levels of ANP clinical autonomy in the category of empowerment, which could be associated with restrictions on rights and privileges impacting their ability to practice to their fullest clinical autonomy (Cajulis and Fitzpatrick 2007; Bahadori and Fitzpatrick 2009; Maylone et al. 2010). This study reported the two top-ranked empowerment findings as 'in my practice, I cannot optimally function because I do not have legal status' (mean 4.25/SD 1.029), followed by 'in my practice, I am constrained in what I do because I am powerless'(mean 4.06/SD1.202). This could signify that ANPs continue to struggle with rights and privileges, impacting their capacity to practice at full clinical autonomy as licensed independent providers.

In Ireland, the CPA for ANPs attaching prescribing rights to a physician was discontinued in 2017 (NMBI, 2017); however, the findings of this study are that the CPAs appear to have remained in many organisations, contributing to a detachment between policy and organisation levels. For example, one ANP in this study reported: '*NMBI have dispensed with CPA but local drugs and therapeutics are insisting on them'*.

Similar to studies utilising the DPBS in advanced nursing practice roles have reported high levels of ANP clinical autonomy (Cajulis and Fitzpatrick 2007; Bahadori and Fitzpatrick 2009; Maylone et al. 2010). The results from this study reported high and extremely high levels of ANP clinical autonomy in the DPBS findings. Additionally, this study identified that ANPs valued clinical autonomy because it has worth and merit (Dempster, 1994).

The highest DPBS scores concerning ANP clinical autonomy in this study were regarding their actualisation and valuation. Cotter (2013) who administered the DPBS to registered emergency nurses, reported low levels of clinical autonomy (Cotter, 2013). This might suggest that ANP roles may experience higher levels of clinical autonomy by the very nature of the clinical autonomy requirement to be working in advanced nursing practice roles (Begley et al., 2010; Cotter, 2013; NMBI, 2017; Lockwood et al., 2021).

The additional ANPCAPS instrument was developed to explore and define ANP clinical autonomy, an objective of this study. Additionally, the subscale was designed to assist in measuring ANP clinical autonomy across all specialisms. The ANPCAPS recorded a score of 'agree' with the top three highest scores being: 'In my practice, I regularly make a treatment plan for patients' (mean 3.75/SD 0.546), 'In my practice, I adopt high levels of clinical decision-making skills' (mean 3.61/SD 0.634) and 'In my practice I regularly complete full episodes of care for patients without a physician' (mean 3.49/SD 0.821).

The ANPCAPS was useful to demonstrate the impact of ANP clinical autonomy, particularly in clinical decision-making and completing a full episode of care without a physician. It is noteworthy to acknowledge that no one health professional works in isolation however ANPs

are required to undertake independent practice additional to collaborative practice. The following section will discuss the findings of ANPs age and education.

8.10.1 ANP Age and Education

There were five sub-groups of respondents This study clarifies that the majority of respondents 50.0% belonged to the age group of 41-50 years, followed by 23.0% belonging to the age group of 32-40 years, followed by 20.9% belonging to the age group of 51-60 years, then followed by 4.1% belonging to the age group of <31 years, while the lowest percentage 2.0% belonged to the age group of >60 years. The mean was 2.94 (41-50yrs), belonging to 50% of the ANPs. The higher age in regard to this study concurs with the recent ONMSD (2021) study that also reported a higher age of ANPs in Ireland due to the nurses and midwives previously undertaking post graduate qualification in nursing and midwifery prior to embarking on ANP training (ONMSD, 2021).

The levels of education and ANP clinical autonomy demonstrated no difference between clinical autonomy of ANPs with an MSc, Doctorate or PhD (r = 0.057, at p <0.492). Other authors have reported significant benefits however, of Doctoral level ANP training (Mackey and Estala, 2008; Sperhac and Clinton, 2008; Barry, 2009; Hendrick-Ferguson, 2015). DNP education has been reported as enabling the legitimacy to practice (Sperhac and Clinton, 2008). Sperhac and Clinton (2008) reported that PhD educated nurses are more inclined to impact clinical research, DNP education is in the clinical arena, improving evidence-based practice and clinical leadership skills. In the USA, in 2004, the American Association of Colleges of Nursing (AACN, 2004) recommended a position statement of ANP education to be at a Doctorate level.

Furthermore, Hendrick-Ferguson (2015) recommended for a DNP program to include: published evidence-based research for possible translation into clinical practice, time allotted for clinical practice and scholarship (or research) activities (80% clinical practice role, 20% research role); define the DNP-prepared nurse's role, responsibilities, and proposed salary, and describe the significance of recruiting ANPs with a DNP degree in a collaborative practice (Mackey and Estala, 2008; Barry, 2009; Hendrick-Ferguson, 2015).

In Ireland, a future exploration of DNP programs could be beneficial, as demonstrated in this study was the importance of experienced ANPs and their levels of ANPs clinical autonomy. Perhaps an exploration of transitioning experienced ANPs into a DNP qualification pathway may support ANP clinical autonomy and champion supervision of ANPs transitioning into newer roles. ANP education does not appear to be a one size fits all.

8.10.2 Length of Experience

There was a significant difference between ANPs experience and intrinsic levels of ANP clinical autonomy. The findings in this study support the view that ANP clinical autonomy is a process that is organic, develops and migrates from novice to expert long after the ANP has qualified. Additionally, by measuring the impact of ANP clinical autonomy, this study demonstrated higher levels of ANP clinical autonomy when working in the role more than three years which gradually increased in years to a maximum of 11-20 years. This finding would suggest that the national roll-out and implementation of ANPs in Ireland (in other jurisdictions) should consider timeframes when measuring or assessing actual impact.

Implementing new ANP services and developing ANPs clinical autonomy is a lengthy process, and recently qualified ANPs/ANP candidates cannot perform with the same levels of ANP

clinical autonomy due to the need for experience, and hence, will not demonstrate service improvement or full clinical impact in the short-term.

8.10.3 Level of ANP Clinical Autonomy

The level of ANP clinical autonomy among the participants in this study was measured using the DPBS and the ANPCAPS. This study is the first instrument to measure ANP clinical autonomy in an Irish or international context. This study contributes new knowledge by precisely measuring both behaviours of the DPBS and a new scale, the ANPCAPS, which measures verified ANP clinical autonomy.

8.10.4 Level of ANP Clinical Autonomy 'Novice to Expert'

The DPBS, ANPCAPs and thematic analysis supports the rationale for higher levels of clinical autonomy being associated with experience; not in previous nursing years of experience but the years qualified as an ANP. The ONMSD (2021) in a study on impact of ANP candidates and newly qualified ANPs purported similar difficulties demonstrating impact, even though the nurses prior to embarking on the ANP training reported an average of over 19 years nursing experience. This is similarly concurred by Benner's Theory of Novice to Expert (1984). For example, the measurement of the levels of ANP clinical autonomy and years of experience being higher in ANPs with more than three years' experience, gradually increased up to the maximum of 20 years-experience increased as the ANP gained experience. This was unrelated to the years previously obtained as a nurse regarding levels of ANP clinical autonomy (ONMSD, 2021). Additionally, Benner (1984) reported this as an exquisite clinical judgment skills and extensive clinical knowledge embedded in clinical practice. Furthermore, this ANP clinical autonomy knowledge is a completely different level from the ANPs' previous nursing training.

The years practising as an ANP that determined higher levels of ANP clinical autonomy demonstrated that the very essence of registering as an ANP is at a novice and not expert group within the realms of advanced nursing practice.

Hence, this supports the view that at the MDT level an internship to develop these skills after the ANP has registered with NMBI is an essential finding of this study. This adds to the body of knowledge determining and deciphering of ANP clinical autonomy being directly related to years of experience at the level of advanced nursing practice and entirely different for their years in nursing practice.

8.10.5 ANPCAPS

This new instrument contributes to existing nursing research and knowledge by providing evidence of the impact of ANP clinical autonomy, which can be easily replicated and tested amongst other professionals and in other contexts. While this is a new instrument used for the first time in this study, it displayed good reliability (Cronbach's alpha=0.786) and can be used or adapted for further studies. As an instrument, ANPCAPS also demonstrated that it could accurately capture ANP clinical autonomy quality by highlighting ANP clinical autonomy levels.

8.10.6 Gender and ANP Clinical Autonomy

The study examined ANP clinical autonomy and gender due to the association between gender and autonomy and its origins. As explained in chapter three, autonomy is a masculine concept. Additionally, gender was included in the ANPCAPS subscale development. Regarding previous studies in nursing that have explored autonomy, gender and decision-making, authors

such as Bjørk and Hamilton (2011) utilised a cross-sectional survey of nurses using the clinical decision-making tool (CDM) in an acute hospital setting (n=2095).

The authors reported male nurses with less experience, education, and a younger age group as having similar scores of females with more than ten years' experience, suggesting that males may influence more autonomy and decision-making in clinical practice than female nurses (Bjørk and Hamilton, 2011). In the field of human relationships management, Burke and Miller (2005) found minimal evidence to support the gender-based stereotypes of women's intuition, even though men reported their intuitive skills as more than women. Similarly, Sladek, Bond and Phillips (2010) study with physicians, nurses, and health managers (n=520) reported that men preferred rational thinking while women preferred intuitive reasoning. This study utilised the t-Test to determine differences in male and female ANPs behavioural and clinical autonomy decisions in this study.

This study revealed no difference between male and female ANPs intrinsic levels of clinical autonomy and decision-making skills ($r = 0.036$, at $p < 0.665$). Conversing ANP decision-making as gender-neutral, both sexes equally gained high ANP clinical autonomy regardless of their gender.

Further analysis of the group statistics and chi-square test examined Gender and DPBS and ANPCAPS intrinsic levels of clinical autonomy, which also determined no difference between gender levels. Interestingly, this study highlighted that ANPs were female-dominated, with 81.8% females and 18.2% males participating in the study. Similarly, findings of gender population in a recent implementation study of ANP candidates reported that 90% of the population were female (ONMSD, 2021). This indicates that more males seek higher grades

and more promotional opportunities than general nursing (ONMSD, 2021). Furthermore, Clayton-Hathway et al. (2020) reported women in nursing as underrepresented in promotional opportunities compared to males. Similarly, Skar (2010) suggested that males seek more senior and higher positions in nursing. Indeed, 18.2% of the ANP population being male is significantly higher than less highly paid positions in nursing.

This study additionally determined the highest academic degree of ANPs who obtained a doctorate (n=3) or PhD (n=3), representing 2% of the total ANP population. Fifty percent of these doctorate-level ANPs were male, representing an unequal ratio of 1:9 males and 1:40 females that have pursued a Doctorate level degree or PhD. Findings of the ANPCAPS as: 'in my practice, my gender impacts me positively at the level of clinical autonomy with which I am trusted'. ANPs strongly disagreed with this statement (mean 1.90/SD 0.953). Understanding why ANPs reported low levels of 'the positive impact of their gender' perhaps goes back to the deeper discussions of autonomy in chapter three. Indeed, women in female-dominated professions and autonomy will often face gender constraints (Gilligan, 1993; Benjamin, 2007; Shadbolt, 2020).

Additionally, the ANP literature has discoursed the influence of ANP clinical autonomy in a sociocultural belief (no matter which gender) that ANPs have less autonomy due to their caring role in a female-dominated profession, rather than that of a physician's role in science and independent practice which was historically more male-dominated (Weiland, 2015; Lockwood et al., 2021). As voiced in the qualitative findings, physicians in organisations remain to hold the power of ANP clinical autonomy in the practice of 'allowing' what ANPs can and cannot do in a power and controlled narrative. This asserts previous ANP literature that ANPs and

physicians are set apart, not by the levels of clinical autonomy but through opposing underlying philosophies (Carryer et al., 2007; Anderson, Birks and Adamson, 2019).

Further research should feasibly examine self-reliance and resilience in ANP roles regarding gender and ANP clinical autonomy. Additionally, integrating classroom debates in education for these issues in nursing and ANP candidates, policy engagement and ANP forums should include open dialogue and self-reflection on what gender and autonomy mean.

8.10.7 Comparative between Groups and Experience

Following a review of the findings and in-depth supervision discussions, further analysis was undertaken to establish differences in urban and rural areas, gender, and levels of ANP clinical autonomy within different specialities. The data from the SPSS analysis were then categorised into groups, and this section presents the findings of this further analysis.

The group statistics indicated that ANPs in emergency had the highest levels of ANP clinical autonomy, notably represented in the ANPCAPS. This result may be due to ANPs in emergency are amongst the longest established ANPs in Ireland (2002), and the cohort is more experienced. Additionally, the clinical environments and organisational vital stakeholders are more familiarised with ANPs in emergency. However, all study respondents' levels of ANP clinical autonomy were high across all specialist areas.

The following chapter will discuss the potential of these findings, limitations and recommendations for future research and present a conclusion to the PhD study.

Chapter 9 - Discussion

9.1 Introduction

This chapter presents the discussion for this study. Firstly, the phases of the study will be discussed, specifically concerning the theoretical contributions and literature supporting the concept of ANP clinical autonomy. The chapter will also present a general discussion of the study's considerations, including the national roll-out of ANP health services, trust amongst ANP's, ANP positioning in the organisation and MDT, continuing professional development and CPD, gender and finally tenacity, perseverance, and resilience. The chapter will close with a summary of the study, recommendations for future research and a conclusion. The following sections will firstly discuss the phases of the study.

9.2 Phase One Narrative Literature Review Findings

Phase one of this study was designed to scope and review the literature to date on the clinical autonomy of ANP's and review various research designs that could be applied for this study. The limited research available in this area was a crucial finding of this review. One plausible explanation is that ANP clinical autonomy as a concept is elusive: hard to grasp and challenging to measure (Dempster, 1994; Lockwood et al., 2021).

The literature review clarified that ANP clinical autonomy is so much more than just shifting medical tasks from one professional group to another, a view in circulation and has previously been described and embedded in the nursing literature (Maier et al., 2016). For example, the literature identified advanced levels of professional nursing practice, including leadership, independent prescribing, patient diagnosis and high levels of clinical decision-making skills

(Anderson et al., 2019; Kerr and Macaskill, 2020; Lockwood et al., 2021). The literature review also established that ANP clinical autonomy incorporates nursing and medical activities and physical assessment, diagnosis, and treatment initiatives (Lockwood et al., 2021).

One of the main findings and outcomes of the literature review was the absence of instruments to measures ANP clinical autonomy. Phase two of the study was structured to develop an instrument, the ANPCAPS, and utilise a validated scale of the DPBS, explained in the following section.

9.2.1 Phase Two Tool development and Validation

The study concentrated on all ANPs in Ireland from all specialisms. Phase two comprised of ethical approval and the development of the ANPCAPS. The tool development included validation of the ANPCAPS. The main goal of the development of the ANPCAPS was consistency and that the scale development process was valid, reliable, and as straightforward as possible. The items generated for the ANPCAPS included a literature review and experts in the area of ANP (n=4). Additionally, a statistician and a nursing professor specialised in scale development were consulted. An initial subscale was developed (n=31 items) and then tested for reliability.

The 31 items ANPCAPS were input into SPSS for testing to determine the items for an acceptable Cronbach's alpha score (any item below 0.70 was deducted from the subscale). This was performed to correlate, assess for statistical analysis and reliability to each other. Additionally, the questions were also on reflection, more specialist to some specialisms of ANP practice, so this stage of the tool development helped broaden the tool for all specialities of ANPs in acute and primary care settings. Following a deduction process and inputting the

subscale into SPSS, 17 items were included in the ANPCAPs. Following the deduction process the 17 items were then tested with (n=10) ANPs and content validity indexing was utilised, as explained in chapter seven.

9.2.2 Phase Three Pilot Testing

Following testing of the ANPCAPS in phase one. The pilot study was conducted to test the complete survey which included (n=16) ANPs from differing specialties and who had been in practice as an ANP for more than 5-10 years. The participants were recruited from the NMPDU, who then gave the researchers details, and the ANPs contacted the DCU student directly if they were interested in participating in the pilot study. The researchers emailed participants the study link, and the purpose of the pilot was explained to the ANPs.

The ANPS were asked to complete the link to the survey, initial consent form, and plain statement. Additionally, the participants were asked to consider the readability, clarity of the questions, feasibility of using the link and completion of the survey. The complete survey was tested in the pilot phase with a combined DPBS and ANPCAPS Cronbach's alpha of 0.902. The following section will discuss phase four of the study.

9.2.3 Phase Four ANPCAPS National Survey

Phase four of the study consisted of the National survey of all ANPs in Ireland. The phase included the involvement of the NMPDU and access to the ANPs. Weekly communication with DCU supervisors and NMPDU was ongoing throughout the National survey going live, strengthening the development of this phase. The National study was distributed to all ANP and ANP candidates in Ireland by the NMPDU

Furthermore, reminder letters were sent from the NMPDU at 2 and 4 weeks with follow-up letters. It was agreed not to transmit any further reminder letters at this stage as the ANPs were working in the middle of the COVID-19 pandemic. The survey deployment via the NMPDU online link was advantageous in consideration of the COVID-19 pandemic. The response rate perhaps could have been improved if the ANPS were not working under such circumstances at the time of the study. However, as COVID-19 was in the early stages a decision to undertake the study was decided due to the unknown future of the pandemic at the time.

9.2.4 ANP Implementation - It Takes Time

The results from this study indicate that the longer the ANP was in practice, the higher the levels of clinical autonomy reported. Indeed, ANP clinical autonomy decision-making is a transitional process, which resulted in ANPs scoring higher levels of ANP clinical autonomy the more experienced they were. High levels of decision-making are resolutely organic, intrinsic, and evolving, as found in this study, requiring supervision and support long after the ANP has qualified.

The chi-square analysis of the lowest levels of ANP clinical autonomy was between the years of 0-3years. These levels of ANP clinical autonomy increased from 3-4 years to the maximum levels of clinical autonomy with ANPs 11-20 years in practice. Hence, the longer the ANP was practising, the higher the levels of ANP clinical autonomy, for example, in the ANPCAPS: regularly completing full episodes of care without a physician, independent diagnosis for patients, discharging without a physician and referral to other specialties without a physician.

In Ireland ANPs are already educated to a graduate-level having completed their nurse/midwifery training and with an additional requirement to have a minimum of 2 years of

experience in the specialist area prior to embarking on ANP training. Similarly, the ONMSD (2021) reported ANP candidates and newly qualified ANPs as having extensive clinical experience, with the average length of time qualified as registered nurses being 19.8 years (ONMSD, 2021). However, the evidence from this study demonstrates that growth and stepping up from an entry grade nursing role into a new ANP clinically autonomous role remained lower in newly qualified ANPs, regardless of the amount of nursing experience they had. This finding would indicate that although ANP candidates may be very experienced in their nursing careers, there is a step-change and stark difference in ANP's developing their clinical autonomy levels. Perhaps a six-month internship post-registration as an ANP should be an organisational requirement to support ANPs transitioning into the role.

Moreover, the ONMSD (2021) reported ANPs in training or recently registered experiencing difficulty utilising their clinical autonomy to its fullest potential. Recently qualified ANPs need to evolve into their new role and should be viewed as a novice and not an expert. The transition from novice to expert in terms of ANP clinical autonomy requires further exploration and research. Hence, this study purports that service and quality impact levels will naturally be lower amongst recently qualified ANPs than established ANPs with higher ANP clinical autonomy. Furthermore, the recent ONMSD (2021) evaluation reported that only one-third of ANP candidates fully practised within their scope or that their skills were fully utilised. Reasons for this were related to constraints within the role (ONMSD, 2021). This study similarly reports full utilisation constraints,' with participants, for example, narrating: 'in my practice I am restrained in what I can do because I am powerless' (extremely true) (mean 4.06/SD1.202). The qualitative comments by one ANP included: '*having to work in a fishbowl, with pharmacy, physiotherapy, medicine and nursing taking ownership of ANP clinical*

autonomy and professional bodies such as pharmacy and radiology having too much authority' and being unable to grow into their ANP clinical autonomy.

This study has identified that in Ireland, the highest levels of ANP clinical autonomy were found when ANPs had supervised the newly qualified ANP or ANP candidate. The second-highest group was ANP supervised by ANPs and physicians, and the lowest levels of ANP clinical autonomy were found in ANPs that physicians solely supervised. However, the principal supervisors were physicians, which would concur with the recent ONMSD study of ANPs in training or newly qualified (ONMSD, 2021). ANP supervision in this study would support that both physicians and ANPs are recognised as supervisors for ANPs. Moreover, the new policy of ANP roll-out in Ireland (DoH, 2019a) and the Sláintecare healthcare reform programme (DoH, 2019b) discourses the desire to increase capacity building of ANPs into primary care settings. The Sláintecare healthcare reform programme (2020) is a new project regarding ANP and linking successful, well-developed ANP services in Ireland is recommended as a valuable resource following the findings of this study.

This study identified ANPs' growing and stepping up by advancing clinical responsibilities and expanding their scope of practice to enhance healthcare provision. Additionally, ANPs reported extremely high levels of actualisation with examples such as: 'in my practice, I take responsibility for my actions (mean 4.72/SD.522) and 'in my practice I base my actions on the full scope of my knowledge and ability (mean 4.72/SD.522). Furthermore, part of ANPs growing into their clinical autonomy included moving into higher levels of accountability and decision-making. Similarly reported as extremely true in this study by the ANPs reporting examples as: 'in my practice, I accept the consequences for the choices I make (mean 4.70/SD.613).

Furthermore, constraints identified in the thematic analysis were reported as restricting ANPs to grow in their role as a 'disconnect between national and international policy and ANP local implementation ANP posts, such as the chief nursing office moving towards independent practice but local drugs and therapeutic committees keeping old policy such as CPA in place'. Additionally, one ANP reported clinical autonomy being limited in their growth in their verbatim comment as follows: 'scope is determined not by ANPs or service requirements but by the membership of such committees'.

Concerning ANPs clinical autonomy this study reported positive findings such as: ANPs regularly 'discharging patients without a physician's consultation' (mean 3.25/SD0.925) and 'completing full episodes of care for patients without a physician' (mean 3.49/SD 0.821). Independent diagnosis is required for ANPs clinical autonomy to grow as reported 'In my practice I regularly make an independent diagnosis for patients' (mean 3.49/SD 0.751). Other studies have reported similar results depicting how a range of activities could enhance ANPs' clinical autonomy (Kerr and Macaskill, 2020). Diagnosing a patient, for example, has been reported as an activity whereby ANPs use their cognitive deductive skills to independently identify their reason for referring a patient from primary to acute care or vice versa (Lockwood et al 2021). Additionally organisational constraints were also reported as impeding ANP clinical autonomy.

Weiner (2009) reported that organisational readiness is a necessary precondition to change, and bureaucratic constraints follow when ANPs' clinical autonomy is unclear. The qualitative findings in this study included an unwillingness to change some bureaucratic boundaries, such as siloing their growth and abilities to enter ANP clinical autonomy. For example, one ANP commented, 'completing ionising and radiation nurse prescribing two years previous, and I am

still unable to prescribe due to the organisation not approving my independent prescribing'. Additionally, there was a lack of inclusion in educational sessions, case reviews and limitations imposed on their scope of practice by medical colleagues. Similarly, another ANP commented, 'bureaucratic barriers and professional boundaries negatively impact my practice'.

Indeed, role isolation has been purported to influence ANPs leaving their positions reverting to their previous nursing roles due to resilience issues (Turner, Keyzer and Rudge, 2007; Mac Lennan, Levett-Jones and Higgins, 2016; Lockwood et al., 2021). Power struggles in healthcare are often associated with a lack of interprofessional respect, lack of trust and ANPs struggling to position themselves within the multidisciplinary team (MDT) (Janson, 2008). Furthermore, organisational power and control can disparage these roles. Indeed, bureaucratic constraints were coined by a theorist known as Lipsky (2010). Lipsky's (2010) street-level bureaucracy theory examined how work practices influence client outcomes. This is similar to reports of ANP policy being in place but disregarded at the organisational level resulting in ad hoc policy of changes for no other intellectual reasoning than power and control (Lipsky, 2010). Freidson (2001) a founding figure in medical sociology, reminded that professions who seek autonomy in medicine does not necessarily equate towards the patients' best interests unless there is an acknowledgement of a shared collaboration process. This acknowledgement extends to ANP practice, as enablers of ANP clinical autonomy are reported as improving patient outcomes particularly when there is collaboration between healthcare professionals.

Other ANP literature has reported ANP's as having expert and complex decision-making skills (Weiland, 2015; Poghosyan and Liu, 2016; Lockwood et al., 2021). A critical factor in this study's quantitative and qualitative findings was the level of clinical decision-making

associated with ANPs' clinical autonomy. The ANPCAP subscale reported high clinical decision-making skills (mean 3.61/SD 0.634) and high levels of clinical leadership, which influences and guides other organisation members (mean 3.36/SD 0.66). In the open comments one ANP acknowledged the importance of high levels of clinical decision-making such as: '*ANPs are required to be clinically autonomous and provide expert levels of decision-making. Nevertheless, this also involves driving and leading quality initiatives that improve patient care'.* Despite constraints to ANP clinical autonomy, this study reported enablers as the level of ANPs clinical expertise and high levels of decision-making from ANPs providing healthcare. Growing into and stepping up into full ANP clinical autonomy were higher as the ANP progressed into their ANP careers. The following section will discuss another important part of ANP clinical autonomy, trust and positioning of ANP clinical autonomy.

9.2.5 Trust and ANP Positioning in the Organisation and MDT

Trust has been defined as a 'firm belief in the reliability, truth or ability of someone or something' (Oxford English Dictionary, 2010). Additionally, positionality (a sense of place) is a crucial component of ANP clinical autonomy within the organisation and MDT. Trust within the realms of collaboration should, however, be reciprocal in its origin (Schadewaldt et al., 2016; Anderson, Birks and Adamson, 2019; Lockwood et al., 2021). Implementing ANP roles requires trust between physician and ANP which develops over time and is an ingredient of successful ANP clinical autonomy (Kilpatrick et al., 2012; Poghosyan et al., 2015; Anderson, Birks and Adamson, 2019; Lockwood et al., 2021).

According to Atkinson (1999) and Martinsuo, Suomala and Kanniainem (2013), it is not sufficient to measure how a service initiative is implemented but attention must be paid to

getting the system right which additionally benefits the organisation. The ability to acquire, create and use knowledge has been reported as a vital source of healthcare organisation's sustainability in care and service efficiency (Nonaka and Von Krogh, 2009; Champagne et al., 2014). As purported by Nonaka and Von Krogh (2009), Von Krogh, Nonaka and Rechsteiner (2012) and Champagne et al. (2014), impact will only succeed in the use of the dynamic process of knowledge and trust with professionals and MDTs which creates a strengthening in the learning capacity and the process of the organisation.

One key component of this study's findings has been the successful impact of full ANP clinical autonomy when the ANP role has been well prepared, championed and all key stakeholders have clearly understood the constitutes of ANP clinical autonomy. Previous studies demonstrating ANP impact and successful championing have proved to be economically cost-effective, for example, in the demonstration of reducing waiting times, stepping into the provision of new and innovative care pathways and improving national targets such as improved Key Performance indicators (KPI'S) (Begley et al., 2010; Gerrish, McDonnell and Kennedy, 2013; Donald et al., 2014).

Indeed, this study reported high levels of clinical autonomy in both the quantitative findings and thematic analysis, as crucial enablers of ANP clinical autonomy when all key stakeholders supported full ANP clinical autonomy. The influence of positioning ANPs in this study reported ANP policy not always fully implemented. A recent report from the ONMSD (2021) reported recently qualified ANPs in training as being deployed into these newer roles without the necessary support, with unclear role demarcation established in the recent capacity building of ANPs positions. Competence strategies have been suggested as the answer to improving

trust and positionality issues of ANP clinical autonomy (NMBI, 2017). However, this again precipitates medicine as the decider of these competencies and not the nursing profession itself.

Clinical guidelines, protocols and competencies are a necessary requirement for all healthcare professionals to ensure safe practice, particularly important when a person is organically growing into their role. However over-reliance often fastens ANPs to a guideline/protocol scope of practice, and intrinsic levels of clinical autonomy requires a deeper level of clinical decision-making (Deci and Ryan, 2008). Indeed, a person-based assessment of trust inspires critical thinking skills and higher levels of clinical decision-making. It is additionally candid that ANPs trust is attached to guidelines that influential decision-makers approve and demarcate in the organisations that ANPs work. However, this appears to be dependent on supportive organisational culture. Indeed, comments in the qualitative section of this study report that ANPs were often constrained by organisational dominations such as radiology and drugs, and therapeutic committees' ultimately deciding ANPs clinical autonomy within the mechanism of guideline approval to practice. The following sub-section will discuss another important finding of this study namely: positioning of ANPs identity within the MDT.

9.2.5.1 ANPs Positioning, Professional Identity and Intersectionality in the MDT

ANPs have been regularly portrayed as trailblazers in nursing (Begley et al., 2010; Ryder, Jacobs and Hendricks, 2019; Kerr and Macaskill, 2020). Additionally, ANPs have also voiced a more caring role than the role's expanded medical and nursing activities (Begley et al., 2014; Lowe, 2017). Authors such as, Mac Lellan, Lovett-Jones and Higgins (2016), Lowe (2017) and Thompson and McNamara (2021) have discoursed an overemphasis on the carer instead of the

curer role cautioning a risk in diluting ANP capabilities to other professionals intensifying constraints to the role.

Indeed, the ANP role appears to lack a lengthy professional identity with reports of balancing in-between nursing and medicine not firmly connected to either (Anderson, Birks and Adamson, 2019; Lockwood et al., 2021). Furthermore, Laperrière (2008) purported that nursing must move away from the 'handmaiden' positioning that often portrays the nursing profession. Turner, Keyzer and Rudge (2007), Burgess and Perkins (2010), and Lockwood et al. (2021) reported ANPs are required to clearly articulate their ANP clinical autonomy as professionals in their own right within the realms of safe practice.

Additionally, the discourse of ANPs has often been associated with a portrayal of being 'the first in the specialism', 'the advanced nurse' and this perhaps has encouraged ANPs depiction and level of mistrust of ANPs positionality and classification. The very fact that ANPs have been portrayed as 'different' and 'different in their roles and titles' has feasibly created a difficult journey of intersectionality in ANPs positioning in the healthcare team. Claxton (2003) proposed that one of the core concepts in nursing in the 21st century is learning to learn in the preparation of change.

Indeed, intersectionality shapes an individual or group to interact with social makers and shows how for example, equality or inequality, minority groups or differences perceive how the world sees them (Burgess-Pinto, Little and Johnston, 2013). The consideration here of intersectionality in nursing itself perhaps remains in identifying when ANPs position themselves, as aforementioned, as separate from their profession and in-between medicine and nursing. This emboldens elements of professional jealousy and mistrust within the newness of

the role (King, 1988; Collins, 2000; Burgess-Pinto, Little and Johnston, 2013; Burgess Reimer-Kikham and Astle, 2014).

Undeniably, the intersectionality discourse in ANP development may illuminate thinking, narrative discourse and address the dynamics of power from varying angles in nursing, education and organisational behaviours (Van Herk, Smith and Andrew, 2011; Burgess-Pinto, Little and Johnston, 2013; Burgess Reimer-Kikham and Astle, 2014). The following section will discuss continuing professional development (CPD) and research.

9.2.6 Continuing Professional Development and Research

ANP CPD and research are essential to their education and continuing evidence-based practice (Begley et al., 2010; NMBI, 2017). Part of the requirements of the domains of practice with the NMBI is their leadership skills and this requires ANPs to create space and take time away from the clinical area to undertake CPD and research. Previous discourse has reported CPD and research is difficult to obtain due to clinical workload, which has for example, impacted on limited evidence of outcomes of ANP clinical autonomy (Bonsall and Cheater, 2008; Begley et al., 2010; Newhouse et al., 2011, 2012; Kilpatrick et al., 2014; Tsiachristasa et al., 2015). Additionally, ANP clinical autonomy requires critical thinking, such as the transition of knowledge into action. At the lower end of the Pearson's scale, this study reported that ANPs took time away from their clinical remit for CPD (mean 2.57/SD.928) (Disagree ranked 1.76-2.50 & agree ranked 2.51-3.25). Moreover, ANPs reported low levels of research time from the clinical area due to their clinical load (1.95/SD.928)'. If the domains of these areas are neglected, then complete fulfilment of ANPs domains of advanced nursing practice will not be achieved.

Regarding the thematic analysis phase of this study, difficulty maintaining CPD and research was reported, with less MDT or organisational support, or indeed acknowledgement that it was essential to their ANP clinical autonomy. This finding is not dissimilar to other studies reporting low levels of CPD and research (Begley et al., 2010; Gardener et al., 2010; Martin-Misener et al., 2015; Ryder, Jacobs and Hendricks, 2020). Perhaps due to a limited worth placed on research, some ANPs reported that these domains are taken in their own time. The emphasis on CPD and research is a valuable domain of ANP registration in Ireland and globally has been recognised as essential to ANP practice (NMBI, 2017; Schober, 2017; ICN et al., 2020). Similar to other studies, the value of CPD and research at the organisational level is somewhat undervalued in the strive for the clinical workload (Begley et al., 2010; Gerrish, McDonnell and Kennedy, 2013; Elliott, 2016). Previous literature would recommend protected roster time for ANPs to carry out the required CPD and research elements of their role, and this study concurs with these prior recommendations (Begley et al., 2010; Sangster-Gormley et al., 2011; Higgins et al., 2017).

Additionally, perhaps an improved discourse with faculty and clinical relationships that ultimately focuses on heightening the nursing profession and quality patient care would be advantageous in promoting ANP clinical autonomy (Rubio et al., 2010; Falkenberg-Olsen, 2019; Ryder, Jacobs and Hendricks, 2020). The following subsection will discuss gender and ANP clinical autonomy.

9.2.7 ANP Tenacity, Perseverance and Resilience

Tenacity, perseverance, and resilience are all associated with recovering quickly and persistence (Oxford English Dictionary, 2010). This study identified ANPs clinical autonomy in reality, as a sense of one's ability to act independently and exert control over one's

environment, including understanding task mastery and self-determination. However, an additional finding is a need for the ANP to have tenacity, perseverance, and resilience skills. Enablers to ANP clinical autonomy and their tenacity, perseverance and resilience has been associated with organisational culture (Begley et al., 2014; Ryder, Jacobs and Hendricks, 2019; Lockwood et al., 2021). ANP clinical autonomy was identified as complex when implementing inter/intra-professional relationships and role territory enforcing restrictions to ANPs clinical autonomy. For example, in the empowerment subscale, the highest mean of extremely true (constraint to levels of ANP clinical autonomy) was: 'in my practice I cannot optimally function because I do not have legal status' (4.25/SD1.029). Additionally, in the qualitative part of the study, ANPs reported constraints such as radiology constraining their scope of practice even when National guidelines from NMBI/HSE should ease this constraint.

Astonishingly, this study reported ANP policy changes and removal of CPA implemented in Ireland in 2017 (NMBI, 2017) in connection with ANP and nurse prescribing rights have been mostly ignored in many organisations. Previous ANP discourse reported similar findings concerning ANPs independent prescribing rights being restricted even when the policymakers in those countries supported ANPs prescribing rights (Maylone et al., 2010; Weiland, 2015; Lockwood et al., 2021). However, an improvement in the organisational context was reported when there was a collaborative working relationship instead of a hierarchical structure. The study's ANPCAPS subscale measured very high levels of ANPs reporting: 'in my practice, I adopt high levels of clinical leadership which influences and guides other organisation members' (mean 3.36/SD 0.66). Also reported in previous literature, ANPs perceive themselves to provide strong leadership and a high level of clinical interactions in the nursing profession (Stanley and Stanley, 2018; Ryder, Jacobs and Hendricks, 2020). For example, the COVID-19 crisis benefited ANPs clinical autonomy and flexibility of the ANPs decision-

making. Furthermore, ANPs reported the need to be represented at senior nursing meetings and a need for supportive organisational key stakeholders such as the Director of nursing and the medical directorate, particularly when implementing these roles.

This research corroborates with previous literature, in the view that clinical leadership and consideration on how ANPs as experts in clinical practice impact the health service is central to ANPs impact, innovation, change and improving patient pathways (Elliott et al., 2016; Stanley and Stanley, 2017; Ryder, Jacobs and Hendricks, 2019; Lockwood et al., 2021). However, consistent reports of confusion of role definition, particularly in newly implemented posts, indicate that transitioning into the ANP role from old ways of working in organisations remains complex.

ANP clinical autonomy will only exist in the context of intrinsic (high levels of clinical autonomy) motivation (Deci and Ryan, 2008). ANPs in this research worked in teams but also provided independent management to patients. In the group statistical analysis, the highest levels of ANP clinical autonomy were reported in the specialist area of emergency care, followed by acute care. ANPs in the specific emergency department area have been in practice for over 22 years. They had the highest numbers in practice in Ireland; this finding would link to newer ANP roles, and that growing into clinical autonomy takes time as it is an organic process (Begley et al., 2010; Lockwood et al., 2021). The recent implementation of ANPs into all specialist areas, including primary care, evidently requires improved knowledge transfer between specialisms. However, this would also indicate a lack of strategic planning when implementing newer roles into newer services. Historically in Ireland, the ANPs themselves have been involved in service development, job descriptions, implementation, and role development. Additionally, no one individual will ever champion ANPs clinical autonomy in

a silo approach to these newer roles. A generic template for site development should be considered to develop expectations and contributions to nursing research and professional development.

ANP tenacity, perseverance and resilience require a political awareness of ANP policy and knowledge (Gerrish et al., 2013; Begley et al., 2014; Elliott et al., 2017). ANPs in this study reported their awareness of negotiating for professional freedom. However, similarly in a study by Schadewaldt et al. (2016), it was reported that ANPs are often deliberately submissive to ease their entry into the roles. This study also reported ANPs actively engaging in unassertive behaviours and careful competence to achieve acceptance and reverting to doctor-nurse roles within collaborative consultations to ease their passage, ultimately encouraging extrinsic (low levels) of ANP clinical autonomy. This is concerning regarding iomplementing full impact of these roles in an already stretched healthcare service.

Similar to Schadewaldt et al. (2016) this study reported ANPs engaging in medical hegemony and subservience in a non-threatening way. It has been suggested that this divide between idyllic and truth creates positioning and identity conflict (Monrouxe, 2010; Schadewaldt et al., 2016; Anderson, Birks and Adamson, 2019). Similarly, this study reported similar comments in the '*not allowed*' narrative and the reiterating of subservience to organisational committees, perhaps due to a lack of confidence in one's own ANP clinical autonomy. Indeed, if ANPs are going to achieve full ANP clinical autonomy, negotiating their practices is undoubtedly stressful, skills of tenacity, perseverance, and resilience are a proviso and necessary requirement for ANPs of the future. Previous ANP research has identified the misuse of power by other professions, as well as nursing itself withholding information to ANPs, resulting in constraining ANP practice and reports of role isolation (Turner, Keyzer and Rudge, 2007;

MacLellan, Lovett-Jones and Higgins, 2016; Lockwood et al., 2021). Subtle undermining was identified in this study's quantitative and qualitative findings as ANPs clinical autonomy was questioned.

Professional efficacy through the concepts of clinical autonomy is integral in ANP roles that extend professional boundaries through prescriptive and referral rights (Lockwood and Fealy 2008; Elliott et al., 2016; Higgins et al., 2014; Kerr and Macaskill, 2020). However, the considerable variation of ANP titles, education, and activities of ANP roles is an ongoing thorn, which has added to the confusion of these roles in clinical practice (Gerrish, McDonnell and Kennedy, 2013; East et al., 2015; Lockwood et al., 2021).

For senior decision-makers, the attenuation appears not to be based on educational qualification and professional qualification but through anti-intellectualism, in the perception that physicians are the risk-takers and ANPs more caring and less tolerant of risk (Carryer et al., 2007; Weiland, 2008; Lowe, 2017; Anderson, Birks and Adamson, 2019). This lack of knowledge needs to be transformed into open, collaborative support and a media presence to voice the levels of ANP clinical autonomy.

Nursing and medicine itself have perhaps constrained ANP clinical autonomy due to a disconnect of how the role is perceived as narrated in the responses of this study. Previously discoursed by Woodward, Webb and Prowse's (2006), who reported the visual imagery of an ANP in the study using the acronym 'swimming with sharks'. For example, the ANPs reported that the environment they worked in involved the risk that powerful others might position the ANP role in danger (Woodward, Webb and Prowse's, 2006). Similarly reported in this study was a lack of understanding of the role of their nursing and medical colleagues. Two decades

later, the discourse of ANPs clinical autonomy in Ireland continues to lack key stakeholders understanding of the role most predominantly the core element of the capacity building of ANPs their clinical autonomy (Weiland, 2015; Mac Lellan, Lovett-Jones and Higgins, 2016; Anderson, Birks and Adamson, 2019: Kerr and Macaskill, 2020). Additionally, the traditions of medicine and nursing are still clearly portrayed. Medicine seen as a masculine and scientific concept, with the nurse being the holistic carer (Wade, 1999; McParland et al., 2000; Skår, 2010; Kerr and Macaskill, 2020). In a book called the *Metaethics of Radical Feminism*, Daly (1978) discussed similar struggles in the power and control battles with midwifery and medicine when they sought autonomous practice.

Regarding ANPs, they have been identified as less expressive than nursing in theory decision-making skills (Charles-Jones, Latimer and May 2003; Anderson, Birks and Adamson, 2019). In this consideration, the order of ANP clinical autonomy has perhaps extended rather than been flattened in a hierarchy of value placed on nursing in general (Charles-Jones, Latimer and May, 2003; Anderson, Birks and Adamson, 2019). Indeed, for ANP clinical autonomy to be fully utilised, role positioning needs to be shared in collaboration with others. This study would also concur with other ANP authors (Kennedy et al., 2012; Kilpatrick, 2012; Gerrish, McDonnell and Kennedy, 2013; Schober, 2016), suggesting a provisional scaffold for ANP trainees and candidates, made up in part of experienced ANPs that have walked the road before them.

The study identified the hierarchy in the qualitative comments and quantitative findings as grounding the realities of constraints to ANP clinical autonomy. Chulach and Gagnon (2015) communicate this as the ‘patronage to passage’, only attended by a biomedical model in healthcare. ANPs quite simply do not fit in with this positionality in nursing or medicine.

Similarly Britnell (2019) has warned of the ‘crow baring’ of technologies, virtual platforms and new roles into organisations without consideration of implementing for example, ANP clinical autonomy. ANP capacity building is essential however, consideration of ANPs clinical autonomy actuality and patronage of passage to establish full utilisation is essential and often not considered at implementation levels (Lockwood et al., 2021). The following section presents a summary of this study findings.

9.3 Summary

This chapter provided a discussion on the results and findings of a four-phased National exploratory study. The theoretical underpinnings of this study have threaded self-determination theory and an organismic dialectical philosophy from the beginning of this thesis journey to the end. The study has perhaps enabled a more adaptable approach considering both the constructivist and scientific research philosophies into the inchoate concept of autonomy itself and transpired into the thought-provoking area of ANP clinical autonomy.

In this study, there were many behaviours which have contributed to ANP clinical autonomy. The misuse of power at times was reported by ANPs when they were unable to perform their full clinical autonomy due to their scope of practice being deliberately curtailed at the organisational level.

It appears important that ANPs are equipped with negotiation skills, ANPs clinical leadership within the organisation and ANPs resilience skills to deal with the many political and organisational restraints to their ANP clinical autonomy. There appears to be an assumption in increasing the critical mass of ANPs that they will register as an ANP and suddenly hit the

frontline without any consideration of the support required for ANP clinical autonomy to be successful in clinical practice.

Many ANPs are in positions in Ireland that require mentorship and support, often unreported, other than providing evidence of supervision when registering as an ANP. ANPs reported being weighed down with the clinical workload and domains such as CPD and research being neglected. At this juncture, organisational culture and ANP clinical autonomy in Ireland has at times muted full utilisation of ANPs clinical autonomy.

The ANPCAPS is a significant contribution to this study as it has identified the capacity of ANP clinical autonomy and is a generic tool that could be utilised in service developments and justification of funding for ANP positions. Additionally, the actual levels of ANP clinical autonomy have been sparse in the literature, with other health professionals often unaware of the levels of ANP clinical autonomy and their capacity to impact patient care. Optimising the impact of ANP clinical autonomy is complex. There is a need to reset the requirements of effective collaboration between policy, organisations, and the frontline health professional teams. This should facilitate a more supportive environment for the ANPs that bring a value-added benefit to patient care.

ANPs themselves also need to be prepared for the complexity and challenges inherent in ANP clinical autonomy. They should be mindful and equipped with the skills of tenacity, perseverance, and resilience to fully influence themselves and be self-determined transpiring into effective clinical autonomy. This additionally enables ANPs to have effective negotiation skills to inspire confidence in their clinical autonomy within the MDT and organisation. Additionally, supports such as championing the requirement of ANP clinical autonomy takes

time to develop long after the ANP has qualified. The risk of not supporting ANPs and addressing organisational cultures results in constraining to ANPs clinical autonomy and risks staff retention in the roles.

The following sections discuss limitations to the study and recommendations for future research.

9.4 Limitations of the Study

There are some limitations with this study which are included as follows:

The Advanced Nurse Practitioner Clinical Autonomy Practice Scale (ANPCAPS) demonstrated good content validity and reliability in this study. However, further development and testing are recommended.

Due to the dearth of evidence of ANP clinical autonomy, this study was significant in unearthing genuine ANP clinical autonomy. Further research should focus on organisational culture and self-determination impact on constraints and facilitators of ANP clinical autonomy.

Even though gender was identified and measured in this study, further research regarding the impact on ANP clinical autonomy would strengthen the findings of this study.

The sample used Irish ANPs to establish ANP clinical autonomy. A future study should target from a global perspective, strengthening the findings of this study and developing the ANPCAPS subscale developed.

The following section will provide future recommendations for ANP clinical autonomy research and open discourse.

9.5 Recommendations

The findings of this study reflect the core component of the ANP is clinical autonomy. Four key recommendations reflect the findings of this study.

9.5.1 Recommendation for Developing ANP clinical autonomy

Developing an ANP clinical autonomy implementation strategy includes collaboration between educators, policy and the organisation to support ANPs full utilisation in practice. Based on the findings of this study, the recommendations for education, policymakers and organisational policy are outlined next.

9.5.2 Recommendation for Education

ANPs are clinical leaders and have an inept ability to transform healthcare delivery. ANPs of the future must be prepared to deliver the responsibilities of ANP clinical autonomy. Educational requirements should develop ANPs scaffolding by creating an ethos incorporating ANP educational programmes that integrates ongoing evaluation of ANP clinical autonomy and improving the disconnect between education and clinical practice. Increasing ANPs with a hybrid ability between educational and ANP active clinical practice is essential to improve ANP clinical autonomy to its fullest capacity.

One strong recommendation from this study is the requirement to develop educational strategies at the undergraduate and postgraduate levels to foster self-determination and resilience strategies around the role and integrity of ANPs in Ireland.

9.5.3 Recommendation for Policy Makers

The ANP policy strategies must change ways of thinking into an innovative methodological change in organisational culture. The inclusion of clinical autonomy and involvement of experienced ANPs should be more inclusive in the decisions made when developing ANP roles in Ireland. The development of organisational structures to successfully implement ANP clinical autonomy in Ireland should be reviewed to place an organisational responsibility to ANP capacity building in ensuring that ANP policy is fully implemented in practice.

All policy implementation should be mindful of the generic ANP structures and build on the scaffold of the developments over the last 22 years in Ireland with an ethos of embracing a generic ANP strategy rather than speciality specific or silo developments. Additionally, there was a reported detachment between ANP policy statements and what translates into action at the organisational level. There are opportunities to strengthen the policy message and encourage organisations to assess their culture and structures to support ANPs full clinical autonomy.

9.5.4 Recommendation for Organisational Policy

Strategic leadership and support from organisations is essential to realise the measures needed to support ANPs clinical autonomy and realistically prepare future ANPs. A designated champion to support ANPs transitioning into these roles should be established at the organisation levels. A further recommendation from this study is to improve supports to ANPs leadership and management skills, within organisations to empower newer ANP's with preceptorship education and shadowing techniques to mix the variety of experiences into a

transparent multidisciplinary team culture. Additionally, a six-month internship following registration as an ANP is a recommendation of this study.

Recognising the value and beliefs of all those participating in the implementation of ANPs into clinical practice will value the past and future development of ANPs in Ireland, enabling a more open cultural implementation process and encouraging full utilisation of these inspirational future nurses. Including ANPs participation in decision-making at all levels, including policy, organisational and local level decisions about ANP practice, would be advantageous. Furthermore, organisations should assess their workplace cultures and structures to ensure no deliberate constraints to ANP clinical autonomy transpires which ultimately impacts on patient care.

9.6 Conclusion

ANP clinical autonomy is championed when all multidisciplinary team members clearly understand the role and collaboratively support the ANPs clinical autonomy and full utilisation. Implementation of ANPs into the Irish health service is a complex process. Policy and organisational support such as requirements and responsibility for ANPs, should be a requisite at implementation phases. Supports such as including experienced ANPs in the development of newer roles may improve constraints to ANPs clinical autonomy.

There is a requirement to support ANPs confidence in their clinical autonomy, strengthening their tenacity, perseverance, and resilience. Future research should focus on supporting these highly educated and professional healthcare providers with open and reciprocal collaboration

that is not positioned on unequal power relations for ANP clinical autonomy to be fully utilised in practice.

Current healthcare policy requires ANPs to impact and improve patient outcomes and drive quality patient care. This study underlines the importance of ANP clinical autonomy as an essential component in future knowledge transition. ANPs are highly motivated individuals, and this study emphasises several fundamental motivators required to encourage and sustain clinical autonomy: competence, relatedness, and autonomy. Elevated levels of ANP clinical autonomy are directly related to effective decision-making, which positively impacts patient care and health service quality.

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Appendices

Appendix A. Data Base Searches

Search
ID# Search Terms
S12 S1 OR S3 OR S4 OR S5 OR S6
S11 S1 AND S2 AND S3 AND S4 AND S5 AND S6
S10 S1 OR S2 OR S3
S9 S1ANDS2ANDS3
S8 S4ORS5ORS6
S7 S4ANDS5ANDS6
S6 professional autonomy
S5 autonomy
S4 clinical autonomy
S3 advanced nursing practice
S2 nurse practitioner or np
S1 advanced nurse practitioner or anp
Select / deselect all
Search Options
Expanders - Apply equivalent subjects
Search modes - Boolean/Phrase Expanders - Apply equivalent subjects
Search modes - Boolean/Phrase Expanders - Apply equivalent subjects
Search modes - Boolean/Phrase Expanders - Apply equivalent subjects
Search modes - Boolean/Phrase Expanders - Apply equivalent subjects
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Search modes - Boolean/Phrase Expanders - Apply equivalent subjects
Search modes - Boolean/Phrase Expanders - Apply equivalent subjects
Search modes - Boolean/Phrase
Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
Actions
View Results View Details Edit
(46,204) (2) (45,450) (500) (31,927) (144) (5,978) (31,927) (462) (12,926) (36,023)

Appendix B. PRISMA Checklist and Flow Chart

Section/topic	#	PRISMA Checklist item
TITLE		
Title	1	Identify the report as a systematic review, meta-analysis, or both.
ABSTRACT		
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.
INTRODUCTION		
Rationale	3	Describe the rationale for the review in the context of what is already known.
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).
METHODS		
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I2) for each meta-analysis.

Page 1 of 2

Section/topic	#	Checklist item
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.
RESULTS		
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).
DISCUSSION		
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.

FUNDING		
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.

Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(6): e1000097. doi:10.1371/journal.pmed1000097

Appendix C. Hawker et al., 2002 Appraisal Tool

1 Abstract and Title – Did they provide a clear description of the study? Good = Structured abstract with full information and clear title. Fair Abstract with most of the information. Poor Inadequate abstract. Very Poor No abstract.
2 Introduction and aims: Was there a good background and clear statement of the aims of the research? Good Full but concise background to discussion/study containing up-to- date literature review and highlighting gaps in knowledge. Clear statement of aim AND objectives including research questions. Fair Some background and literature review. Research questions outlined. Poor Some background but no aim/objectives/questions, OR Aims/objectives but inadequate background. Very Poor No mention of aims/objectives. No background or literature review.
3 Method and data: Is the method appropriate and clearly explained? Good Method is appropriate and described clearly (e.g., questionnaires included). Clear details of the data collection and recording. Fair Method appropriate, description could be better. Data described. Poor Questionable whether method is appropriate. Method described inadequately. Little description of data. Very Poor No mention of method, AND/OR Method inappropriate, AND/OR No details of data.
4 Sampling: Was the sampling strategy appropriate to address the aims? Good Details (age/gender/race/context) of who was studied and how they were recruited. Why this group was targeted. The sample size was justified for the study. Response rates shown and explained. Fair sample size justified. Most information given but some missing Poor sample mentioned but few descriptive details Very poor no details of sample
5 Data analysis: Was the description of the data analysis sufficiently rigorous? Good Clear description of how analysis was done. Qualitative studies: Description of how themes derived/ respondent validation or triangulation. Quantitative studies: Reasons for tests selected hypothesis driven/ numbers add up/statistical significance discussed. Fair Qualitative: Descriptive discussion of analysis. Quantitative. Poor Minimal details about analysis. Very Poor No discussion of analysis.
6 Ethics and bias: Have ethical issues been addressed, and what has necessary ethical approval gained? Has the relationship between researchers and participants been adequately considered? Good Ethics: Where necessary issues of confidentiality, sensitivity, and consent were addressed. Bias: Researcher was reflexive and/or aware of own bias. Fair Lip service was paid to above (i.e., these issues were acknowledged). Poor Brief mention of issues. Very Poor No mention of issues.
7 Results: Is there a clear statement of the findings? Good Findings explicit, easy to understand, and in logical progression. Tables, if present, are explained in text. Results relate directly to aims. Sufficient data are presented to support findings. Fair Findings mentioned but more explanation could be given. Data presented relate directly to results. Poor Findings presented haphazardly, not explained, and do not progress logically from results. Very Poor Findings not mentioned or do not relate to aims
8 Transferability or generalizability: Are the findings of this study transferable (generalizable) to a wider population? Good Context and setting of the study is described sufficiently to allow comparison with other contexts and settings, plus high score in Question 4 (sampling). Fair Some context and setting described, but more needed to replicate or compare the study with others, PLUS fair score or higher in Question 4. Poor Minimal description of context/setting. Very Poor No description of context/setting.
Implications and usefulness: How important are these findings to policy and practice? Good Contributes something new and/or different in terms of understanding/insight or perspective. Suggests ideas for further research. Suggests implications for policy and/or practice. Fair Two of the above (state what is missing in comments). Poor Only one of the above. Very Poor None of the above.

Appendix D. Papers included utilising Hawker et al. (2020)

Paper	Purpose	Sampling	Data Collection	Data analysis	Major Findings	Methodological Quality
Anderson, Birks and Adamson (2019) UK Qualitative	To consider professional nursing identity of ANPs.	ANPs (n = 9) and nursing colleagues (n = 5) across two primary care general practice organisations	Fieldwork methods were ANP participant observation & semi-structured interviews.	Ethnographic Study Thematic analysis & Reporting was guided by COREQ.	Intra-professional relationships negatively impacted by the nursing profession itself. Intra-professional relationships, and the broader nursing profession shape ANP. A Weak professional identity was established by the ANP and their clinical autonomy lacked support.	36
Athey et al. (2016) USA Quantitative.	To gain an understanding of how important autonomy and work setting is to ANP job satisfaction.	National Sample Survey (n=8311)	2012 National Sample Survey of Nurse Practitioners	Descriptive Statistics	Autonomy is a key factor associated with satisfaction for ANPs impacting on staff retention. High levels of clinical decision-making skills were identified. The most predictive factor of satisfaction was when the ANP felt they were fully utilised.	35
Bahadori, and Fitzpatrick, (2009) USA Quantitative	Level of autonomy of primary care ANPs	Convenience sample (n=48)	ANP Dempster Practice Behaviour Scale (DPBS)	Descriptive Statistics	The ANP struggled with clinical autonomy and empowerment due to limited legal prescriptive authority for controlled substances and being tethered to a collaborative practice agreement with a physician.	34
Burgess and Sawchenko (2011) Canada Qualitative	To explore ANP implementation into the community and explore ANPs perspectives, how collaboration advanced the ANP role.	ANPs (n=11)	Grounded Theory Participatory Action Research (PAR)	Constant comparative analysis which was inputted into Nvivo	Collaborative of Practice (CoP) enhanced ANP implementation and clinical autonomy. The CoP also assisted ANPs about crystallising their ANP clinical autonomy.	35
Cajulis and Fitzpatrick, (2007) USA Quantitative	Levels of autonomy of ANPs in an acute care setting	ANPs in differing specialties (n=54)	DPBS	Descriptive Statistics	The overall mean autonomy score indicated high levels of autonomy. Results pertained to evidence of the level of ANP autonomy such as, providing direct patient care and clinical decision making skills.	34
Cowley, Cooper and Goldberg. (2016) United Kingdom Qualitative	Semi structured interviews with members of the multidisciplinary team to explore the perceived effect and acceptability of the ANP.	Multidisciplinary Team (n=8)	Data was transcribed by an independent transcriber. Themes and codes were identified.	Thematic Analysis	The development created some confusion of the role in regard to clinical autonomy. Role boundaries were reported as challenging Confusion of the ANP role had a negative effect on the extent to which the ANP could deliver care. At the implementation stages clarity of ANP clinical autonomy is essential to enable the role.	32
Fox, Gardener and Osbourbe. 2018. Australia Mixed Methods	To aim was to explore factors that influence sustainability of ANP services	Survey 'Nurse Practitioner Service Pattern Scale' (n=161) telephone survey with ANPs (n=112), Interviews (n=12) and document analysis (n=10)	Case Study	Triangulation analysis. SPSS and qualitative content analysis	Constraints ANPs reported a misfit of their identity, not fitting in the nursing or medical umbrella which was reported as isolation. ANP clinical autonomy was subject to extensive auditing through review of diagnostic requests, prescriptions and consumer diagnosis and, reporting of key performance indicators.	32
Kerr and Macaskill, 2020 Ireland Qualitative	To explore ANP (Emergency) perceptions of role, positionality and professional identity	ANPs (n=10) In-depth interviews	Narrative Study Bourdieu's concepts of habitus theoretical framework	Thematic analysis	Five key themes emerged career pathways, personal and professional transitions, role dimensions and core concepts and position in the organisation and emergency professional identity	37
MacLellan, Lovett-Jones and Higgins, 2016 Australia Qualitative	To explore the power and politics in the transition of ANPs while adjusting to the autonomous role in Australia	Newly endorsed ANPs (n=10)	Carspeckens five stages of critical ethnography, informed by focused ethnography	Thematic analysis	Themes emerged: dominant themes were issues of power and politics dominating the participants observed, Power struggles of autonomy in practice were hampered by nurses overtly and covertly. Deliberate misuse of power frequently encountered	35

					constraining ANP to be autonomous. Many left and returned to RN roles.	
Maylone et al. (2010) USA Quantitative	To investigate the relationships between ANPs perceptions of collaboration with physician colleagues and level of autonomy ANP practice	ANPs (n=99) Convenience sample	DPBS	Descriptive statistics	ANPs reported collaboration with physician colleagues as high apart from the empowerment scale. Empowerment was the lowest which indicated ANPs limitations to their prescriptive rights and scope of practice impacting on their ability to practice with full clinical autonomy	33
Park et al. (2018) USA Quantitative	To explore the extent to which scope of practice laws related to the ANPs day to day practice autonomy	United States Health Resources and Services Administration (HRSA) (n=12.923) ANPs	National State Survey	Regression Analysis Descriptive Statistics	Day to day practice autonomy was reported when they had prescriptive independence. CPA agreements and attachment to physicians was constraining to ANP clinical autonomy. This study reported reducing barriers to ANP clinical autonomy would improve capacity to make the ANPS more efficient and effective to patients.	35
Poghosyan and Liu, 2016. USA Quantitative	ANP autonomy and relationships with leadership affecting teamwork in primary care practices	Cross-Sectional Survey (n=314) ANPs	Data was collected using the Autonomy Independent Practice (AIP) & NP-Administration Relations (NP-AR) and the NP primary &organisational climate questionnaire (NP-PCOCQ)	Descriptive Statistics	ANP clinical autonomy was favourable when all members of the team understood the role which improved leadership teamwork. Policy and organisational change should focus on promoting ANP clinical autonomy Clinical leadership was reported as fragmented.	34
Ryder, Jacobs and Hendricks (2019). Mixed Methodology Ireland and Australia	To explore Irish and Australian nurse practitioners (ANPs) implement leadership and research in their roles.	Mixed methods, an interpretive descriptive approach. Online survey (n=38) ANPs and interviews (n=10) ANPs	An interpretive descriptive approach was used.	Braun and Clarke thematic analysis. The criteria for reporting qualitative data COREQ	Four themes emerged innovative leadership, which includes the ANPs as trailblasers, optimism, incorporating pride in achievements, research which included ANP research roles, research challenges support and research leadership and resilience, which incorporates overcoming resistance, isolation and seeking positive support systems.	36
Sangster-Gormley, Martin-Misener and Burge (2013) Qualitative Canada	To explain the process of ANP implementation.	Data sources included semi-structured interviews with participants (n=16) key stakeholders and key documents.	Single Case Study	Yins approach was adhered to.	Interconnectedness of the concepts of intention, involvement and acceptance influences the implementation process and how the ANP is able to function in terms of clinical autonomy.	34
Schadewaldt et al. 2016. Mixed methods Australia	To examine the experiences of ANP and physicians working in collaborative practice models.	ANPs (n=6) 13 Medical practitioners (n=13) and practice managers (n=3) participated in the study.	Case Study Mixed methods	Descriptive statistics (SPSS) and NVivo 10	ANPs accepted the accountability and clinical autonomy and heightened decision making skills. The ANPs' level of clinical autonomy led to an expansion of their scope of practice, and clinical decision-making skills. An overlap with the scope of practice of physicians, which led to blurred professional roles.	34
Spetz, Skillman and Andrilla. (2017) Quantitative USA	To compare urban and rural ANP autonomy and satisfaction in rural settings.	Descriptive study Survey Design (n=13,000) ANP	National sample survey of ANPs	Descriptive Statistics	ANP in rural settings reported characteristics indicating greater autonomy. These findings were due to the ANP being the main primary care provider. This was dependent on the state the ANP worked in, some ANPs reported being attached to the physicians collaborative practice agreements.	34
Weiland. (2015) Qualitative USA	To understand the meaning of autonomy as interpreted by ANPs through their lived experiences	Purpose sample of (n=9) ANPs	Gadamerian hermeneutic study. Gilligan's feminist perspective was utilised during interpretive analysis	Interpretive analysis	Genuine ANP Practice was the major theme, reflecting the participants' overall meaning of their autonomy. Practicing alone with the patient provided the context within which participants shaped the meaning of Having Genuine NP Practice. Having Genuine NP Practice had four subthemes: relationships, self-reliance, self-empowerment, and defending the NP role.	37

Yee et al.. (2013) Qualitative USA	To examine the impact of state scope of practice and other market and organizational factors impacting on the role of the ANP	Telephone interviews N=300 two-person researchers	Notes were transcribed and jointly reviewed,	Notes were transcribed with a 2 person researcher approach. Limited detail of analysis.	Restrictions to practice in the USA are varied between, no doctors oversight, doctors' oversight of the ANP and medical doctors oversight to diagnose, treat and prescribe. Important factors were: practice culture, policies, and the level of ANP clinical experience. regard to how much oversight the	28
Turner, Keyzer and Rudge (2007) Qualitative Australia	To examine the spheres of influence or autonomy and policy a discourse analysis of the introduction of ANPs in rural and remote Australia	(n=2 ANP and n=15 ANP trainees). Interviews and focus groups	Critical discourse analysis using Fairclough's approach.	Analysis was undertaken in policy documents relating to ANP authorisation and the experiences of nurses working in ANP positions.	Lack of understanding of the ability of the ANP autonomy implementation was complex. Policy and reality of ANP autonomy lacked clarity. ANP trainees some left the training and returned to general nursing due to the constraints to ANP clinical autonomy.	36

Appendix E. Status for Publication

In revision for publication

Lockwood, E, B. and Lehwaldt, D., Sweeney, M R. 'Development and Testing of a quantitative tool to measure clinical autonomy among advanced nurse practitioners'.

Lockwood, E, B. and Lehwaldt, D., Sweeney, M R. 'Do Advanced Nurse Practitioners practice autonomously - a national study in the Republic of Ireland'.

Post-Doctoral Study Proposal

DCU study: A Global Study comparing levels of Clinical Autonomy among Advanced Nurse Practitioners

Appendix F. Hypothesis Tested H01 – H056.

H01: There is no significant difference between respondents' gender in term of overall 'DPBS and ANPCAPS' intrinsic clinical autonomy.
H02: There is no significant difference between respondents age in term of overall DPBS and ANPCAPS levels of intrinsic clinical autonomy perceptions.
H03: There is no significant difference between respondent's highest academic degree obtained in term of overall DPBS and ANPCAPS levels of intrinsic clinical autonomy perceptions.
H04: There is no significant relationship between respondents' gender and readiness levels of intrinsic clinical autonomy perceptions.
H05: There is no significant relationship between respondents' gender and Empowerment levels of intrinsic clinical autonomy perceptions.
H06: There is no significant relationship between respondents' gender and Actualisation levels of intrinsic clinical autonomy perceptions.
H07: There is no significant relationship between respondents' gender and Valuation levels of intrinsic clinical autonomy perceptions.
H08: There is no significant relationship between respondents' gender and overall DPBS levels of intrinsic clinical autonomy perceptions.
H09: There is no significant relationship between respondents' gender and ANPCAPS levels of intrinsic clinical autonomy perceptions.
H010: 'There is no significant relationship between respondents' gender and 'overall DPBS and ANPCAPS' levels of intrinsic clinical autonomy perceptions.
H011: There is no significant relationship between respondents age and readiness levels of intrinsic clinical autonomy perceptions.
H012: There is no significant relationship between respondents age and Empowerment levels of intrinsic clinical autonomy perceptions.
H013: There is no significant relationship between respondents age and Actualisation levels of intrinsic clinical autonomy perceptions.
H014: There is no significant relationship between respondents age and Valuation levels of intrinsic clinical autonomy perceptions.
H015: There is no significant relationship between respondents age and overall DPBS levels of intrinsic clinical autonomy perceptions
H016: There is no significant relationship between respondents age and ANPCAPS levels of intrinsic clinical autonomy perceptions.
H017: There is no significant relationship between respondents age and 'DPBS and ANPCAPS' levels of intrinsic clinical autonomy
H018: There is no significant relationship between respondent's highest academic degree obtained and readiness levels of intrinsic clinical autonomy.
H019: There is no significant relationship between respondent's highest academic degree obtained and Empowerment levels of intrinsic clinical autonomy.
H020: There is no significant relationship between respondent's highest academic degree obtained and Actualisation levels of intrinsic clinical autonomy.
H021: There is no significant relationship between respondent's highest academic degree obtained and Valuation levels of intrinsic clinical autonomy.
H022: There is no significant relationship between respondent's highest academic degree obtained and overall DPBS levels of intrinsic clinical autonomy.
H023: There is no significant relationship between respondent's highest academic degree obtained and intrinsic levels of ANPCAPS.
H024: There is no significant relationship between respondent's highest academic degree obtained and 'DPBS and ANPCAPS' levels of intrinsic clinical autonomy.
H025: There is no significant relationship between respondent's Years of Experience and Readiness levels of intrinsic clinical autonomy
H026: There is no significant relationship between respondent's Years of Experience and Empowerment levels of intrinsic clinical autonomy
H027: There is no significant relationship between respondent's Yrs. of Experience and Actualisation levels of intrinsic clinical autonomy.
H028: There is no significant relationship between respondent's Yrs. of Experience and Valuation levels of intrinsic clinical autonomy.
H029: There is no significant relationship between respondent's Yrs. of Experience and overall DPBS levels of intrinsic clinical autonomy.
H0:30. There is no significant relationship between respondent's Years of Experience and 'DPBS and ANPCAPs' levels of intrinsic clinical autonomy perceptions.
H031: There is no differences between ANP Groups and DPBS intrinsic levels of ANP clinical autonomy.
H032: There is no differences between ANP Groups and ANPCAPS intrinsic levels of ANP clinical autonomy.
H033: There is no differences between ANP Supervisor levels and DPBS intrinsic levels of ANP clinical autonomy.
H0 34: There is no differences between ANP Supervisor gender and DPBS intrinsic levels of ANP clinical autonomy.
H0 35: There is no differences between ANP Area (Rural/Urban) Characteristics and DPBS intrinsic levels of ANP clinical autonomy.
H036: There is no differences between ANP years of experience levels and DPBS intrinsic levels of ANP clinical autonomy.
H037: There is no differences between ANP years of experience levels and DPBS empowerment levels of ANP clinical autonomy.
H038: There is no differences between ANP years of experience levels and DPBS actualisation levels of ANP clinical autonomy.
H039: There is no differences between ANP years of experience levels and DPBS readiness levels of ANP clinical autonomy.
H040: There is no differences between ANP years of experience levels and DPBS valuation levels of ANP clinical autonomy.
H041: There is no differences between ANP years of experience levels and ANPCAPS 'in my practice I regularly make a treatment plan for my patients' levels of ANP clinical autonomy.
H042: There is no differences between ANP years of experience levels and ANPCAPS 'In my practice I regularly adopt high levels of clinical decision-making skills' levels of ANP clinical autonomy.
H043: There is no differences between ANP years of experience levels and ANPCAPS 'In my practice I regularly complete full episodes of care for my patient without a physician' levels of ANP clinical autonomy.
H044: There is no differences between ANP years of experience levels and ANPCAPS 'In my practice I regularly make an independent diagnosis for my patients' levels of ANP clinical autonomy.
H045 There is no differences between ANP years of experience levels and ANPCAPS 'practising at full clinical autonomy enables confidence in my clinical decision making' levels of ANP clinical autonomy.
H046: There is no differences between ANP years of experience levels and ANPCAPS 'In my practice I regularly discharge patients without a physician consultation' levels of ANP clinical autonomy.
H047: There is no differences between ANP years of experience levels and ANPCAPS 'In my practice I refer patients to other specialities without the need of a physician consultation' levels of ANP clinical autonomy.
H048: There is no differences between ANP years of experience levels and ANPCAPS 'In my practice I regularly take time away from the clinical area to undertake professional development' levels of ANP clinical autonomy.
H049: There is no differences between ANP groups levels and ANPCAPS 'in my practice I regularly make a treatment plan for my patients' levels of ANP clinical autonomy.
H050: There is no differences between ANP groups levels and ANPCAPS 'In my practice I regularly adopt high levels of clinical decision-making skills' levels of ANP clinical autonomy.
H051: There is no differences between ANP groups levels and ANPCAPS 'In my practice I regularly complete full episodes of care for my patient without a physician' levels of ANP clinical autonomy.
H052: There is no differences between ANP groups levels and ANPCAPS 'In my practice I regularly make an independent diagnosis for my patients' levels of ANP clinical autonomy.
H053: There is no differences between ANP groups levels and ANPCAPS 'practising at full clinical autonomy enables confidence in my clinical decision making' levels of ANP clinical autonomy.
H054: There is no differences between ANP groups levels and ANPCAPS 'In my practice I regularly discharge patients without a physician consultation' levels of ANP clinical autonomy.
H055: There is no differences between ANP groups levels and ANPCAPS 'In my practice I refer patients to other specialities without the need of a physician consultation' levels of ANP clinical autonomy.
H056: There is no differences between ANP groups levels and ANPCAPS 'In my practice I regularly take time away from the clinical area to undertake professional development' levels of ANP clinical autonomy.

Appendix G. NMBI Figures.

Dated 6th January 2020
Dear Emily,
I can confirm that there were 409 ANPs and 12 AMPs registered as of 31 December 2019. Unfortunately, I cannot provide you with the candidate statistics at the moment.
Kind regards,
Colm.

Colm O'Leary
Director of Registration and Digitisation

Direct Line 01 639 8575 Mobile 085 870 7644 http://www.nmbi.ie
18/20 Carysfort Avenue, Blackrock, Co Dublin, A94 R299, Ireland.

Bord Altranais agus
Cnáimhseachais na hÉireann
Nursing and Midwifery
Board of Ireland

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Appendix H. NMPDU ANP Candidate Figures

Email Dated 19th October 2020 at 11.34 to emily.lockwood@hse.ie

Hi Emily
Hope all is well with you.
I got an email from Margaret Hickey re numbers of candidates in 2020
We had 4 cANPs at that time
Do come back if there is anything else .. Sheila Cahalane is now lead for advanced practice in the ONMSD and Mary Frances has retired . Sheila's email is sheila.cahalane1@hse.ie and she may be able to assist with national stats
Many thanks
Regards
Mary

Mary Doolan
Registered General Nurse Department of Public Health - Midlands | HSE Area Office | Arden Road | Tullamore | Co. Offaly | R35 TY28 | Tel: 057 93 59891 | Fax: 057 93 59906 | Mobile: 0870982002

Email Dated 13th October 2020 at 10.08 to emily.lockwood@hse.ie

Dear Emily,
I have looked through my databases and calculate that in March 2020 there were 15 cANPs in the NMPDU South (Cork/Kerry) area. These include all disciplines.
Best wishes with your study
Aoife

Aoife Lane Ph.D, MSc (Econ), BNS, RNT, RGN
NMPD Officer
Nursing and Midwifery Planning and Development, HSE South,
Administration Building, St. Mary's Health Campus, Gurranabraher, Cork, Eircode T23X440
T. 021 49 21261
Mob. 087 698 4752
E. aoife.lane@hse.ie

Email Dated 13th October 2020 at 15.54 to emily.lockwood@hse.ie

We have 10 anps official candidates in southeast . Eithna

Project Officer

Professional Coach & mBIT coach
NMPD
Office Complex
Kilcreene Hospital
Co. Kilkenny
0860412070
0567785628
Eithna.Coen@hse.ie @NMPDUKilkenny NMPDU South East

Email Dated 13th October 2020 at 10.38 to emily.lockwood@hse.ie

Dear Emily

I refer to your query in relation to Population sample of candidate ANPs and apologies I am only responding to you now, I was off leave.

I can confirm that in NMPDU NW area there were 10 candidates ANPs in March 2020.

If you have any queries please do not hesitate to contact me.

Kind Regards
Ann-Marie
Ms Ann-Marie Fox
Nurse Planning & Development Unit/HSE West

Appendix I. Ethical Approval Letter DCU

Ollscoil Chathair Bhaile Átha Cliath
Dublin City University

Ms. Emily Lockwood School of Nursing, Psychotherapy and Community Health
Dr. Daniela Lehwaldt
School of Nursing, Psychotherapy and Community Health
17th February 2020 REC Reference: Proposal Title: Applicant(s)
Dear Colleagues,
DCUREC/2020/013
'An Exploration of Advanced Nurse Practitioner Clinical Autonomy in Ireland'
Ms. Emily Lockwood and Dr. Daniela Lehwaldt.
Further to expedited review, the DCU Research Ethics Committee approves this research proposal.
Materials used to recruit participants should note that ethical approval for this project has been obtained from the Dublin City University Research Ethics Committee.
Should substantial modifications to the research protocol be required at a later stage, a further amendment submission should be made to the REC.
Yours sincerely,
Dr Geraldine Scanlon Chairperson
DCC Research Ethics Committee

Taighde & Nuálaíocht Tacaíocht
Ollscoil Chathair Bhaile Átha Cliath,
Baile Átha Cliath, Éire

Research & Innovation Support
Dublin City University,
Dublin 9, Ireland

T +353 1 700 8000
F +353 1 700 8002
E research@dcu.ie
www.dcu.ie

Appendix J. Chief Operations Officer DCU Data Protection

Data Protection of the survey and DCU google form Mr Noel Prior 20th December at 15.38

Good afternoon Emily

Just to confirm a few points after our discussion earlier:

1) If the online survey is entirely anonymous then the data protection risk is low. You will need to inform participants that the survey is anonymous and that they should not submit any personal information (either about themselves or others) via the survey answers.

2) If you intend to use Google Forms then ask ISS (via a ticket) for help with setting it up in a secure manner. The important thing to ensure is that the option within Google forms to see other participants submissions is switched off (i.e. one participant must not be able to see anyone else's responses to the survey).

3) If the research proceeds to a stage where you are obtaining personal data from research participants (i.e. interviews, voice/video recordings etc) then this will invoke additional safeguards as you will be processing personal data. Please contact data.protection@dcu.ie in advance of doing so for guidance.

Good luck with your research.

Noel

Noel Prior | Risk and Compliance Unit
Office of the Chief Operations Officer
Oifig an Phríomhoifigigh Oibríochtaí

Room A241 (Finance Office)
2nd Floor | Albert College Extension
DCU Glasnevin Campus | Collins Avenue Extension
Dublin 9 | D09 V209

Phone: 01-7008706 / 01-7006486 | Email: noel.prior@dcu.ie

Links to University Webpages | Naisc de chuid na hOllscolie
Office of the Chief Operations Officer | Risk and Resilience | Data Protection
University Policies | Ombudsman Liaison | Campus Development Plan

Appendix K. Chief Operations Officer DCU Personal Data

Mr Noel Prior PDSS Advice.

Dated 7th January 2020 at 09.37am

Good morning Emily

Generally, a PDSS for a research project is only needed where personal data is obtained, processed or held as part of the research.

If you are obtaining details / facts about or from individuals that is not anonymised then preparing a PDSS is recommended. However, if all the data obtained is anonymised then it cannot be 'personal data' and so a PDSS will not be necessary.

If your research is purely on anonymised data then it is very important that the data is truly anonymised, not just superficially. Basically if you can by any means link any attribute in an anonymised dataset to a living individual then it cannot be deemed anonymised and therefore all the data protection issues will have to be addressed and safeguards provided. These are documented in a PDSS. The link below to a website section on PDSSs will assist.

Good luck with your research.

Noel

https://www.dcu.ie/ocoo/dp/guides.shtml

Noel Prior | Risk and Compliance Unit
Office of the Chief Operations Officer
Oifig an Phríomhoifigigh Oibríochtaí

Room A241 (Finance Office)
2nd Floor | Albert College Extension
DCU Glasnevin Campus | Collins Avenue Extension
Dublin 9 | D09 V209

Phone: 01-7008706 / 01-7006486 | Email: noel.prior@dcu.ie

Links to University Webpages | Naisc de chuid na hOllscolie
Office of the Chief Operations Officer | Risk and Resilience | Data Protection
University Policies | Ombudsman Liaison | Campus Development Plan

Appendix L. Director of NMPDU Consent Circulate the Survey

Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

Nursing & Midwifery Planning & Development Unit
HSE South-SE
Office Complex
Kilcreene Hospital Grounds, Kilkenny

Tel: 353 56 7785620
Email: nmpdukilkenny@hse.ie

19 December 2019 **JR/MH/31**

Re: Emily Lockwood PhD T DCU Researcher: Topic: 'An Exploration of Advanced Nurse Practitioner Clinical Autonomy in Ireland'

Dear Sir/Madam,

This is to confirm the Director of NMPDU Kilkenny had agreed with Ms Emily Lockwood to circulate (email) the following to all ANPs in Ireland and forward to all other Directors of NMPDU in Ireland for circulation:

1. Pilot phase
2. Validation form
3. Plain statement information about the study
4. Online link to questionnaire

We understand the decision to answer or decline the questionnaire lies with the ANP.

Yours sincerely

Director, Nursing and Midwifery Planning and Development Unit HSE-SE

Nursing & Midwifery
Planning & Development Unit
South East

Appendix M. Flyer Circulated by the NMPDU for Validation Tool Testing & Piloting

Appendix N. Complete Survey

'An Exploration of Advanced Nurse Practitioner Clinical Autonomy in Ireland: A National Study'

Please click on the link and read the plain language statement

Plain Language Statement here (via link)
Plain Language Statement

'An Exploration of Advanced Nurse Practitioner (ANP) Clinical Autonomy in Ireland'

Hello my name is Emily Lockwood and I am currently undertaking a PhD programme at the Dublin City University (DCU) School of Nursing, Psychotherapy and Community Health. I am also a registered ANP in Ireland. I am looking for your help with my research study. For the study, you will need to fill out an online survey.

Below are some questions answered that you might consider when deciding if you want to participate in this study or not.

About the Study and what is it about?
I am interested in finding out the factors related to ANP Clinical Autonomy. In order to gather the information I am inviting all ANPs in Ireland to complete this survey. I am asking you to complete an online survey with the attached link to the survey. There are three sections.
Section 1 seeks demographic information about you.
Section 2 is the Dempster Practice Behavioural scale.
Section 3 is a Clinical Autonomy subscale that will ask you some questions about ANP clinical autonomy and there is one open-ended question for any additional comments.

Who can Participate in the Study?
All ANPs working in Ireland are invited to take part in the study.

Implications for Participants and Privacy
I want to reassure you that your privacy is protected as the information that you give will be dealt with the confidence of anonymity. There will be no personal identifier on the survey. Participation in this study is on a voluntary basis, which means you can decide if you want to complete it or not

Advice as to arrangements to be made to protect confidentiality of data, including that confidentiality of information provided is subject to legal limitations
It is important that you are aware of confidentiality of information provided cannot always be guaranteed by researchers and can only be protected within the limitations of the law it is possible for data to be subject to subpoena, freedom of information claim or mandated reporting by some professions. However, the risk has been advised by the DCU chief operations officer to be low due to the anonymity of the survey.

Personnel Data GDPR Compliance is there a Risk?
I have discussed with the DCU Office of the Chief Operations Officer and there is no risk to GDPR as the survey is anonymous. I do not wish to have any of your personal data.

Please DONOT include any personnel information such as, for example, personal details or NMBI Pin Number

How Will the Data Used be Disposed Of?
The data you provide will be password protected. Only myself as the researcher and my supervisors will have access to the data. Data will be destroyed after five years, after the study is completed. There are no legal implications of data confidentiality as the data is anonymous.

Benefits of Taking Part in the Study?
By taking part in this study, you will help with developing a clearer understanding of ANP clinical autonomy in Ireland.

What are the Risks of Taking Part in This Study?
I do not envisage any risks to your taking part in this study as the survey is anonymous. The survey will take approximately 10-15 minutes to complete.

If I change my mind?
You can withdraw from the study at any time during the online survey, without giving an explanation and without any problems.

How will I find out about the study?
It is envisaged that the data collected will be analysed and published. There is NO GDPR issues for this study as personnel Data is not collected and the survey is anonymous. Additionally, I will complete a short report of the study findings at the end of the study. The report will be available at the NMPDU Kilkenny (judy.ryan@hse.ie).

If you have any questions about this study my contact details are as follows:
Emily.lockwood2@mail.dcu.ie and mobile: 0864186147. My Principle Supervisor is: Dr Daniela Lehwaldt (Daniela.lehwaldt@dcu.ie)
Funding for this study is as follows: 50% funding from the NMPDU and 50% Funded by the Principle Researcher Ms Emily Lockwood as part of her PhD study.

If you have any concerns about this study and wish to contact an independent person,
please contact:

The Secretary, Dublin City University Research Ethics Committee, c/o Research and Innovation Support, Dublin City University, Dublin 9. Tel 01-7008000, e-mail rec@dcu.ie

At the beginning of the online survey you will be asked as follows: to complete a plain language statement and consent prior to completing the survey and proceeding to the online survey.

The Date will be recorded when completed online. The below information will be asked in regard to consent.

I have read and understand the plain language information and about the study: 'A National Study: An Exploration of Advanced Nurse Practitioner Clinical Autonomy in Ireland'.

Do you consent to undertake this online survey please tick: 'yes', or, 'no'. If no then thank you for your time to date it is your right to not participate in this study and there are no consequences of such.

If you the participant click, 'yes', informed consent will be informed.

The participant can only continue to the survey when the plain language statement in the survey is completed.

Thank you for your time.

Section 2: Following the ANP reading the plain language statement link consent was requested as below.

I Have read and understand the plain language information about the study: An Exploration of Advanced Nurse Practitioner Clinical Autonomy in Ireland.
Do you consent to

Yes
No
If No: Thank you for considering this survey. If you are here by mistake please start again by selecting 'Back' below. Otherwise, thank you for your time.

Section 3: Demographics

To which gender do you identify?
Female
Male
Other

Please Fill out your age (years) Tick ONE box only
<31
32-40
41-50
51-60

Please select your years Registered/Accredited as an ANP with NCNM (prior to NMBI) or NMBI- Tick ONE box only

years
years
3-4 years
5-10 years
11-20 years
More than 20 years

Highest academic degree obtained – Tick ONE box only

Master in Nursing Clinical Practice
Master in Nursing Advanced Clinical Practice
Research Master's Degree
Doctor of Philosophy (PhD)
Doctor of Nursing Practice (DNP)
Other please include

Current ANP Position
ANP Emergency Paediatric and Adults
ANP Emergency Adults
ANP Emergency Paediatric
ANP Injury Unit Adult
ANP Acute Care
ANP Primary Care
ANP Elderly (Acute/Primary)
ANP Public Health
AMP
ANP Candidate
AMP Candidate
Other ANP Role please include

What BEST REPRESENTS the setting in which you are currently employed - Tick ONE box only

Public Voluntary Hospital HSE Hospital HSE Hospital and Primary Care Primary Care Non HSE Private Hospital Other

What BEST REPRESENTS the characteristic area in which you are currently employed - Tick ONE box only

Rural Ireland Urban Ireland

What BEST REPRESENTS the Health Region in which you are currently employed - Tick ONE box only (please refer to this map - https://www.hse.ie/eng/services/news/newsfeatures/health-regions/health-regions-map.pdf)

Section 4: What BEST REPRESENTS your Main Supervisors - Tick ONE box only

Physician
ANP/AMP
Both

What BEST REPRESENTS your Physician or ANP Supervisor's / Supervisors' Gender - Tick as many as appropriate
Female
Male
Both
Other

Section 5 of 8
DEMPSTER PRACTICE BEHAVIOURAL SCALE (DPBS) (DEMPSTER, 2010).
Please CAREFULLY read and think about EACH statement below. For each statement, mark the response that BEST indicates how TRUE that statement is for you.

DPBS

Please CAREFULLY read and think about EACH statement below.

For each statement, mark the response that BEST indicates how TRUE that statement is for you.

IN MY PRACTICE I . . .	NOT AT ALL TRUE 1	SLIGHTLY TRUE 2	MODERATELY TRUE 3	VERY TRUE 4	EXTREMELY TRUE 5
1 . . . take responsibility and am accountable for my actions.					
2 . . . have developed the image of myself as an independent professional.					
3 . . . base my actions on the full scope of my knowledge and ability.					
4 . . . self-determine my role and activities.					
5 . . . derive satisfaction from what I do.					
6 . . . take control over my environment and situations I confront.					
7 . . . am valued for my independent actions.					
8 . . . am constrained by bureaucratic limitations.					
9 . . . provide quality services through my actions.					
10 . . . am confident in my abilities to perform my role independently.					
11 . . . have been professionally socialized to take independent action.					
12 . . . function with the authority to do what I know should be done.					
13 . . . have too many routine tasks to exercise independent action.					
14 . . . have a sense of professionalism.					
15 . . . have the rights and privileges I deserve.					
16 . . . have the professional experience needed for independent action.					
17 . . . am restrained in what I can do because I am powerless.					
18 . . . collaborate with others outside my field when I feel there is a need.					
19 . . . derive feelings of self-respect and esteem from what I do.					
20 . . . make my own decisions related to what I do.					
21 . . . possess ownership of my practice; that is, my role belongs to me.					
22 . . . have the power to influence decisions and actions of others.					
23 . . . have a sense of self-achievement.					
24 . . . am provided with a legal basis for independent functioning.					
25 . . . demonstrate mastery of skills essential for freedom of action.					
26 . . . have my activities and actions programmed by others.					
27 . . . have the respect of those in other disciplines.					
28 . . . cannot optimally function because I do not have legal status.					
29 . . . establish the parameters and limits of my practice activities.					
30 . . . accept the consequences for the choices I make.					

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Section 6 of 8

Advanced Nurse Practitioner Clinical Autonomy in Practice Survey (ANPCAPS). ANP Clinical autonomy can be described as independence, practising as professionals in their own right, not controlled by others and self-determination (Dempster, 1994; Turner, Keyzer and Rudge, 2007).

This Section is in regard to your individual ANP Clinical Autonomy. Please complete all questions.

Advanced Nurse Practitioner Clinical Autonomy Practice Scale 'ANPCAPS'.

Likert: Strongly Agree, Disagree, Agree, Strongly Agree

In my practice I … …

1.function to the full capacity of my registration as an ANP

2.regularly discharge patients without a physician's consultation

3. regularly complete full episodes of care for patients without a physician

4.refer patients to other specialities without the need of a physician's consultation

5. regularly make an independent diagnosis for patients

6. am constrained in my clinical autonomy practice due to my organisation

7. regularly make a treatment plan for patients

8. can request all diagnostic tests I need for patients as part of their treatment plan if required

9. adopt high levels of independent clinical decision-making skills

10. my gender impacts on me positively at the level of clinical autonomy with which I am trusted

11. adopt high levels of clinical leadership which influences and guides other members of the organisation

12. consider that my clinical autonomy as an ANP enables confidence in my clinical decision-making skills

13. am involved in organisational management decisions about advanced nursing practice

14. can prescribe all medications I need for patients if required

15. regularly take time away from the clinical area to undertake research

16. regularly take time away from the clinical area to undertake professional development

17. am constrained in my ANP clinical autonomy practice due to other health professionals

Section 7 of 8

Additional Comments

If you have any other comments about this survey contents or any comments about the survey contents or anything else in regard to ANP clinical autonomy please include below.

Long-text answer

I know You're Really Busy Especially with the Recent COVID 19

SO Thank you So Very Much for Completing this Survey – Stay Safe!!

Appendix O. DPBS Authors Permission to use DPBS

---------- Forwarded message ---------
From: Kimberly Dempster-Gonzalez <DPBS@cox.net> Date: Wed 6 Nov 2019 at 05:00
Subject: RE: Dempster Practice Behavioural Scale
To: Emily Lockwood <emily.lockwood@dcu.ie>
Cc: Emily Lockwood <emily.lockwood2@mail.dcu.ie>
Ms. Lockwood –
Thank you for emailing regarding Dr. Dempster's research tool. Thank you for your condolences. Unfortunately, as you know, Dr. Dempster passed away in November 2016. I now administer the DPBS on her behalf, managing and administering all future requests for and use of the DPBS. Please feel free to contact me via this email address dpbs@cox.net in the future for business related to the DPBS.
With this email, I am granting you permission on Dr. Dempster's behalf to use the DPBS for your research. Attached for your use, please find a copy of the DPBS tool and it's corresponding description and information. Once your research is completed, the author of the DPBS also requests 1) a summary of validity and reliability of the DPBS resulting from its use in a study; 2) outcomes of any study completed that included the DPBS; and 3) information on any publications or papers that result from such studies.
Dr. Dempster would be very pleased that you are using the DPBS for your research in Dublin (one of our favourite cities!) and Ireland. I wish you luck in your scholastic endeavours.
Thank you!
Kimberly Dempster-Gonzalez
On Behalf of Dr. Judith S. Dempster, DNSc, FNP, FAANP Peoria, Arizona USA
Email dpbs@cox.net

Appendix P. ANPCAPS Items 31 Original Subscale

No.	ANPCAPS Questions
1	I am clinically autonomous
2	I have a collaborative relationship with my physician colleagues
3	I have a submissive relationship with my physician colleagues
4	I regularly discharge patients without a physician's consultation
5	I always consult a physician prior to discharging patients
6	I regularly complete full episodes of care for patients without the need of a physician's consultation
7	I can refer patients to other specialities without the need of a physician's consultation
8	I regularly complete a full physical examination
9	I regularly make independent diagnosis
10	I regularly make an independent treatment plan
11	I have high levels of job satisfaction in my role as an ANP
12	I am regularly involved in Clinical Supervision with my medical colleagues
13	I am regularly involved in Clinical Supervision with my ANP colleagues
14	I regularly teach medical staff
15	I regularly teach nursing staff
16	I have an element of trust with my clinical supervisors who is/are a physician/s
17	I have an element of trust with my clinical supervisor who is/are ANP/s
18	I often adopt assertiveness in my clinical practice with my nursing colleagues
19	I often adopt assertiveness in my clinical practice with my medical colleagues
20	I often adopt submissiveness in my clinical practice with my nursing colleagues
21	I often adopt submissiveness in my clinical practice with my medical colleagues
22	As an ANP there is a lack of knowledge of my clinical autonomy
23	As an ANP I have no restrictions to my clinical autonomy
24	As an ANP and nurse prescriber of medications I can prescribe all medications I need for my patients as part of their treatment plan
25	As an ANP I can request all X-Rays I need for patients as part of their treatment plan if required
26	As an ANPs I can request all CTs I need for patients as part of their treatment plan if required
27	As an ANP I can request all Ultrasounds I need for patients as part of their treatment plan if required
28	As an ANP I can request all Bone Scans I need for patients as part of their treatment plan if required
29	As an ANPs I can request all MRIs I need for patients as part of their treatment plan if required
30	I often feel dominated in my clinical decision-making skills by my physician
31	Please include any additional comments you feel are important to ANP/AMP clinical autonomy below:

Appendix Q. CVI Index Instructions & Scoring To Panel of Experts

Thank you so much for agreeing to participate in this tool development I really appreciate how busy you are.
'ANP Clinical autonomy can be described as independence, practising as professionals in their own right, not controlled by others and self-determination' (Dempster, 1994; Turner, Keyzer and Rudge, 2007).
Please see the attached link with the list of statements regarding ANP clinical autonomy.
These statements have been generated from a review of the literature and discussion with experts in the field of ANP.

Firstly please read the 17 items about ANP clinical Autonomy listed.

Secondly the table is organised into 5 columns; A, B, C, D and E. Column A: is a list of items; presented in column A are items (statements) generated from a review of the literature. These items represent findings from one or a number of studies and discussion with expert advisors of ANP. Please read each statement carefully. Below is the key to the answers you will be asked. You can click on the online answer.

Key	1 = Not Relevant	1 = Not Relevant	1 = Not Relevant	1 = Not Clear	1 = Not Necessary	1 = Yes
	2 = Somewhat Relevant	2 = Somewhat Relevant	2 = Somewhat Relevant	2 = Somewhat Clear	2 = Useful but not Essential	
	3 = Quite Relevant	3 = Quite Relevant	3 = Quite Relevant	3 = Quite Clear		2 = No
	4 = Highly Relevant	4 = Highly Relevant	4 = Highly Relevant	4 = Highly Clear	3 = Essential	

Column 1: Item consistency: please read each item in ANPCAPS items and indicate whether the item is clear or unclear by clicking your choice.

Column 2: Item representative: please read each item in ANPCAPS items and indicate whether the item is clear or unclear by clicking your choice.

Column 3: Item relevance: please read each of the ANPCAPS items and indicate whether the item is clear or unclear by clicking your choice.

Column 4: Item clarity: please read each of the ANPCAPS items and indicate whether the item is clear or unclear by clicking your choice.

Column 5: Item clarity: please read each of the ANPCAPS items and indicate whether the item is clear or unclear by clicking your choice.

Column 6: Overall Validity of the Survey: please read each of the ANPCAPS items and indicate whether they are relevant (yes) or not (no) please click the answer on the google document.

Additional Comments: There is a section at the end of the survey form if you need to add additional comments based on your review of the items.

Additional Questions at the end of the google document

Appendix R. Piloting Survey Instructions for Pilot Participants

There is a table below with a list of statements regarding ANP Clinical Autonomy at the start of the pilot session. On the second page there are a list of questions for you to answer. Finally there is a link to complete the online survey please time yourself when completed and please additionally answer the questions below the linked survey.
Please read each statement carefully.

Relevance; please read each item and indicate whether the item is relevant to what is being measured (ANP Clinical Autonomy) by choosing a number between 1 and 4

Clarity; (is the question easy to understand, or does it need to be changed) please read each item and indicate whether the item is clear or unclear by choosing a number between 1 and 3

Consistency; (please indicate whether the items are measuring the same thing) please review all the items and indicate whether the items collectively appear to measure the ANP Clinical Autonomy by indicating 1 = yes or 2 = no. Additional
Related to the topic?

Essential to the Topic?
Comments: There is a section at the end of the reviewers form for additional comments. If you indicate that a question is not relevant or some changes are needed for clarity for example, please indicate how the item could be improved.
See below example of how to compete the review for one of the statements.

Also, please answer the questions and click on the answer in the google form document emailed to you.

1.Did you find the format of the survey easy or difficult? If difficult, please explain

2.If you found any of the questions not relevant to ANP clinical autonomy or difficult to understand, how would you change the questions in order to make them better?

3.If this was your survey, are there any questions you would get rid of? If so, which questions and why?

4.If this was your survey, are there any questions you would add? If so, please write them down.

Appendix S. Scoring System

The scoring system for the DPBS and ANPCAPS

ANPCAPS (Lockwood, Lehwaldt and Sweeney) 2022

Step 1: The maximum score that can be obtained in this 17-item section is 68 (17x4). The minimum score which can be obtained is 17 (17x1). The difference between the maximum and the minimum score is 51 (68-17). 1 is added to this difference, which forms a total score of 52 (51+1).

Step 2: Four classes are required (the negative perception class (Strongly Disagree and Disagree) and the positive perception class (Agree and Strongly Agree). The range of scores for the four categories which will make up each of the classes (69 divided by 4 (representing 4 categories) equals 17.25 (rounded to 17). Thus, each of the 4 categories comprises a range of 17 scores.

Step 3: The minimum score for the Strongly Disagree perception category is 17 (17x1). The maximum score for this category is the lowest score (17) added to 16 (17-1), so any score between (1-17) will be interpreted as Strongly Disagree perception.

Step 4: To determine the range of scores for the Disagree perception category, following the maximum score for the previous category (the Strongly Disagree perception category) becomes the minimum score for this category, that is, 18. The maximum score for this category is 34 (18+16).

Step 5: To determine the range of scores for the Agree perception category, the next integer following the maximum score for the previous category (the Disagree perception category) becomes the minimum score for this category, that is, 35. The maximum score for this category is 61 (35 + 16).

Step 6: To determine the range of scores for the Strongly Agree perception category, the next integer following the maximum score of the previous category (the Agree perception category) becomes the minimum score for this category, that is, 62. The maximum score for this category is 68. **ANPCAPS (Lockwood, Lehwaldt and Sweeney 2022).**

Scoring for ANPCAPS

Below reveals the range of scoring that represents the four categories determined due to the procedures established by Runyon and Haber (1991).

Interpretation	**Score**
Strongly Disagree	1-17
Disagree	18-34
Agree	35-61
Strongly Agree	62-68

Interpretation of Scores for ANPCAPS

Step 1: The maximum score that can be obtained in this 18-item section is 150 (30 x 5). The minimum score which can be obtained is 30 (30 x 1). The difference between the maximum and the minimum score is 120 (150 – 30). 1 is added to this difference, which forms a total score of 121 (120 + 1).

Step 2: five classes are required (the Not at all True, Slightly True, Moderately True, Very True, and Extremely True perception class). The range of scores for the five categories which make up each of the classes, (121 divided by 5 [representing the five categories] equals 24.2 (rounded down to 24). Thus, each of the five categories comprises a range of 24 scores.

Step 3: The minimum score for the Not at all True perception category is 30 (30 x 1). The maximum score for this category is the lowest score (30) added to 23 (24 – 1), so any score between (30-53) will be interpreted as Not at all True

Step 4: To determine the range of scores for the Slightly True perception category, the next integer following the maximum score for the previous category (the Not at all True perception category) becomes the minimum score for this category, that is, 54. The maximum score for this category is 77 (54 + 23).

Step 5: To determine the range of scores for the Moderately True perception category, the next integer following the maximum score for the previous category (the Slightly True perception category) becomes the minimum score for this category, that is, 78. The maximum score for this category is 101 (78 + 23).

Step 6: To determine the range of scores for the Very True perception category, the next integer following the maximum score of the previous category (the Moderately True perception category) becomes the minimum score for this category, that is, 102. The maximum score for this category is 125 (102 + 23).

Step 7: To determine the range of scores for the Extremely True perception category, the next integer following the maximum score of the previous category (the Very True perception category) becomes the minimum score for this category, that is, 126. The maximum score for this category is 150.

Runyons & Haber's Procedure for DPBS

Below reveals the range of scoring that represents the five categories determined as a result of the procedures established by Runyon and Habber (1991).

Interpretation (by category)	**Score**
Not at all True	30-53
Slightly True	54-77
Moderately True	78-101
Very True	102-125
Extremely True	126-150

Interpretation of Scores for DPBS Perceptions

Other Qualifications	Frequency	Percentage
MSc in Mental Health	1	0.7
MSc Epilepsy	1	0.7
Masters in Pain Management	1	0.7
Masters (in specialist area)	1	0.7
Master Nursing Studies/Certificate in Advanced Practice	1	0.7
Doctorate Psychotherapy	1	0.7
Doctor of Nursing	1	0.7

Respondents Highest Academic Degree

	Mean	SD	Frequency	Percentage
ANP Injury Unit			9	6.1
ANP Emergency			41	27.7
ANP General Medicine	5.27	1.802	3	2.0
ANP Acute Care			23	15.5
Other			72	48.7
Other			Frequency	Percentage
ANP Candidate			7	4.7
ANP Cardiology			5	3.4
ANP Dermatology			1	0.7
ANP Epilepsy (Integrated Care)			5	3.4
ANP Gastroenterology			5	3.4
ANP Medical Oncology			6	4.1
ANP Mental Heath			5	5.4

ANP Neonatal	4	2.7
ANP Neurology	1	0.7
ANP Neurology (Integrated Care)	1	0.7
ANP Older Persons (Integrated Care)	12	8.1
ANP Orthopaedic	2	1.4
ANP Respiratory	3	2.1
ANP Respiratory (Primary Care/integrated Care)	1	0.7
ANP Secondary Care	1	0.7
ANP Integrated Care (Primary Care non HSE)	2	1.4
ANP Paediatric Ambulatory Care	1	0.7
ANP Rheumatology	5	3.4
ANP Primary Care	1	0.7
ANP Mental Health Community	3	2.1
ANP Urology	1	0.7

Other ANP Position

Other	Frequency	Percentage
Voluntary Sector Intellectual Disability	1	0.7
University	1	0.7
Respiratory Integrated Care	1	0.7
Primary Care HSE	1	0.7
Older persons integrated care	1	0.7
Neonatology	1	0.7
HSE OPD	1	0.7
HSE Community Mental Health	3	2.1
ANP neurology (MND and MS)	1	0.7

ANP Employment Setting

Readiness Statements		Mean	SD	Score	Rank
Q7	In my Practice I am valued for my independent actions.	4.38	0.965	131	1st
Q2	In my Practice I have developed the image of myself as an independent professional.	4.35	0.522	146	2nd
Q27	In my Practice I have the respect of those in other disciplines.	4.35	1.027	142	3rd
Q11	In my Practice I have been professionally socialised to take independent action.	4.14	0.921	113	4th
Q6	In my Practice I take control over my environment and situations I confront.	4.09	0.755	144	5th
Q12	In my Practice I function with the authority to do what I know should be done.	4.06	0.836	94	6th
Q22	In my Practice I have the power to influence decisions and actions of others.	4.05	0.948	112	7th
Q4	In my Practice I self-determine my role and activities.	3.99	0.522	140	8th
Q29	In my Practice I establish the parameters and limits of my practice activities.	3.99	0.981	117	9th
Q21	In my Practice I possess ownership of my practice; that is, my role belongs to me.	3.89	1.005	132	10th
Q20	In my Practice I make my own decisions related to what I do.	3.84	0.870	149	11th
Total		4.10	0.981	Very True	

*DPBS Readiness Means, SD, **Scores** & Ranks*

Empowerment statements		Mean	SD	Score	Rank
Q28	In my Practice I cannot optimally function because I do not have legal status.	4.25	1.029	111	1st
Q17	In my Practice I am restrained in what I can do because I am powerless.	4.06	1.202	131	2nd
Q24	In my Practice I am provided with a legal basis for independent functioning.	4.05	0.921	116	3rd

Q13	In my Practice I have too many routine tasks to exercise independent action.	3.79	1.150	134	4th
Q15	In my Practice I have the rights and privileges I deserve.	3.54	1.121	121	5th
Q26	In my Practice I have my activities and actions programmed by others.	3.37	1.197	130	6th
Q8	In my Practice I am constrained by bureaucratic limitations.	2.81	1.290	140	7th
Total		3.70	1.130	Very True	

*DPBS Empowerment Means, SDs, **Scores** & Ranks.*

Actualisation statements		Mean	SD	Score	Rank
Q1	In my Practice I take responsibility and am accountable for my actions.	4.72	.522	141	1st
Q3	In my Practice I base my actions on the full scope of my knowledge and ability.	4.72	.522	107	1st
Q30	In my Practice I accept the consequences for the choices I make.	4.70	.613	145	3rd
Q9	In my Practice I provide quality services through my actions.	4.64	.585	112	4th
Q14	In my Practice I have a sense of professionalism.	4.60	.678	126	5th
Q18	In my Practice I collaborate with others outside my field when I feel there is a need.	4.60	.592	136	5th
Q10	In my Practice I am confident in my abilities to perform my role independently.	4.43	.720	130	7th
Q16	In my Practice I have the professional experience needed for independent action.	4.37	.776	126	8th
Q25	In my Practice I demonstrate mastery of skills essential for freedom of action.	4.16	.822	125	9th
TOTAL		4.55	0.648	Extremely True	

*DPBS Actualisation Means, SDs, **Scores** and Ranks.*

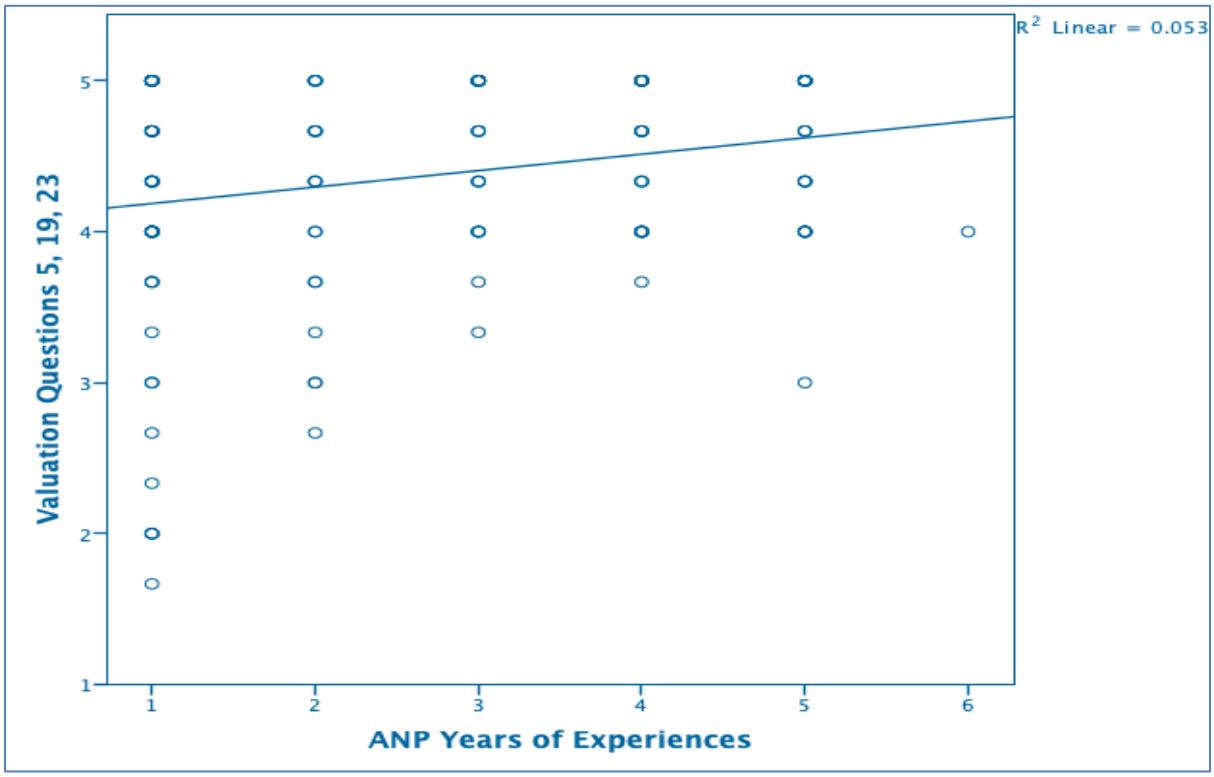
Valuation statements		Mean	SD	Score	Rank
Q5	In my Practice I derive satisfaction from what I do.	4.51	0.769	119	1st
Q23	In my Practice I have a sense of self-achievement.	4.34	0.821	121	2nd
Q19	In my Practice I derive feelings of self-respect and esteem from what I do.	4.27	0.862	124	3rd
Total		4.37	0.817	Extremely True	

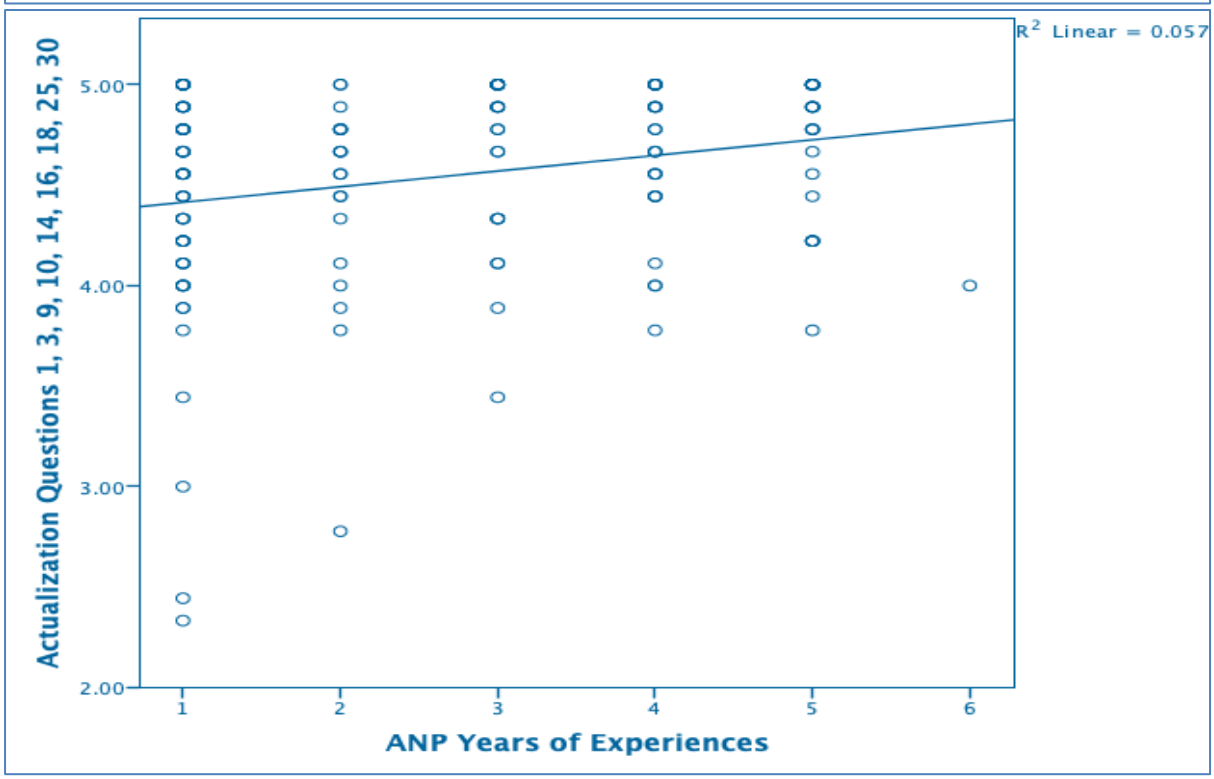
*. DPBS Valuation Means, SD, **Scores** & Ranks*

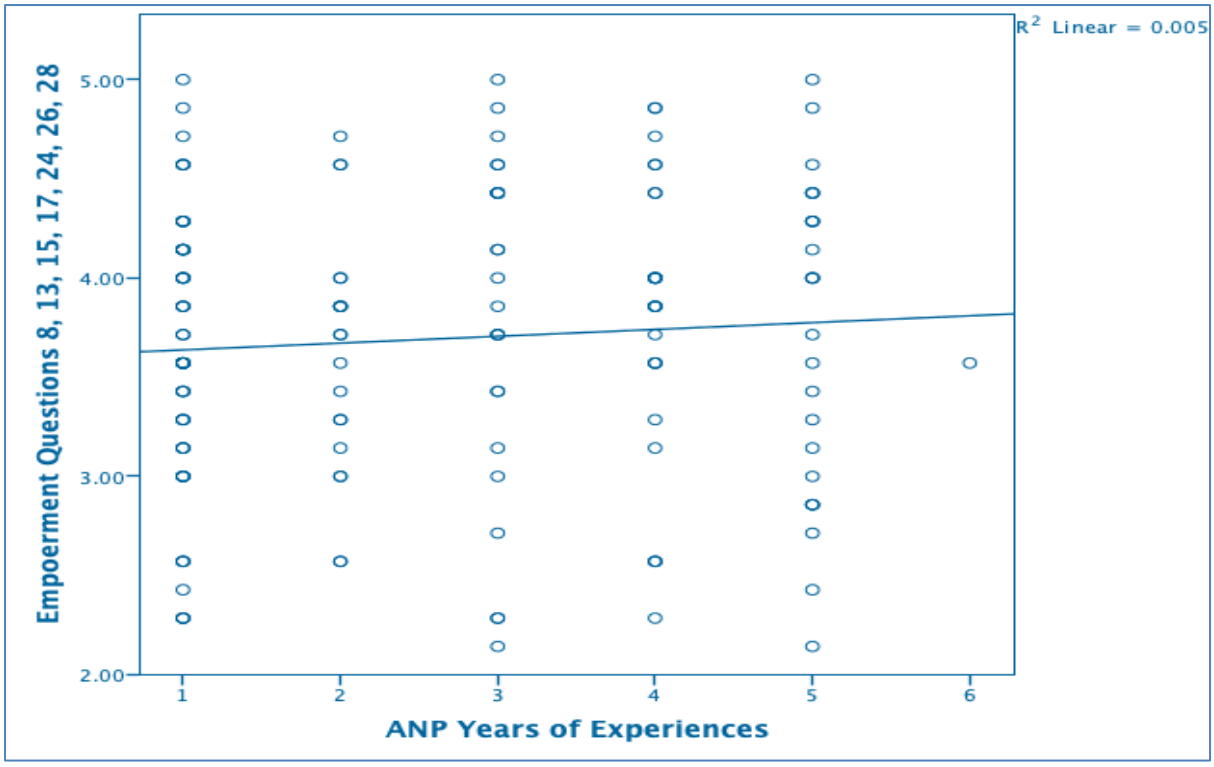
ANPCAPS	**Mean**	**SD**	**Score**	**Rank**
Q7. In my practice I regularly make a treatment plan for patients.	3.75	0.546	54	1st
Q9. In my practice I adopt high levels of clinical decision-making skills.	3.61	0.634	53	2nd
Q3. In my practice I regularly complete full episodes of care for patients without a physician.	3.49	0.821	57	3rd
Q5. In my practice I regularly make an independent diagnosis for patients.	3.49	0.751	56	4th
Q12. In my practice I practice at full ANP clinical autonomy which enables confidence in my clinical decision-making skills	3.48	0.622	51	5th
Q4. In my practice I refer to other specialities without the need of a physician's consultation.	3.37	0.867	55	6th
Q11. In my practice I adopt high levels of clinical leadership which influences and guides other members of the organisation.	3.36	0.66	48	7th
Q2. In my practice I regularly discharge patients without a physician's consultation.	3.25	0.925	55	8th
Q1. In my practice I practice to the full capacity of my registration as an ANP.	3.18	0.841	59	9th
Q14. In my practice I can prescribe all medications I need for patients if required.	2.92	1.06	28	10th
Q13. In my practice I am involved in organisational management decisions about ANP.	2.66	0.967	46	11th
Q16. In my practice I regularly take time away from the clinical area to undertake professional development.	2.57	0.89	52	12th
Q17. In my practice I am constrained in my ANP clinical autonomy practice due to other health professionals.	2.47	1.072	52	13th
Q8. In my practice I can request all diagnostic tests I need for patients as part of their treatment plan if required.	2.32	1.077	45	14th
Q6. In my practice I am constrained in my clinical autonomy practice due to my organisation.	2.30	1.007	48	15th
Q15. In my practice I regularly take time away from the clinical area to undertake research.	1.95	0.928	58	16th
Q10. In my practice my gender impacts on me positively at the level of clinical autonomy with which I am trusted.	1.90	0.953	50	17th
Total	2.95	0.860		Agree

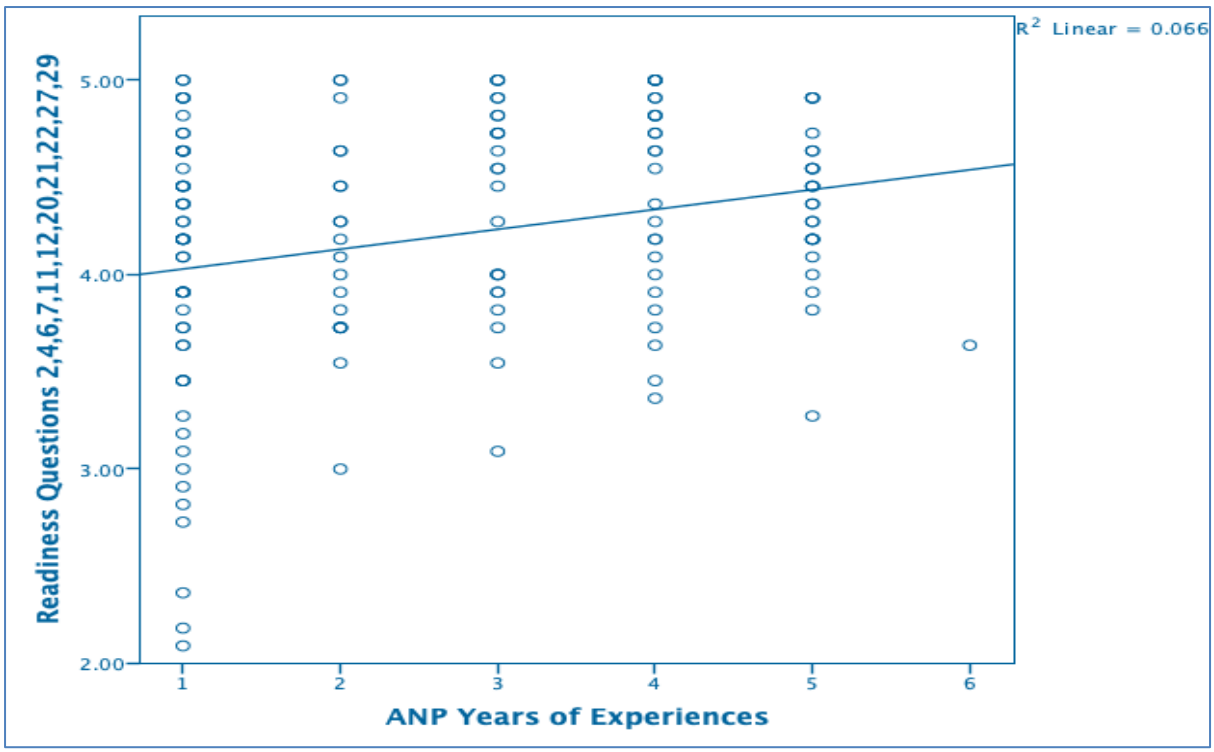
*ANPCAPS Mean, SD, **Score** & Rank*

Appendix T. All Scatter Plots for DPBS






R² Linear = 0.005
Empoerment Questions 8, 13, 15, 17, 24, 26, 28
5.00
4.00
3.00
2.00
1
2
3
4
5
6
ANP Years of Experiences


R² Linear = 0.066
Readiness Questions 2,4,6,7,11,12,20,21,22,27,29
5.00
4.00
3.00
2.00
1
2
3
4
5
6
ANP Years of Experiences

Appendix U. Panel Members Validation Scoring

ANPCAPS Validation (Consistency)												
Items	ANP1	ANP2	ANP3	ANP4	ANP5	ANP6	ANP7	ANP8	ANP9	ANP10	S -CV / UA	I-CVI
Q1	4	4	4	4	4	4	4	4	4	4	1	4
Q2	4	4	3	4	4	4	4	4	4	4	0	3.9
Q3	4	4	4	4	4	4	4	4	4	4	1	4
Q4	4	4	4	4	4	4	4	4	4	4	1	4
Q5	4	4	4	4	4	4	4	4	4	4	1	4
Q6	4	4	4	4	4	4	4	4	4	4	1	4
Q7	4	4	4	4	4	4	4	4	4	4	1	4
Q8	4	4	4	4	4	4	4	4	3	4	1	3.9
Q9	4	4	4	3	4	4	4	4	4	4	0	3.9
Q10	4	4	4	4	4	4	4	4	4	4	1	4
Q11	4	4	4	4	4	4	4	4	4	4	1	4
Q12	4	4	4	4	3	4	4	4	4	4	0	3.9
Q13	4	4	4	4	4	4	4	4	4	4	1	4
Q14	4	4	4	4	4	4	4	4	4	4	1	4
Q15	4	4	4	4	4	4	4	4	4	4	1	4
Q16	4	4	4	4	4	4	4	4	4	4	1	4
Q17	4	4	4	4	4	4	4	4	4	4	1	4
Proportion Relevent	100%	100%	99%	99%	99%	100%	100%	100%	99%	100%	S -CV / UA	S-CVI
											14	3.98
Mean Expert Proportion (ACP)	99.4%										82.4%	99.4%

Only Applicaple for the ESSENTIAL ASPECTS	CVR	=	(ne - N/2)/(N/2)
	CVR	Content Validity Ration	
	ne	#of SME Panelists indecateing "essential"	
	N	Total # of SME panelists	

ANPCAPS Validation (Representitive)												
Items	ANP1	ANP2	ANP3	ANP4	ANP5	ANP6	ANP7	ANP8	ANP9	ANP10	S -CV / UA	I-CVI
Q1	4	4	4	4	4	4	4	4	4	4	1	4
Q2	4	4	3	4	4	4	4	4	4	4	0	3.9
Q3	4	4	4	4	4	4	4	4	4	4	1	4
Q4	4	4	4	4	4	4	4	4	4	4	1	4
Q5	4	4	4	4	4	4	4	4	4	4	1	4
Q6	4	4	4	4	4	4	4	4	4	4	1	4
Q7	4	4	4	4	4	4	4	4	4	4	1	4
Q8	4	4	4	4	4	4	4	4	4	4	1	4
Q9	4	4	4	4	4	4	4	4	4	4	1	4
Q10	4	4	4	4	4	4	4	4	4	4	1	4
Q11	4	4	4	4	4	4	4	4	4	4	1	4
Q12	4	4	4	4	4	4	4	4	4	4	1	4
Q13	4	4	4	4	4	4	4	4	4	4	1	4
Q14	4	4	4	4	4	4	4	4	4	4	1	4
Q15	4	4	4	4	4	4	4	4	3	4	0	3.9
Q16	4	4	4	4	4	4	4	4	4	4	1	4
Q17	4	4	4	4	4	4	4	4	4	4	1	4
Proportion Relevent	100%	100%	99%	100%	100%	100%	100%	100%	99%	100%	S -CV / UA	S-CVI
											15	3.99
Mean Expert Proportion (ACP)	99.7%										88.2%	99.7%

Only Applicaple for the ESSENTIAL ASPECTS	CVR	= (ne - N/2)/(N/2)
	CVR	Content Validity Ration
	ne	#of SME Panelists indecateing "essential"
	N	Total # of SME panelists

ANPCAPS Validation (Relevance)												
Items	ANP1	ANP2	ANP3	ANP4	ANP5	ANP6	ANP7	ANP8	ANP9	ANP10	S -CV / UA	I-CVI
Q1	4	4	4	4	4	4	4	4	4	4	1	4
Q2	4	4	3	4	4	4	4	4	4	4	0	3.9
Q3	4	4	4	4	4	4	4	4	4	4	1	4
Q4	4	4	4	4	4	4	4	4	4	4	1	4
Q5	4	4	4	4	4	4	4	4	4	4	1	4
Q6	4	4	4	4	3	4	4	4	4	4	0	3.9
Q7	4	4	4	4	4	4	4	4	4	4	1	4
Q8	4	4	4	4	4	4	4	4	4	4	1	4
Q9	4	4	4	4	4	4	4	4	4	4	1	4
Q10	4	4	4	4	4	4	4	4	4	4	1	4
Q11	4	4	4	4	4	4	4	4	4	4	1	4
Q12	4	4	4	4	4	4	4	4	4	4	1	4
Q13	4	4	4	4	4	4	4	4	4	4	1	4
Q14	4	4	4	4	4	4	4	4	4	4	1	4
Q15	4	4	4	4	4	4	4	4	3	4	0	3.9
Q16	4	4	4	4	4	4	4	4	4	4	1	4
Q17	4	4	4	4	4	4	4	4	4	4	1	4
Proportion Relevent	100%	100%	99%	100%	99%	100%	100%	100%	99%	100%	S -CV / UA	S-CVI
											14	3.98
Mean Expert Proportion (ACP)	99.6%										82.4%	99.6%

Only Applicaple for the ESSENTIAL ASPECTS	CVR	= (ne - N/2)/(N/2)
	CVR	Content Validity Ration
	ne	#of SME Panelists indecateing "essential"
	N	Total # of SME panelists

ANPCAPS Validation (Clarity)												
Items	ANP1	ANP2	ANP3	ANP4	ANP5	ANP6	ANP7	ANP8	ANP9	ANP10	S -CV / UA	I-CVI
Q1	4	4	4	4	4	4	4	4	4	4	1	4
Q2	4	4	3	4	4	4	4	4	4	4	0	3.9
Q3	4	4	4	4	4	4	4	4	4	4	1	4
Q4	4	4	4	4	4	4	4	4	4	4	1	4
Q5	4	4	4	4	4	4	4	4	4	4	1	4
Q6	4	4	4	4	3	4	4	4	4	4	0	3.9
Q7	4	4	4	4	4	4	4	4	4	4	1	4
Q8	4	4	4	4	4	4	4	4	4	4	1	4
Q9	4	4	4	4	4	4	4	4	4	4	1	4
Q10	4	4	4	4	4	4	4	4	4	4	1	4
Q11	4	4	4	4	4	4	4	4	4	4	1	4
Q12	4	4	4	4	4	4	4	4	4	4	1	4
Q13	4	4	4	4	4	4	4	4	4	4	1	4
Q14	4	4	4	4	4	4	4	4	4	4	1	4
Q15	4	4	4	4	4	4	4	4	4	4	1	4
Q16	4	4	4	4	4	4	4	4	4	4	1	4
Q17	4	4	4	4	4	4	4	4	4	4	1	4
Proportion Relevent	100%	100%	99%	100%	99%	100%	100%	100%	100%	100%	S -CV / UA	S-CVI
											15	3.99
Mean Expert Proportion (ACP)	99.7%										88.2%	99.7%

Only Applicaple for the ESSENTIAL ASPECTS	CVR	=	(ne - N/2)/(N/2)
	CVR	Content Validity Ration	
	ne	#of SME Panelists indecateing "essential"	
	N	Total # of SME panelists	

ANPCAPS Validation (Essential)												
Items	ANP1	ANP2	ANP3	ANP4	ANP5	ANP6	ANP7	ANP8	ANP9	ANP10	S -CV / UA	I-CVI
Q1	3	3	3	3	3	3	3	3	3	3	1	3
Q2	3	3	3	3	3	3	3	3	3	3	1	3
Q3	3	3	3	3	3	3	3	3	3	3	1	3
Q4	3	3	3	3	3	3	3	3	3	3	1	3
Q5	3	3	3	3	3	3	3	3	3	3	1	3
Q6	3	3	3	3	3	3	3	3	3	3	1	3
Q7	3	3	3	3	3	3	3	3	3	3	1	3
Q8	3	3	3	3	3	3	3	3	3	3	1	3
Q9	3	3	3	3	3	3	3	3	3	3	1	3
Q10	3	3	3	3	3	3	3	3	3	3	1	3
Q11	3	3	3	3	3	3	3	3	3	3	1	3
Q12	3	3	3	3	3	3	3	3	3	3	1	3
Q13	3	3	3	3	3	3	3	3	3	3	1	3
Q14	3	3	3	3	3	3	3	3	3	3	1	3
Q15	3	3	3	3	3	3	3	3	3	3	1	3
Q16	3	3	3	3	3	3	3	3	3	3	1	3
Q17	3	3	3	3	3	3	3	3	3	3	1	3
Proportion Relevent	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	S -CV / UA	S-CVI
											17	3
Mean Expert Proportion (ACP)	100.0%										100.0%	100.0%

Only Applicaple for the ESSENTIAL ASPECTS	CVR	= (Ne - N/2)/(N/2)
	CVR	Content Validity Ration
	Ne	#of SME Panelists indecateing "essential"
	N	Total # of SME panelists

ANPCAPS Validation	CVI	I-CVI	S-CVI	S-CVI/UA	S-CVI/AVE	CVR	ACP	Overall Validity	Kappa
Consistency	100%	100%	100%	100%	100%	100%	99.4	100%	1
Representative	100%	100%	100%	100%	100%	100%	99.7	100%	1
Relevance	100%	100%	100%	100%	100%	100%	99.6	100%	1
Clarity	100%	100%	100%	100%	100%	100%	99.7	100%	1
Essential	100%	100%	100%	100%	100%	100%	100%	100%	1