Declaration

Name of candidate: SOPHIE-JANE SITHOLE

This Thesis/Dissertation/Research Project entitled, Leadership in radiography: Exploring radiographers’ experiences in leadership is submitted in partial fulfilment for the requirements for the Unitec degree of Master of Health Science.

Candidate's declaration

I confirm that:

- This Thesis/Dissertation/Research Project represents my own work;
- Research for this work has been conducted in accordance with the Unitec Research Ethics Committee Policy and Procedures, and has fulfilled any requirements set for this project by the Unitec Research Ethics Committee.

Research Ethics Committee Approval Number: 2012-1004

Candidate Signature: .................................................................Date: ........................................

Candidate number: 1357328
Leadership in radiography: Exploring radiographers’ experiences in leadership

Sophie-Jane Sithole

A thesis submitted in partial fulfilment of the requirements for the degree of Master of Health Science
Unitec Institute of Technology 2013
Abstract

The roles of health professionals including radiographers, are evolving due to technological advancements, globalization, economic recession and an increased aging population. Leadership has been highlighted in literature that discusses the changing role of radiographers as being an essential component that professionals should have and practise, whether in clinical practice, research or education. It is within the changing context of increasing emphasis on leadership that this study sets out to explore leadership in radiography through the lived experiences of radiographers in the Wellington region of New Zealand.

The study is guided by the values of descriptive phenomenology; in particular the philosopher Edmund Husserl. Amedeo Giorgi’s modified scientific phenomenological method was employed for data analysis. Individual interviews and focus groups were used for data collection. The individual interview participants (n=5) were radiographers from the public and private sector. Three held formal leadership roles and the other two participants had no formal leadership roles. A leader from one of the sites, although having no radiography background was also included as a participant. The participants from the two focus groups were radiographers (n=6) and student radiographers (n=5) from the public sector, all with no formal leadership roles.

The findings of the study indicate that the themes, besides being interlinked, also build on each other. The following themes emerged from the study: definition, identity, relationship, characteristics, types and styles of leadership and followership styles, perceptions, expectations and ideal leadership, context and appointment, promotion and leadership development. These findings contribute knowledge and understanding of the lived experiences of leadership in radiography. It is anticipated that the findings may inform a wider study on leadership in radiography and inform future leadership development strategies for radiographers in New Zealand.
Acknowledgements

I would like to thank the following people for their support throughout this study.

The participants: thank you for sharing your experiences, views and insights about leadership in radiography. I greatly appreciate your willingness to participate.

The intermediaries of the research sites: thank you for allowing access to the participants and for helping in the recruitment process.

Erika: thank you for all your help, insights and throughout the proofreading stages. Your encouragement throughout the journey has made the work seem light.

Lynette: thank you for your insights and directions.

My supervisors: Dr Suzanne Henwood and Dr Dianne Roy, thank you for your support, advice and encouragement when I seemed lost. It has been a pleasure working with and knowing you.

My husband Tulani, thank you for your belief, support, encouragement and reminding me of the big picture when the going was tough.
# Table of Contents

Declaration .......................................................................................................................................................... i
Leadership in radiography: Exploring radiographers’ experiences in leadership ........ ii
Abstract ............................................................................................................................................................ ii
Acknowledgements .......................................................................................................................................... iii
Table of Contents .............................................................................................................................................. iv
List of tables ....................................................................................................................................................... viii

Chapter 1: Background .................................................................................................................................... 1
  Purpose and significance of the research ........................................................................................................ 3
  Significance of research due to gaps in literature ............................................................................................ 3
  Contribution of the research study .................................................................................................................. 8
  Researcher’s experience of the phenomenon and assumptions .................................................................. 9
  Summary ....................................................................................................................................................... 11

Chapter 2: Literature review .......................................................................................................................... 12
  Definition of leadership ................................................................................................................................ 12
  Leadership versus Management ..................................................................................................................... 14
  Leadership theories and styles ....................................................................................................................... 15
  Ethics and leadership .................................................................................................................................... 18
  Characteristics of Leadership ....................................................................................................................... 19
  Power ........................................................................................................................................................... 21
  Emotional Intelligence and Leadership .......................................................................................................... 22
  Empowerment and Leadership Development ............................................................................................... 27
  Organisational culture .................................................................................................................................. 29
  Ideal Leadership ........................................................................................................................................... 30
  Neuroscience and leadership ....................................................................................................................... 31
  Summary ....................................................................................................................................................... 32

Chapter 3: Methodology ............................................................................................................................... 34
List of tables

Table 1: Individual interviews participants ................................................................. 50
Table 2: MRT focus group participants ................................................................. 51
Table 3: Student MRT focus group participants ........................................... 51
Table 4: Themes and subtheme ........................................................................... 54
Table 5: Desirable characteristics ..................................................................... 67
Table 6: Undesirable characteristics ..................................................................... 67

List of figures

Figure 1: Inter-relationship of themes ................................................................. 55
Chapter 1: Background

The radiography profession in the New Zealand (NZ) healthcare industry finds itself in a new economic age that is complex and changing, being driven by globalization and a technological revolution (Health Workforce New Zealand, 2010). Leaders in healthcare professions including radiography have for some time been called to lead the way to innovative change resulting in “excellent patient care services, systems and knowledge production” (Cummings et al., 2010, p. 364). Furthermore, radiographers have had an on-going challenge to keep up with technological changes or risk “becoming outdated and incompetent” (White & McKay, 2004, p. 218) as well as being asked to deliver better and improved services to the patient.

The roles of health professionals, including radiographers, are evolving due to technological advancements, globalization, economic recession and an increased aging population (Coleman & Piper, 2009; Ferris, 2009). The evolving roles have resulted in redefined territorial boundaries where non-medical personnel are taking up opportunities to work in areas that traditionally were reserved for those in the medical profession (Coleman & Piper, 2009). Published literature on the changing role of radiographers cite major changes in the United Kingdom (UK) where the radiographers’ role has expanded, extended and advanced progressively (Hardy et al., 2008; Hardy & Snaith, 2006; Yielder, 2007). The result in the UK has been a call for radiographers to rise as leaders - and of foremost importance to improve patient services and systems, contribute to policy making and be involved in research (Ford, 2010; Forsyth & Maehle, 2010; Reeves, 2008).

Literature that discusses the changing role of radiographers has highlighted that leadership is an essential skill for radiographers to possess (Australian Institute of Radiography, 2009; Yielder, Murphy, & Sinclair, 2008). Radiography professionals are encouraged to practice and develop leadership skills, whether in clinical practice, research or education (Forsyth & Maehle, 2010). Generally in healthcare, leadership is seen as central to improving patient care to meet the demands of the healthcare systems. In the UK, leadership and leadership development has been given extra attention and priority due to the emergence of
advanced and consultant roles in the nursing and allied health professionals including radiography (Ford, 2010; Forsyth & Maehle, 2010; NHS Institute for Innovation and Improvement, 2011).

Recently the NZ health sector has taken steps to focus on leadership development, by developing managers and clinicians in all professional groups (Health Workforce New Zealand, 2010). Health Workforce New Zealand (HWNZ), charged with the workforce initiatives, established a New Zealand Centre of Excellence in Healthcare Leadership, in early March 2011. The aim of the Centre of Excellence is to establish international standards and recognition, improving leadership at all levels across the health sector and providing a resource for all professional groups and managers (Health Workforce New Zealand, 2010).

Leadership is universally present in every social structure whether it is in homes, schools, non-profit and profit organisations (Northouse, 2010). It has been discussed by scholars like Plato and Aristotle as well as early civilisations including the Egyptians, Greeks and Romans, long before management theories emerged. There is much research about leadership, but due to the complexity of the phenomenon, there are still no universal answers on what leadership is (Northouse, 2010; Uhl-Bien, Marion, & Kelvey, 2007). There are however still new ideas emerging that help us understand leadership and its applications in different contexts. Leadership is a universal phenomenon that is present in every facet of our lives and therefore the researcher’s assumption is that in all contexts, including at work, everyone experiences and has their own understanding of what leadership is.

Leaders are no longer seen as those occupying the traditional management roles but are present in all levels in an organisation, from the boardroom to shop floor (Kouzes & Posner, 2007). Leadership has been identified as one of the essential ingredients needed in order to spearhead change in the health sector in clinical practice, education, administration and research (Botting, 2011; Department of Health, 2003; Hardy et al., 2008; Health Workforce New Zealand, 2010; Roberts, Floyd, & Thompson, 2011).

As leaders are present in all levels in an organisation this study sets out to explore leadership in radiography with a specific focus on radiographers with and
without formal leadership roles; and to describe what leadership is perceived to be at these levels.

**Purpose and significance of the research**

It is within the changing context of increasing emphasis on leadership that this study sets out to explore leadership in radiography through the experiences of radiographers in the Wellington region of New Zealand. The study employed a phenomenological methodology to understand what leadership meant to radiographers, their experiences, perceptions and what radiographers thought would be effective leadership in clinical practice.

The objectives of the study were to:

- understand what leadership means to radiographers in clinical practice,
- explore radiographers’ experience of leadership,
- explore radiographers’ perceptions of leadership in clinical practice and
- explore what radiographers thought ideal leadership in radiography to be.

**Significance of research due to gaps in literature**

Published research investigating leadership in radiography appears to be limited in quantity and scope. International research studies in radiography have used quantitative, qualitative and mixed methods to investigate the effect and relationship of organisational and managerial leadership on services, patient care, staff retention and job satisfaction (Akroyd, Legg, Jackowski, & Adams, 2009; Forsyth & Maehle, 2010; Kim, Kim, & Kim, 2011; Price & Miller, 2010). Price and Miller (2010), Ford (2010) and Forsyth and Maehle (2010) in the UK have concentrated their research on consultant practitioners in radiography, investigating how the practitioners are working within the four domains of their role as specified by National Health Service (NHS) Institute for Innovation and Improvement (2011). The four domains of the consultant role involves namely: expert clinical practice; professional leadership and consultancy; education, training and development; practice and service development; as well as research and evaluation (NHS Institute for Innovation and Improvement, 2011). These are discussed later in the chapter.
Akroyd et al. (2009) used a postal questionnaire to investigate the relationship between organisational commitment, perceived organisational support and manager or supervisor’s leadership skills and the impact on radiation therapists. The registration list of American Registry of Radiologic Technologists (ARRT) in the United States was used to recruit participants. Excluded from the sample were managers, educators and part-time radiation therapists. The questionnaire was sent to a random sample of eight hundred radiation therapists registered and of those returned, only one hundred and seventy six questionnaires were usable, which was a response rate of 22%. The other returned questionnaires were not usable because they were incomplete. The results of the study showed that radiation therapists’ commitment to their organisation was influenced by their emotional attachment to the organisation (affective commitment) and feelings of obligation to the organisation (normative commitment) more than their awareness of the costs of leaving the organisation (continuance commitment) (Akroyd et al., 2009). Affective and normative commitments were greatly influenced by the leadership skills of the radiation therapists’ manager or supervisors which translated to the perceived organisational support experienced (Akroyd et al., 2009). The leaders who utilised transformative leadership skills and behaviours influenced the therapists’ commitment to the organisation as they felt valued and were aware of their contribution to the success and effectiveness of the organisation (Akroyd et al., 2009).

The issue of the sample size in postal questionnaire-based studies becomes a concern, as the response rate might not be as high as hoped and a repeat questionnaire or follow-up mail would need to be sent to those that did not initially respond. This technique was employed by Akroyd et al. (2009), to improve the response rate. The researchers then compared the data from the first 100 respondents to the last 76 respondents in order to counteract response bias introduced by the low response rate. The response rate in this research study was small, making the issue of generalisation a problem and the results may potentially not be representative of the population.

Kim et al. (2011) also utilized a postal questionnaire to analyse the effect of leadership and organisational culture on organisational effectiveness in radiology organisations in the city of Busan of the Republic of Korea. Three hundred and five questionnaires were distributed to radiographers working in sixteen hospitals from four different sectors mainly university hospitals, general hospitals, semi-
general hospitals and private hospitals. Two hundred and seventy nine radiographers responded, resulting in a 91% response rate. From this number only two hundred and sixty one questionnaires were usable - the other eighteen questionnaires were unusable due to inconsistencies and incomplete answers (Kim et al., 2011).

The aim of the study was to generate ideas on ways to improve job performance and organisational management in radiology organisations. The researchers used Quinn and McGrath's theory on the types of cultures that exist in an organisation, where competing values exist (Kim et al., 2011). Job satisfaction and organisational commitment were used as variables to determine the effect of culture on organisational effectiveness. The types of cultures were namely: rational culture, developmental culture, consensual culture and hierarchical culture. Kim et al.'s study results showed an agreement amongst respondents on four appropriate cultures for radiology organisations which were rational, developmental, consensual and hierarchical (Kim et al., 2011). Developmental and consensual cultures influenced organisational effectiveness when the relationship between organisational culture and organisational effectiveness was considered (Kim et al., 2011).

The researchers’ definition of leadership was influenced by Stogdill who described leadership “as the process of leading the activities of an organised group toward setting and accomplishing organisational goals” (cited in Kim et al., 2011, p. 202). Tannenbaum, Weschler and Massrik who described leadership as “the interpersonal influence executed for accomplishing specific objectives or goals through communication”, also influenced the researchers' definition of leadership (cited in Kim et al., 2011, p. 202). Also Bass's classification of leadership into transformational leadership (core leader, intellectual stimulation and individual consideration) and transactional leadership (contingent reward, active management by exception and passive management by exception) was used (Kim et al., 2011). The result also revealed that the participants perceived core transformational leadership as the appropriate leadership style compared to transactional leadership, when the relationship between leadership and organisational effectiveness was considered. The researchers concluded that transformational leadership, combined with consensual culture can be used for upgrading job performance. Furthermore, the researchers proposed that the combination of transformational leadership and consensual culture will result in
enhanced organisational effectiveness and reduced strife among radiographers (Kim et al., 2011).

Price and Miller (2010) employed two exploratory case studies to examine development, implementation and impact of consultant radiographer roles at two NHS trusts in the UK. This was after the introduction of the Career Progression Framework which illustrated how radiographers in clinical practice could progress their careers within the NHS. The four levels of career progression were; consultant practitioner, advanced practitioner, practitioner and assistant practitioner. Price and Miller (2010) focused on the consultant radiographer in their research. The researchers used structured interviews and employed non-directional questions, giving the respondents room for exploring the topics freely. One case study was made up of three participants; a radiology specialist manager, directorate manager and a consultant radiographer. The other case study had four participants; a director of clinical services, two consultant radiographers and a radiologist.

The results from the study showed that the implementation of the Career Progression Framework with the introduction of the consultant role had overall good benefits for both trusts (Price & Miller, 2010). There was increased capacity and patient throughput; improved use of medical staff time; inter-professional working; cost containment; improved team working and departmental performance; increased flexibility in patient response; more fulfilled staff and no change in errors or complaints since the consultant posts were introduced (Price & Miller, 2010). However, the results cannot be generalised as only three consultant practitioners from two NHS Trusts were involved in the study.

Forsyth and Maehle (2010) examined the profiles of the first generation consultant radiographers in the UK looking at their demographics, educational backgrounds, qualifications and training, career experience and progression, teaching, lecturing and research activities. The researchers used the consultant radiographers’ group membership list from the Society and College of Radiographers (SCoR) to send out self-administered paper and web based questionnaires.

The sample was comprised of twenty-one participants who represented the total population at the time and were members of the SCoR consultant group before a
specified date (Forsyth & Maehle, 2010). From the sample, eleven participants responded to the questionnaire which represented 50% of the population. The results showed that the consultant radiographers had a comparable educational background, clinical training and skill enhancement to consultant nurses (Forsyth & Maehle, 2010). The researchers also discovered that the consultant group had a strong engagement in the development of expert clinical skills and participating in education, training and development of assistant practitioners, undergraduates and postgraduates as well as lecturing in medical and nursing courses (Forsyth & Maehle, 2010). However, the results implied that the consultant group were not as strongly engaged in research and leadership training, as expected of the role (Forsyth & Maehle, 2010).

Ford (2010) analysing job descriptions for the consultant radiographers, used a self-administered questionnaire and semi-structured interviews as a means of triangulation to increase validity of the results. The researcher explored the experiences of the first UK consultant radiographers appointed in the UK, examining the appointment process; the nature of the role and the consultants’ perceptions of their success and challenges. The sample consisted of thirteen consultant radiographers who were registered in the first quarter of 2005 minus the researcher (Ford, 2010). Ten consultant radiographers agreed to participate in the research (Ford, 2010), however there is evidence from other literature (Forsyth & Maehle, 2010; Price & Miller, 2010) that indicate the number of registered consultant radiographers increased that year.

The results of Ford’s (2010) study demonstrated that the consultant radiographers had similar job descriptions and that their posts were established according the Department of Health’s guidelines. The consultant radiographers in the study were positive about what they believed their roles will accomplish and they seemed to experience similar challenges of acceptance and adaptation to the role (Ford, 2010). The results also showed the strong expert clinical practice element of the role as in Price and Miller (2010) study as well as strong team leadership and involvement in training and education. The results correlated with Price and Miller’s (2010) study that limited research was being done by the consultant practitioners (Ford, 2010). The leadership component might be different in the two studies because Ford’s study included consultant radiographers from multiple sites whilst Price and Miller’s study was focused on two NHS Trusts. Different questionnaires were used by the researchers and
there were differences between what the participants' job descriptions mentioned and what actually happened in practise.

A search of literature on leadership in radiography from online databases of NZ sources, the professional journal previously known as *Shadows - New Zealand Journal of Medical Radiation Technology*, yielded no evidence of published research. A search of courses offered on leadership, designed for radiography was done on curricular from universities and technical institutes, which offer Medical Imaging undergraduate and postgraduate courses within NZ. The search produced no evidence of leadership courses offered specifically for radiography. Furthermore, the governing body the NZ Medical Radiation Technologist Board (MRTB) had no information on leadership practices in the profession. However leadership is a required standard competence for medical imaging as specified in the competency documents for all modalities (specialities) (New Zealand Medical Radiation Technologists Board, 2011). Also the literature revealed no evidence of international research examining how radiographers define and understand leadership, what their experiences have been or radiographers' perceptions of leadership in clinical practice.

In NZ the radiography profession is referred to as Medical Imaging (MI) so as to incorporate imaging modalities that do not use radiation like Ultrasound and Magnetic Resonance Imaging. Radiographers, at the time of data collection were called Medical Radiation Technologists (MRTs), however the name was changed to Medical Imaging Technologists (MIT) in the course of finalising the thesis. Throughout the rest of the thesis, the term medical imaging is utilised in place of radiography and MRT instead of radiographer.

**Contribution of the research study**

In light of knowledge gleaned from the above previous research studies, this study sought to provide an in-depth understanding of how MRTs perceive leadership, the leader and their role in the leadership process in NZ. This study gives an insight on the characteristics and type of leadership that MRTs consider valuable for clinical practice. The study also enhances understanding on whether MRTs view leadership and leadership development as valuable in their clinical practice. As demonstrated by Kim et al. (2011), culture plays a significant role in
leadership and organisational effectiveness. This study through the experiences of MRTs explored whether organisational culture contributed to how the leadership role was perceived and how leadership styles were affected by organisational culture.

Previous research studies which examined the consultant MRT’s role highlighted that leadership development and research were still areas that needed work and participation. In NZ there is evidence of discussions and past research on the changing roles of MRTs and career progression (Sinclair, Yelder, Gunn, Thompson, & Nash, 2008; Yelder & Coleman, 2012; Yelder et al., 2008). The literature discusses the proposed introduction of a three tier practitioner system. The three tiers proposed were; advanced practitioner role at the top tier, practitioner in the middle tier and assistant practitioner in the bottom tier. Leadership has been identified as a required competence for the advanced and practitioner roles (Sinclair et al., 2008; Yelder & Coleman, 2012), therefore, a skill to be acquired by all MRTs. This study, therefore, contributes evidence in demonstrating the level of understanding and meaning that MRTs have of leadership in clinical practice and can assist in development strategies for implementing leadership training for MRTs in clinical practice.

**Researcher’s experience of the phenomenon and assumptions**

The researcher trained as a MRT in a hospital based programme and has more than ten years’ experience in the profession as well as experience in both public and private organisations. During this time, the researcher has been exposed to different leadership and management practices which have enlightened their understanding on how leadership, or the absence of leadership, affects daily work.

In the public sector, the researcher is of the opinion that the business focus is on getting things done that are within set margins and targets. There is very little room for wider organisational change but departmental change is possible and achievable. Leaders in this sector, the researcher perceives are having more opportunities to develop new leaders and adequately set in action succession
plans. This is because resources are available from other professionals within the hospital or Ministry of Health for such endeavours to be successfully implemented. In the private sector, the researcher is of the opinion that business has more emphasis on profitability and getting the best out of a dollar with minimum expenditure. Employees are valued according to their dollar output. Unfortunately in some cases minimum expenditure includes providing either no, or a bare minimum, of professional development support for the staff.

From the researcher’s experiences leadership and leadership development has been reserved for those in leadership positions and promotions to positions of leadership have not usually come with leadership training. It has been assumed that the years of experience and expertise an MRT has acquired, makes them qualified to lead or manage. As a result, the researcher has experienced working under authoritarian supervisors and managers, who were managers rather than leaders. The researcher has also worked with individuals who were leaders as their focus was not only on the bottom line but they also concerned themselves with the well-being of individual employees; encouraging others to find their purpose and find ways to accomplish it. There have been other leaders who have set an example and have had influence when they did not occupy any formal leadership role.

From these experiences one of the assumptions the researcher has is that everyone has the potential to be a leader and it is taking opportunities to lead that differentiate leaders from followers. The other assumption is that leadership is not only determined by the leader, followers and their relationship, but by the social context in which leadership takes place. Organisational, cultural, social and economic constraints that are present at any particular time also put pressure on leadership.

With each passing year in the profession in NZ the researcher has had more questions about leadership in medical imaging. Reading literature on career progression, role extension or role advancement in NZ has not provided answers as to why the medical imaging profession seems to be lagging behind other professions in NZ. The common idea in literature has been the importance of leadership in spearheading change in medical imaging. This led to an interest in finding out what MRTs’ thoughts were on leadership.
The obvious lack of literature on leadership in medical imaging in NZ led to the realisation that the gap in the literature needs urgent addressing for future researchers on leadership. As the researcher’s interest was on the views of the MRT in clinical practice, exploring the lived experiences provided a platform to obtain a general view of leadership in medical imaging from the participants’ discussions.

Summary
This chapter has set the scene of this research study, pointing out the purpose and objectives of the study. The chapter also highlights available published leadership related research in medical imaging. Chapter two reviews literature on leadership that informed the study. The chapter outlines the research about leadership from various business sectors. A detailed report of the methodology used in the study is presented in Chapter three. The study employed Giorgi’s modified descriptive phenomenological method to explore leadership as a lived experience of MRTs in clinical practice. Chapter four introduces the participants and reports on the study findings. Chapter five discusses leadership as experienced by MRTs in clinical practice, highlights the significance of the findings, presents a study conclusion and presents recommendations and areas for further research.
Chapter 2: Literature review

Literature used to inform this study has been taken from various fields in order to explore holistically what leadership is thought to be. Sources for the literature review include nursing journals, business journals, books, web sites and pages, since there is limited literature on leadership that is medical imaging specific. Topics that will be reviewed include: defining leadership; leadership versus management; leadership theories and styles; leader identity; empowerment and leadership development; organisational culture; leadership skills and ideal leadership.

Definition of leadership

A search of the literature reveals that there is no universally accepted definition of leadership (Kotter, 1996; Kouzes & Posner, 2007; Maxwell, 2005; Northouse, 2010). Northouse (2010) and Bass and Bass (2008) agree that the leader; the effects of leadership; interactions between the leader and followers and the context are the common areas most leadership definitions are focused on.

Defining leadership according to ‘the leader’ describes the person, their personality and attributes and sees the person as symbolic and as the main focus of the group (leader centric) (Bass & Bass, 2008). The leader according to Northouse (2010), possesses compelling and intentional behaviour that initiates structure; exercises influence; goes beyond conventional practices and is creative in inducing compliance without using excessive force. Leadership defined according to ‘the leader’, does not necessarily imply that leadership is about the position that a leader has in an organisation (Byrom & Downe, 2010; Maxwell, 2005; Northouse, 2010). Maxwell (2005) and Northouse (2010) suggest one can be in a position of authority but not necessarily be a leader. A leader is the person the followers have recognised and assigned as leader of the group because of their behaviour or expertise and not necessarily because of a formal position or title (Kouzes & Posner, 2007). Maxwell (2005) calls for 360-degree leaders who affect the organisation in all areas even though they are not in positions of authority, and encourage both personal and professional development of self and others. These individuals would demonstrate professional behaviours and attitude such as exceptional standards of care;
knowledgeable; skilful; follow procedures and protocols; execute their work well; ethics; values; beliefs; putting others first and being aware of their limitations and weaknesses (Byrom & Downe, 2010; Morrow et al., 2011; Sim & Radloff, 2009). Such individuals are aware that others have answers to their limitations and weaknesses and will work with people from various levels to achieve organisational and personal goals (Morrow et al., 2011; Sim & Radloff, 2009; Wang & Hsieh, 2013).

The effect of leadership focuses on leaders being in the forefront of goal achievement for the group and concentrates on the results of the leader’s interaction with the group (Bass & Bass, 2008; Bennis, 2004; Northouse, 2010). The focus is on the leader inspiring, motivating, challenging, encouraging and uplifting others in the process of goal achievement (Bass & Bass, 2008; Kotter, 1996; Kouzes & Posner, 2007)

Leadership defined as an interaction between the leaders and followers, illustrates that leadership is a process and involves power relationships (Bass & Bass, 2008; Northouse, 2010). Leaders and followers have designated roles and the leader is identified and acknowledged in their role (Kouzes & Posner, 2007). Leadership in this classification encompasses variable elements that affect organisational effectiveness and success (Kouzes & Posner, 2007; Ladkin, 2010) and leaders need followers in order to be called leaders (Northouse, 2010).

Further to this, leadership defined in relation to context focuses on the organisational environment. That is, the complexities of organisational culture, networks, levels, uncertainty or external factors such as a country’s economic situation (Bass & Bass, 2008; Hernandez, Eberly, Avolio, & Johnson, 2011; Northouse, 2010). There is a need for the leader to adapt their leadership style according to the different contexts presented (Blanchard, 2008).

In the present study, therefore, a broad definition of leadership was employed to incorporate the areas mentioned above: the leader; the effects of leadership; interactions between leader and followers and the context. The leadership definition employed for this study describes leadership as a reciprocal relationship between the leader and the followers in an undertaking to accomplish organisational goals in various situations and environments.
Leadership versus Management

Various authors have made a differentiation between leadership and management as well as the commonalities that the phenomena share; pointing out that leadership has a longer history than management, which only emerged with the industrial revolution (Bass & Bass, 2008; Blanchard, 2008; Bolman & Deal, 2003; Kotter, 1996; Kouzes & Posner, 2007; Northouse, 2010). Leadership has been described as establishing a vision and strategies to accomplish organisational goals (Klenke, 2008; Kouzes & Posner, 2007). Leadership is also about interpersonal interactions, planning, organising, and evaluating completed work (Bass & Bass, 2008; Kotter, 1996).

Kotter (1996) and Northouse (2010) described leadership as being people oriented, with leaders working with followers to produce change and movement to accomplish common goals and the set vision. Furthermore, leadership has been construed as influencing others to create visions for change (Bennis, 2004; Kotter, 1996). Thus a multi-directional influenced relationship has been proven to exist in leadership which is neither a position nor defined by the actions of an individual leader (Ham, Ashton, & Timmins, 2011; Storey & Holti, 2013). Furthermore, leadership has been depicted as an engagement in mutual interaction in a complex environment to develop purposes and achieve mutual goals between the leader and the followers (Ham, 2012; Ham et al., 2011).

Management, on the other hand, has been described as task oriented with managers and subordinates focussing on achieving set targets and mastering production routines to produce order and consistency in the goods and services that are sold (Kotter, 1996; Northouse, 2010). Management involves implementing the vision with planning, coordinating, supervising, and staffing as its main functions (Bass & Bass, 2008; Bolman & Deal, 2003; Kotter, 1996). Moreover, authority in management has been depicted as operating in a uni-directional way, from top to bottom with limited emotional involvement and activities coordinated to accomplish the job at hand and respond to problems (Drucker, 2007; Ham et al., 2011).

Bass and Bass (2008) and Yukl (1999) however, argue that there is no clear line of separation between leadership and management since both processes influence a group of individuals to accomplish goals. Leadership and
management both require the use of interpersonal skills for effective operation and depending on the approach used, there can be positive and negative consequences for the individuals (Bass & Bass, 2008). Yukl (1999) suggests that when managers are influencing their subordinates they are involved in leadership and when leaders are involved in planning, organizing, controlling and staffing they are engaged in management.

**Leadership theories and styles**

Leadership theories are as numerous as the definitions of leadership (Ladkin, 2010; Northouse, 2010; Uhl-Bien, 2006). Theory has been defined as “a set of hypotheses related by logical or mathematical arguments to explain and predict a wide variety of connected phenomena in general terms” (Collins Dictionary and Thesaurus, 2005, p. 1671) and in this case the phenomenon is leadership. Most leadership theories focus on the leader’s ability, personality, character, style of leadership, situations, processes, interactions between leader and followers, inspiration and transformation (Bass & Bass, 2008; Hernandez et al., 2011; Northouse, 2010).

The diverse ranges of perspectives developed describing how leadership has been defined and theorized represent the various approaches of conceptualizing leadership (Drath et al., 2008; Hernandez et al., 2011). These perspectives have helped demonstrate the complexity of leadership, which might explain why there are various definitions of leadership but no universal definition has been agreed upon. This could be due to leadership theory being contextualised and influenced by different philosophies.

The common theories of leadership include cognitive, great-man, traits, charismatic-transformational, situational, and person-situation theories, among others (Bass & Bass, 2008). These theories describe the leader as the hero or heroine and the focus of the leader-follower relationship; and the success of the organisation or department is attributed to the efforts of the leader (Ham et al., 2011; Ladkin, 2010). However, there have been additional theories that have emerged in the literature that focuses on complex adaptive theories, relational theories, quantum theory and service-orientated theories (Drath et al., 2008; Ham et al., 2011; Ham & Hartley, 2013; Storey & Holti, 2013; Uhl-Bien, 2006; Uhl-Bien et al., 2007; van Dierendonck, 2011). These theories are termed post-heroic theories as their focus is not on the leader but on the relationship between
leader and follower, the context where leadership occurs and the service given to the customer (Ham et al., 2011; Ham & Hartley, 2013; van Dierendonck, 2011).

Leadership theories are the foundations on which the leadership styles are built (Bass & Bass, 2008). Knowing the different theories can help potential leaders develop themselves in a number of areas and understand what society looks at when it proclaims an individual as a leader (Bass & Bass, 2008). Northouse (2010) is of the opinion that knowing these theories makes the leader aware of the complexities involved in leadership.

Leadership styles describe the way in which a leader provides direction, implements plans and motivates people (Daft & Pirola-Merlo, 2009; Northouse, 2010). Literature suggests leadership styles cannot be generalised under one theory (Bass & Bass, 2008; Hackman & Wageman, 2007; Northouse, 2010; Zaccaro, 2007). Various styles of leadership have weaknesses and strengths; a leader can develop and function within a number of styles that suit their personality, characteristics and the organisation they are in (Northouse, 2010). The flexibility to use appropriate styles in different contexts and interactions with followers has been noted as an essential component of leadership (Blanchard, 2008; Botting, 2011; Cummings et al., 2010; Ham, 2012).

Examples of leadership styles are: autocratic, participative, collaborative, situational, complex adaptive, authentic, adaptive, distributed, servant, courageous, transactional and transformational leadership (Bass & Bass, 2008; Blanchard, 2008; Drath et al., 2008; Northouse, 2010; Uhl-Bien et al., 2007). Notably, transformational leadership is promoted in the healthcare industry, recommended and supported by some researchers and healthcare organisations, where it is in place as a process that changes and transforms individuals (Botting, 2011; Carryer, Gardner, Dunn, & Gardner, 2007; Duygulu & Kublay, 2011; Kim et al., 2011). Conversely, transformational leadership is now superseded by shared and adaptive forms of leadership (Ham et al., 2011; Khoo & Burch, 2008; Shuck & Herd, 2012; Storey & Holti, 2013).

Transformational leadership involves motivating, inspiring, influencing and promoting various opportunities for staff as well as being concerned with values, ethics, standards and long term goals (Bass & Bass, 2008; Kouzes & Posner,
Transformational leaders engage individuals in achieving extraordinary ventures in the organisation through motivation and morality; inspiring followers to focus upon an overall organisational mission instead of their own self-interest; resulting in greater productivity and the empowerment of staff (Carreyer et al., 2007; Cummings et al., 2010; Kim et al., 2011). Various research studies have produced results that indicate positive follower outcomes when using transformational leadership. These include: increased commitment; job satisfaction empowerment; task engagement; increased job performance and extra work effort (Botting, 2011; Cummings et al., 2010; Duygulu & Kublay, 2011; Kim et al., 2011; Lievens & Vlerick, 2013; Mackay, Hogg, Cooke, Baker, & Dawkes, 2012).

There is research evidence suggesting that leadership styles that are service or patient-centred and not leader-focused are replacing transformational leadership (Ham et al., 2011; Khoo & Burch, 2008; Shuck & Herd, 2012; Storey & Holti, 2013). Transformational and sole leader leadership styles have been criticised for making leadership available to only a few individuals (Khoo & Burch, 2008; Storey & Holti, 2013). Furthermore, narcissistic and psychopathic personalities that have developed in some transformational leaders have resulted in a lack of participation, poor engagement from followers; and poor organisational performance (Ham, 2012; Ham & Hartley, 2013; Pearce, 2007; Storey & Holti, 2013).

Khoo and Burch (2008) utilising their networks, sent questionnaires to eighty business leaders and managers in NZ. The researchers investigated the relationship between the ‘dark side’ of personality and transformational leadership. The results indicate that some of the potential weaknesses of transformational leadership are linked with an individual’s personality (Khoo & Burch, 2008). These weaknesses include, but are not exclusive to: manipulation of followers; narcissism and psychopath personalities developing; unethical and destructive behaviours; using skills for self-benefit instead of group or organisational benefit and corrupt goals and endeavours (Bass & Bass, 2008; Ham et al., 2011; Khoo & Burch, 2008; Northouse, 2010; Pearce, 2007). The research, throwing light on the connection between personality and transformational leadership, is among a growing number of research studies that are investigating the connections between narcissistic personality and leadership (Khoo & Burch, 2008). The study by Khoo and Burch (2008), however, had a
number of validity issues; for example the small sample size makes
generalisation difficult. Also, the reliance of self-reporting limits the use of the
findings because respondents could potentially have reported enhanced
leadership capability and given a biased image of their personality.

Current literature on leadership theories and styles suggests the adaptation of
post-heroic leadership styles which focus on ethical behaviour, employee
engagement and development, service orientation and authenticity in leadership
(Ham, 2012; Leroy, Anseel, Gardner, & Sels, 2012; Shuck & Herd, 2012; Storey
& Holti, 2013; Wang & Hsieh, 2013; Waterman, 2011; Yip, Ernst, & Campbell,
2011). In the UK, Storey and Holti (2013) as well as Ham and Hartley (2013), in
their reports on the NHS and King’s Fund, advocated for the adoption of new
leadership models that employ post-heroic leadership styles after reported poor
service delivery and performance in a number of the NHS Trusts. The
researchers’ thus advocating for a model where leadership is not limited to those
with designated positions but available to everyone (Ham et al., 2011; Storey
& Holti, 2013). Ham (2012) and Wang and Hsieh (2013), in their discourse on
leadership and engagement, suggested that engaging employees will ensure
that individuals have a voice; provide excellent service to their customers and
network within and across their departments and organisations to improve
productivity, profitability and performance.

**Ethics and leadership**

Northouse (2010, p. 379) points out that the ethical or moral theory in leadership
is about “the actions of leaders and who they are as people”, with good leaders
being governed by the principles of respect, service, justice, honesty and
community. Leaders show respect by treating others with as much importance as
the products and services they produce through allowing individuals to be
themselves, listening attentively and being empathetic among others (Northouse,
2010). Service to others is evident when leaders give of themselves through
activities that involve mentoring, empowerment behaviours and team building or
contributing to the greater good of others (Northouse, 2010; Spears, 1998).

With resources for staff development scarce in the work environment, resource
distribution and use indicates the principles of fairness and justice the leader
uses and upholds (Northouse, 2010). Openness and honesty about such issues
as resource distribution adds to the trustworthiness of the leader and the people
in-turn regard such honesty as an indication of the dependability and reliability of the leader in other complex situations (Kouzes & Posner, 2007; Ladkin, 2010; Leroy et al., 2012; Northouse, 2010). According to Ladkin (2010) and Waterman (2011), ethical leaders are concerned about the goals and purposes of the organisation and community they are in; aligning goals and purposes with the development and building of the community and its people.

Cuilla (2004) noted that leadership is moral and value loaded and that the choices and responses made in any circumstance are formed by the leader’s ethical beliefs. Also, ethical behaviours are “contextually, historically and culturally determined”, according to Ladkin (2010, p. 157). Furthermore, Northouse (2010) mentions that the moral dimension of leadership distinguishes leadership from other forms of influence like coercion and oppressive control or power.

However, literature has examples of exceptional leaders whose intentions swayed from being honourable and ethical to self-serving interests that have been costly to organisations (Ham et al., 2011; Ham & Hartley, 2013; Khoo & Burch, 2008). Storey and Holti (2013) in their report, Towards a New Model of Leadership for the NHS demonstrated how the leaders of the Trusts disregarded the views of the staff, were more concerned about targets than the quality of care provided to patients and that staff concerns and ideas were stifled.

**Characteristics of Leadership**

There have been numerous research studies done on the qualities, skills and attributes that leaders possess. Researchers have focused on the characteristics that make a good leader and how these qualities can be developed by established and emergent leaders (Akerjordet & Severinsson, 2010; Byrom & Downe, 2010; Chaturvedi, Zyphur, Arvey, Avolio, & Larsson, 2012; Cummings et al., 2010; Curtis, Sheerin, & de Vries, 2011; Foti, Bray, Thompson, & Allgood, 2012).

When evaluating their leaders, followers seemed to prefer leaders possessing certain characteristics. Characteristics such as honesty, the ability to motivate others, a positive attitude, knowledge, approachability, nurturing, supportive, good communication skills, good organisational skills, good interpersonal and relational skills, leadership traits associated with emotional intelligence and team players were preferred by the followers (Akerjordet & Severinsson, 2010;
Blanchard, 2008; Botting, 2011; Brady-Germain & Cummings, 2010; Byrom & Downe, 2010; Schneider & Goktepe, 1983; Stanley, 2006). There is evidence that certain characteristics are still looked for in leaders although it could be argued that leadership is no longer about an individual, but is now more interrelationally focused (Mackay et al., 2012; Mackay, Pearson, Hogg, Fawcett, & Mercer, 2010; Uhl-Bien, 2006; Zaccaro, 2007).

Stanley (2006) in a study to identify, explore and critically analyse clinical leaders found that leaders were present in all levels of the nursing profession. The study was conducted in a large NHS Trust in the English Midlands using a sample of eight hundred and thirty registered nurses from various grades and departments. A questionnaire was sent to the eight hundred and thirty nurses and one hundred and eighty eight responded, thus a low response rate (22.6 %). From the participants (n=188) that responded to the questionnaire, forty two were selected according to their availability and interviewed. These participants (n=42) were asked to nominate individuals they perceived to be clinical leaders. Eight nominees were then interviewed by the researcher. The results from that study revealed that the identified clinical leaders were not senior nurses nor did they occupy designated positions (Stanley, 2006). Stanley (2006), discovered the clinical leaders were identified according to attributes such as clinical competence, clinical knowledge, approachability, motivation, empowerment, decision-making, effective communication, being a role model, and visibility in the clinical area. The results also demonstrated that the clinical area had an influence on who was perceived as a clinical leader with nurses from speciality areas identifying more clinical leaders than those from general medical and surgical areas (Stanley, 2006).

Hannah and Avolio (2011) are of the opinion that characteristics alone are not sufficient for leadership effectiveness, they have to be coupled with other factors including organisational function and the ability to accomplish tasks for the leader to be respected and trusted by their subordinates. Quick and Wright (2011) highlighted that leaders should develop themselves through observation, diagnosis and interpretation of issues, problems, opportunities, weaknesses and strengths. Development can also be done through coaching and reflection as leaders assess, interpret and understand various contexts and their followers in every action they take or do not take (Quick & Wright, 2011). This, according to Quick and Wright (2011), makes leadership a creative process of learning as
leaders practice leadership and concurrently learn from past experiences. The learning process develops the leader’s character and characteristics and establishes ethical principles (Maxwell, 2000; Quick & Wright, 2011). The leader also learns what works and what does not work through failure more than through success (Maxwell, 2000; Quick & Wright, 2011).

In a study investigating emergent leaders, Chaturvedi et al. (2012) described these leaders as individuals with undesignated roles or authority exercising influence over other group members. Emergent leaders are those who are in charge of how everyday activities get accomplished and who encourage others (Chaturvedi et al., 2012). The emergent leaders, according to Chaturvedi et al. (2012), can facilitate organisational development and change through their activities. Emergent leaders also nurture and inspire others to be exceptional, tapping into individuals’ leadership potential (Chaturvedi et al., 2012). Uhl-Bien et al. (2007) posit that leadership is about individuals who interact in levels and ways that encourage new behavioural patterns, which affect the modes of operation, enabling change to take place.

In medical imaging, emergent leaders are individuals who encourage others to become exceptional professionals who challenge the status quo and achieve results (Hogg, Hogg, & Bentley, 2007; Yelder & Davis, 2009). Yelder (2006) considered that the medical imaging profession in NZ is in need of leaders from within the profession who take it to new heights. The author was of the opinion that the introduction of the advanced practitioner role in the profession might facilitate the emergence of leaders with more individuals exposed to leadership and leadership development initiatives, since the role is perceived to involve higher duty responsibility as well as clinical expertise (Yelder & Coleman, 2012). However, to date the advanced practitioners’ role in medical imaging in NZ has not been implemented (Yelder & Coleman, 2012). There is on-going research in medical imaging on career progression and the introduction of a three tier system in the profession in NZ (Yelder & Coleman, 2012). The advanced practitioner, practitioner and assistant practitioner roles have been proposed (Yelder & Coleman, 2012).

**Power**

Uhl-Bien et al. (2007) noted that the interplay of power, people and common goals makes leadership complex and diverse. Power has been described as that
proficiency that a leader has to change individuals’ beliefs, attitudes and courses of action (Raven, 2008). Different bases of power can be used to influence people namely, reward, expert, legitimate, referent and coercive (Raven, 2008). Egestad (2008) in a phenomenological study exploring the characteristics of good practice advanced the idea that experienced MRTs (radiographers) had control of technical and scientific knowledge in the clinical environment. Consequently, expert power would be the commonly used form of power in medical imaging as experienced MRTs control or influence less experienced MRTs’ behaviours through their knowledge (Egestad, 2008).

Power can be used to achieve goals but if used in excess it can stifle growth as people work in fear and are unwillingly to participate in activities (Khoo & Burch, 2008). Many authors concur that power in leadership should not be used to oppress individuals but can be a factor that makes things happen when used with ethical and moral considerations including empowering others (Bass & Bass, 2008; Bennis, 2004; Blanchard, 2008; Northouse, 2010).

The effects of power in leadership, according to various authors, is minimised in leadership styles that share power among group or team members (Ham et al., 2011; Hawken, Lee-Wright, & Walsh, 2012). Leadership styles such as shared leadership, distributed leadership, collaborative leadership, and participative leadership promote sharing of power between members of a group (Ham et al., 2011; Hawken et al., 2012; Kramer & Crespy, 2011; Pearce, 2007). Power sharing it has been suggested, is not limited to those with designated leadership roles (Hawken et al., 2012). The idea behind power sharing is that there is no one individual with all the answers skills, talents and abilities needed to solve problems; implement service improvements and innovations in an organisation - hence the need to collaborate with others in leading groups and teams (Ham, 2012; Ham et al., 2011; Ham & Hartley, 2013; Hawken et al., 2012; Kramer & Crespy, 2011).

**Emotional Intelligence and Leadership**

Emotional Intelligence (EI) in leadership is a term used to describe how a person effectively uses emotions to direct and inform the thinking and actions of self and others; and involves self-awareness, self-regulation and self-management (Goleman, 1996; Schaubroek & Shao, 2012). Self-aware individuals are open and honest about their abilities and use self-review and reflective practices to
regulate themselves; making it easy for them to seek assistance from others who complement their strengths (Goleman, 1996). Discussing emotional intelligence in relation to leadership, Akerjordet and Severinsson (2010) suggested that leaders high in emotional intelligence behave in ways that stimulate and nurture expansive and divergent thinking and creativity of their teams through open communication and support.

Self-regulation involves the ability to recognise normal emotional responses, control and use of these responses in the most effective manner and identify personal and professional motivators (Goleman, 1996). Freshman and Rubino (2002) mention that leaders self-regulate by suppressing strong emotions long enough to make rational decisions and react in a controlled manner, thereby positively affecting the work environment.

Goleman (1996) postulates that leaders that self-manage do not make decisions based on impulses but are more able to adapt to change. Self-management in healthcare, is presumed by Freshman and Rubino (2002) to be associated with dealing with complex organisational situations, issues, problems and information; building effective partnerships with colleagues, other health professionals and leaders, as well as the compassionate and empathetic care of patients. However, it is supposed that the coupling of these values plus the commitment to, and development of, leadership skills and emotional intelligence would make outstanding leaders (Akerjordet & Severinsson, 2010; Freshman & Rubino, 2002). Literature on emotional intelligence concurs that emotional intelligence can be learnt and developed by leaders and followers (Goleman, 1996; Ladkin, 2010). Freshman and Rubino (2002) posit that there is a misconception that possessing compassion, empathy and the desire to help people is enough to make a good leader.

Emotional intelligence in radiography has been associated with the acknowledgement of own and others emotions, being able to deal with emotions appropriately to foster open dialogue and improvement of patient care (Mackay et al., 2012; Mackay et al., 2010). A UK-wide study on emotional intelligence within the radiography profession by Mackay et al. (2012), showed that the radiography profession had a higher score in emotional intelligence compared to the normative group drawn from various professions and trades. The study population consisted of all registered radiographers in the UK (n=25,328), who
were invited to complete an online questionnaire and a response rate of 7.9% was obtained (n=1997) (Mackay et al., 2012). To reduce bias introduced by a low response rate, the researchers composed a sample from the data already obtained as representative of the population and compared it with a normative group of n=866 drawn from the TEIQue-SF normative database (Mackay et al., 2012).

The Mackay et al.'s (2012) study results showed that radiographers compared to the normative group had higher emotional intelligence scores. The results also showed varying scores between specialities (modalities) within the radiographers’ group. The nuclear medicine radiographers’ perception of emotional intelligence was lower than that of radiographers in other modalities (Mackay et al., 2012). Mackay et al. (2012) posits that the coupling of fulfilling relationships, communication and empathy plus the commitment to, and development of, leadership skills and emotional intelligence would make radiographers good leaders in clinical and educational settings of their profession.

Research has shown that emotional intelligence seems to play a significant role in work-related factors such as job satisfaction, job performance, motivation, and leadership amongst others (Wong & Law, 2002). A study conducted by Wong and Law (2002) to investigate the effects of leader and follower emotional intelligence on performance and attitude using three groups of samples. In that study, the first sample consisted of a group of undergraduate students (n=72) who were used to develop a measure for measuring the effects of emotional intelligence on performance. The resultant measure was tested on practising managers and followers (n=149 supervisor-subordinate dyads) on the interaction between the emotional intelligence of followers and their emotional labour [emotional involvement and effort required to perform one’s work] (Wong & Law, 2002). Finally, after adjustments were done on the measure, the researchers used the measure on middle level administrators and their followers (n=146 supervisor-subordinate dyad) in a government organisation to test the influence of leader EI on followers’ job outcome (Wong & Law, 2002).

The results of Wong and Law’s (2002) study showed that the measure better predicted the external criterion variables and therefore increased the validity of the study. Measuring EI of followers and its effects on job outcome proved to be
difficult as other uncontrollable variables (cognitive intelligence) affected this result (Wong & Law, 2002). The results further demonstrated that the emotional intelligence of followers positively affected job satisfaction and was not dependent on the nature of the job (Wong & Law, 2002). The emotional intelligence of the leaders was shown to have positively affected the job satisfaction and extra-role behaviours of followers, although no relationship was found between the emotional intelligence of the leader and job performance of their followers (Wong & Law, 2002). The researchers postulated that emotional intelligence would affect organisational commitment and turnover intentions for jobs that require high emotional labour like healthcare and the hospitality industries (Wong & Law, 2002). The use of a self-reporting questionnaire in the study could have affected the results due to participants over or under-evaluation of themselves and affecting the results of the measure.

A study by Côté, Lopes, Salovey, and Miners (2010), was done which focused on examining the associations between emotional intelligence and leadership emergence. Côté et al. (2010) used self-reporting and evaluation questionnaires together with an ability test to gather data in an attempt to increase validity of a study. The ability test consisted of a series of questions and problems to solve that related to using one’s emotions in problem solving and decision making (Côté et al., 2010). Côté et al. (2010) conducted a study with two sets of samples, each sample had one hundred and fifty undergraduate students (n=150) who were divided into working groups, each with between two and six members per group. The self-reporting questionnaires were administered first when the course started, followed by an ability test and afterwards a self and group member evaluation questionnaire was completed. The evaluation questionnaire was to determine leader emergence in the groups (Côté et al., 2010). The results of the study showed that emotional intelligence was associated with leadership emergence over and above cognitive intelligence, personality traits and gender (Côté et al., 2010). The researchers discovered that these results were consistent only when measured using the ability test and not the self-reporting questionnaire (Côté et al., 2010).

These research results demonstrate that the ability to understand and be in tune with emotions affects areas such as job satisfaction, performance and leader emergence. Also associated with emotional intelligence and emotions is the extent to which individuals engage in their work, especially in healthcare where
staff have to show compassion and empathy (emotional labour) to their patients and colleagues (Côté et al., 2010). Therefore, emotional intelligence is a requirement for everyone to develop not just for leaders in healthcare.

There is a range of current literature that advocates shared leadership, discussing the role that employee engagement plays in organisations (Ham, 2012; Menguc, Auh, Fisher, & Haddad, 2013; Salanova, Lorente, Chambel, & Martinez, 2011; Shuck & Herd, 2012). Employee engagement has been described as the use of physical, cognitive and emotional capabilities by an employee to work resulting in involvement, commitment, attachment and productivity (Ham, 2012; Salanova et al., 2011).

Rayton, Dodge, and D'Analeze (2012) conducted a systematic review of published research done by research companies such as the Hays group on employee engagement. The researchers concluded that engagement affected a number of areas such as customer satisfaction, productivity, innovation, retention, health and safety and quality (Rayton et al., 2012). A similar review by Ham and Hartley (2013) looked at healthcare organisations that were considered world class such as the Mayo Clinic in the United States of America, to determine how they achieved employee engagement and the lessons that could be learnt by NHS in the UK.

The potential results for employee engagement cited by Ham and Hartley (2013) and Rayton et al. (2012) were reduced costs related to sickness, stress, absenteeism, turnover, production errors, accidents and inefficient processes. The researchers also noted better outcomes and experiences of customers (patients); increased productivity; innovation; improved employee wellbeing, morale and motivation (Ham & Hartley, 2013; Rayton et al., 2012). A number of areas were identified as essential to facilitate employee engagement. These areas include but are not exclusive to, manager-employee relations; clear articulation of the organisation’s vision and strategic plan; employee participation in decision making and organisational integrity (Ham, 2012; Ham & Hartley, 2013; Rayton et al., 2012). Employee empowerment and giving employees a voice in organisational issues was discovered to distinguish between profitable and unprofitable organisations and that leadership played an important role in employee engagement (Ham, 2012; Ham & Hartley, 2013; Rayton et al., 2012).
Empowerment and Leadership Development

Leadership literature encourages leadership development and empowerment across all professions and medical imaging is no exception. Empowerment entails the sharing, involvement and participation of individuals in decision-making, project management and responsibility (Joyce, 2010). Empowerment is associated with leadership development as leaders empower others by delegating power and responsibility to those they know have an interest in or more expertise on a project, problem or issue they are dealing with (Hogg, Hogg, & Henwood, 2008; Joyce, 2010). Mentorship, support and encouragement were provided by leaders to individuals they have delegated their duties and leading roles to perform. Curtis et al. (2011), therefore, advocate for the empowering of individuals through delegation of tasks and projects that will encourage learning and development of leadership skills; as well as creating a nurturing environment through mentorship.

Leadership development is designed to ensure that there are competent individuals that succeed the generation above them thereby enabling succession to be smooth (Ham, 2012). In their research, Donovan, Diers and Carryer (2012) found that succession planning in New Zealand nursing was of concern as leadership development was not clear or structured, thus creating a gap between current leaders and the next generation. The assumption is that the same could be true in medical imaging in NZ, as there is no evidence of either structured or targeted leadership development that encourages the emergence of new younger leaders and establishment of a succession plan. Time, resource constraints and the complex healthcare environment are some of the reasons hindering succession planning and the reason why there is a lack of structured leadership development (Donovan et al., 2012). Research suggests that succession planning cannot be left to chance; effort has to be put in to develop the next generation of leaders in healthcare professions (Donovan et al., 2012).

The medical imaging profession needs leaders who can encourage and empower others to raise the profession to the same level as other professions in healthcare (Niemi & Paasivaara, 2007; Sim & Radloff, 2009). Some authors are of the opinion that this may enable medical imaging, as an emerging profession, to take its place and become an established profession (Sim & Radloff, 2009; Yielder & Davis, 2009). This will require clinical practitioners to be involved in
doing research, professional and self-development, be innovative, creative and add to the generation of knowledge and evidence-based practice (Ford, 2010; Haven, 2012; Reeves, 2008; Smith, Yelder, Ajibulu, & Caruana, 2008).

Leadership development within the advanced and consultant roles has been viewed as essential for the improvement and success of efficient, quality care and essential services rendered to the public (Grint & Holt, 2011; Ham, 2012; Hendry, 2013; National Health Service, 2008; Society of Radiographers, 2005). In the United Kingdom, various healthcare organisations and institutes have identified the need for effective leadership development as being a key requirement or prerequisite for taking healthcare forward, as well as promoting personal development of practitioners (Ham et al., 2011; Ham & Hartley, 2013; National Health Service, 2008; Society of Radiographers, 2005). Leadership has been included in the required competencies for advanced and consultant practitioners under the Framework for Professional Leadership documents (College of Radiographers, 2005; Society of Radiographers, 2005). In the NZ context, there is no mention of leadership in the scope of practice under the Health Professionals Council Act (Doyle, 2013). However the MRTB only mention leadership, in particular “identification of leadership styles” under the communication competency in the published documents on competencies for practice (New Zealand Medical Radiation Technologists Board, 2011, p. 10).

In the past, some organisations have preferred to employ individuals who were experienced in leadership instead of developing the skills and encouraging those who have the potential to be exceptional leaders within the organisations (Hogg et al., 2007). Donovan et al. (2012) mention that health reforms in the 1990s in NZ removed existing leadership and promotion within the profession and opted for “generic managers who could be selected from any industry” (Donovan et al., 2012, p. 16). As there is no leadership development programme specifically designed for MRTs in NZ as yet, the assumption is that the recruitment of experienced leaders may be from outside the profession or from international sources within the profession and perhaps from within the profession without experience.

Curtis et al. (2011) in the UK, noted that graduates in nursing undergraduate programmes were not prepared to develop leadership skills for their day-to-day nursing practice. Instead leadership development is reserved for management
activity and positions (Curtis et al., 2011). Yet, nurses lead and manage the care environment as well as interact with patients, their families and other health professionals associated with their care (Curtis et al., 2011; Donovan et al., 2012). The assumption is that MRTs require the same range of leadership skills in their daily activities as they interact and dialogue with patients, families, colleagues and other health professionals. Decision making competencies are part of the requirements for the daily duties of MRTs as indicated in the prescribed competencies for MRTs for patient care and service provision (New Zealand Medical Radiation Technologists Board, 2011).

McKenzie and Manley (2011) are of the view that everyone has leadership potential and skills that can be enhanced through leadership development initiatives. According to McKenzie and Manley (2011), (Maxwell, 2007) and (Ham, 2012) leadership development is a lifelong endeavour and no leader can afford to be content at the level of development they are at. Continuous improvement will enhance professional and personal development which influences staff positively and results in improved patient-centred care and systems (Curtis et al., 2011; Gibbs, 2011; McKenzie & Manley, 2011). Leaders in healthcare are encouraged to grow and evolve as their environment, technology, world systems and acceptable ways of doing things [organisational culture] are evolving to reflect the demands of a knowledgeable society (McKenzie & Manley, 2011; Silverston, 2013).

**Organisational culture**

Organisational culture is affected and influenced by a number of factors including, but not exclusive to, leadership, commitment, loyalty, job motivation, job performance and organisational effectiveness (Kim et al., 2011). Kim et al. (2011) pointed out that socialisation takes place where new employees to an organisation learn the appropriate ways and patterns for operation, solving problems and issues according to the basic principles that govern the organisational activity. As old and new employees and leaders interact there is an enforcement of the organisational culture which influences the effectiveness of the organisation (Kim et al., 2011).

Furthermore, Spears (1998) highlights that to achieve and enable an empowering culture the organisation and individuals in it must work at being trustworthy, then empowerment will be established and maintained. Trust
becomes the binding factor in the relationships through effective communication between the individuals in the organisation (Covey, Merrill, & Merrill, 1994; Kramer & Crespy, 2011). It is felt that leadership success and organisation effectiveness become the rewards of an empowering and trustworthy organisational culture which supports and encourages its members (Covey, 2004; Covey et al., 1994; Hawken et al., 2012; Kramer & Crespy, 2011). Spears (2002, p. 2) on the other hand points out that; “a low-trust culture is characterised by high control management, political posturing, protectionism, cynicism and internal competition and adversarialism simply cannot compete with the speed, quality and innovation of those organisations around the world that do empower people”. A culture of empowerment and delegation that is established by the leader ensures that group members have the ability, authority and responsibility to make appropriate decisions in their work (Kramer & Crespy, 2011).

In healthcare, less bureaucratic organisational cultures that employ leadership styles that engage all stakeholders; staff, patients, internal and external suppliers are being favoured compared to the bureaucratic cultures of the past (Grint & Holt, 2011; Ham et al., 2011; Ham & Hartley, 2013; McKenzie & Manley, 2011). Leadership styles that engage, collaborate, empower and value people are encouraged in literature, as research demonstrates that these leadership styles make the leader-follower relationship thrive and enable organisations to cope with complexity and change (Grint & Holt, 2011; Ham & Hartley, 2013; Hawken et al., 2012; Leroy et al., 2012). Authors on leadership believe that the success of any style of leadership is closely related to the culture that prevails in the organisation, even though through leadership and change an organisation’s culture may be transformed (Hawken et al., 2012; Kotter, 1996; Kouzes & Posner, 2007; Leroy et al., 2012; Northouse, 2010).

Ideal Leadership
Foti et al. (2012) conclude that followers develop a construct of what leadership should be from socialisation and past experiences. The researchers highlight that followers use these constructs to recognise, understand and respond to a leader’s behaviour. Schaubroek and Shao (2012) and Foti et al. (2012) in their research studies on follower perceptions discovered that leaders are judged according to their sensitivity, dedication, charisma, attractiveness, intelligence and strength. The leaders are usually not aware that their behaviour or character
is being judged against the follower's ideal leader construct (Foti et al., 2012; Schaubroek & Shao, 2012). Followers' perceptions, attributions and expectations of a leader are affected when they do not meet the follower-leader construct and as a result the leader might get challenges or resistance from followers (Schaubroek & Shao, 2012).

Schaubroeck and Shao (2012) in their study illustrated that male and female leaders were judged differently depending on the emotion the leader demonstrated, which according to Schaubroek and Shao (2012) gave an impression of the effectiveness of the leader. Scenario methodology and a questionnaire were used in the study. The scenario method involves outlining in detail an event or situation which is analysed to answer the research question. The researchers employed examples of anger and sadness and found that males who demonstrated anger were regarded as strong and females who demonstrated sadness were regarded as weak (Schaubroek & Shao, 2012). Yet if a female showed anger they were labelled as domineering and unbecoming of a woman by females and a male showing sadness was regarded as weak and ineffective (Schaubroek & Shao, 2012).

A balance of the female and male attributes are needed in leadership by both male and female leaders in order to cater for the differences in perceptions and expectations of how leaders should behave between the two genders (Kark, Waismel-Manor, & Shamir, 2012; Schaubroek & Shao, 2012). Thus a mixture of culturally feminine and masculine types of behaviours may be employed to give both male and female leaders flexibility in the way they lead and are an advantage in how they are perceived by others (Kark et al., 2012). According to Kark, et al. (2012) and Schaubroek and Shao (2012) this contributes to leadership effectiveness, flexibility, better adjustment to managerial roles and leader emergence.

**Neuroscience and leadership**

The exploration of leadership in medical imaging is timely as the profession is at the centre of new developments in leadership research. Over the last few years there has been an integration of neuroscience and leadership research resulting in the establishment of neuroleadership (Ringleb & Rock, 2008). Neuroleadership combines neuroscience and the use of functional Magnetic Resonance Imaging (fMRI) with behavioural sciences (Balthazard, Waldman,
Thatcher, & Hannah, 2012; Boyatzis et al., 2012). fMRI is used to examine how the brain functions when processing information in various situations such as in decision making, problem solving and the use of soft skills such as emotional intelligence (Boyatzis et al., 2012; Ringleb & Rock, 2008). Neuroscience is giving scientific evidence according to Ringleb and Rock (2008) to areas where there has been a reliance on self-reporting questionnaires in research as well as other areas that could not be easily researched. Medical imaging professionals, therefore, have the opportunity to explore, understand and develop leadership as well as be in the forefront in research on neuroleadership.

**Summary**

This chapter has reviewed literature from various sources, as there is more literature about leadership from psychology; business; medicine and nursing than from medical imaging. Leadership has been portrayed as a complex and sophisticated phenomenon which has been studied and discussed for centuries. New facets of understanding, defining and theorising leadership are constantly emerging from literature. However, there is yet to be a definite construct that will capture everything that is known about leadership to date.

Literature describes leaders as individuals who possess or develop certain characteristics that make them effective in their role, working with followers towards goal achievement. The leader-follower relationship is affected by many variables like power dynamics; organisational culture and structure; context and interpersonal relations. Leader effectiveness is said to translate to organisational effectiveness and is associated with influencing people to put aside self-interest and ambition and work towards accomplishing common goals.

Leadership development and empowerment has been demonstrated in literature to work together when a leader entrusts certain responsibilities and projects to individuals who have the potential to be leaders. Leaders through delegation and support expose individuals to processes and demands that enable the development of essential leadership skills. Literature further highlights that followers have a construct of what leadership should be and how leaders should act and behave. These constructs are used to judge the effectiveness of the leader and whether the leader possesses attributes that the followers like, admire and would like to emulate.
Leadership plays an important role in the development and change processes in healthcare and other industries as highlighted by the need to understand and explore the phenomenon. Available literature on leadership in medical imaging argues that effective leadership is needed to facilitate the adaptation of individuals and organisations to the complex changing environment of healthcare.
Chapter 3: Methodology

The chapter outlines the theoretical framework of the research method used in the study. The ontological, epistemological and methodological assumptions which determined the methodology of the study are discussed. This is followed by a discussion of descriptive phenomenology as a research method and philosophy; examination of data analysis employed in the study and finally an overview of the rigour in the study is presented.

Theoretical framework

Ontological assumptions relate to the nature of reality and its characteristics (Creswell, 2007) and dealings with enquiring about what “exists in the ‘real’ world” (Davidson & Tolich, 2003, p. 24). Davidson and Tolich (2003) indicate that different cultures have different ontological perspectives and the nature of what is real to one culture or community is different from another culture or community. Creswell (2007) concurs with Davidson and Tolich (2003) in that researchers, the researched (individuals and communities) and the readers construct and interpret different realities in a similar context or situation. In this study the researcher’s objective was to illustrate the different realities that exist about leadership in medical imaging from different perspectives.

Epistemological assumptions relate to the “ways of researching and enquiring into the nature of reality and the nature of things” (Cohen, Manion, & Morrison, 2011, p. 116). This study takes on the constructionist perspective which sees meaning or truth coming out of society’s engagement with realities in the world (Crotty, 1998). Meaning is constructed individually, with each individual having a different meaning for the same phenomenon, issue and problem in the same context (Cohen et al., 2011; Creswell, 2007; Crotty, 1998). According to Willig (2008), social constructionist oriented research is about “identifying the various ways of constructing social reality that are available in a culture, to explore the condition of their use and to trace implications for human experience and social practice” (Willig, 2008, p. 7). Therefore leadership in this study is perceived to be socially constructed and affected by issues such as culture, communication and language.

The study used a qualitative approach to explore leadership in medical imaging as experienced by MRTs. Qualitative research assists in understanding naturally
occurring social phenomena as research participants’ “beliefs, attitudes, meanings, values and experiences are explored” (Whitehead, 2007a, p. 107). Qualitative research takes on a holistical perspective of experience as research participants’ feel, make sense of and reflect on their experiences with the researcher valuing every facet of what is shared with them (Crotty, 1998; Whitehead, 2007b). The researcher then uses the shared experiences as data that is analysed and conclusions are drawn from it.

The research study utilised descriptive phenomenology, which explores phenomenon in and through individuals (Crotty, 1998), seeking to understand individuals’ personal experiences, interpretations and constructs. Phenomenology was used to explore the definition, meanings, perceptions and experiences of leadership by MRTs. This enabled exploration of rich in-depth descriptions and the discovery of previously unexplored themes and meanings, bringing new awareness of the phenomenon for the participants. According to Willig (2008) phenomenology, besides revealing meanings of a phenomenon, illustrates the impact the phenomenon has on those studied rather than making assumptions or conclusions about the phenomenon.

**Descriptive Phenomenology**

Descriptive phenomenology, informed by the philosophical approach of Edmund Husserl (1859-1938) was utilised for this study. Descriptive phenomenology illustrates the multiple realities that people have on a phenomenon, giving “individuals’ perspectives through description, understanding and explanations” (Creswell, 2007, p. 60). The goal of using phenomenology for this study was to develop an understanding of leadership through lived experiences of being in the medical imaging profession.

It was Husserl’s primary concern in phenomenology to find out about the things that are taken for granted (Giorgi & Giorgi, 2003; Husserl, 1913/1964). Mainly ‘what do we know?’ or ‘how is this phenomenon known?’ and answering those questions that we have of our world and ourselves (Whitehead, 2007a). Answering questions which “cannot be answered by the traditional sciences” (Husserl, 1913/1964, p. 3), using descriptive phenomenology. Husserl assumed that using the descriptive phenomenological method in analysis of lived experiences would result in rich descriptions and an understanding of the phenomenon under investigation (Husserl, 1913/1964).
Husserl's phenomenological method involved obtaining descriptions of the phenomenon from self or other individuals. Thereafter, analysis using transcendental phenomenological reduction meant the researcher examined the data to find the essential components that best describe the phenomenon (Bradbury-Jones, Sambrook, & Irvine, 2009; Giorgi & Giorgi, 2004). The next stage was the process of free imaginative variation which involved “varying specific dimensions of the given object” or phenomenon and one sought the “effect on the object of the removal or variation of the key dimensions” (Giorgi & Giorgi, 2004, p. 246). The phenomenon investigated will have its ‘essences’, the invariant structures of individuals’ experiences, known and established through the process of phenomenological reduction of participants' lived experiences (Ladkin, 2010; Todres & Holloway, 2004). ‘Essences’, according to Todres and Holloway (2004), are the core nature of things or experience that fortify phenomenon or experience. The question of the essential qualities of phenomenon or experience is answered when essences are obtained.

Giorgi and Giorgi (2004) point out that Husserl's descriptive phenomenological method was based on philosophical analysis and could not be applied as it was, to enlighten situations in scientific social sciences. The authors called for the modification of the method if it was to be applied to research in social sciences. The disciplinary perspective applied to the data narrowed the analysis to a manageable, specific context or ‘life-world’ (Giorgi, 2012) and in the case of this study the ‘life-world’ was the medical imaging profession in private and public organisations. Giorgi’s modified version of descriptive phenomenology was employed in this research study, to examine leadership in the medical imaging profession in the Wellington region.

**Bracketing**

Throughout the research process, researchers temporarily ‘bracket’ out any prior knowledge about the phenomenon from the start of the research to its end (Giorgi, 2012). Bracketing is used to identify what is known and separate it from the phenomenon, thereby enabling the true essence of the phenomenon to emerge (Giorgi, 2012; Giorgi & Giorgi, 2004).

Prior to the commencement of the research process the researcher, in an attempt to bracket prior knowledge and experiences about the phenomenon, used journaling and memos to identity assumptions, perceptions and preconceptions about leadership in general and in medical imaging. Journaling
and memo writing were continued throughout the research process. The study utilised focus group discussion as a form of data collection and the researcher’s view about leadership. Prejudices and assumptions were made known to the participants who challenged the researcher’s views and this assisted the researcher in bracketing.

**Methods**

**Ethical considerations**

Ethics approval for the research was sought and granted by the Unitec Research Ethics Committee (UREC) before commencing the research study (Appendix A). In planning, implementing and reporting this study, full consideration was given to being aware of, observing, respecting and protecting the privacy and rights of the participants (Bell, 2010; Cohen et al., 2011). The recruitment and participation of participants was on a voluntary basis (Bell, 2010; Klenke, 2008).

**Informed consent**

Organisational consent was obtained from two organisations to recruit participants for the research and approval was given. Organisation A was a private radiology practice and consent sought from management through the operations manager. Organisation B was a state District Health Board and consent was sought from the CEO through the radiology manager. Both organisations were located in the North Island of New Zealand. Invitation letters (Appendix B) and information sheets (Appendix D and E) about the research study, and how to contact the researcher to answer questions about the research and participation were sent through appointed intermediaries. The intermediaries were appointed by the organisations as the contact people to discuss issues about site participation with the researcher. Interested individuals from Organisation A registered their interest to participate in the study directly to the researcher. Individuals from Organisation B, used their intermediary to register interest and were contacted by the researcher. Organisation B’s intermediary negotiated and coordinated interview times and interview room that suited the department, the participants and the researcher.

Written informed consent was obtained after giving information, using information sheets. Full disclosure of the research topic, purpose, information dissemination, ownership, where, how and how long data will be stored, who has access, the interview questions and expected length of interview process was
given before participants signed the consent form as recommended by Bell (2010) and Morse and Field (1995).

**Confidentiality and Anonymity**

During the whole research process the researcher endeavoured to observe respect and protect the privacy and rights of the participants. Respecting rights and confidentiality, data was anonymized and pseudonyms were used for participants and their respective sites. The researcher discussed issues of maintaining confidentiality and anonymity with focus group participants as part of the focus group ground rules. Transcription was done solely by the researcher and besides the researcher; transcripts were seen by the principal supervisors after anonymizing. Two of the participants were randomly selected and given their transcript, a summary of their first interview and initial analysis when the second interview was done. This was to check for quality and accuracy in capturing participants’ experiences and the phenomenon being studied.

**Rights, Care and Respect**

Participants were informed of their right to withdraw at any time without explanation and a right to withdraw their data up to a week after completion of the focus group. This was to enable the location of individual data to be possible before initial data analysis was in progress. Digital recordings will be erased five years after the completion of the study. The transcripts will be kept electronically in a password protected file on the researcher’s personal computer for a period of five years as per UREC requirement and then destroyed. All hard copy transcripts will be kept in a secure location at the researcher’s home and securely destroyed when the report is written.

Information from the participants was treated with care and respect and there was no need for any interview to be stopped at any time either from a participant's request or due to any signs of distress presented. If a case of distress had presented, the researcher would have stopped the interview and made sure the participant was calm and comfortable. The researcher is not a counsellor and therefore ensured that participants could be directed to a qualified counsellor, in case they needed help after the interviews. The researcher’s supervisors would have been informed of any incident and their help sought as well. There were no cases where infringement of participants’ rights was highlighted during the interviews.
Participants, their organisations and data were treated with respect, integrity, confidentiality, safety and handled as valuable and unique. Attempts were made to respect and be sensitive to the wide range of cultural views represented as the profession is multicultural.

Sampling

The two sites were sampled from 4 state-owned radiology departments and six private radiology practices in the region. Using convenience and purposive sampling, a site from each group was selected. Organisation A (private radiology practice) was selected because the site had MRTs with diverse age and work experience demographics and the site was geographically closer to the researcher. Organisation B (state-owned department) was selected because the site had a large MRT staff complement, with diverse demographics as well and was easily accessible for the researcher. The two sites were not chosen for any specific uniqueness but because they reflected medium to large sized radiology departments in NZ.

Purposive sampling focuses on getting rich informative data from the participants who meet the inclusion criteria (Creswell, 2008, 2009). In convenience sampling participants meeting the predetermined criteria, [in this case being MRTs], are selected due to being conveniently available in terms of access, location, time and willingness to participate (Neuman, 2003; Whitehead & Annells, 2007). The two forms of sampling were employed in both sites when sampling participants.

However, because no one initially registered interest to participate from Organisation A snowball sampling was used. Snowball sampling involves identifying individuals who have the inclusion criteria and using them as informants to identify and recommend individuals that will be willing to participate and the researcher could contact (Morse & Field, 1995; Whitehead & Annells, 2007). This form of sampling was employed to recruit participants from Organisation A using the researcher’s professional network.

Selection and Recruitment

The selection of the two sites was to include diverse experiences as the two organisations have diverse organisational structures. Organisation A’s management structure consisted of modality (speciality) heads, a manager who reported to head office to the operations manager and a board of directors. Staff at the site had autonomy on how they carried out their business. In contrast,
Organisation B had a more complex bureaucratic system with modality charges, manager, chief operations officer and clinical director and chief executive officer. Decisions in Organisation B are made by top management and have to fit into the District Health Board’s budget and plans.

After ethics approval (Appendix A), an invitation letter (Appendix B) and information sheets (Appendix D and E) were sent to named intermediaries for distribution and all MRTs from the two sites were invited to participate. At both sites the invitation letter was posted on the staff notice board and individuals interested in participating were asked to contact the researcher.

Reminders in the form of emails were sent out to the intermediaries and forwarded to all staff, after a month to encourage individuals to participate. Contact was maintained with the intermediaries throughout the invitation process, to ensure reminders were sent to encourage staff to volunteer for the research study. The slow response could be attributed to a number of reasons: for one the researcher was an outsider to both sites; people are usually busy with work and family life and participating in a research study would take their valuable time; they did not understand the research study or did not want to discuss the topic.

Organisation B took the opportunity to encourage participation and planned on engaging staff into dialogue about the phenomenon as the organisation had gone through some changes in the past two years. Organisation B’s leadership, were mindful of the fact that participation in the study may raise awareness of issues about leadership in the profession and in their organisation. Participants in the study from Organisation B were encouraged to share their own views about the phenomenon and not a generic view as discussions might have started before data collection. Voluntary participation was maintained throughout even though management was encouraging staff into dialogue about leadership and management. Before each interview the researcher assured participants that they had the right to withdraw participation at any time during the interview and the right to withdraw their data up to a week after completion of the focus group. The participants were further reminded that they were not compelled to participate in the study. Organisation of times and meeting place for the individual interviews and focus groups, were negotiated with the individuals, the intermediaries and the researcher. Dates and times were arranged into the work schedule of staff at Organisation B.
Organisation A’s MRTs had not registered interest to participate in the study even after a personal visit from the researcher. Two further email reminders were sent out over two months. As pointed out by Morse and colleagues, no response or slow responses are some of the hurdles met in the field when conducting a research study (Morse & Field, 1995; Morse & Richards, 2002). The researcher did not make any further approaches as there was a risk volunteers would feel pressured into participating, violating the voluntary nature of the participatory framework being employed. A change in the recruitment process for the private practice was implemented. The researcher’s professional network recommended the researcher to an MRT in another branch of the private radiology practice and obtained consent to participate in the study. After conducting an interview with the participant, another MRT was recommended to the researcher. The inclusion and exclusion criteria remained the same. There was an acknowledged awareness of the risk of a limited one-sided perspective of the phenomenon from participants selected from the researcher’s professional network (Morse & Field, 1995; Neuman, 2003).

**Inclusion and Exclusion criteria**

Inclusion criteria for individual interviews:
- Qualified MRTs with no specifically defined leadership roles;
- Modality (speciality) charges (from General, Computerised Tomography (CT), and Ultrasound)
- Radiology managers

Exclusion criteria for individual interviews:
- MRTs working at the researcher’s workplace.

Inclusion criteria focus groups:
- Qualified MRTs with no specifically defined leadership role.
- Student radiographers.

Exclusion criteria for focus groups:
- MRTs with specifically defined leadership roles.
- Team leaders and managers.
- MRTs working at the researcher’s workplace.
Data collection process

Interviews
The phenomenological method used utilised individual and focus group interviews as the main form of data collection (Todres & Holloway, 2004). Individual and focus group interview methods were used for data collection because they reflected the study’s aim of exploring the lived experiences of leadership in medical imaging. The interview method in phenomenology engages the participant and the researcher with the participant’s lived experience (Todres & Holloway, 2004). The interview method encourages the participants to construct knowledge and reflect on their activities (Todres & Holloway, 2004).

Piloting and pre-testing the interview schedule
The interview questions were formulated using the aims of the research study and concepts from the literature review. Semi-structured questions were opted for instead of a broad open-ended question. The researcher, as a novice researcher, wanted to ensure that there was a guide to the interview process, allowing for deeper exploration of the phenomenon and new data to emerge.

The initial set of interview questions were tested on the researcher by a peer who had previous research experience. After the interview, the interview schedule was revised to reflect phenomenological philosophy, which involves asking questions that encourage detailed descriptions. Revision was necessary to ensure that there was natural flow; that there was no repetition of questions, and that the questions were open-ended and encouraged conversation or discussion.

A further pilot interview was conducted by the researcher with a peer from the researcher’s workplace, so as not to contaminate the sample. The interview schedule (Appendix I) was given to the participant a day before the interview. The reason was to give her a chance to think through the topic and questions to be asked, in order to be able to maximize the time we had for the interview. The result was a well thought through interview lasting 30 minutes, which was shorter than anticipated but allowed opportunities to ask other probing questions that came up from the responses. Giving the interview schedule ahead of time, as highlighted by Kvale (1996), resulted in the loss of obtaining spontaneous and unexpected answers from the participant and the interview became more
structured. This was experienced by the researcher in the pilot interview and was not done in the real interviews.

The insights gained from the pilot were used as a guide for the rest of the interviews. A revised version of the piloted interview schedule was given to the individual interview participants. This was along with the information sheets and consent forms that participants read prior to the interview.

**Sample size**

The nature of qualitative research especially phenomenology requires a small sample size to be used to obtain rich in-depth descriptions of the phenomenon (Morse & Field, 1995). The small number of participants make the research process practicable, taking into account the time to conduct interviews and finish the research study in the planned time frame as well as the adequate management of the amount of data that is obtained (Morse & Field, 1995; Neuman, 2003). The individual interviews had six (n=6) participants and the MRTs focus group had six (n=6) participants whilst the students focus group had five (n=5) participants. Bradbury-Jones et al. (2009) and Morse and Field (1995) suggest that the sample size in focus groups should not exceed ten because a group with more than ten participants makes the discussion difficult to control. The focus group sizes in the study were therefore within the recommended numbers.

**Individual interviews**

The individual interviews used an interview schedule (Appendix F) with semi-structured questions and participants were encouraged to recall critical incidents. Some questions were developed after the piloted interview schedule (Appendix I). Some participants were able to use constructs and reflections from the recalled critical incidents to make a comparison of the various past leadership experiences they have had with their current situation.

As this was the researcher’s first research study, piloting the interview schedule was useful for developing the final interview schedule for the study. Confidence was also gained as interviewing progressed and this necessitated returning to two participants who were interviewed first. After the initial data analysis, the researcher conducted second interviews with the first two participants to clarify areas and emerging themes that were not fully explored or mentioned by these participants in the initial interviews. The information obtained was not yielding
any new data and no further interviews conducted. The average length of each interview was around thirty-five minutes.

**Focus Groups**

Focus groups, according to Creswell (2007), involve the interaction between individuals around a specific topic with the aim of presenting the multiple realities that represent different views of the population. Bradbury-Jones et al. (2009), mention that individuals are influenced by people around them and the environment that they are in. Therefore, focus groups use the interactions between individuals to examine and explore topics to get insights that cannot be achieved during a one-to-one interview (Bradbury-Jones et al., 2009).

Participants in a focus group are able to reflect on their experience and give their ideas or opinions after hearing other participants share (Webb & Kevern, 2001). In a focus group participants are able to defend their opinions and ideas when challenged by others encouraging further clarification and understanding of experiences that previously would not have been explored or reflected on (Bradbury-Jones et al., 2009; Klenke, 2008; Webb & Kevern, 2001). Ground rules were discussed with the participants before the group discussion started. Ground rules such as maintaining confidentiality, respecting the views of others and not ridiculing other participants were agreed on by the participants.

Focus groups were used in this study to complement the individual interviews and encourage discussion among participants on leadership in medical imaging. The focus group sessions utilised the meaning units and topics that emerged from the data analysis of the first two individual interviews as discussion points (Appendix G). In addition to the researcher, a facilitator was used for the focus groups to assist in making sure that all areas of discussion were covered and ensuring the sessions ran smoothly, as well as for recording nonverbal responses from participants.

Digital audio recording was used for all the interviews and focus group discussions. The recordings were downloaded to a computer and transcribed in their entirety and pseudonyms assigned to participants.
Data analysis and interpretation

In preparation for data analysis, the transcripts were read again to edit and remove pauses, fillers and repetitions, to ensure comprehension of transcripts without losing data or changing the meaning of the sentences.

Giorgi’s modified version of descriptive phenomenological data analysis was employed as follows:

- **Emersion in the data** by reading and re-reading the transcripts to get an understanding of what the participant is talking about (Giorgi, 2012; Giorgi & Giorgi, 2003). The researcher in an attempt to contain analysis in medical imaging assumed a disciplinary (medical imaging) attitude as suggested by Giorgi (2006, p. 355), “to bring the proper sensitivity to the analysis and provide a perspective that enables the data to be manageable”. Furthermore, the researcher employed phenomenological reduction, which involves bracketing past experiences, knowledge, assumptions, perceptions and preconceptions about the phenomenon. The researcher, with the aim of emersion in data employed these two processes as the digital recordings were listened to and transcripts were read and re-read. Notes and memos were made by the researcher throughout the analysis process.

- **Manually analyse data to obtain meaning units.** Meaning units include topics, themes and statements of meaning (Giorgi, 2012; Giorgi & Giorgi, 2003). Interview data were manually analysed to obtain meaning units. The meaning units were obtained by first analysing each transcript for main topics and marking the areas of text where the topics are found (Giorgi, 2012; Giorgi & Giorgi, 2004). The selected areas were further analysed sentence by sentence to understand the meaning units in depth.

- **Adoption of disciplinary attitude, phenomenological reduction and transformation of data through combining meaning units.** Meaning units which have similar focus or content are combined to clarify the sense (Giorgi, 2012; Giorgi & Giorgi, 2003). The emergent meaning units are further analysed to find essential meanings and a fixed identity of the phenomenon called free imaginative variation (Giorgi, 2012; Giorgi & Giorgi, 2003). Mind maps from the above stages of the analysis were
developed from each transcript and then combined to make a master mind map of the main meaning units.

- **Develop structural description of condensed key meaning units from the participants’ data.** An intricate and rich detailed description of the essential meanings are combined with participants’ raw data in developing the structural description of the phenomenon (Giorgi, 2012; Giorgi & Giorgi, 2003). The combination produces rich detailed in-depth description of the phenomenon (Giorgi, 2012).

A descriptive document for each transcript was created which had the participants’ demographics, main meaning units and supporting quotes for the meaning units as well as subthemes that were specific for each transcript. Also the researcher’s notes made in the first stage of the analysis were valuable in formulating the document as they contained ideas that were emerging in the analysis. The document was presented to a peer and the research supervisors to check analysis to ensure inclusiveness of the emerging findings and highlight any potential bias. Further analysis was recommended, as it was felt that the researcher may have missed meaning units that were emerging in the quotes and not accounted for by the researcher.

After further analysis and adding the meaning units that emerged, a detailed description of leadership in medical imaging was formulated using the essential meaning units that described the phenomenon and supported by excerpts from participants’ data.

**Authenticity and trustworthiness**

Rigor in qualitative research uses the process of checking dependability, credibility, transferability and confirmability (Lincoln & Guba, 1985; Morse & Richards, 2002). Dependability poses a challenge for phenomenology as it cannot be easily achieved since phenomenology uses mainly interviews as the data collection process; which can be both selective and subjective (Creswell, 2008; Willig, 2008). Lincoln and Guba (1985) point out that there can be no dependability without credibility; therefore an illustration of one establishes the other. Dependability can be further enhanced by having the research process and the research results examined for consistency (Lincoln & Guba, 1985). In the study this was achieved by the research supervisors and a peer, reviewing
the research process and the findings. The details of processes used in the study as presented in the thesis are part of the audit trail maintained throughout the study. The use of excerpts from participants’ data in the findings chapter, illustrate where themes were identified from and how conclusions were reached.

The data is said to be selective and subjective because the participants decide which experience they will share and the experience exists in the participant’s mind (Morse & Field, 1995). Individual interviews and two focus groups were used to achieve credibility and validity of the study as suggested by Willig (2008). The limitations of each method were overcome by the strengths of the other (triangulation) (Cohen et al. 2011; Willig, 2008). To further improve rigour of the study and triangulate the results, member checks were used (Morse & Field, 1995). Two participants were given their transcript, a summary of the transcript and the initial data analysis which acted as a guide to the topics that needed to be covered or clarified in the second interview. The participants were given an opportunity to make changes and comments on the documents; however no changes or comments were made. Member checks were employed to improve credibility of the study.

To increase credibility and maintain the spirit of descriptive phenomenology, the researcher identified and understood the assumptions underpinning the philosophical stance taken and suspended any judgement about what constituted reality when dealing with the phenomenon (bracketing) (Giorgi, 2012; Hamill & Sinclair, 2010). The researcher endeavoured to ensure accuracy and credibility by dealing with the data as one that knew nothing about leadership and let the participants’ data speak for itself. Expert review was employed to further enhance credibility (Hamill & Sinclair, 2010), by engaging a peer with an education and leadership background in discussing leadership phenomenon and assisting in checking the analysis. Reviews from the research supervisors were also obtained throughout the research process.

**Limitations of the study**

Daft and Pirola-Merlo (2009), Ladkin (2010) as well as Uhl-Bien et al. (2007), described leadership as a complex phenomenon to study and understand. There were a number of limitations that existed due to the phenomenon, the design of the study and the researcher, in this present study. Leadership is a vast
phenomenon to study and there seem to be a number of unarticulated assumptions surrounding it, for example, the individual perceptions held by followers of what their role should be in the leadership relationship (Ladkin, 2010). This study did not fully explore the detail surrounding leadership as it was undertaken to explore leadership within the context of medical imaging and to give a general understanding of how leadership is experienced by a small group of MRTs from a specific region of New Zealand.

While this study is not directly generalizable and the findings are unique to the small sampled population of MRTs, it would be interesting to test out the findings on a wider group of MRTs. This would enable the further exploration of the findings to evaluate whether they are valid across a wider subset of the profession or just unique to the sampled group. The nature of phenomenological studies prevents broad generalizations to be made because the sample size utilized is usually small but transferability of findings is possible (Creswell, 2007).

The use of the snowball sampling method might also have introduced an unintentional bias in the study. A certain view might have been obtained from participants selected using snowball sampling as people with similar views might have agreed to take part in the study. However, with the inclusion of leaders, MRTs and students it is hoped that as wide a view as possible was captured to minimise the risk of selection bias.

Data collection could have been improved by including written reflective work from the focus group participants in addition to the discussion. Establishing rapport and gaining trust from the participants as a colleague in the profession with no leadership role, was an attempt to enable participants to reflect and disclose more about leadership in medical imaging. The researcher wanted to ensure that focus group participants disclosed their experiences without fear of being judged or ridiculed by the researcher and other members of the group.

Another limitation is that the researcher was an outsider, having no relationship with the group except as a MRT in the same region. An insider MRT could have been employed by the researcher to chair the discussion, for participants to be more relaxed but that would have introduced a power relationship with the participants. Data collection could have also been improved by having more than one session of the discussions with each focus group.
The researcher entered the research field as a novice researcher, this created limitations in data collection and data analysis. It has meant that the researcher, during the research process has had to grow both in knowledge about the phenomenon and the skills and abilities required to carry out qualitative research.
Participants
The participants who took part in the study are represented in the Table 1. Pseudonyms have been used to protect confidentiality of the participants and their respective workplaces.

Leaders, for the purpose of this discussion represent managers, supervisors, team leaders and duty MRTs (area and shift coordinators or supervisor). The leaders have been assigned pseudonyms that start with the letter ‘L’, namely; Lawrence, Lee, Laine and Leroy. MRTs have been assigned pseudonyms starting with ‘R’, namely; Ralph, Rachel, Raleigh, Raquel, Rebekah and Ruth. Finally the students have pseudonyms starting with ‘S’, namely; Steven, Sarah, Sue, Sylvia and Stephanie.

Table 1: Individual interviews participants

<table>
<thead>
<tr>
<th>Participants</th>
<th>Gender</th>
<th>Age group</th>
<th>Work experience(in years)</th>
<th>Leadership Position held</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lee</td>
<td>M</td>
<td>25-35</td>
<td>7</td>
<td>Modality Charge</td>
</tr>
<tr>
<td>Lawrence</td>
<td>M</td>
<td>35-45</td>
<td>10</td>
<td>Modality Charge</td>
</tr>
<tr>
<td>Laine</td>
<td>F</td>
<td>45-50</td>
<td>23</td>
<td>Modality Charge</td>
</tr>
<tr>
<td>Leroy</td>
<td>M</td>
<td>45-50</td>
<td>25</td>
<td>Manager</td>
</tr>
<tr>
<td>Raewyn</td>
<td>F</td>
<td>40-45</td>
<td>20</td>
<td>No leadership position</td>
</tr>
<tr>
<td>Rose</td>
<td>F</td>
<td>45-55</td>
<td>25</td>
<td>No leadership position</td>
</tr>
</tbody>
</table>
Table 2: MRT focus group participants

<table>
<thead>
<tr>
<th>Participants</th>
<th>Gender</th>
<th>Age group</th>
<th>Work experience (in years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ralph</td>
<td>M</td>
<td>25-35</td>
<td>3</td>
</tr>
<tr>
<td>Raleigh</td>
<td>F</td>
<td>25-35</td>
<td>10</td>
</tr>
<tr>
<td>Rachel</td>
<td>F</td>
<td>20-25</td>
<td>3</td>
</tr>
<tr>
<td>Raquel</td>
<td>F</td>
<td>35-45</td>
<td>15</td>
</tr>
<tr>
<td>Rebekah</td>
<td>F</td>
<td>20-30</td>
<td>3</td>
</tr>
<tr>
<td>Ruth</td>
<td>F</td>
<td>45-65</td>
<td>25</td>
</tr>
</tbody>
</table>

Table 3: Student MRT focus group participants

<table>
<thead>
<tr>
<th>Participants</th>
<th>Gender</th>
<th>Age group</th>
<th>Year in college/training</th>
<th>Work experience outside medical imaging (in years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steven</td>
<td>M</td>
<td>25-30</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Sade</td>
<td>F</td>
<td>18-25</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Sue</td>
<td>F</td>
<td>18-25</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Sylvia</td>
<td>F</td>
<td>25-35</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Stephanie</td>
<td>F</td>
<td>20-25</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
### Summary

Chapter 3 outlined the theoretical framework that this research study is based on. The study took a qualitative framework within a social constructionist perspective. The perspective sees meaning as being constructed, with each individual having a different meaning for the same phenomenon in the same context. Descriptive phenomenology was used to examine the MRTs lived experiences of leadership using individual interviews and focus groups as data collection tools. Data analysis employed Giorgi’s modified version of descriptive phenomenological analysis that emphasised the adoption of disciplinary and phenomenological reduction attitudes throughout data analysis. Ethical considerations and issues of achieving quality research like authenticity and trustworthiness are outlined in the chapter. Bracketing and reflexivity were used to further improve quality of the study and to reduce, as much as possible, the researcher’s biases, assumptions, prejudices and preconceptions. The chapter also outlined the participants’ demographics from the individual interviews and the focus groups. The following chapter presents on the research findings.
Chapter 4: Findings

The primary goal of this qualitative descriptive phenomenological research study was to explore the experiences of leadership in medical imaging, examining what leadership is and what leadership means to MRTs in clinical practice. The chapter presents the study’s findings (themes), which resulted from the data collected using descriptive phenomenology informed by Husserl. Data analysis was guided by Giorgi’s modified scientific version of descriptive phenomenological method. The emergent themes will be presented and are reflective of the experiences of the participants on leadership in medical imaging. Throughout this chapter excerpts from interviews will be used to illustrate these themes.

Themes and subthemes

The following themes emerged from the data: definition, identity, relationship, characteristics, types and styles of leadership and followership styles, perceptions, expectations and ideal leadership, context and appointment, promotion and leadership development (see Table 4, below).

The themes that emerged were initially difficult to separate as individual entities because of the complexity and overlapping nature of the data. This interlink highlights the complexity that was encountered when trying to describe leadership in medical imaging. An example is the alternating roles of leaders and followers. The leaders in the study, especially duty MRTs (coordinators) only occupy the position for a limited time such as one day in a week and then switch positions to being followers when someone else is the duty MRT the next day.
### Table 4: Themes and subtheme

<table>
<thead>
<tr>
<th>Themes</th>
<th>Subthemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td></td>
</tr>
<tr>
<td>Identity</td>
<td>Leader</td>
</tr>
<tr>
<td></td>
<td>Follower(s)</td>
</tr>
<tr>
<td>Relationship</td>
<td>Communication</td>
</tr>
<tr>
<td></td>
<td>Power</td>
</tr>
<tr>
<td>Characteristics</td>
<td>Trust</td>
</tr>
<tr>
<td></td>
<td>Support</td>
</tr>
<tr>
<td></td>
<td>Personality</td>
</tr>
<tr>
<td></td>
<td>Friendship</td>
</tr>
<tr>
<td>Types and styles leadership and</td>
<td>Self-leadership</td>
</tr>
<tr>
<td>followership styles</td>
<td>Expert leadership</td>
</tr>
<tr>
<td></td>
<td>Administrative leadership</td>
</tr>
<tr>
<td>Perceptions, expectations and</td>
<td></td>
</tr>
<tr>
<td>Ideal leadership</td>
<td></td>
</tr>
<tr>
<td>Context</td>
<td>Organisational structure</td>
</tr>
<tr>
<td></td>
<td>Organisational culture</td>
</tr>
<tr>
<td>Appointment, promotion and</td>
<td></td>
</tr>
<tr>
<td>leadership development</td>
<td></td>
</tr>
</tbody>
</table>
The themes as illustrated in Figure 1 are interlinked and build on each other. Figure 1 presents leadership as a relationship that exists between a leader and followers. Each individual in the relationship has to know the role they play for the relationship to be effective. From then, desirable characteristics for each role are established followed by the differentiation of the type and style of leadership the characteristics promote. The findings suggest that the type and style of leadership chosen affects the perceptions and expectations that individuals have of the leader and this can be determined by the context in which leadership takes place. Perceptions and expectations affect the ideal leadership situation that each individual would like to experience. Context is not limited to the physical environment like the workplace but includes systems, culture, organisational norms and other factors which are not easily articulated but affects leadership activities and productivity of an organisation (Kotter, 1996;
Ladkin, 2010). The findings further suggest that appointment and promotion into leadership positions has evolved with time. Leaders are designated through various ways and not necessarily from within the profession. The findings also indicated that leadership development could assist in raising leaders from within the profession and assist in establishing succession planning. Finally, all the themes contributed to MRTs' working definitions of leadership in medical imaging.

Definitions

The definitions theme is presented first as it forms the starting point for describing the leadership phenomenon, however, definitions are arrived at as a conglomeration of all the themes. The participants defined leadership as having a vision, influence and modelling the expected behaviour for staff to emulate, as well as guidance, support, getting things done, teamwork, teaching and the ability to put ideas into action. The leader according to participants is the main focus of leadership. The leader is the one who determines how things are done in the department or area of responsibility, “...Leadership is taking people forward, taking people with you ...to follow a vision that you have set...” (Leroy, 7:16)

Leadership in clinical practice was understood by some participants as the umbrella person responsible for the day-to-day running of the department from how the equipment works, attending to patients, producing images of diagnostic quality and getting input from the radiologist on protocols and image quality.

...Leadership to me means someone who is the sort of big umbrella over everything, the sort of person who is in control of everything that is going on and is really the person that is ultimately responsible for everything that is going on... (Rose, 2:14)

The students found that the MRTs were setting an example and modelling the behaviour that was needed to function as a MRT on a day-to-day basis, leading patients and those students “...It is being looked up to, having people respect you for what you are doing...” (Sade, 4:19)
In defining leadership, participants highlighted that leaders provide essential and necessary physical and emotional resources for staff to implement the set vision of the organisation. Leaders were said to empower their staff, to perform their work with added responsibility and prepare staff for change as well as making change seem like everyone’s responsibility.

When the participants were asked the difference between leading and leadership, leading was described as implementing the vision. The work plan of the vision being broken down into small objectives and steps that can be followed and the accumulation of these steps results in the accomplishment of the vision. Leading was said to involve showing ‘how to’ do things and most participants indicated that anyone can lead but not everyone can be in leadership. As shown by this comment:

...You could say leading is ‘come with me this is what we are doing’; leadership is ‘this is where we want to get to, how do we do it?’… I think you could probably interchange those. Leading as a group, you can lead from behind and just push as long as you are pushing in the right direction instead of just pushing… (Lawrence, 7:33)

In discussing the difference between leading and leadership the participants in the two focus groups agreed that anyone can show the way but only a few are designated leaders. According to the focus group participants, leadership was about interpersonal relationships, control, targets, ensuring effective utilisation of resources and other responsibilities. All participants implied that leadership was more about how people were treated. Leadership for the participants was about dealing with people and the conflicts that arise when things are not in order or people do not see progress. As expressed by this comment:

... Leadership, I think it’s dealing with people. It’s just reading people, trying to read people, trying to be clear about the points I am trying to make, trying to be fair and trying really hard to be transparent. Even though I think I am transparent it is making that extra effort so that everyone is very clear that you are being fair and following whatever processes. To me it is just juggling people... You get several different types of people, and everyone works differently and everyone interacts
differently with everyone else and it is trying to get a handle of all of those interpersonal things and how, each person needs to be managed... (Lee, 3:4)

The participants in the study portrayed leaders as needing followers to influence, provide direction and empower. This is illustrated throughout the accounts given, ‘staff’, ‘team’ or ‘group’ were cited concurrently with leader or leadership. Some leader-participants also referred to leading collaboratively with some individuals in their teams. Interestingly there was remarkable similarity in the definitions from participants.

**Understanding of Leadership**

The leader-participants were of the opinion that an understanding of leadership would enable MRTs to realise that the leader is not necessarily the technical expert leader. The leader might have been appointed to the role because of their expertise but the role requires more than technical expertise for the leader to be effective:

.... I think understanding what the roles of people are and how they differ, as you have different roles in the hospital… People look at me as the technical expert of the area I work in, which for sure I am but I don't spend a lot of time doing that either... I am expected to know all the answers and find all the problems… (Lee, 6:22)

The leader’s work is focused on the individuals and the processes of meeting targets and liaison and not the technical aspect of the work. The experts according to leader-participants are the MRTs on the floor who are perfecting their technical skills daily and would know more about the equipment and technical issues than the leader, “…Clinical expertise comes from everyone …Don't expect to be the clinical expert as well as the team leader…” (Lawrence, 4:18) However, according to MRT participants, a leader having technical experience is favoured because they are able to communicate with staff, patients and other health practitioners as well as be good advocates for the department.

…A leader has to have good clinical skill and have to relate to people and in a training environment they have to be able to talk to students and have to relate to all age groups … You have to be able to teach, take
instruction and you have to be able to communicate to everybody… And obviously practically and clinically the leader should know what they are doing… (Raewyn, 5:44)

The leader-participants said that an understanding of leadership by MRTs could encourage them to develop as competent practitioners, who are able to critique and challenge issues. Issues – especially, in situations when MRTs have to get clarification from referrers on imaging requests that are incomplete or not adequate for an examination to be done. The leader-participants felt handling such difficult and challenging situations may assist in the process of developing leadership skills.

…It’s [leadership] taking people to follow a vision that you have set and empowering them to do that … As a leader, you want them [MRTs] to be confident practitioners that are not only technically good at what they do and can critique their work but also have got good interpersonal skills with the patient. And it is important that they can also relate to other health practitioners as well so they… can talk to a doctor, for example ….And it [understanding leadership in clinical practice] encourages people to challenge stuff … or be competent to do it, in a respectable way … (Leroy, 7:16)

Laine suggested that an understanding of leadership might change perceptions of what leadership is and enable staff to understand why certain decisions had to be made. It will show staff what a leader’s job and responsibilities entail so they are not confused or expect more than the leader can deliver.

... It [understanding leadership] could change how receptive we are to decisions, things like that. And it would be an interesting thing for our new students when they have been here for six months or a year or so to understand what is involved in each of those jobs. Because when you are quite removed from it, you can’t see what the job entails and perhaps people will understand why decisions had to be made, for example, why leave was turned down. I don’t think a lot of people would know what our leaders do, you know. ‘It looks like they are having coffee again and they are talking in her office’ or something. I think it would be interesting for people to see a breakdown of what leaders do... (Laine, 4:28)
Furthermore, Laine is of the opinion that understanding leadership for MRTs and students will bring role clarity and possibly affect the perceptions and expectations that they have of those in leadership positions. Ruth was not in agreement with the view that MRTs needed to understand leadership. She however, mentioned that it was important for MRTs to understand the patient:

... I don’t think we need to understand leadership, we need to understand the patient, and we need to understand the clinical aspect of the patient and what our role is, to produce diagnostic images... (Ruth, 7:77)

The other members of the MRT focus group concurred instead with the leader-participants, indicating that understanding leadership might improve the way certain situations are handled especially during times when they work alone. The participants mentioned that, when they work alone they have to make decisions that affect their workflow and the images they obtain.

Identity

The identity theme describes how the participants perceived the role they occupied in leadership. Those who were in leadership described themselves with confidence, pointing out what they do; their limitation and their contributions. Most MRT participants were not leading and described their role in leadership as following the leading of their leaders and radiologists.

Leaders

The leaders in the study represent those individuals in formal leadership positions. According to the participants, leaders constitute managers, team leaders, duty MRTs (coordinators) and supervisors. Participants described leadership in medical imaging as leader-centred. The leader became either the hero or heroine or the villain, depending on how staff or teams were led:

...We have had some leaders in the past, managers who have walked in and said ‘I will have new staff meetings and nobody says anything, I am going to tell you what is going on and what I need you to do’... (Raleigh, 2:17)
The leader’s actions, responses and interactions with staff to accomplish set goals were the focus of the participants’ descriptions. The ideal leader was described as being one who can be trusted; gives good direction; has good communication skills; handles queries well; has good interpersonal skills and is aware of what is happening around them. This view of leadership is expressed in comment:

...I suppose, it is providing direction or a goal or target for a group of people that you are working with and it’s like you are not at the front leading the way but you are saying you are trying to establish a goal for somewhere you want to get to ... (Lee, 4:10)

Followers
The participants described followers as individuals and groups who follow the leading of the person designated as the leader. Some participants described the MRT’s role as a compartmentalized one. They limited the MRT’s role to technical aspects such as taking images and patient care as well as following the leader’s instructions, thereby working under the direction and supervision of those in positions of authority. These participants were not of the view that MRTs had a leadership role:

...The clinical aspect and its core leader, the radiologist, is the person who will liaise with other departments, clinicians and referrers. We look for their guidance as to what is ordered and we might go to the radiologist to back us... (Ruth, 6:68)

...We also have a lot of followers [herself included] I think and I guess like any other job sometimes we get into our comfort zones and that is where you stay... I think there are quite a few leaders out there in medical imaging... (Raewyn, 6:48-50)

Rose provided an interesting view on why she prefers being a follower instead of a leader, choosing not to pursue any leadership positions at work because as she explains she already has a leadership role in her household and that is enough for her:

...I don’t want to be a leader. That is because I have so much happening in my life to take such a role and I am not saying that those in leadership role have nothing happening, they do. But it is for people that want to go
up the ladder; I have no desire to do that. I am probably the wrong person to talk to about leadership; I have no desire to be a leader. I suppose I am a leader at home, I have kids that I try to set an example and steer them in the right direction and try and help them everywhere. And try and make them understand everything and know the consequences of their actions and that is what leadership is, isn't it? Making people understand all those sorts of things. Setting a good example in all aspects of your job or life you know. But I don't have any leadership role apart from being in charge at home. I don't have any desire to be in charge at work, not at all… I was really happy to have the job that I like and come to work and have a leader that is approachable, understanding, and fair and that I like... (Rose, 7:42)

Teaching Role
Student participants however saw MRTs as their leaders by virtue of their relationship of teacher and learner as they got most of their practical instruction, mentorship, direction and guidance from MRTs in practice. The MRTs also acknowledged teaching students the practicalities of the job and some viewed the role as part of leadership: “... We do teach students, we all do that and that is one aspect of our role that is leadership...” (Ralph, 6:72). Teaching was viewed by some MRTs as a leadership role because when the MRTs share technical knowledge and information with students, they inspire, lead, challenge the students, model professionalism and share the vision of the organisation and profession. Participants in the student focus group provided valuable accounts on their view of the MRTs’ role. Their view suggested that even when MRTs do not consider themselves as leaders, the students they work with and teach the practical aspects of the job to, considered them as leaders. The students mentioned that MRTs are always modelling the appropriate professional behaviour to emulate, thus showing students the way to work and influencing their interactions with patients, family, support people and colleagues:

…I remember the first days; I was like ‘... I am not going to be able to do what they are doing, it is so stressful’ …but now you know you can go in and talk to the patient and position them… (Sade, 2:6)

… The MRTs makes you feel comfortable… they are not pushing you through [the examination], they are not second guessing you when they give you an opportunity to take a leading role in examining the
patient…and if they need to change anything they [MRTs] come in and say ‘look you might be able to do this’… (Stephanie, 3:10)

Describing the role that is occupied by leader and followers, some MRTs were aware that depending on the context, MRTs occupied both the follower and leadership role alternately. For example the coordinator or duty MRT is a leader only on days when they are rostered in the coordinator’s role; the other days the coordinator assumes a MRT role without any leadership responsibility. Also most of the leader-participants were frontline leaders, their role changed from leader to follower when dealing with the manager and radiologist:

…and I have learnt a lot from my boss… She says here is the problem, go and solve it. As I have got the team where I want them I say here is the problem and one of you guys might want to solve it … (Lawrence, 3:14)

Relationship

The participants’ descriptions show that the relationship between leader and followers is established through interaction and communication. As the leader and followers interact, the ways they communicate and behave determine how they will be perceived as well as the influence each will have on the other.

Communication

Participants said that leadership in clinical practice involves interacting and communicating with the public patients and their families or carers, colleagues, medical and allied health professionals, students, engineers and suppliers. Leadership in clinical practice has also been described by participants as being about ensuring that communication lines between all stakeholders are open and optimum to be able to accomplish goals.

Throughout the interviews, this quality was highlighted as essential. In the excerpt below Rose describes what a good communicator is like, indicating that in her role of teaching students, communication is vital to the relationship:

…it [being a leader] is about being approachable… I am not saying that it should be with this fabulous gregarious personality or anything like that. They just have to be someone that you feel comfortable with going to
**speak about anything to do with your position at work and or outside of work I guess because your outside work things affect your work. So I think a leader needs to be a very approachable person and not make people feel stupid when you don’t know the easiest of things. And in my role as a leader of a student who is here that is how I always try to be, don’t belittle people for the silliest things or doing the stupidest things because you know people make mistakes, stupid mistakes... (Rose, 2:10)**

The participants considered that poor communication was associated with poor leadership. This highlights that the way leaders communicated to staff either made staff enjoy their work and the environment or it created tension, since the enjoyment of anything is in the control of the particular individual. From the following description, good communications appear to affect work environments: “...Coming with bad leadership is that whole aspect of interpersonal skill aspect, if you have got a person that can’t communicate or is rude and abrupt, that creates a kind of tension in the workplace…” (Leroy, 2:4). Communication connects the emotions of leaders and staff; and a leader who is aware of their emotions is able to pick emotions of others, resulting in better interpersonal relations and reduced conflicts in an organisation.

**Power**

The descriptions and accounts given by participants of their experiences of leadership in medical imaging highlight the existence of a power relationship between the leader and the followers. Power is the energy that is used to get things done (Waite & Hawker, 2009, p. 714) and in this case, as described by the participants, it would be to get the MRTs to work according to the set rules, policies and guidelines of the department. Most participants described a situation where the leader had more, or seemingly more, power than the followers. Participants mentioned that in cases when power is used effectively there is ‘control’. They went further to describe a situation where there is order and clarity in the organisation; with the person in authority ‘knowing what is going on’ whether in detail or generally:

... Someone who is the sort of big umbrella over everything the sort of person who is in control of everything that is going on and is really the person that is ultimately responsible for everything that is going on… (Rose, 2:14)
...So those leaders that are there should be strong at what they do and somehow command a little bit more from the people that should be listening to them instead of people being told one thing and they do what they want anyway. They need to be able to say do this and know they will do that… (Raewyn, 8:58)

On the other hand, misuse of power as described by some participants would lead to the leader being ‘militant’ or ruling in a ‘regimental’ way. Participants described situations where the leaders required them to do as the leader said and not allowing any room for staff to make contributions:

... We have had some leaders in the past, managers who have walked in and said ‘I will have new staff meetings and nobody says anything, I am going to tell you what is going on and what I need you to do’. So, there is no option for any feedback, you couldn’t say anything to that person, they were not interested. They didn’t want to know what staff thought... (Raquel, 2:17)

Whilst not exercising power leads to ‘things-falling-apart’, confusion and disorder, in the organisation:

...Other examples of bad leadership include when renovations were being done in my workplace, everything fell apart and everybody got too emotional about everything. Another example is [Place B] where nobody really trusts the leader and people end up working with different agendas and don’t support each other. The department and relations all falls apart and they can’t retain their staff... (Raewyn, 4:5)

The results of not exercising power were such that the leader became ruled over by subordinates and unable to keep the department or organisation running smoothly. Although a deviation to this was demonstrated by Raewyn’s experience where the staff had more power (personal power) than the leader:

...I guess, the funny bad leadership one, I can relate to is back when I was a new graduate working in [Place C]. A new environment with MRTs that were significantly older than me and the charge was not in control at
all. Those were the days of the processors and everything. He would say clean the processor and we would turn around and say 'we don't clean the processor', we won't do it. He would have to do it, at the end of the day, end of the week or whenever it was... (Raewyn, 3:3)

This study has shown that there are instances it seems when the leader is perceived to be a figurehead and the followers can undermine the leader, take the leading role and dominate. The followers are conscious of what is happening and aware of the impact of their actions to the leader and their relationship. Raewyn’s account indicates that staff did not perceive the leader as being effective, or possessed any power.

Characteristics

The participants highlighted that leaders have to have certain skills and qualities to enable them to be effective in the leading role and to get results from everyone. The desirable and undesirable characteristics were identified by participants and are listed in Table 5 and Table 6, grouped according to the various skills and qualities they represent.

There were a number of advantages associated with the effective use of the desirable skills that were identified. The advantages include fostering a pleasant environment; leading effectively; turning non performing teams into achieving, excellent teams and having followers liking the leader and responding favourably to them.

The identified skills and qualities were said by participants to differentiate between good and bad leadership situations and desirable characteristics were in their view, associated with good leadership. The skills and qualities that were identified by MRT and leader-participants as valuable for leaders to have were the same as those identified by student participants when they were describing MRTs as leaders. The skills and qualities for leaders and followers according to the participants were similar. Consequently, the findings suggest that the development of the desirable characteristics presented in Table 4, by MRTs would beneficial as they interact with colleagues, students, patient and their families.
### Table 5: Desirable characteristics

<table>
<thead>
<tr>
<th>Skills</th>
<th>Qualities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicative skills</td>
<td>Listening skills; giving adequate positive and negative feedback; understanding the diversity of people; consultative; inclusive and keep staff well informed.</td>
</tr>
<tr>
<td>Interpersonal skills</td>
<td>Approachable; ask others for advice; empathy; supportive; appreciative; trustworthy; fair; reliable; open-minded; accommodative; sympathetic; confident; flexible; progressive; transparent and considerate.</td>
</tr>
<tr>
<td>Relational skills</td>
<td>Teamwork; ability to delegate; encouraging; uplifting; empowering and supporting; trusting; objective; ability to come down to people’s level; responsible.</td>
</tr>
<tr>
<td>Organisational skills</td>
<td>Problem solver; knowledgeable about the work and issues of the workplace and how to possibly fix them; ability to train others; organised; result oriented; pragmatic.</td>
</tr>
<tr>
<td>Strategic skills</td>
<td>Vision; goal setting; providing direction; decision making; challenging; ability to anticipate change.</td>
</tr>
</tbody>
</table>

### Table 6: Undesirable characteristics

<table>
<thead>
<tr>
<th>Skills</th>
<th>Qualities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicative skills</td>
<td>Rude; abrupt; poor communication.</td>
</tr>
<tr>
<td>Interpersonal skills</td>
<td>Isolate people; undermine; demean; lack confidence.</td>
</tr>
<tr>
<td>Relational skills</td>
<td>Favouritism; out of reach; disempowering; unsupportive; militant.</td>
</tr>
<tr>
<td>Organisational skills</td>
<td>Micromanagement; procrastination; avoidance; makes mistakes.</td>
</tr>
</tbody>
</table>
Good and bad leadership

In good leadership, the participants described situations when they were happy, there was harmony in the organisation, excellent quality of care and the various groups and teams worked together. Participants said that good leadership produces an environment that is conducive to work in and the employees are helpful, and supportive of each other and the organisation. The employees are willing to take on new challenges and go the extra mile, knowing that they will be supported through the journey. This according to the participants translates to making the patient’s journey pleasant and increases productivity. Participants said that good leadership, when in place, enables learning to take place and situations are accepted which would not have been accepted or worked otherwise.

…If you have got good leadership, then you have got a good group of people that support each other and also support the company or whomever they are working for. …M is our direct leader: from our group, they never have a problem and any issues; we would resolve them before they even get to M… And that is maybe because there is good leadership from M and they trusted us and that trust is returned... (Raewyn, 2:12)

Bad leadership situations were linked to undesirable characteristics where people felt undermined, unappreciated and unhappy.

…Everything falls... I will say bad leadership brings low morale to your department and then the group or team work falls apart. It [group] falls apart either because people are not working together or helping each other or the team gangs up against the leadership. Whereas if you have got good leadership, then you have got a good group of people that support each other and also support the company… (Raewyn, 4:5)

…So the good leadership can keep things even and smooth with minimum hiccups then you are going to benefit at the end of the day, you would hope. But without it, if you have got no one leading a department, people go off and do what they want to do. Everyone could be at lunch the same time or no one wants to go to theatre or whatever or the same
people end up in theatre all the time and not everyone is pulling their weight. No one is happy at where they are they are always poking their finger blaming someone else and it just does not work. And things fall apart. So a good clinical leader makes staff happy in their job and makes a better examination for the patient and it is a smooth journey and it all is going to be nicer. And you get the vibe of the place as soon as you walk in and you can tell... (Raewyn, 8:47)

...Bad leadership is having someone that sort of immediately puts you down and is demeaning or makes you feel stupid so you never want to go to them as a leader you never want to. They could be someone with a fabulous personality you just need to know them. I have had experiences of leaders who are just out of reach, it is hard to describe but not really...you are just scared of them. They are probably good MRTs but don’t have many people skills... (Rose, 2:12)

Low morale, high staff turnover, job dissatisfaction, victimisation, poor performance and dissatisfied patients are just a few consequences that were pointed out as present when there was bad leadership. In some cases the participants expressed that they had to think about what they want in a job or workplace and how long they will be willing to put up with being in that environment. Bad leadership as perceived by the MRTs seemed to affect every area of the workplace, causing unrest and dissatisfaction.

Trust
Trust was identified as another important factor that needed to be present when dealing with people not just in leadership but in any relationship. The participants pointed out that trust is always two-way and when lost it is not easily recovered. Trust was said to develop over time and it was highlighted that trust can easily be lost by treating people with disregard, in a belittling manner or demeaning:

...In our group, they never have a problem, they never have to find someone if someone is taking leave because we always bind together and take care of it. And any issues we would resolve before they even get to them and things like that... And that is maybe because there is
good leadership from [M] and they trusted us and that trust is returned…When nobody trusts the leader, people end up working with different agendas and don’t support each other and it all falls apart and they can’t retain their staff… (Raewyn, 2:5)

… Someone that sort of immediately puts you down and is demeaning or makes you feel stupid so you never want to go to them as a leader you never want to and you just don’t… (Rose, 2:12)

According to the participants leadership entails trusting others with responsibility, like delegation of duties to those who are experienced, more skilled and are willing to take the challenge. Most participants were of the view that being ‘in control’ or ‘in charge’ does not have to mean that staff lose the ability to make decisions on some issues. Delegating responsibility to others was said to show that the leader trusts them and people would work hard to secure that trust and the leader’s belief that they are able to accomplish a task.

**Support**

The student focus group indicated that to develop and acquire the necessary skills for medical imaging or leadership, one needed to be comfortable with working with the assigned MRT to not only boost their confidence but for support. All participants in the study expressed that support for the leader and organisation from staff is easily reciprocated when the leader is supportive as well. The participants mentioned that the support produced strong relationships and teamwork, where members of the team would cover areas that needed covering, ensuring that work continued with minimum disruptions if there were problems or issues.

…In clinical practice I would be thinking of a duty MRT who is going to manage the floor for the day… Somebody who can take on board and organise the staffing levels and make sure people are doing what they are meant to be doing, sorting out issues, faults, problems and dealing with them, so staff are coming to do their job… Issues shouldn’t ever explode into huge dilemmas, they should be picked up early and fixed before it is a drama… (Raewyn, 7:46)
Whereas if you have got good leadership, then you have got a good group of people that support each other and also support the company or whomever they are working for. I can probably say that in relationship to the afterhours work I do... (Raewyn, 2:5)

The participants in this study believed that the leader has to have skills that are not just technical but interpersonal and relational. In clinical practice a leader is needed to sort out staffing issues, teach juniors, and deal with equipment faults and problems. According to the participants the leader needs to be an individual that is respected, easily approachable and willing to work with and ask for advice from other people.

**Personality**
A pleasant personality was said to work hand in hand with the above identified characteristics. MRT participants indicated that a leader is liked or disliked because of their personality and that their leadership will be judged as either good or bad depending on how appealing they are to their followers. Although the way followers feel about their leaders does not always reflect the quality of their leadership as Rose stated:

...I think it is a personality thing. If you like the leader of your team you probably feel that they are a good leader. I guess that does not necessarily follow, it is because you like them as a person often... (Rose, 1:8)

**Friendship**
Participants in the MRT and student focus groups agreed that although they want the leader to be friendly, approachable and accommodative, the leader had to be impartial in the way they dealt with everyone. There were mixed views on whether a leader should be friends with any staff member. Some participants commented that professionalism had to be maintained when at work if a leader was friends with a staff member:

...They can't play favourites... They have to be professional enough not to let friendship make a difference in their decision making... (Raquel, 5:48)

... Someone that you respect does not have to be your friend... Respect is important in leadership... (Steven, 4:39)
However, some participants from the students’ focus group [those with previous work experience] pointed out that the leader could be friends with whom they like, and behave appropriately both outside and inside the work environment:

…We could still be friends, come to work and be professional but outside work we are sort of different people… (Stephanie, 5:20)

…I was a shift supervisor in one of my jobs and I was friends with someone who was below me, really good friends and socialised outside of work. But we were professional at work, for us our friendship would not have worked any other way… (Sylvia, 5:23)

Types and styles of leadership and followership styles

Most participants in the MRTs’ focus group wanted to be consulted, involved and to participate in the decision making activities of their organisations. These participants denoted a need for more participative and collaborative styles of leadership that value and appreciate followers.

From the discussions with some of the leader-participants, there were indications Organisation B was going through some changes and that there were new leaders in the top positions. The leader-participants revealed that the relationship they were trying to foster was a collaborative one. A relationship that involves the leader and staff working together, in collaboration to propel the organisation forward and staff “…have to be accountable for their actions as well and have to be aware that they will be held accountable and they are in positions of responsibility…” (Leroy, 1:4). MRT participants reveal that they have experiences where: “…You can have somebody who is in leadership but does not consult, you can also have a style of leadership were they consult too much, you have got to find a nice middle part…” (Ruth, 8:89).

MRT and student focus group participants concurred with Lawrence about the way their team leader led:

…we have also got the team leader who is fantastic. She has revolutionised the place….she empowers me and I empower down… She has clear standards of what she expects from us. I try and mimic that to
everyone else and she is quite happy to stand back and let me get on with it… (Lawrence, 5:20)

The same style of leading was emulated by their immediate leaders: “… You are influenced by what you are seeing as leadership and you model yourself around what the other people do. Our team leader is very good at leadership, so you try and pick up things from them…” (Laine, 1:4).

The authoritarian style of leadership was seen as being controlling and not convenient for radiology as MRTs work alone at times. The authoritarian style of leadership was associated with bad leadership and micromanagement of staff: “…In terms of bad leadership… You could actually disempower people by not allowing them to do the job, by micro managing them or by setting silly deadlines for things and checking up on them…” (Leroy, 2:4). From the descriptions by some MRT participants, the authoritarian style of leadership is perceived to limit both function and developmental potential. However, any leadership style used has to be in line with the context of the situation as expressed here:

… There is bound to be a mixture of different types of leaders and styles they use...Leaders who want you to tow-the-line and are regimental. They give the instructions and point out “this is the way I do it” and it has got to be done that way as well, that sort of thing... I can think of this one from private who leads quite dictatorially, really. She says this is how it goes and this is how it is. She has smaller staff and she is in more control all the way. In the hospital situation which has people 24/7 there are more people with control and is a little more different... (Raewyn, 5:31)

Even though the collaborative and participative leadership was described as what the MRTs wanted, the following extract demonstrates that some MRTs preferred to be told what to do:

… We need someone up top telling us this is acceptable or this is not, as a guideline. Because we work in different areas or places we have different experiences. You need someone to plan everything and someone to go to or streamline when there is an issue... (Raquel, 7:78)
Participants in the study described how leaders use their power to influence the staff in line with a behaviour, attitude or way of doing things that they are promoting and how the staff would comply. The participants suggested that leadership consisting of a group of individuals is more inclusive than having a sole leader, indicating that leadership and power can be distributed in a group or team. According to Leroy, team leadership is about bringing together people with different complementary skills:

...A team … everyone playing to their strengths... we have charges, clinical leader, team leader, manager… all that works together, because people have different things they have to achieve… We all get together as a group and talk about what we want to do and then someone might say.... ‘This is what I have done’, then I say great but ‘what we need to do is frame it in such a certain way because this is what or how the hospital will like to receive it’ … So it’s working as a team so we can share those things... (Leroy, 4:10)

The overall leader does not take credit for other team members’ work but is encouraging and building each member up. Leroy acknowledged that it was not easy to establish such a strong relationship and the process was time consuming. According to all participants an effective and efficient team has members that trust each other and has a strong working relationship:

…When you have got a good group of people that support each other and also support the company or whomever they are working for. … They trusted us and that trust is returned… When nobody really trusts the leader, people end up working with different agendas and don’t support each other and it [organisation] all falls apart ....(Raewyn, 2:5)

**Types of leadership**

Participants in the study highlighted three types of leadership that were present in medical imaging: self-leadership, expert leadership and administrative leadership.

**Self-leadership**

Some MRTs felt they were leaders when they worked alone and had to practice self-leadership even though the view of leadership being leader-centred was
accepted by most participants. According to these participants, self-leadership is the process of leading oneself.

… We work alone most of the time and you need leadership skills to do that, even though it is only leading yourself, …you still need to take your own direction… (Raewyn, 6:48)

…There isn’t anyone beside us all the time as we work telling us what to do, we are telling ourselves... (Ruth, 7:80)

…There is lots of decision making in our job all the time in every image you do you are making decisions on how the patients are treated, how your images are, the staff you work with, how you deal with patients... You need that confidence that you can make decisions... (Raleigh, 7:79)

**Expert leadership**

Expert leadership has been described in the study as having a leader who is known to be a technical expert in the field of practice (speciality) they are in. The expert leader becomes the go-to-person when one is stuck and is the person who is charged with the responsibility of teaching students and other members of staff. Leaders were expected "... to have good clinical skill and ... to relate to people and in a training environment ... to able to talk to students and have to relate to all age groups..." (Raewyn, 4:37). Both focus group members mentioned clinical skill and experience as an essential requirement for their leaders, whilst those in the leadership positions did not concur with this view.

The leader-participants were of the view that the practising MRT was the expert as the MRTs are continually improving their skills in daily practice. Lee revealed that "...you are a technical expert that’s why you got the promotion but technical expertise has nothing to do with leadership or management..." (Lee, 7:26).

Furthermore, according to Lee, being a technical expert does not necessarily mean one can handle every leadership role, rather an expert will be able to deal with situations in the area of their expertise more effectively.

**Administrative leadership**

Administrative leadership was described by participants as a positional role that dealt with the running of a team, department or organisation. It involves activities like job distribution,"...organise the staffing levels and make sure people are doing what they are meant to be doing and sorting out issues faults, problems..."
... you get several different types of people and everyone works differently and everyone interacts differently with everyone else and it is trying to get a handle of all of those interpersonal things and how each person needs to be managed..." (Lee, 1:4); management and distribution of resources: "... [The leader] has an overview of what is particularly going on in the day..." (Leroy, 1:2). The leader-participants in the study indicated that the leadership role was administrative: "... just because you are the leader you are not the best clinical leader. It's [leadership role] an administration role, about keeping the team together..." (Lawrence, 4:18).

Perceptions and expectations

Leaders have to not only acquire and utilise various skills and qualities in their daily dealings with people but they also have to manage perceptions, expectations and stories that are told about them. The perceptions and expectations theme came out in the discussions with all the participants as they revealed what they perceived as leadership. Rose reflects on her expectations of her manager:

...I expect my leader to know how everything works here even though she does not work here. I expect to go to her when things don’t work and when I have a problem… You know all problems you have with patients, they are rude to you or you have been rude to them and you feel they are going to complain or something. You want to be able to go to her [leader] and say this person might want to ring you and say blah blah. And I expect her to come to me if she thinks there is something I have done...

(Rose, 3:18)

Rose expected her to take care of everything in her organisation as she perceived her leader to be “... umbrella over everything...” (Rose, 2:14). However, Rose did not mention whether her leader knew about her expectations. The participants in the study did not mention whether they had informed their leaders about their expectations. Lee mentioned how “... managing people’s expectations …” (Lee, 6:22), was a very important task for a leader because individuals’ perceptions and expectations of their leader affect how they relate:
...if people are not very clear about what you are supposed to be doing they may expect you to be X, Y, Z when you are A, B, C. Then they may harbour grudges or animosity for no reason apart from that they expect things that they shouldn’t expect.... (Lee, 6:22)

Some participants mentioned the stories they heard about the leadership in other organisations and departments and the perceptions they had: “... you hear what people say about them [leaders] and how why they [staff] dislike them and what they do... (Rose, 7:44). The stories (accounts) that were shared by participants revealed the expectations and perceptions that each individual had about leadership and their leader.

Ideal Leadership
The expectations and perceptions that individuals had of leadership were further revealed when participants discussed what their perception of ideal leadership resembled. Ideal leadership for some leader-participants consisted of all stakeholders having an input to the protocol and procedures used in practice; following world best practices; providing staff with the opportunities and resources to “… give people time to find out where you fit …” (Lee, 5:20) and then function in that capacity.

In clinical practice, ideal leadership for some MRTs would entail appropriate and effective staffing and allocation of duties or responsibilities. The ideal situation involves the leader taking care of problems; faults and issues efficiently. Staff are then left to do their core work where possible; delegating some work for other staff to do:

….I have worked in different places and some places people just take everything on and get super stressed and then every time you say something it won’t get dealt with. It just goes the bottom of the list but if you are good at delegating you can get someone to do the little things that you don’t have to do so things get done. And so it is good to get staff involved… (Rachel, 3:26)
Raleigh, when asked about her ideal leadership situation, mentioned that she was currently experiencing the ideal situation, where people are happy and cooperative and the leadership is collaborative in dealing with most things and situations. Laine concurs with Raleigh about their work place being ideal and mentions that the staff might not be aware of the privileged situation they are in. She explained that:

... We sort of have it [ideal leadership] pretty much like that here. We have got the open minded leadership and you can see them actively making changes or working towards improving the department. They are quite transparent ...where a good leader keeps you well informed and it kind of helps. I think of my position where I am, probably privileged to decisions and am included in things, but I think our staff will probably feel that their direct leader is doing a good job. I don't ever hear anyone getting talked about; you know people complaining and things like that… You want someone fair, open minded and progressive, and open to new ideas and things… (Laine, 4:24)

The above excerpt reveals the participant’s ideal leadership as well as her perceptions, expectations and how there have not been stories about their leader to affect her perceptions of the leader. Perceptions and expectation contribute to the ideal situation(s) which individuals seek for in every leadership encounters in medical imaging.

**Context**

Throughout the study images of the organisation, its culture and structure, language and communication, ethics, norms, values and beliefs of the leaders and followers were created from the descriptions of the participants. These factors seemed to affect follower and leader behaviour. The way leaders treated and related to followers made a difference to how followers identified with the leader.

**Organisational structure**

Organisational structure involved establishing the various reporting lines that formed the formal culture in the organisation. Power and authority as described by participants, is to some extent invested on the manager, supervisor, charge
MRT, duty MRT or other positional title that delineate the position of an individual in an organisation. These are the individuals who ensure that the activities and processes for productivity are complied with. In a chain of command the level of authority differs with the position the individual is in. The existence of the chain of command was evident in both the public and private sector: “... We have charges, clinical leader, team leader who is a technical team leader ...” (Leroy, 2:4). Participants also revealed how their organisational structure shelters them from directly dealing with some issues and complaints as these seem to be: “…filtered down… You don’t have too many people stomping their feet coming around complaining directly to us. It [complaints] will go through a lot of people and get filtered before it gets to us in a nice way…” (Rachel, 8:90).

There was an emphasis on having the overall leader ‘taking charge’ and being ‘in control’ to keep things in the department flowing smoothly. The participants further revealed that it was the overall leader’s role to work with other leaders to accomplish the set vision of the organisation. The participants mentioned that the overall leader draws from the experiences, skills, qualities and knowledge of their team members to lead the organisation. The participants disclosed that the leader cannot be in all areas at the same time nor have knowledge to solve all problems and issues. The leader therefore, enlists the team members in leading the department: “…You want your leader not to take all the responsibilities of the people underneath them. I think people with good leadership allow other senior members of their team to lead as well and just report back to the leader…” (Laine, 2:6). The participants expected the leader to refer difficult decisions and situations to the leader’s leader: “…Someone who can take problems to the next levels, so that if you have a problem that is bigger than your department, you trust your leader to be able to go to the next level…” (Raleigh, 4:40).

The organisational structure ensures that there is division of duties, responsibilities and authority. Frontline leaders deal with simple issues and the severity of issues dealt with changes along the chain of command.

**Organisational culture**

Throughout the discussions there were comparisons of the current workplace with former workplaces, from those participants that had worked in a number of organisations. Most participants commented favourably and in appreciation of the kind of leadership that they were working under presently. The impression
they gave was that their leaders viewed them as important and valuable individuals:

...I think for some of you guys you don’t have anything to compare with because you have only worked in this place, whilst I have lots to compare with. From place to place there is always different ways of doing things. And I think this place is different from other places because here we have a very open way of doing things, even the leaders are quite approachable. Teamwork ... way of doing things here, in some places you might get that you don’t feel like you can go to the leaders with any issues because you are scared of what they are going to say or you are scared of getting into trouble. It’s completely different here... Here you can definitely go to any of the bosses and talk to them about any problem you have and they will try to look into it in a positive way or try to change things. Some places you might go and say something and nothing happens... (Raleigh, 1:3)

Some participants gave comparisons of the leaders they have worked under. Participants, who had worked for Place X, cited a situation where everything was dictated by the leader or a few individuals. Whilst in a different organisation, the same participants were experiencing a leader who includes staff in running the department. The following conversation reflects their experience:

Rachel: When we compare here and [Place X]....
Rebekah: That was a different set up though...
Rachel: But the people there tended to micromanage.....
Rebekah: It was a very bad environment really....
Ralph: Not very friendly... Quite a different structure to what we have here.
Rebekah: Seniors were in charge, whatever they said goes, and you never got to have a say, did we?
Rachel: No. Whereas here, we can...
Rebekah: Here we can.....
Rachel: Here we can say for example how ED will run and we run it the way we want. Whilst in [Place X], the ED area is run by one person and everything is done her way.... (1:5-13)
The exchange between these three participants implies that micromanagement; unpleasant environment, structure and the way things were done contributed to them leaving that particular workplace. The participants also revealed that each organisation has a way of doing things that fits into the culture that has been accepted and established by the people working there.

...If you have a culture where if someone makes a mistake they are going to be told off or disciplined or criticised then (a) the people that make mistakes are never going to own up to them (b) they become very nervous about doing anything at all and they make more mistakes...
(Leroy, 3:8)

The excerpt above suggests that the leader is the one who determines the prevailing culture in the organisation, according to what would constitute a reward or punishment as well as how staff are treated.

**Appointment and promotion**

The appointment of those in leadership positions, according to some of the participants, has changed in the past two decades. Laine revealed that the appointment to leadership positions in medical imaging in NZ was previously made according to seniority within the profession, but has changed to appointments of leaders from outside the profession. In medical imaging, non-MRTs have been appointed to leadership roles, changing the traditional progression to managerial positions that used to occur.

According to Laine, leaders who occupy leadership positions are now appointed on the merits of having leadership or management qualifications.

...I think leadership has changed perhaps in 25 years. It [leadership] was always that a senior practitioner will be the leader or deputy leader, charge MRT and things. And I think in medical imaging… [leadership appointment] is changing... Leadership now seems to involve formal qualifications and you might have done some management papers or postgraduate, some sort of leadership or management, some sort of
theoretical work. I think we will get non-clinical leaders, which is debateable whether that will work well... (Laine, 3:16)

Furthermore, Laine’s claim was supported by the inclusion in the study of a leader who is not an MRT but was appointed from another healthcare profession. The leader-participants who were MRTs indicated that when promotion is by clinical expertise, the leader has to keep up with both the technical aspect of their job as well as the administrative side as frontline leader. However moving up from the frontline leaders, the objectives become strategic:

…It [leadership] does change as you move up… Mine is hands-on leadership because you are talking about people and their problems, about their lives or all of those basic things that you have to factor into the work environment. The higher up [organisational structure] you go the more removed you are and it’s [leadership] about providing that strategic vision for places, whereas mine is very basic at the moment. Just really broad objectives.... (Lee, 3:10)

Some leader-participants felt that the administrative aspect of their role became more demanding and the technical expertise side was sacrificed. These leader-participants were of the opinion that leadership development was needed for individuals promoted because of their technical expertise.

**Leadership development**

Some participants considered leadership development as essential for MRTs because MRTs are only taught technical skills during their training and they consider that leadership is about more than just being a technical expert. Lee revealed how ill prepared he was when he took the leadership role he is in now:

... I took the [leadership] role but the downside was that I got my foot in the door, given the state of the department… In terms of handover and the support to handle what I was doing was very minimal. I didn’t mean to say they didn’t try but it simply means there were no resources or people to help sort of guide me through… I had to learn from whatever happened. That was a steep learning curve, though I found it quite good... When I came into the role I didn’t have a concept of how vast the
role was or the scope of the role… You come in and you think there doesn't seem to be too much to do, whereas now there aren't enough hours or days in the week to do the things that need to be done. Which I suppose is natural with any job, when you start to see the potential, where things can go and what you can improve… (Lee, 1:2)

Leroy on the other hand provided some practical steps, like mentoring new employees and new graduates, which could be taken either to prepare MRTs for leadership or to develop those leadership skills that they used daily:

... Leadership is a number of things and maybe for a new graduate it might be better for them to first learn to mentor. They do some sort of mentorship type of education and they learn to mentor students and start to manage a group of students like that and then once they have developed they might want to think about leadership. Leadership really is managing a defined patch of work... I think people just assume somehow that it [leadership] happens by osmosis but you need to train people, people don't know how to lead, it does not come natural for some people… (Leroy, 8:18)

Furthermore, Leroy explains how mentorship, for example may provide an opportunity to identify and prepare individuals for leadership. This would then provide an opportunity for succession planning to avoid a situation of having to appoint ill-equipped individuals if a crisis arises and there is no one to fill leadership positions at short notice:

... Some people are cut out to do it [lead] but for some people it can be their worst nightmare and it's trying to plan for the key positions in the department.... To try and find out who is in the department who could be good at doing that [leading] in a few years and try and develop people like that, instead of waiting until when somebody key in the department leaves and there is nobody who wants the role and then there is quite a hole left... It takes time for people to develop, you have to establish a working relationship, and you have to decide where you are going to go... (Leroy, 8:18)
Feedback, encouragement, delegation and support were identified by the MRT focus group as essential in leadership development. The same factors were not limited for leadership development but essential for professional development as well. Participants in both focus groups with past work experience mentioned that their past experiences helped them understand their current workplaces and leadership experiences.

Undergraduate medical imaging education focuses mainly on developing technical skills and dealing with patients. Some participants expressed concern that medical imaging education does not seem to prepare MRTs to deal with situations that require decision making and the adequate use of soft skills in people handling:

…I had never been exposed to any sort of management before especially studying to be an MRT, you don’t cover that stuff. Initially it [leadership training] was like ‘oh that’s very good’ – but I think you do a lot of that stuff anyway without realising it and it’s pretty basic stuff but it is good to know there are models out there. But you quickly realise that in the real world they are not applicable... (Lee, 2:8)

Some leader-participants were of the opinion that an understanding of leadership gave the MRTs the responsibility to pursue those things they are passionate about. However, other leader and MRT participants mentioned that the challenge with leadership and leadership development is aligning individuals’ personal goals with organisational goals to produce a win-win situation for all as people have different and diverse goals. Lee felt leadership development for MRTs might facilitate easy transition from clinical practice to leadership roles.

Summary

In summary, participants defined leadership according to the leader, vision, influence, models behaviour, guidance, support and getting things done. The definitions described leadership as a relationship, interaction, engagement and collaboration that exists between leaders and followers. Some participants were of the view that an understanding of leadership would enable MRTs to realise that leadership is more than technical expertise. Leadership was focussed on individuals, processes of meeting targets, liaison, and decision making.
However, other MRTs were not in agreement with the need for MRTs to understand leadership advocating instead for a better understanding of the MRT’s role and patient care.

The leaders represented both formal and informal leaders, and depending on the context, some individuals were said to occupy both leader and follower roles. The majority of the MRTs were described as occupying the follower’s role. Although the student participants regarded the MRTs as their immediate leaders since they were charged with showing them the practical aspects of the job, interaction with patients and their families, as well as modelling professionalism required in the profession. However, some MRT participants did not see their role as being a leadership role even though they did mention being in charge and looking after students. The leader-follower relationship was described as a power relationship with the positional leaders in most cases being invested with power and authority in line with their positional titles. The overall leader was described by participants as keeping things flowing, drawing on the skills, qualities and knowledge of other leaders in their team. Participants described their organisations as having chains of command and in some cases levels within levels.

According to participants the leadership relationship consisted of interaction between leader and followers to accomplish the set goals and vision of the organisation. The interaction was achieved through communication and all participants were of the opinion that communication was very important in the leader-follower(s) relationship. Communication lines that were optimum and open between all stakeholders, according to participants, enabled the accomplishment of goals; and besides communication, skills like trust and support were equally valued by all participants. Furthermore, a leader’s personality was said by some participants to contribute to how the leader, and eventually their leadership, was perceived by the followers.

There were different opinions about whether a leader could be friends with followers, with some MRTs and students pointing out that as long as professionalism was maintained at work, the leader could be friends with followers. On the other hand, others were of the opinion that such a relationship could cause favouritism to occur which would disadvantage the other followers.
Self-leadership as a type of leadership, was described by participants as a process whereby the MRT leads and directs self as well as makes necessary decisions. The participants stated that MRTs work alone at certain times and so self-leadership applies in the profession. This view opposed the idea that MRTs should not concern themselves about leadership or that they are leaders. The expert and administrative types of leadership emerged from the data during analysis, because the technical expertise of a leader in medical imaging was said to be important in leadership. Expert leadership described the technical expertise that an MRT had in a particular area whilst administrative leadership described the activities and functions that positional leaders fulfilled, like staffing, resource management and distribution, quality control and monitoring.

The MRT participants in their discussions mentioned that the leader needed to function in both clinical and administrative leadership. The leader-participants acknowledged that it was desirable, although not essential, to be an MRT before taking on the leader’s position. The reason being that, even though promotion came through technical expertise in the field, it was that portion which was sacrificed as the leadership role evolved. This was experienced by one of the leader-participants as his leadership role evolved with time. As participants described their experiences, various leadership styles that had been experienced and observed were depicted. Some participants described leaders who used authoritative ‘command and control’ styles of leadership. Other participants however described leadership styles that were ‘more open’ and participative, with the leaders listening and responding positively to suggestions staff made. Leadership styles which involved followers through participation, collaboration and shared leading, were what all the participants said worked and would suit medical imaging.

The participants’ ideal leadership was in line with the above descriptions of participative, consultative, collaborative and shared leadership styles. Some of the participants mentioned they were experiencing their ideal leadership where they currently work. Thus for these individuals leadership expectations were being met.

Leader perceptions and expectations were also described, with participants categorising the leader as either good or bad depending on what was perceived to be the characteristics and behaviour expected from a leader. The leader-
participants acknowledged that when dealing with the ideal leadership, expectations and perceptions had to be managed as they affected the leader-follower relationship.

There was comparison of different work cultures that some participants had experienced previously with that of the current workplace. According to these participants, their organisation had the kind of leadership that appreciated and valued them as knowledgeable and important individuals. This impacted positively on them and their work engagement. Other participants indicated they had worked in organisations where everything was dictated by the leader or few individuals. Furthermore, the participants were of the opinion that the prevailing culture was determined by the leader and that each organisation has a unique way of doing things that fits into the accepted culture.

The appointment and promotion of leaders according to some participants has changed from appointments made according to seniority from within the profession. Appointments are made according to leadership and management qualifications, with no medical imaging experience or in some instances, no experience in the medical field required. However, when promotion is by expertise some participants pointed out that the leader has to keep up-to-date with their technique. Participants indicated that MRTs are only taught technical skills during training and that leadership was more than being a technical expert and so advocated for leadership development. As a means of developing people and having a succession plan, some participants pointed out that activities like mentorship could help develop leadership skills thus avoiding the occurrence of appointing ill-equipped individuals to leadership positions. Feedback, encouragement, delegation and support were also said to be essential in developing leadership skills for MRTs.

The chapter has encapsulated the themes that emerged from the participants’ experiences. The following chapter will discuss the findings in association with published literature, offer recommendations for future studies and a study conclusion.
Chapter 5: Discussion and Conclusion

This chapter presents the discussion of the findings with relevant literature and participants excerpts, provides the study conclusion and offers recommendations and future areas of research.

Management and Leadership

Management and leadership were words that were used interchangeably by the participants throughout the study. There was no question asked during the interviews about any differences between management and leadership. The researcher wanted to find out if the difference would be described by the participants. The findings show that the MRTs, including the leaders who participated, viewed leadership and management as one entity.

The participants did not differentiate between processes for leadership and management. Monitoring; control; quality control and standardisation; people and resource management; goal setting, delegation, teaching and empowerment were listed as part of leadership: “… somebody who can take on board and organise the staffing levels and make sure people are doing what they are meant to be doing and sorting out issues, faults, problems whatever and dealing with them…” (Raewyn, 7:52). There was no mention of which processes were for management; however, participants described the processes that they expected their leaders to perform as part of their role.

Management has been described by various authors as a phenomenon that came with the industrial revolution when there was need for division of labour and specialisation (Drucker, 2007; Mumford, Campion, & Morgeson, 2007; Northouse, 2010). Management was divided and perfected into various functions which are still in use today (Drucker, 2007). These functions include planning; organising; staffing and controlling (Drucker, 2007). Like leadership there has not been a definitive definition of management that has surfaced, even with extensive studies on the management phenomenon.

Leadership on the other hand has been described in the literature as a phenomenon that for centuries has dealt with human relationships, (Bass & Bass, 2008; Northouse, 2010; Uhl-Bien, 2006). Leadership involves human interactions and interrelations which take place between the leader and the
follower(s) for a common purpose (Northouse, 2010). According to Uhl-Bien (2006) what makes the leadership phenomenon complex to study and define are the human interactions that occur between the leader(s) and followers.

**Definitions**

In defining leadership, all the participants described the process of leading and the person in the leadership role. The leader is expected to fulfil various activities and possess certain skills and qualities to enable them to function in that role. The findings show that for some MRTs and students, leadership is about the leader having influence and empowering others, as well as being about the person in the leadership position: “…Setting an example, you want the leader to be the person whom everyone says “I want to be like that person”… The leader has to be kind of focussed, driven and shows a good example…” (Sue, 4:3). This study showed that leadership for these participants means working with others to accomplish goals, leading by example and being a role model when dealing with issues that are essential in clinical practice.

The definitions of leadership given by the participants in the study reflect the definitions posited by many authors like Bass and Bass (2008), Northouse (2010), Daft and Pirola-Merlo (2009). “…Taking responsibility for everyone around for whom you are responsible for…” (Sylvia, 3:38); “giving clear instructions to the people you are leading…” (Steven, 4:9) and “…having a vision…” (Leroy, 1:2), these excerpts represent some of the definitions given by participants. Vision, influence, modelling required behaviour, giving direction, guidance, setting goals and support are among a number of descriptions that have been used to identify the nature and essential qualities of leadership (Klenke, 2008; Kouzes & Posner, 2007). Rose gives a different view about leadership, describing the leadership role as power that certain individuals have over others, “…Sometimes I think a leadership role is an opportunity for some people to have power over everybody and it is their only opportunity to have power and they like to exercise it and but at times they don’t exercise it [power] properly…” (Rose, 6:34). There were other participants in the study who described leadership in agreement with ideas that promote follower involvement and participation in the leadership process. That is, the leader focused on the followers as well as the relationship that exists between leaders and followers.
Understanding leadership

In the study the ideas about leadership and its definition contributed to how leadership was understood. Leadership was understood by the majority of the participants along the idea of an individual (leader) having power over subordinates. Understanding leadership by MRTs was seen as essential in clinical practice as there are instances when MRTs work alone, lead self and manage issues that arise as well as make decisions.

“...I think it (understanding leadership) will make everything run smoothly and if things run smoothly then everyone is happy. When people are happy in their job then you know it is a nice place to be and then in times when things fall apart, people would step up and have a sense of responsibility to do their part...” (Raewyn, 7:48)

One of the leader-participants mentioned that understanding leadership by MRTs could contribute in developing and building confidence to tackle issues and problems, especially for new graduates and those new in the department. Some MRT participants concurred with the leader-participants, about developing and building confidence in dealing with issues when working solo or when the needed.

However from the study, one MRT participant did not see the value of MRTs understanding leadership, pointing out that the MRT should only understand their role in image production and patient care and thereby implying that their role does not include leadership. This same sentiment was expressed by one of the leader-participants whom, although advocating for participative and collaborative leadership, did not think there was value in MRTs understanding leadership. However, the Medical Radiation Board (MRTB) NZ competency standards include leadership and leadership styles as part of the competencies that all registered MRTs should have (New Zealand Medical Radiation Technologists Board, 2011).

The view that there is no need for followers to understand leadership, which some participants advocated, is in contrast with recent research on participative, collaborative, adaptive, shared or distributed forms of leadership. These are the leadership styles which are along the lines of the descriptions participants gave
of the ideal leadership situation. According to Grint and Holt (2011) and Ham and Hartley (2013) these styles of leadership are not focused on an individual being the hero or heroine in the organisation, but have their foundations in engaging all members in taking responsibility for the improvement of healthcare for the patient. Leadership or the leadership role is seen as being available to everyone and is dependent on the context (Ham, 2012; Ham et al., 2011).

Identity
The identity theme showed the various responsibilities which MRTs have in practice. MRTs can occupy the leader role as coordinators or duty MRTs. The follower role, following the leading of the designated leaders in their workplace (team leaders, radiologists, managers) and the teacher or instructor’s role when they guide student MRTs through the art of the trade.

Leaders
The identification of the formal leaders was easily achieved as leadership was defined by participants according to the positional leaders in the profession which included managers; team leaders; duty MRTs and supervisors. Besides identifying leaders according to their designated leadership role, there was a lack of clarity on what was distinctive about a leader.

The leader-participants did not clearly mention that they were followers. However, as the majority of the leader-participants interviewed were frontline leaders their role changed from leader to follower when dealing with their superiors as illustrated in this comment when Lawrence describes the relationship he has with his leader: “…We have also got the technical team leader who is fantastic….She empowers me and I empower down. She has clear standards of what she expects from us and I try and mimic that to everyone else…” (Lawrence, 5:24). An individual is a leader in some circumstances and a follower in others, this changes the perception that the leader-follower roles are stagnant (Ladkin, 2010; Yip et al., 2011). Shared leadership therefore is possible in medical imaging as the leader-follower roles are flexible in practice. Shared leadership involves sharing of responsibilities with everyone in the organisation and individuals collaboratively work together for the success of the organisation (Ham, 2012; Ham & Hartley, 2013; NHS Leadership Academy, 2011).
The student participants added MRTs to the list of leaders, as MRTs were their immediate leaders whom they interacted with daily for practical and professional guidance as is illustrated by Steven: “...Leadership as far as the MRTs go has been good so far... everyone is very helpful...” (Steven, 1:16). Some MRT participants concurred with the students about their role as leaders to the students: “…We do teach students, we all do that and that is one aspect of our role ...” (Ralph, 6:72). Some MRTs indicated that they were in a leadership role when instructing and dealing with students and others viewed this role as part of the MRTs normal duties and not related to leadership.

Followers

The MRT participants identified themselves as those who follow the direction of their leaders. Some participants said that as followers they had valuable input to offer in the running and managing of the department. These participants were of the opinion that some duties could be delegated to staff, and include everyone not just the same few individuals all the time. As shown in this excerpt: “... Give people an opportunity to take on tasks and roles rather than just saying certain people can do this. You know different people can have a go at chores and tasks....” (Raleigh, 4:33).

MRTs might prefer the follower’s role at work because they have leadership responsibilities outside their workplace. Rose, one of the MRTs mentioned that she was; “…really happy to have the job that I like and come to work and have a leader that is approachable, understanding and fair and that I like…” (Rose, 6:42). As Rose had a leadership role at home, at work she preferred to have someone else take the leadership role. Rose also mentioned another reason for not taking up a leadership role citing how leaders are:

… The brunt of everything you know… Brunt of a lot of criticism and there is not always a lot of praise because people are happy to pick out the bad parts and not say anything about the good parts and to moan all the time and stuff like that... (Rose, 6:42)

Some MRTs might rather be followers in clinical practice as they have leadership roles in the professional body: “…We have some really strong leaders in the profession... I mean for starters we have our society and in that we have got
people that step up and do the presidency and all that sort of stuff and I think those people are strong leaders…” (Raewyn, 6:48)

Ham (2012) discussing staff engagement in leadership and how it can be used in the NHS; in line with a new leadership focus, noted that there was a lack of engagement and participation in leadership by health professionals. This was due to the perception that leadership roles are detached from patient care and their core work. Ham (2012) also highlighted how the lack of training, support and experience to function in these roles contributed to the lack of engagement and participation in leadership. The availability or lack of training, support and experience to function in the leadership roles, detachment from patient contact, care, clinical work as remarked by Ham (2012) could be contributing factors to how Rose views the leadership role in medical imaging.

The identity MRTs in the study had of their role in leadership could be derived from the identity MRTs in NZ have of themselves in the profession. Literature on professional identity and professional development of MRTs in New Zealand and Australia portrays MRTs as lacking in professional autonomy; being dominated, directed and guided in their work by radiologists and having feelings of being inferior compared to other healthcare professions (Lewis, Heard, Robinson, White, & Poulos, 2008; Yelder, 2006; Yelder & Davis, 2009). The following excerpts show that the medical profession often dictates how MRTs do their work, for example who can refer patients and who can report on the imaging:

…I am trying to build a much closer clinical relationship with the radiologists … and link radiology a lot closer to the units in the wards and referrers that have a lot of input to our service…we are really dictated to by our radiologists; in particular our clinical leader has a large input into our imaging protocols… (Lee, 3:12; 5:20)

… The head radiologist who tells us what kind of radiological images he wants… (Ralph, 6:66)

It can be assumed therefore that MRTs have occupied the followers’ role in relation to medical clinicians, seeking direction and guidance about their work from radiologists.
Niemi and Paasivaara (2007) conducted a discourse analysis of the professional journal of the Society of MRTs in Finland for the period 1987 to 2003. Their study showed that the professional identity of MRTs is based on technical, safety and professional elements with MRTs using technology to obtain diagnostic images and provide patient care to their clients (Niemi & Paasivaara, 2007). The authors’ findings are comparable with a discussion put across by Yelder and colleagues, when they were discussing the career progression of MRTs in NZ (Yelder, 2007; Yelder & Coleman, 2012; Yelder et al., 2008) as well as the research done by Lewis et al. (2008) on the ethical commitment of Australian MRTs.

Participants in the study shared the same sentiments about what their role entailed, producing diagnostic images using technology: “…we need to understand the clinical aspect of the patient and what our role is, to produce diagnostic images…” (Ruth, 7:77) and providing patient care, “…If a patient comes to CT for example and they come with nurses and doctors… They don’t know our machines; you help them move the patient…. “ (Rachel, 7:74).

Niemi and Paasivaara (2007) in their analysis identified issues that affect and influence professional identity; and these include organisational culture, language and communication in the organisation, ethics, values and beliefs, actions, way of thinking and dealing with patients and their relatives. Leadership as a relational phenomenon is presumed to be affected and influenced by these same issues; such as patient care, and communication: “…Communication skills are a big thing in a leadership role, you know. Communicating with people actually, letting them know what you thinking…” (Rose, 7:44) and organisation culture:

...Here you can definitely go to any of the bosses and talk to them about any problem you have got and they will try to look into it in a positive way or try to change things. And some places you might go and say something and nothing happens ... (Rachel, 1:3)

MRTs in the study either identified with the follower or leader role or both. However, some MRTs did not see themselves as having a leadership role and yet some did. Those in the designated leadership roles were confident in describing their role than the MRTs were. What emerged from this study was that the perception that individuals have of their role determines how they
behave in leadership, as a leader or a follower. The identity of ‘who’ was a leader was or what constitutes a leader, besides mentioning a designated leadership role, was not clearly articulated in the study. Leader identity according to Foti et al. (2012) and Schneider and Goktepe (1983) lacks clarity in published literature. Also as leadership is a social construct there are a number of factors that affect leader identity such as individual perception and group or social affirmation. These factors affect those individuals identified or emerge as leaders in a group and they become informal leaders as they do not occupy formal designated roles. Eventually, each person’s perceived identity in leadership would affect the relationship between leader and follower.

**Relationship**

Leadership in this study was described as a power relational phenomenon that exists between the leaders and followers, with leaders seemingly having considerable power over the followers.

In the study, the presumption was that the followers were all MRTs, students and support staff [who were not included in the study], as shown by these comments from MRT and leader-participants:

…*We also have a lot of followers [herself included] I think and I guess like any other job sometimes we get into our comfort zones and that is where you stay…* (Raewyn, 6:48)

…*I think not everyone is involved in leadership but lots more people are involved in leading. We have got lots of senior staff who in my opinion are leading by example and experience and able to take responsibility probably at short notice…* (Laine, 5:31)

Throughout the study images of the organisation, its culture and structure; ethics, values and beliefs of the leaders were created by the descriptions of the participants. These factors, including communication, seemed to affect followers in their role; and the way leaders treated and related to followers seemed to make a difference to how followers identified with the leader. Communication was highlighted by Kramer and Crespy (2011), Uhl-Bien (2006) and Wang and Hsieh (2013) as essential to leadership because it is socially constructed and
therefore affected by language and other forms of communication. Clear and precise communication was advocated by Kramer and Crespy (2011), especially in collaborative relationships so that each individual knows what’s going on and who is doing what. Communication was shown to be important in the study as well.

The descriptions given by participants of their experiences of leadership highlight a power relationship that exists between leader and followers. Ladkin (2010, p. 101) points out that “... leaders are leaders because through either some formally recognised organisational symbol or through informal attribution by ‘followers’, they are deemed to be so”. Therefore power consists of two types, positional and personal power. Positional power according to Raven (2008) is the power that someone has due to their position in the organisation or department, which includes legitimate, reward and coercive power. Positional power is highlighted in the descriptions when participants talked about “... hierarchy...” (Stephanie, 5:12) or “… being scared to say anything ....” (Rachel, 1:3) when discussing their relationship with the leader.

There is also personal power which an individual has due to their influence on followers who see the leader as likeable and knowledgeable (Ladkin, 2010). Personal power includes referent power - which involves seeing an individual as a role model; and expert power - which involves an individual having exceptional insight and knowledge in a particular area (Raven, 2008). As medical imaging involves mastery of technical and clinical skills, expert power might be prevalent and would be the kind of influence MRTs have on students. Although it was stated that “…You know you are a technical expertise that’s why you get a promotion but technical expert has nothing to do with leadership or management…” (Lee, 7:26). However, expert power does not necessarily mean one can handle every leadership role. Ladkin (2010, p. 101) mentions that “... in situations calling for particular expertise, the person who has that expertise might be expected to take up the leader role....”. Some participants that were in leadership positions indicated that when it came to expertise they were not the technical experts. The radiographers on the floor who were developing their art on a daily basis were the experts whilst their role as leaders was more administrative.
The relationship between the leader and follower was described by the participants to consist of the followers relying on the leader for a number of things from problem solving to when time off work may be taken. Even when talking about team and team leadership, there was an emphasis on having the overall leader taking charge and being in control to keep things flowing smoothly.

.... A team is like a skill shift and everyone playing to their strengths. So if you have got ....a team like we've got ... we have charges, clinical leader, team leader and all that works together. Because people have different things that they have to achieve but if we all get together as a group and talk about what we want to do and then someone might say.... ‘This is what I have done, then I say great but what we need to do is frame it in such a certain way because this is what or how the hospital will like to receive it’ or something. So it's working as a team so we can share those things and I don't have to take credit for it… (Leroy, 4:10)

The participants further revealed that it was the overall leader working with other leaders to accomplish the set vision of the organisation or department. The overall leader drawing from the skills, qualities (characteristics) and knowledge of the team members, who are an extension of the leader who cannot be in all areas at the same time, nor have knowledge to solve all problems and issues. The participants further identified a variety of characteristics essential for those in leadership positions.

Characteristics

The characteristics theme presented what the participants viewed as the essential qualities and skills that leaders should possess. In describing the characteristics, participants also described what constituted good and bad leadership, depending on the characteristics exhibited by the leader.

The characteristics that were said to be essential for leader effectiveness according to Daft and Pirolla-Merlo (2009) are the same characteristics that are essential for an effective follower. Followers are also required to have and develop skills and qualities such as communicative skills, interpersonal skills,
relational skills, organisational and strategic skills sought from leaders (Daft & Pirola-Merlo, 2009). The reason is that the leader-follower role can be fluid, with the leader becoming a follower in certain contexts (Daft & Pirola-Merlo, 2009).

In this study, individuals who are likely to alternate their roles constantly are those that were described as duty MRTs or coordinators because their leadership is limited to a day in a week and not on a full time bases. According to some participants, MRTs who develop characteristics that enable them to deal effectively and efficiently with people will improve their clinical roles as well. The development of soft skills like Emotional Intelligence as suggested by Mackay et al. (2012) would make individuals compassionate and empathic for patients, colleagues, subordinates, followers and leaders, thus improving how MRTs relate in society.

Daft and Pirola-Merlo (2009), Ladkin (2010) and Hannah and Avolio (2011) concur with the idea that an effective follower can easily swap roles from follower to leader and these authors encourage everyone (leaders and followers) to understand leadership and their role in leadership in order to be effective. However, there are authors who are of the opinion that leadership is available to all; all individuals in an organisation have to be engaged to participate in leadership practices (Ham, 2012; Maxwell, 2005; van Dierendonck, 2011). Thus leaders are encouraged to make leadership available to everyone (Maxwell, 2005).

**Good and bad leadership**

The descriptions of good and bad leadership from the study illustrated what the participants perceived and expected from those in leadership. According to Hannah and Avolio (2011) each individual is influenced by their values, ethics and the contextual influences around them in their perceptions and expectations of their leader and leadership. The literature further points out that the management of people's expectations and perceptions determine the stories that circulate about the leader (Foti et al., 2012; Hannah & Avolio, 2011; Ladkin, 2010). These stories in turn affect how the leader is accepted and viewed by followers and those that hear the stories (Ladkin, 2010). Leaders in the study were described according to the characteristics that made the participants feel both valued and important or as means to an end.
Furthermore, leadership in literature is described as a socially constructed phenomenon (Ladkin, 2010), considering that individuals are shaped by their work environment and that alignment to the cultural norms and values in the organisations is encouraged (Kim et al., 2011; Ladkin, 2010). MRT and leader-participants in the study described how they were treated by their leaders:

… The leader I had prior to taking on this job. She was a poor communicator and really didn’t know what a team meant and tended to isolate people and had a very much ‘I had it hard you have it hard’ attitude… (Lawrence, 1:2)

…I remember one place in two years we had one staff meeting. If you were called into the office you were in trouble, and people would come back crying and no one ever knew what was going on … (Rachel, 8:85)

The common examples of bad leadership experienced by participants indicate that there are other factors that affect how leadership is practised; factors such as organisational norms and cultures, characteristics developed by an individual and individual preference for leadership styles. The leadership style employed by the leader has an influence on how followers responded and the styles the followers chose to use (Daft & Pirola-Merlo, 2009).

Types and styles of leadership and followership styles

In this study participants described places that promote participative and collaborative leadership styles and behaviours as the environment they would like to work in. They also described the need for command and control of activities in achieving results. The participants asserted that these two styles, though different and contrary, are needed in varying proportion depending on the context.

… Sometime you need someone to say ‘this is how it is, that is how it has got to be done’, and then sometimes you need to be able to smooth things over. If by taking the attitude of ‘this is how it is done and we don’t care what you think’ it’s going to create a big uproar. Then that is not going to be beneficial, so maybe you can take a softer approach in some ways… (Raewyn, 5:40)
Ham et al. (2011) concluded that a combination of ‘participative and collaborative’ leadership styles with ‘command and control’ leadership styles, work in some contexts when used appropriately. However, Ham et al. (2011) stressed that the command and control styles of leadership cannot be used as dominant styles because they do not engage followers in leadership or create innovation in teams. Some participants revealed that the potential for patient care improvement through follower contribution and innovation is not realised in command and control leadership styles.

Literature on command and control leadership styles indicate that these styles focus on the results instead of development and empowerment of followers or the production of change in an organisation (Mumford et al., 2007; Storey & Holti, 2013). Command and control leadership styles result in passive followers who are demoralised, disempowered, disengaged and are only willing to put the bare minimum into their work (Storey & Holti, 2013). In the study, Lawrence reveals how he reacted to his previous leader: “….Trust them …they are all adults. The experience I had with my previous incumbent is that she treated you like a child, so you disengage…” (Lawrence, 4:20). Lawrence then describes his leadership style: “….varies according to the situation… I try to be consultative and inclusive and I do try and devolve authority as much as I can with the proviso that the staff feedbacks as much as they can what they are doing…” (Lawrence 7:35).

Leadership styles that are participative and focused on the followers have been used in the UK’s NHS system to develop leaders and improve the service provided to the population (Storey & Holti, 2013). Relational and transformational leadership are now styles of choice, not just in the NHS, but in healthcare organisations in the developed world, whose focus has been to transform, develop and change their organisations to better service the community (McKenzie & Manley, 2011; NHS Leadership Academy, 2011; Storey & Holti, 2013; van Dierendonck, 2011). In the study, leadership styles that have the staff as their focus, listening to staff and encouraging them to bring forth ideas for better improvement of the workplace were highlighted as desirable:

…Here you can definitely go to any of the bosses and talk to them about any problem you have got and they will try to look into it in a positive way
Transformational leadership has been the most common style of leadership research and promoted in healthcare, in the past twenty years (Kim et al., 2011; National Health Service, 2008; NHS Institute for Innovation and Improvement, 2011; Salanova et al., 2011). Nevertheless, new evidence from the UK suggests that although organisations have transformed and improvements realised - in some cases it was at the expense of the followers and patients (Grint & Holt, 2011; Ham & Hartley, 2013). The focus in some organisations was on meeting targets, productivity and profitability - with followers well-being neglected, which followed on to affect the delivery of services to the patient (Ham & Hartley, 2013; Storey & Holti, 2013). Recent literature (Ham & Hartley, 2013; Leroy et al., 2012; Menguc et al., 2013; Rayton et al., 2012) is now focusing on systems leadership; service orientated leadership, adaptive, collaborative and shared leadership styles which are inclusive of everyone as leadership is not focus on the charisma of individual but on service, engagement (employee, customer or patient) and teamwork.

**Followership style**

Followership according to Daft and Pirola-Merlo (2009) is as important in the leadership relationship as the leader. Daft and Pirola-Merlo (2009) used Robert Kelley’s category of the five types of followers encountered in leadership. The authors found follower types were; passive, conformist, effective, alienated follower and pragmatic survivor (Daft & Pirola-Merlo, 2009). Various types of followership were described in the study which, when compared to Kelley’s classification of followership, are all present in any organisation at the same time.

As command and control styles have been prevalent in organisations, it could be assumed that MRTs who have worked under these leadership styles have become passive and conformist followers. Past history, culture and medical dominance in medical imaging (Sim & Radloff, 2009; Yielder, 2007; Yielder & Davis, 2009) could be contributing factors to some passive follower, conformist follower and pragmatic survivor behaviours. Such followers do not perceive the valuable contribution they can make in improving service delivery and patient care (Ham, 2012). They would prefer to give the minimum to their work and not
take any interest in leadership: “...I think there are certain people that have a real clinical interest in what we do but I think lots of people don’t, they just turn up to cruise at work, take the money and go home...” (Lee, 5:20). From the descriptions in this study, those who emerged as passive and conformist followers wanted to be told what to do. Passive and conformist followers desire structured and predetermined work with all the responsibility taken on by the leader (Daft & Pirola-Merlo, 2009).

MRT and leader-participants’ accounts revealed that with some leaders, the participants took on different forms of followership styles depending on the leadership style used by the leader. The pragmatic survivor adapted their behaviour according to the leadership style used (Daft & Pirola-Merlo, 2009) and found reason to stay in the organisation as illustrated in this excerpt: “…the bad leadership … you get disgruntled staff members and really unhappy. I have worked here for over 25 years and that would have been the only time I have thought that I can’t work here anymore…” (Laine, 1:4). Some MRT focus group members indicated that they had to leave employment because of the way the leader interacted with them.

On the other hand, effective followers want to be involved in decision making and issues that involve their work, taking on responsibility and being accountable, participating in leadership as well as being proactive about issues that worry them (Daft & Pirola-Merlo, 2009). In the study MRT focus group participants gave accounts of why their workplace was good and inferred that they were engaged and participating in how the organisation operated: “…The good thing about here is that if you raised your concerns with the bosses, that stuff will actually be looked into instead of being ignored...” (Raquel, 2:18). Kramer and Crespy (2011) asserted that collaborative and participative leadership styles work effectively in small groups. Medical imaging as a profession contains small numbers working in various specialities, therefore employing principles of shared leadership and collaboration would be possible.

The use of different leadership styles selected appropriately for the situation result in staff employing followership styles that match the leadership style and situation. Command and control styles invoke passive, conformist or pragmatic followership styles (Daft & Pirola-Merlo, 2009). Effective followership styles could be a result of leadership styles that are engaging, service oriented and people
focused; such as shared, collaborative, participative, patient, or service centred leadership styles (Daft & Pirola-Merlo, 2009).

**Types of leadership**

The administrative and expert leadership style emerged as being practiced in the study. The participants who occupied the leadership positions and were MRTs described their work as mainly administrative not technical, and as such they were not the technical experts in the field. They concluded that the technical experts are the MRTs who practice and exercise their skills daily. Ladkin (2010, p. 101) concluded that “… *In situations calling for particular expertise, the person who has that expertise might be expected to take up the leader role*” and the leadership role is shared between the administrative leader and the expert. The administrative leadership then deals with activities which are similar to what the various authors describe as management.

Leadership in healthcare involving clinicians (all healthcare professionals), is called clinical leadership and is theorised by concepts of shared, distributed and collaborated leadership (NHS Leadership Academy, 2011). Leadership under this concept is an undertaking of everyone, responsibility is shared and so are the benefits (Ham et al., 2011; NHS Leadership Academy, 2011). Clinical leadership involves collaboration between professionals and administrators (NHS Leadership Academy, 2011). Clinical leadership acknowledges that not everyone is a leader however, contribution can be made to the leadership process by everyone, through “demonstrating personal qualities, working with others, managing services, improving services and setting direction” (NHS Leadership Academy, 2011, p. 6). Concepts of clinical leadership therefore challenge the traditional way of viewing leadership as only reserved those with a designated leadership role. Equally, the view that MRTs do not have a leadership role as expressed by some participants in the study is challenged by concepts of clinical leadership.

Clinical leadership has the same principles as shared and collaborative leadership - where the leader-follower roles become fluid as members of the group alternate roles depending on the situation, task or expertise needed (NHS Leadership Academy, 2011; Stanley, 2006). Clinical leadership implies that MRTs are active participants in leadership and an understanding of leadership would therefore be valuable. Clinical leadership utilising shared leadership
principles, promotes the ideas of having all staff engaged in acts of leadership such as networking, improving others, self and services as well as engaging all stakeholders to improving service delivery (Ham, 2012; NHS Leadership Academy, 2011). The leader-follower relationship in clinical practice is assumed to move from being leader centric to collaboration and engaging; resulting in better patient experiences, improved safety and quality, financially strong and stable organisations, better performance and reduced turnover, staff being supported, recognised and encouraged (Ham, 2012; McKenzie & Manley, 2011; Rayton et al., 2012).

Clinicians in leadership positions have first-hand insight about how the organisation’s system works, what areas need extra attention to benefit patients, and provide high quality services. Clinicians are encouraged to be aware that they can influence change and improvements in their current position without being in designated leadership roles by collaborating and engaging with leaders, colleagues, patients and other health professional and stakeholders (Ham, 2012; NHS Leadership Academy, 2011). High standards of professionalism coupled with clinical leadership from clinicians ensures improved patient outcomes and organisational services (Grint & Holt, 2011; Morrow et al., 2011). The focus on clinical leadership instead of general leadership suggests moves towards engagement and involvement of professionals in leading innovations and transformations from a decentralised place (Ham, 2012; NHS Leadership Academy, 2011).

The findings of the study suggest that some MRTs do not yet understand the concept of clinical leadership and how they can play their part; therefore, do not see the value in understanding leadership. However, there is a need for MRTs to understand and develop leadership skills so as to take up the top leadership roles, and be positioned to be advocates for the profession in at policy making levels. Leadership in healthcare is evolving, making leadership accessible to everyone and challenging traditionally held perceptions and expectations.

Perceptions, expectations and ideal leadership
Perception and expectation as a theme was evident throughout the study as the participants were generally discussing certain areas of leadership. However, the images that were created by the participants’ words differed from one another in
that what one individual valued varied from what others valued. This is evident in the study through the different descriptions given of what leadership is.

Lievens and Vlerick (2013) looking at transformational leadership and safety performance among nurses revealed that leaders are able to change the perceptions of employees through their words and actions. The leader's words and actions about the job and organisation will affect how the employee views the formal characteristics of the organisation, including leadership. Therefore, what is said and how the leader behaves affects how they are perceived by followers. Ladkin (2010) further mentions that the leader controls how they are perceived by followers. The author comments that leadership as a social construct is conceptualised through what followers see, hear, feel and touch and through these senses followers identify with the leader (Ladkin, 2010). Decisions, actions and behaviours from the leader also contribute how they are perceived by the followers (Ladkin, 2010). However Ladkin (2010) states that the same factors that determine how leaders are perceived, also determine how followers are perceived by the leader.

**Ideal leadership**

The ideal leadership image that individuals have of leadership is said to come from the perceptions and expectations that individuals have of leadership (Foti et al., 2012; Hannah & Avolio, 2011b; Ladkin, 2010). Ideal leadership according to Foti et al. (2012) comes from past experiences, observations and through socialization such that individuals have a model, image or impression of what leadership should be. In a leadership situation individuals use their models to judge and form opinions about the leader's behaviour and leadership situation (Foti et al., 2012; Lievens & Vlerick, 2013). The following excerpt from Raleigh illustrates this:

> … We have had some leaders in the past, managers who have walked in and said ‘I will have new staff meetings and nobody says anything, I am going to tell you what is going on and what I need you to do’… I didn’t form a very good opinion about that person just for doing that… (Raleigh, 2:17)

Some of the descriptions of ideal leadership practices given by the participants are in agreement with shared styles leadership, which include collaborative and
participative leadership: “...If there is openness in the team, if there is a clear direction of this is what we hopefully want to do... Hopefully it engages other people to work well really I suppose...” (Leroy, 4:10). There are a number of factors that affect perceptions and expectations of individuals, and the leader would have to manage what they have control of which has influence over followers perceptions. Factors such as organisational culture, structure, ethics, values, beliefs, leader behaviour and communication contribute to perceptions formed by individuals.

**Context**

The theme of context suggests that leadership is affected by factors such as policies, systems and procedures as well as organisation values, beliefs and norms which are not always stated. Ranges of contexts that exist in different workplaces were described in the study, with participants who have worked in various organisations comparing these organisations with their current place of employment.

The descriptions from the participants demonstrated that they believed the prevailing culture determined the leadership practices in the workplace and that the leaders made a large contribution to each organisation's culture. For some participants, the current leadership in their workplace were encouraging more participation and autonomy in some areas compared to the previous leadership. According to these participants the workplace was pleasant, enjoyable to work in and most importantly they felt valued. “...*People are approachable and there is not too much us and them kind of an attitude... We get on quite well here. You feel like when you approach someone you can get some of your problems fixed...” (Ralph, 2:16). The participants' descriptions also implied that there was improved effectiveness in the organisation under the current leadership.

Ladkin (2010, p. 40) in her book, *Rethinking Leadership*, talks of the "invincible influences" that affect leadership behaviour and practice. These influences range from individual preferences, expectations and perceptions of leaders and followers, organisational culture, values and ethics as well as the context in which leadership is enacted (Ladkin, 2010). According to Ladkin (2010, p. 43), "... culture will carry certain, often unarticulated assumptions about what leadership looks like...." Furthermore, Stace and Dunphy (2001, p. 158) state
that "...culture exercises strong control over the actions of those in the organisation by setting the boundaries of what is acceptable behaviour and defining ideal behaviour".

Culture then would include formal organisational practices like job definition; pay structure; accountability and things which are governed by policies and procedures, whilst informal culture includes the values; beliefs; norms; expectations and taboos of the organisation (Barnes, 1995). The prevailing culture in an organisation therefore, affects expectations and perceptions of the leaders and followers as well as commitment, loyalty, job performance and motivation, organisational effectiveness and leadership practices in the organisation (Kim et al., 2011). The following excerpt illustrates how some leaders do not promote a delegating culture: “...I have worked in different places and some places leaders just take everything on and get super stressed and then every time you say something it won't get dealt with. It just goes to the bottom of the list...” (Rachel, 3:26). To change an organisation there is a need to change the culture of the organisation such as changing the values; beliefs; norms and ethics of the organisation (Kotter, 1996). This could cause a domino effect with a change in leadership practices and follower expectations and behaviour.

...This department has gone through quite significant changes over the past two years, from being a rudderless ship to getting a very strong clinical leader who is engaged... We have also got the team leader who is fantastic... She has clear standards of what she expects from us and I try and mimic that to everyone else but she is quite happy to stand back and let me get on with it... The key to changes has been the coming in of the clinical radiologist and the team leader... (Lawrence, 5:24)

The MRT focus group participants who had been in Organisation B longer than two years, were in agreement with Lawrence about the changes that having new leaders had made. The participants noted that the atmosphere and culture changed, resulting in an environment where individuals are valued, trusted and listened to. Storey and Holti (2013) reported that when a leader focuses on service delivery the employees and customers (patients) become important and the prevailing culture of the organisation changes to value employees and customers. The authors further mention that service oriented leaders engage,
develop, collaborate and listen to employees (Storey & Holti, 2013). This results in satisfied staff, improved performance and high quality service to the patients (Storey & Holti, 2013).

Two different nursing studies by McKenzie and Manley (2011) and Cummings et al. (2010) assert that language and communication, ethics, values, quality, organisational structure and culture affect leadership in healthcare. Cummings et al. (2010) using content analysis, reviewed quantitative articles published in various electronic databases to find the pattern between relational and task focused leadership styles and their outcomes for nurses and their work environments; whilst McKenzie and Manley (2011) looked at leadership and responsive care in nursing practice. The findings from these studies suggest that the outcomes of leadership contribute to the outcomes in patient care, follower improvement, retention, development and job satisfaction. Context also influences how appointment and promotion into leadership positions occurs as well as how leadership development occurs in an organisation.

Appointment and promotion

When discussing the appointment and promotion of MRTs to leadership positions, leader-participants described how promotions were no longer based on seniority. Nowadays appointment and promotion especially to the top leadership positions was identified as being according to leadership or management qualifications with no medical imaging experience or experience in healthcare as a prerequisite. According to Pallot (1998) and Carryer, Diers, and Wilson (2010), health sector reforms in NZ in the 1990s saw the introduction of departmental managers from the private sector to public sector. The health sector experienced change in management, finance and operation, where generic managers and chief executive officers from any industry replaced ward nurse managers, chief medical officers (Carryer et al., 2010; Pallot, 1998). In medical imaging that would suggest the replacement of chief radiographers. The selection of individuals who have leadership or management qualifications with no background knowledge into positions of authority in the professions they lead, was also promoted in the UK under the Griffiths report of 1983 (Griffiths, 1983).

The changes in the 1990s allowed the movement of leadership and management from the private sector to public as well as from within the health...
sector. There has not been change in how leaders are appointed since these reforms in NZ as evidenced in the study: “…Things are changing with management, where people with management qualifications manage a department, when they have not come through that department …” (Laine, 2:6). However, the health sector in the UK is reverting back to clinical leaders (Ham et al., 2011; NHS Leadership Academy, 2011). The researcher has observed radiology departments managed by individuals with backgrounds from other professions within health sector such as from nursing, dental, pharmacy and medical laboratories. Organisation B had a leader who was not an MRT but was from within the health sector: “…I have got a health management background…” (Leroy, 4:10) and having a non-MRT leader did not seem to affect the MRTs in the organisation. The issue of having non-MRTs as top leaders was not pursued in this study. However, future research on the impact of non-MRT leaders in medical imaging would be a valuable area/topic of study.

The replacement of promotions that are based on seniority and favouritism to promotions according to leadership qualifications or participation in leadership programmes were evidenced by Donovan et al. (2012) as occurring in the nursing profession in NZ. In the study Laine mentioned that: “…It was always, a senior practitioner will be the leader or deputy leader, charge radiographer… I think you know in radiography and hospitals that is kind of changing…” (Laine, 3:16). In medical imaging in NZ, however there is no published literature on MRTs participating in leadership programmes. Unitec offers a clinical management course tailored for Medical Imaging as a CPD programme. From this it could be assumed that some MRTs do participate in some leadership and management programmes. In the study one of the leader-participants revealed that they had participated in an organisation sponsored leadership programme.
Recommendaions

This research study has explored leadership in medical imaging using a small sample size therefore generalizations cannot be made. However, the anticipated hope is that the study will generate research and discussion on leadership from all stakeholder from MRTs; departmental leaders; education and professional development course providers and the Institute of MRTs in New Zealand.

Future research could focus on:

- The role of MRTs as the frontline staff in clinical leadership.
- The effects of organisational culture and structure on leadership and succession planning.
- The leadership styles that suit the radiology environment.
- Investigation into the followership styles in medical imaging.
- Investigate the effect of having non-MRTs as leaders in radiology departments.
- Investigation into the succession plans of various departments with regards to leadership.
- Investigate how emergent leaders are identified and nurtured in medical imaging.
- Case studies on the different leadership styles used in the public and private sector and their effects on organisational effectiveness and job satisfaction.
- How leadership development could be incorporated into the existing training curriculum.
- Find out if there is an interest in including leadership training in the CPD programmes.
- Profiles of effective leaders in public and private sector, and education.
- The role of gender differences in leadership practices.

As there is paucity of leadership literature for MRTs in New Zealand, research using both qualitative and quantitative methods would be valuable to enable a better understanding of effective leadership in medical imaging and its achievability.
Conclusion

In conclusion, this study has explored leadership in clinical practice in medical imaging in NZ through the lived experiences of MRTs. An insight has been obtained from the study about what leadership means and is perceived to be by MRTs as well as what ideal leadership in medical imaging is perceived to be.

The participants did not differentiate between leadership and management and throughout the study leadership was used to describe both. The definitions of leadership were varied but the main ideas focused on the leader having influence over others, empowering followers, and followers attending to the direction of the leader. There were differences in the need to understand leadership amongst the participants, with some participants seeing no value in understanding leadership. This view is contrary to the MRTB (NZ)’s standard clinical competency requirements and current view in the literature that promote leadership in the clinical area making leadership accessible to everyone.

In this study, since leadership was defined by the participants as leader centric, leaders were identified according to the positions they occupied. The follower’s role was not described in much detail as the leader’s role and the majority viewed their role as followers, even though the student participants regarded the MRTs as their leaders. Literature stated that the behaviour in leadership was linked to the perception an individual had of the role.

The leader-follower relationship was said to be power oriented, with the leader supposedly having power over the followers. A number of factors were identified that affected the leader-follower relationship however communication was noted as the most important. Clear and open communication was reported as supporting the leader-follower relationship.

The following skills were also identified as essential for leaders to have; communication, interpersonal, relational, organisational and strategic. The same skills were also identified for followers to possess especially those that were leaders when they took up the coordinator’s role for the day. The classification of ‘good’ and ‘bad’ leadership was judged according to how these skills were used by the leader.

Command and control leadership style were identified as prevalent in some organisations and combined with certain characteristics resulted in participants
experiencing uncomfortable leadership situations. Leadership styles that are engaging and promote collaboration and participation were valued by participants and labelled as ideal to work in. Some participants in the study mentioned that they were experiencing some of these leadership styles in their workplace. The context in which leadership took place attributed to the leadership styles that were employed by leaders. Organisational culture and structure, values, beliefs, and ethics were among factors that were described as affecting leadership in the workplace.

The appointment and promotion of leaders was identified as having changed from promoting senior staff within the profession, to appointing individuals with leadership qualifications from any industry instead of within the profession. One participant had misgivings about such appointments; however the topic was not explored further.

Leadership in medical imaging has not been explored in practice nor have practitioners been made aware of the fact that they could have a valuable role to play in clinical leadership without compromising on clinical practice or knowledge. Understanding and gaining knowledge about clinical leadership might encourage MRTs to become advocates and reformers of the profession in NZ. Further research on leadership in medical imaging is recommended to encourage awareness of the phenomenon and the part each one has to play.
References


Covey, S., Merrill, A., & Merrill, R. (1994). First things first: To live, to love, to learn, to leave a legacy. New York: Simon & Schuster.


Giorgi, A., & Giorgi, B. (2004). The descriptive phenomenological psychological method In P. Camic, J. Rhodes & L. Yardley (Eds.), *Qualitative research*
in psychology: Expanding perspectives in methodology and design.

Goleman, D. (1996). *Emotional Intelligence: Why it can matter more than IQ.*
London: Bloomsbury Publishing.


Pearce, C. (2007). The future of leadership development: The importance of identity, multi-level approaches, self-leadership, physical fitness, shared leadership, networking, creativity, emotions, spirituality and on-boarding


Shuck, B., & Herd, A. M. (2012). Employee engagement and leadership: Exploring the convergence of two frameworks and implications for


Appendix A: Ethics approval

Sophie-Jane Sithole
8 Hollard Grove
Avalon
Lower Hutt, 5010
23.2.12

Dear Sophie-Jane,

Your file number for this application: 2012-1004
Title: Leadership in Radiography – Exploring radiographers experiences of leadership.

Your application for ethics approval has been reviewed by the Unitec Research Ethics Committee (UREC) and has been approved for the following period:

Start date: 23.2.12
Finish date: 23.2.13

Please note that:

1. The above dates must be referred to on the information AND consent forms given to all participants.

2. You must inform UREC, in advance, of any ethically-relevant deviation in the project. This may require additional approval.

You may now commence your research according to the protocols approved by UREC. We wish you every success with your project.

Yours sincerely,

Scott Wilson
Deputy Chair, UREC

cc: Suzanne Henwood
Cynthia Almeida
Appendix B: Invitation for individual interviews and focus group discussion

INVITATION FOR INDIVIDUAL INTERVIEWS AND FOCUS GROUP DISCUSSION

Study Title: Leadership in Radiography. Exploring radiographers lived experiences of leadership.

My name is Sophie-Jane Sithole. I am a student in the Medical Imaging Department at Unitec Institute of Technology. I am conducting a research study as part of the requirement of the Master of Health Science degree programme and I would like to invite you to participate in either a focus group or individual interview or both.

I am undertaking a phenomenological study on leadership in radiography in New Zealand. The aim of my study is to explore the experiences of leadership in radiography, examining what leadership is, what leadership means to radiographers and what radiographers envision leadership in clinical practice to be.

Should you decide to participate in the **individual interview**, you will be asked to meet with me for an interview. The areas to be covered will include what leadership is, what leadership means to radiographers, what radiographers envision leadership in clinical practice to be and what your experiences are in being the leader or being led. The meeting will take place at a mutually agreed upon time and place and should last no more than an hour. Subsequent interviews will be conducted to cover topics that need clarification or topics that were not covered initially but were raised in other participant’s interviews.

If you decide to participate in the **focus group discussion**, we will examine what leadership is, what leadership means to radiographers, what radiographers envision leadership in clinical practice to be, what your experiences are in being the leader or being led and other topics from the interviews that need group
exploration. The meeting will take place at a mutually agreed upon time and place and should last no more than two hours.

Participation to either the individual interview or focus group is voluntary. The discussion session and individual interviews will be digitally audio recorded so I can accurately reflect on what is discussed. The digital recordings will be accessible only to my supervisors and me. The identities of the sites and the participants as well as the information you provide will be confidential and kept anonymous.

The results of the research will be disseminated through the Journal of Medical Radiation Sciences (JMRS); Annual National NZIMRT Conference; Regional Study day or Radiography Day presentation and workplace based educational programme, to encourage dialogue among radiographers. You will not be identifiable in any report or publication.

Thank you for your consideration. If you would like to participate, please contact me at the number listed below to discuss participating. If you have any queries and questions about the research, you may contact my supervisors Dr Suzanne Henwood and Dr Dianne Roy at Unitec Institute of Technology.

Contact details
Researcher: Sophie-Jane Sithole Email: sophiejanesithole@ymail.com Phone: 0210701309
Supervisor: Dr Suzanne Henwood Email: shenwood@unitec.ac.nz Phone: 09 815 4321 ext. 5184
Supervisor: Dr Dianne Roy Email: droy@unitec.ac.nz Phone: 09 8154321 ext.8307

UREC REGISTRATION NUMBER: 2012-1004
This study has been approved by the UNITEC Research Ethics Committee from 23-02-2012 to 23-02-2013. If you have any complaints or reservations about the ethical conduct of this research, you may contact the Committee through the UREC Secretary (ph: 09 815-4321 ext 6162). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.
Appendix C: Participant consent form

PARTICIPANT CONSENT FORM

Title: Leadership in Radiography. Exploring radiographers lived experiences of leadership.

Researcher: Sophie-Jane Sithole
I have been given and have understood an explanation of this research study for Master of Health Science programme. I have had an opportunity to ask questions and have them answered.

I understand that I may withdraw from the study together with any information traceable to me a week after the interview without giving a reason.

I agree to be audio recorded during the interview. I understand that a summary of the study report will be used for publication.

I have had time to consider everything and I give my consent to be part of this research study.

Signed: ________________________________
Name: ________________________________
Date: ______________

UREC REGISTRATION NUMBER: 2012-1004
This study has been approved by the UNITEC Research Ethics Committee from 23-02-2012 to 23-02-2013. If you have any complaints or reservations about the ethical conduct of this research, you may contact the Committee through the UREC Secretary (ph: 09 815-4321 ext 6162). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.
Appendix D: Individual interview participant information form

INDIVIDUAL INTERVIEW PARTICIPANT INFORMATION FORM

My name is Sophie-Jane Sithole. I am currently enrolled in the Master of Health Science degree programme at Unitec Institute of Technology and seek your help in meeting the requirements of research for a Thesis course which forms a substantial part of this degree.

I am undertaking a phenomenological study on leadership in radiography in New Zealand. The aim of my study is to explore the experiences of leadership in radiography, examining what leadership is and what leadership means to radiographers in clinical practice.

I would want to interview you and talk about your experiences of leadership in radiography. The initial and subsequent interviews are expected to be no more than an hour long. Subsequent interviews will be done to cover topics that need clarification or topics that were not covered initially but were raised in other participant’s interviews. Another purpose of the subsequent interviews is for you to read, comment and edit your interview transcript and notes, and comment on the analysis already done of your interview.

You are free to select the interview venue which should be in public, quiet and secure for both of us. We will have to agree on the selected venue. If you agree to participate, you are free to withdraw your participation up until a week after the interview because it will be hard to separate your interview data when analysis has begun.

The interviews will be audio recorded. All the information you provide will be confidential and you will not be identifiable in any report or publication. All information collected from you will be stored securely at my home and only you, the researcher and the supervisors will have access to this information. The information will be destroyed completely five years after completion of the study.

The results of the research will be disseminated through the Journal of Medical Radiation Sciences (JMRS); Annual National NZIMRT Conference; Regional Study day or Radiography Day presentation and workplace based educational programme, to encourage dialogue among radiographers.

I hope that you will agree to take part and that you will find your involvement interesting. If you have any queries and questions about the research, you may contact my principal supervisor at Unitec Institute of Technology.

My supervisors are;
Dr Suzanne Henwood, phone 09 815 4321 ext. 5184 or email shenwood@unitec.ac.nz
Dr Dianne Roy, phone 09 815 4321 ext. 8307 or email droy@unitec.ac.nz

UREC REGISTRATION NUMBER: 2012-1004
This study has been approved by the UNITEC Research Ethics Committee from 23-02-2012 to 23-02-2013. If you have any complaints or reservations about the ethical conduct of this research, you may contact the Committee through the UREC Secretary (ph: 09 815-4321 ext 6162). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.
Appendix E: Focus group participant information form

FOCUS GROUP PARTICIPANT INFORMATION FORM
My name is Sophie-Jane Sithole. I am currently enrolled in the Master of Health Science degree programme at Unitec Institute of Technology and seek your help in meeting the requirements of research for a thesis course which forms a substantial part of this degree.

I am undertaking a phenomenological study on leadership in radiography in New Zealand. The aim of my study is to explore the experiences of leadership in radiography, examining what leadership is and what leadership means to radiographers in clinical practice.

I am inviting you to participate in a group discussion focusing on leadership in radiography, what leadership is, what it means for radiographers, what you envision leadership in clinical practice to be and sharing your experiences as a leader or being led or both.

One group discussion session will be held and I anticipate it will take up to a maximum of two hours. We are meeting at (insert place, date and time). The discussions will be audio recorded. All the information you provide will be confidential to the group and you will not be identifiable in any report or publication. All information collected from you will be stored securely at my home and only you, my supervisors and I will have access to this information. The information will be destroyed completely five years after completion of the study.

The results of the research will be disseminated through the Journal of Medical Radiation Sciences (JMRS); Annual National NZIMRT Conference; Regional Study day or Radiography Day presentation and workplace based educational programme, to encourage dialogue among radiographers.

I hope that you will agree to take part and that you will find your involvement interesting. If you have any queries and questions about the research, you may contact my principal supervisor at Unitec Institute of Technology.

My supervisors are:
Dr Suzanne Henwood, phone 09 815 4321 ext. 5184 or email shenwood@unitec.ac.nz
Dr Dianne Roy, phone 09 815 4321 ext. 8307 or email droy@unitec.ac.nz

UREC REGISTRATION NUMBER: 2012-1004
This study has been approved by the UNITEC Research Ethics Committee from 23-02-2012 to 23-02-2013. If you have any complaints or reservations about the ethical conduct of this research, you may contact the Committee through the UREC Secretary (ph: 09 815-4321 ext 6162). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.
Appendix F: Interview schedule

INTERVIEW SCHEDULE

A. Using examples, can you describe in detail your leadership experience in radiography of
   i. Good leadership
   ii. Bad leadership

B. The term ‘leadership’
   i. What does it means to you?
   ii. What does the term mean in clinical practice in radiography?

C. From your experience what are the leadership qualities that are specifically needed in clinical practice in radiography?

D. Please describe leadership currently within radiography.

E. What would you like leadership in clinical practice to ideally be?

F. What difference do you think an understanding of what leadership is, would make to clinical practice in radiography?

G. Can you tell me what the difference between leading and leadership is?
Appendix G: Radiographer focus group discussion guide

RADIOGRAPHER FOCUS GROUP DISCUSSION GUIDE

TOPIC AREAS FOR DISCUSSION

- Thinking of leadership, tell me about your experiences and the different approaches to leadership.
- Can you tell me what characterises effective leadership traits and behaviours?
- What is it that can be done to encourage individuals to take-up leadership positions and/or develop leadership qualities?
- Tell me how would you define leadership?
- What does leadership mean to you?
  - What does leadership mean to other radiographers?
- When the term clinical leadership is used, what does that mean to radiographers?
- Can you tell me what the difference between leading and leadership is?
Appendix H: Student focus group discussion guide

STUDENT FOCUS GROUP DISCUSSION GUIDE

TOPIC AREAS FOR DISCUSSION

- Tell me about your experiences of leadership so far in radiography.
- Tell me what characteristics do you think you should have to work in radiography?
- Do you think your role now has any leadership content to it?
- Tell me how you would define leadership?
- What is the difference between leading and leadership?
- What would be the ideal workplace to work in?
- Tell me, if you had in your training a bit of some leadership training, would it help you understand your leaders or understand what really happens at a level higher than were where you are.
Appendix I: Pilot interview schedule

Pilot Interview Schedule

Establishing rapport

- Welcome and introduction.
- Brief overview of research study.
- Explanation of what is required of the participant.
- Informed consent forms completed.

Research questions:

- Can you tell me what the term ‘leadership’ means to you?
- What does the term ‘leadership’ mean in clinical practice in radiography?
- From your experience what are the leadership qualities that are specifically needed in clinical practice in radiography?
- Can you tell me how you would describe leadership currently within radiography?
- What have been your experiences of leadership in radiography?
- Please give examples from your experience, of good and bad leadership experiences in the profession.
- Tell me what you would like to see leadership in clinical practice to become?
- What difference do you think an understanding of what leadership is, would make to clinical practice in radiography?