

**DEVELOPMENT OF A CAREER AND COMPETENCY FRAMEWORK  
FOR OCCUPATIONAL HEALTH NURSES WORKING IN NEW ZEALAND  
USING PARTICIPATORY ACTION RESEARCH**

**By**

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## ABSTRACT

This participatory action research (PAR) study was undertaken to review the *New Zealand Competencies for Practising as an Occupational and Environmental Health Nurse (2004)* document and develop an integrated career and competency framework for nurses working in the field of occupational health. The 2004 competency document needed to be reviewed to ensure Occupational Health Nurses (OHNs) have up-to-date guidelines for the skills and knowledge required by businesses to support and promote the health and wellbeing of the workforce, as well as enabling OHNs to identify their training requirements and career planning.

Eight OHNs (including myself) from Christchurch over a 10-month period applied a PAR approach to this qualitative study. The nurses actively engaged in the project from research design to dissemination so linking theory and practice. Achieving the aims and objectives required collaboration, democratic participation, joint decision making, sharing resources, gaining knowledge, and empowerment. The study had six phases. Recruitment of the OHNs occurred during the first phase and in the second phase information was collected through a questionnaire gaining awareness of the OHNs role within the workplace. This information stimulated the first action cycle inquiry. During the third phase data was collected from transcripts of the PAR group meetings. The fourth phase was reflection of the PAR theoretical process of the study. This reflection included understanding what occurred leading to the turning points and what sustained the PAR group. From this phase, evolved phase five, formation of a sub-PAR group, and phase six of the study when the original PAR group reconvened and four subsequent meetings were held concluding the study in May 2015. The study provides contribution to PAR by showing importance of the time commitment of homogenous co-researchers, and role of primary researcher.

A number of areas were identified by the nurses as important skills and knowledge areas for occupational health nursing. Areas include fitness for work, health promotion, risk assessment, legislation and standards, leadership and management skills, research and professionalism. These skills and knowledge topics were then expanded and applied into the career framework from competent to expert nurse. The final participatory cycle involved distributing the framework to the New Zealand Occupational Health Nurses Association to complete the review. The outcome of this research is an integrated occupational health nursing competency and career framework which has been disseminated nationally to New Zealand OHNs waiting for feedback. It is expected that the framework will raise the profile of OHNs within New Zealand, and the vital contribution they make to the public health strategy and supporting businesses to apply employment legislation.

**Key words:** occupational health nursing; competencies, health and safety; career; business.

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I perceived the pursuit of undertaking this study and the writing of this thesis to be similar to those who experience the trials and the sense of fulfillment of running a full marathon.

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# **Chapter 1: The Research Context**

## **1.1 Introduction**

Occupational health (OH) contributes to a nation's welfare and prosperity by providing advice and knowledge on improving and supporting the health of the working population (World Health Organisation [WHO], 2001). It is important for businesses to be assured that the occupational health nurse (OHN) from whom they seek advice has the required knowledge and skills to support and maintain the health of their workforce.

This thesis describes the research study I began in July 2014 to review the competencies required by OHNs working in New Zealand, using the PAR process. This process is participatory, cyclic and collaborative. The research actively engaged eight OHNs in a research project from research design to dissemination so linking theory and practice. The study had two purposes: to review the current New Zealand OHN competency document, and develop an integrated career and competency framework for OHNs, and to record and analyse the PAR process in order to gain an understanding of this research methodology in OH.

Occupational health focus on promoting, improving and maintaining health safety and welfare of the working population. The role of the specialist OHN is orientated towards: a) the prevention of occupational injury and disease through a comprehensive OH and safety strategy; b) the promotion of health and work ability, such as providing support for workers with chronic health conditions that, whilst not caused directly by work, may affect the employees ability to maintain attendance or performance at work, through a comprehensive workplace health promotion strategy; and c) improving environmental health management, by reducing risk to the working population and the wider community (WHO, 2001).

In New Zealand OHNs have a major role in supporting business to comply with health and safety legislation. The Health and Safety at Work Act 2015, emphasises the importance of addressing OH illnesses. Good delivery of OH services to the working population leads to improved staff health, attendance and therefore productivity (Black, 2008). There is also a positive social and economic benefit, in creating a well community, helping to reduce health inequalities, and encouraging national prosperity.

Registered nurses (RNs) employed in the field of OH work in a variety of workplaces as part of a multi-faceted group, or work independently providing OH on a contractual basis. Many OHNs deliver nurse rather than doctor-led services (Harriss, 2010). Occupational health nursing however, is not a well-recognised speciality despite this group of nurses having an important public health role requiring specialist knowledge, and skills (Harriss, 2010).

I agree with Black (2008), Harriss (2010) and O'Neill (2012) that OH nursing in New Zealand, as it is in the United Kingdom (UK), is being pulled along, driven in part by legislation and government initiatives, rather than pushing to create its own destiny. Following a literature search on the Cumulative Index to Nursing and Allied Health Literature database (CINAHL) and PubMed, I could not find a New Zealand document that discussed a strategic plan of delivering OH services to the workforce. Nevertheless, OH is integral to the successful implementation of the recent Health and Safety at Work Act 2015, and health promotion programmes. I believe that some businesses and government agencies are unsure what OHNs do and the positive contribution that this specialist role can make to the welfare of business. Anecdotally, through my 20 year career as an OHN, I have been asked not only by the general public but also by other healthcare professionals what is OH and what do you do?

The time was right with the recent introduction of the Health and Safety at Work Act 2015, for OHNs to review *The Competencies for Practising as an Occupational and Environmental Health Nurse* document (New Zealand Occupational Health Nurses Association [NZOHNA], 2004) to ensure practices were appropriate and meet the requirements of current workers, businesses and legislation.

## **1.2 Research Question and Objectives**

The broad question which contextualise this study is: What are the critical elements and key considerations of a competency and career framework for occupational health nurses in New Zealand, enabling them to work to best practice to support and promote the health and wellbeing of the population?

The two objectives that guided the group of OHNs through a process of self-examination and reflection about their role were:

- To determine the knowledge and skills required for OHNs to provide the expert advice required by industry/businesses to support the health and wellbeing of its workforce. These will reflect the core general nursing competencies required by the Nursing Council of New Zealand (2007), as well as meet the requirements of the Health and Safety at Work Act 2015 and government health initiatives.
- To understand and document the group dynamics and the transforming moments to further inform PAR as a research approach in OH.

### **1.3 Defining Occupational Health**

#### **1.3.1 Historic Perspective**

Occupational health origins dates back to the Greek period when it was recognised that miners were dying at an early age of silicosis. However, it was not until Ramazzini, an 18th century Italian Professor of Medicine from Modena that OH was acknowledged by physicians (Abrams, 2001). Ramazzini explored the link between a worker's disease and the work the individual undertook, providing health information to the workers on how to prevent work related illness and disease.

Although OH developed in Europe during the industrial revolution, it was not until the 1940s the history of occupational medicine began in New Zealand. Thomas Ownsworth Garland, an Industrial Hygienist visited 220 factories in 1948, identifying OH issues and concluded that many of the factories failed to reach the standard of the Factories Act 1946 (Glass, 2003). Garland's solution was to have nurses visit factories to advise workers on how to identify and prevent occupational related diseases. He instigated the establishment of industrial clinics to be staffed by industrial trained nurses under the direction of the District Industrial Medical Officer. On the 3<sup>rd</sup> June 1948 the first Industrial Health Clinic was established on Wellington Wharf. A second clinic was established at Lyttleton Waterfront in 1949, followed by Dunlop in 1951, a result of collaboration between a company and the Department of Health (Glass, 2003). The NZOHNA website refer to "The sisters" [nurses], had grown to 27 working in various industries across the country. The nurses provided first aid to the workers, and gave advice in preventing social and work-related disease. To ensure the nurses gained the required knowledge and skills required to carry-out this work Garland arranged training for them. He resigned in 1956 to

take up a position in Middlesex, England and not long after the Division of OH disbanded and was incorporated into the Division of Public Health.

In 1967 the number of government funded health clinics was at its peak (12 clinics) but by the 1980s they had all been closed. There is no reliable data on the number of OHNs currently employed. However, the NZOHNA website stipulates in 2013 there were 250 active members practising, spread across every region. Access to OH by the working population remains restricted to mainly large industries such as Fonterra Co-operative Group, St Johns, District Health Boards (DHB) and businesses.

During the course of this study the Health and Safety in Employment Act 1992 went through consultation leading to the reform of the act and establishment of the Health and Safety at Work Act 2015. The New Zealand's workplace health and safety system was reformed, following the work of the Independent Taskforce on Workplace Health and Safety and the Royal Commission on the Pike River Coal Mine Tragedy. Part of changes to the health and safety system led to the establishment of WorkSafe New Zealand. It is estimated 600–900 workers die from OH illness every year, costing New Zealand \$3.5 billion (WorkSafe New Zealand, 2013). The Act has an increasing focus on OH with expectations on requirements of the workplace to prevent accidents, injury and illness. The legislation requires businesses and employees to have an understanding of OH hazards and how to manage these hazards through education, enforcement and prevention programmes, such as the management of dermatitis and work-related stress.

### **1.3.2 Role of Occupational Health Nursing in the Workplace**

Despite limited access to OH by the working population and a relatively small group of nurses working in this field of nursing, the OHN role, has over time extended beyond first aid and a basic GP service to a recognised nursing speciality (Harriss, 2010). OHNs work in a variety of workplaces. They either work as I do at a DHB as part of a multi-faceted group, as a health professional at a worksite, or work independently providing OH on a contractual basis. OHNs are required to undertake a wide range of activities based on the individual rather than disease, moving towards a bio-psychosocial model of care and the use of evidence-based medicine (Paton, 2014). OHNs are co-ordinators of health programmes, for example I

recently co-ordinated the annual influenza immunisation programme for the 10,000 employees of the Canterbury DHB. All OHNs make clinical judgement and be able to prescribe vaccinations for an employee. OHNs should be recognised as delivering advanced clinical practice.

Generally OHNs activities are internationally similar, working with management, employees, trade unions and other stakeholders (Naumanen-Tuomela, 2007; Tompson, 2012). These activities according to Harriss (2010) include an understanding of business methods and leadership skills, and knowledge of current legislation. In addition, there is a need for familiarity with chemical, physical, biological and psychological hazards in the workplace and the ways they are managed through risk assessment. The nurse also supports the employee with health problems to return to work or remain in appropriate work, which involves dealing with ethical issues particularly around confidentiality and the need to balance the need of the individual and the employer. The OHN requires an understanding of health monitoring such as spirometry and audiometry, administration of vaccinations, skills in undertaking fitness to work medicals, and have first aid certification health promotion skills. Finally OHNs need to be able to work across an organisation in a collaborative manner.

### **1.3.3 Emergence of Trends in Businesses and the Role of the OHN**

The world of work is changing (Macdonald & Sanati, 2010). New industries such as call centres are working alongside heavy manufacturing presenting different type of work-related illnesses and injuries. Technological, political and social changes are driving forces expected to change type of OH activities this century. (Higashi, 2006; Mellor & St John, 2007; Naumanen-Tuomela, 2001). Local OH practice today is already I believe being shaped by these global forces.

The cost of ill health to society and the role of the workplace in helping to tackle the problems are widely discussed in various documents (Black, 2008; Kaspin, Gorman, & Miller, 2013; WHO, 2010). Increasing OH capability will make it easier for businesses to address the 300,000 people estimated by WorkSafe New Zealand (2013) affected annually by work related ill health. Reducing the cost of sickness absence to a business increases productivity and so benefits the economy. According to the *State of Workplace Health and Safety in New Zealand Report*

(Ministry of Business, Innovation and Employment [MBIE], 2012), 4.5 sick days are taken by the working population annually, costing New Zealand \$1.26 billion in 2012. This includes salary, replacement cost of the employee and loss of production. Sixty percent of sickness absence is related to illness.

OHNs can help address sickness absence within the workplace through a rehabilitation programme. The OHN works with the employee, their healthcare provider and employer, and Human Resources Department (HR) as required to support the individual to return to work. This can be achieved through a return to work programme, modification of the working environment, such as reducing hours of work, gradually returning the employee back to their normal occupation. Clinical expertise of the OHN plays an important role in supporting the employee and employer through this process includes facilitating access to physiotherapy, cognitive therapy and counselling for the employee.

OHNs need to ensure they have the skills and knowledge to advise employers on how to address the management of ill-health, reduce the cost of sickness absence to business and society, and advise business how to reduce hazards at work.

#### **1.3.4 Social and Technological Impact**

The Office for National Statistics (2013) estimates that one third of the New Zealand population will be over 60 by 2033, many of whom will be working. The ageing workforce associated with chronic illness poses a major challenge for the government, and society. Chronic disease, is defined by the WHO (2005), as an illness that means health problems requiring on going management for a period of years or decades. Chronic conditions for example musculoskeletal discomfort, mental ill-health, diabetes, cancer, respiratory disease and obesity are linked to ageing, lifestyle and genetic disposition.

At work people can be exposed to varying degrees of pressure from the demands of the task undertaken, the work environment and their working conditions. All people experience stress, but the health-damaging effect depends mainly on their ability to cope. It is predicted that by 2020 depression will become the second leading cause of disability in the world (WHO, 2010). Advances in technology means that more people can work from home which has the potential for the risk for social isolation and lack of workplace engagement. The employer with OH

support can advise and make appropriate adjustments at the workplace to support the employee. The OHN can provide information and support to the individual in the management of their anxiety as well as provide advice to the business in improving the working environment and conditions.

Presenteeism, being at work when unwell, is a major cost to the workplace (Cancelliere, Cassidy, Ammendolia, & Cote, 2011). As well as creating a heightened risk of injury or spreading of infectious diseases, workers are unlikely to be fully productive, resulting in lost output (Goetzel et al., 2002). Evaluated at the average full-time pay rate, presenteeism was estimated to cost New Zealand between \$700 million (39.3 million work hours lost) and \$8.2 billion (409 million work hours lost) per year (Wellness in the Workplace Survey Report, 2013).

Wellness programmes within the workplace have been shown to have a positive effect on the health of the workforce in raising morale, improving productivity, reducing sickness absence and staff turnover (Baicker, Cutler, & Song, 2010). A health and wellness strategy can be implemented into the work place by the business with the assistance of the OHN.

OHN have a pivotal role in advising employers and employees what a good work environment looks like helping to ensure the working population's health is supported. This entails influencing workplace cultures which encourage healthy behaviours amongst the workforce; early detection of disease indicating the need for health interventions and support for the employee who develop illnesses and providing them support to stay at work, and as mentioned previously rehabilitation back to work following absence due to illness (Harrison, 2012). A good working environment will assist in the reduction of sickness absence and cost of ill health to society, as well as support the ageing workforce to remain at work.

### **1.3.5 A Need for a Solution**

The predicted demographic trends of aging workforce, legislation and technology poses a challenge for government and businesses as well as OH. There is a need for succession planning, attracting more nurses to the profession, more awareness of OH among other healthcare workers, businesses and developing our capacity to meet the requirements of businesses. The solution is multi-factorial. One solution

includes reviewing and re-defining *New Zealand Competencies for Practising as an Occupational and Environmental Health Nurse* (NZOHNA, 2004).

The minimum qualification to work as an OHN is to be a RN. No former experience is required to undertake the varied requirements expected of an OHN (National Occupational Health and Safety Advisory Committee [NOHSAC] Report, 2006). The OHN can undertake postgraduate education and progress to expert level within this speciality generally after five years of working in the field of OH. Anecdotally, it is known that many RNs are working as sole OH practitioners with no postgraduate qualifications or formal experience in this speciality.

Recent projections suggest that there will be an international shortage of nurses (Donley, 2005; Harris, 2010; New Zealand Nursing Organisation [NZNO], 2013). In New Zealand it is expected that half of the current nursing workforce will retire by 2035 (NZNO, 2013). OHNs are facing the challenges of declining numbers and an ageing workforce (Harris, 2010). Although no data is available on the average age of OHNs, at a recent local OHN meeting I observed that most of the nurses were 50 years plus. There is a need to develop a competency framework integrated with a clear career pathway to encourage the recruitment and retention of OHNs.

It is timely to develop the OH competencies to ensure the provision of consistent standards in the delivery of OH by the nurses. The expectations of businesses and the NCNZ (2007) is for the OHN to provide evidence-based practice to ensure best outcomes for their employees. This study sets out how a group of OHNs affiliated to the Canterbury OHN Group using the PAR process will operationalise NCNZ competencies in relation to OH nursing.

#### **1.4 My Changing Role as an OHN**

My passion is OH nursing. I have seen my title change from industrial nurse to an OHN. My practice has moved to adopt activities to accommodate the requirements of the business, and employee. I came into OH in the United Kingdom (UK) in 1984 after working for three years on a ward as a RN. I exchanged my working environment from ward based nursing to a factory, working for an engineering firm offering first aid and primary care similar to a GP practice. The concept of OH grabbed my attention and I enrolled on various courses. Over the following 20 years



I worked as an OHN in a chemical factory, aerospace, and the army. I moved to New Zealand in 2006 and gained employment at Canterbury District Health Board (CDHB) as an OHN. This initially involved me working as a sole practitioner and more recently part of a multi-disciplinary team. In the UK, I was sponsored by a business to complete for my Postgraduate Diploma in OH, and had a nurse mentor when working in the chemical factory and army to guide me through my career.

### **1.5 Raising a Question – Bridging the Gap between Theory and Practice**

In 2012, the *New Zealand Competencies for Practising as an Occupational and Environmental Health Nurse* (NZOHNA, 2004) document was used to guide the orientation and mentor programme of a New Entry into Practice Nurse (NETP) into our team at the CDHB. The document was not intuitive and did not provide the nurse with an understanding of the distinct body of knowledge and skills required to move through the NCNZ (2007) competencies three practice levels of nursing (competent, proficient and expert). It was evident from this experience, to encourage newly qualified nurses into OH, there was a need to review this document in order for the OHNs to gain an understanding of the skills and knowledge required in this specialty, and a career pathway that aligned with the NCNZ (2007) competencies.

I approached the Canterbury OHN group based at Christchurch (of which I was a member), to gauge their interest in working with me as co-researcher to explore the key knowledge and skills that an OHN requires to support and promote the health and wellbeing of the working population. This group of nurses had varying experiences within OH. Their roles were well established, and their work was typical of national OHNs role. The group had an established link with other OHNs throughout the country who belong to the NOHNA. From the initial consultation with the group, the nurses voiced an interest to explore this issue and the research question evolved.

## **1.6 Purpose and Rationale**

The purpose of this research was to work with a group of my fellow OHNs who are affiliated to the Canterbury OHN Group to review and update the current OHNs competency document; to map identified OHNs core competencies against NCNZ (2007) competencies; and align these with the needs of New Zealand businesses and employment legislation; and to provide the OHN with an evidence-informed knowledge and a career framework.

My role within this study was that of an OHN exploring with seven OHN colleagues an issue of concern. This study followed the tenets of the PAR approach (Kemmis & McTaggart, 2005) engaging those the research affects. It is a process that allows those who have an issue of concern to be empowered to do something about it through a cycle of reflecting, planning, acting and observing (McTaggart, 1989). PAR is not like traditional forms of research, it is messy, undertaken in collaboration and dialogue. In PAR, the process is formed around the problem where as traditional research questions are built around methods (Kidd et al., 2005). The PAR process enabled me to be a co-researcher acting not only as one of the researchers, but also as a facilitator of the project as a student undertaking my Masters degree. Conducting PAR with the local OHNs allowed me to explore its value as an empowering research tool.

### **1.6.1 Significance of the Research Study**

The expected outcome of this research is an integrated competency and career framework that would be disseminated nationally to New Zealand OHNs, providing them with guidance on best practice, service delivery to businesses, and so supporting and improving the health of the working population, and reducing health inequalities. It is expected that the framework will raise the profile of OHNs within New Zealand, their vital contribution they make to the *New Zealand Primary Health Care Strategy* (MoH, 2001), and support businesses to apply employment legislation as stipulated by the new legislation. It is also anticipated that the framework will raise awareness among nurses of opportunities in OH, and improve recruitment by providing a career structure which moves the nurse from novice through to advanced nurse practitioner. The outcome of the research will be a living document, responding to the continuous change in the working environment and the requirements of OHNs who deliver the healthcare services to business.

## **1.7 Structure of Thesis**

This study tells the journey of the Christchurch OHN PAR group from my initial investigations beginning in March 2014 through to the completion of this thesis over a two year period. The structure of the study is driven by the PAR approach and relies on the participation of the OHNs. The thesis documents the problem solving cycle and the theory aspect of PAR, the two inter-related cycles occurred simultaneously.

This introductory chapter explored the contribution OHNs makes to the success of businesses and indirectly society by promoting and supporting the health of the working population. It highlighted my concern of the need for OHNs in New Zealand to raise their profile within the business world and amongst the nursing profession.

Chapter two commences with an overview of the literature concerning the current activities the OHN undertake in New Zealand and internationally. This is followed by an investigation of the emerging trends in OH nursing and concludes with the relevance of the literature review to this study.

Details of the PAR study design and rationale for using this approach is presented in Chapter three. Three approaches to critical social paradigm are described, leading finally to the discussion on the suitability of the application of PAR framework to the research undertaken in partnership with the OHNs.

An overview of the study design and methods used which are congruent with the PAR process is described in Chapter four. This includes the rationale for sampling recruitment, ethical issues, ensuring rigour, and my position as participant and researcher and the methods used to collate data and analysis. The chapter also explores the theoretical cycle of the PAR process to the study.

The fifth chapter outlines the six phases of the study. It includes the interpretation of the questionnaires and audio recordings of discourse between the OHNs as they moved through the cyclical process of PAR. It highlights how each of the nurses had the opportunity to articulate their experiences and role within their workplaces.

Chapter six reflects on the application of the PAR process to this study and the translation of the OHNs knowledge to best practice leading to the development of the OHN Skills and Knowledge framework.

## **Chapter 2: Literature Review**

### **2.1 Introduction**

This chapter presents findings from a literature review undertaken to gain an understanding of the core nursing knowledge and skills required to underpin OHN practice in New Zealand. National and international documents were selected such as those from the NZNC (2007) and the New Zealand competencies (NZOHNA, 2004), and OH nursing competencies from United States of America (Association American Occupational Health Nurses [AOHN], 2013) and the UK (Royal College of Nursing [RCN], 2011). The documents retrieved through this literature review were used as a basis for discussion by the PAR group.

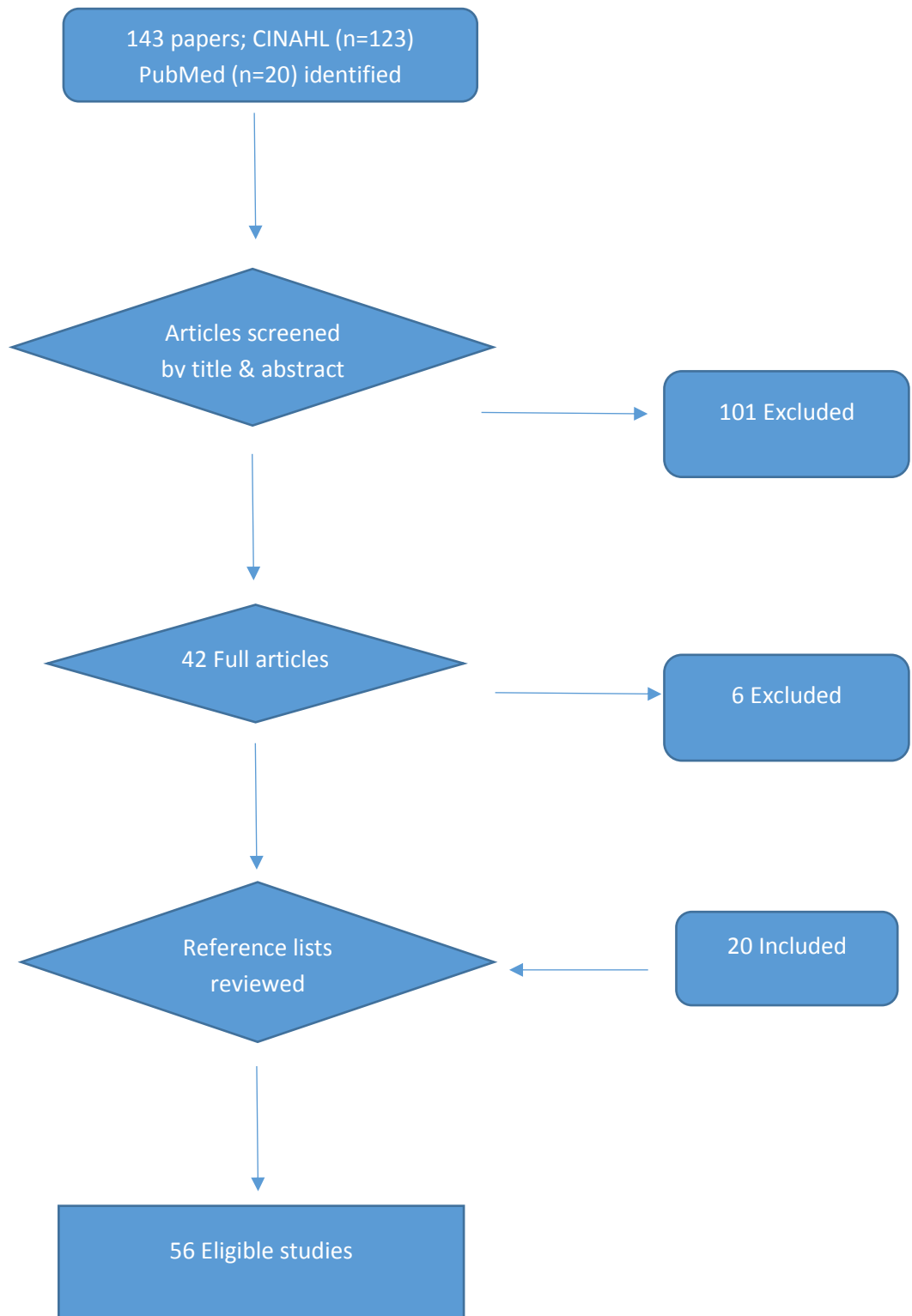
### **2.2 Search Strategy**

The literature review was undertaken using Cumulative Index to Nursing and Allied Health Literature (CINAHL) and PubMed covering a period from January 2000 to November 2015. This period was significant in that it covered a time of fast social and economic change in the business world. I was interested in literature that linked OHN's practice to a framework and demonstrated best practice on identified training requirements and career pathways. The initial search was undertaken in January 2014 and a follow up search was undertaken in November 2015. The keywords were i) occupational health nursing, ii) competencies, iii) health and safety, iv) career framework, and vi) business. The five keywords were combined with the operator AND. All English speaking publications were included.

The initial literature search resulted in 143 papers (Figure 1). Full text of potential relevant articles were assessed for eligibility using the following inclusion criteria:

- OHNs or those working in the field of OH
- Interventions: Any study that reported on an intervention that focused on the activities OHN undertake.
- Time limits: 2000-2015 capture recent international practices
- Language: English speaking publications.

Each article was summarised in a table that contained information including author, year, practitioner, article type, country of research, journal name, article title, aims of the research, method, and findings including themes as identified by the author of the article.



**Figure 1:** Flowchart of Literature Review Process

In addition to the literature identified via the search strategy grey literature such as government policy and resources from other national and international nursing organisations and specialty group is also included in the review. The reason these are added here is the literature was not a resource for the researcher to position the research question but was also a resource for the PAR group.

## **2.3 Evaluation of Literature Reviewed**

The 56 articles were further categorised for review under the country of origin and grouped into policy, general, research, report and competency framework. They all focused on OH as a concept that promotes health and wellbeing in the workplace, and they all describe the activities OHNs undertake. The highest number of articles were from the United States of America ([USA], n=16) and the UK (n=14).

### **2.3.1 Research Articles**

Of the 56 articles, 15 were research articles. These were on research carried out in USA (n=5), Australia (n=3), Japan (n=3), UK (n=1), Belgium (n=1), Finland (n=1) and Canada (n=1). The research was a mixture of quantitative and qualitative designs which included action research (n=1), descriptive using surveys (n=9) and narrative inquiry (n=1). Their aim was to describe the role and activities of OHNs.

The surveys for nine of the articles were posted or emailed to the people who were affiliated to an OHN Association. Three of the studies did not provide detail on how the study was undertaken. The sample recruitment for these nine studies were OHNs recruited from a variety of workplaces. Sample size varied from 112-720. Return rates varied from 49% to 72%. Numerical data was usually analysed using Statistical Package for Social Sciences and open-ended questions were coded and themed. Several of the articles reported unusable data.

Demographic details were provided in six of the nine surveys. The survey samples were dominantly female. Five articles reported the nurses were of mature age, ranging from 40-49 in two articles and 50 plus in the remaining articles. The articles identified the nurses have qualifications in OH with the minimum being a diploma. One article reported nurses had engaged in additional short courses in OH and safety. Two articles reported the nurses sampled had obtained non-nursing tertiary qualifications. Ethical approval was not commented on in seven of the surveys, and

in two it was noted that approval was not required because no identifiable personal information was collected.

The narrative inquiry study (Blizzard, 2006) involved nine Human Resource (HR) personnel. Research ethics approval was obtained. Data analysis was grounded in the participant's stories and transcribed verbatim and analysed by the same researcher. Thematic analysis was used and method described. Rigour was achieved through credibility and trustworthiness supported by the participants interviews. The study findings confirmed the rationale of employing OHN specialists in supporting the working population.

Mellor, St John, and McVeigh (2006) found the main functions of OHNs are based on health assessment and rehabilitation services, with less time been given to illness and injury prevention, health promotion, and research. The evidence from several articles were emergent functions such as, educational and managerial tasks (Hart & Lachat, 2012; Ishihara et al., 2004; Strasser & Knuth, 2006).

There was consensus in the literature that the OHN role in the workplace is important. Despite international variations in working environment, social and economic status and legislation, good delivery of OH to the working population contributes to health and safety, and improves attendance and productivity (Black, 2008; Blizzard, 2006; Burgel & Childre, 2012; Denniston & Whelan, 2005; Garrett, 2005; Grainger & Mitchell, 2003; Harris, 2010; Harrison, 2011; Heikkinen, 2000; Ishihara et al., 2004; Jones, 2013; Mellor et al., 2006; Rossi, Heinonen, Marziale & Hong, 2005). Maintaining and supporting the health of the workforce has a positive effect on the community, creating social and economic benefit, helping to reduce health inequalities and national prosperity. The survey carried out by Bupa (2015), a private health company in Australia, revealed workplaces are looking beyond the mitigation of risk associated with occupational injury or illness towards a workplace which also supports healthier employees.

### **2.3.2 Other Articles Retrieved**

The remaining articles were general articles, policies and nursing competency frameworks from USA, UK, Brazil, Korea, South Africa, Lebanon, and New Zealand. These international and national policy documents reflected the requirements of the WHO (2010) *Healthy Workplaces: A Global Framework and Model* document that

addresses the health of the working population. This document states OHNs are best positioned in a variety of business to deliver strategies to improve health and reduce health inequalities. The USA and UK articles position the activities into competency frameworks. These frameworks are toolkits to be utilised by the nurses to establish a consistent approach to OH practice; to guide the development of education programmes and professional development; and to inform businesses the role the OHN undertakes in the workplace.

The articles identified OHNs are integral to the delivery of health strategies and employment legislation requirements (Chikotas, Parks, & Olszewski, 2007; Harrison, Harris, & Maw, 2005; Jones, 2013; Marinescu, 2007). There was a common concern reported that OHNs face challenges in delivering national health and wellbeing strategies that are high on the agenda of their respective governments. These challenges were due to the ageing OHNs workforce, small numbers of OHNs working in this speciality, lack of recognition by governments, businesses and other healthcare professionals on the knowledge OHNs have in delivering the requirements of legislation and government initiatives to the working population.

The literature highlighted two main categories; OH as a concept that promotes health and wellbeing, and the work activities of OHNs. Emerging from these categories, six topics were identified. These were: i) the challenges for OHNs in meeting the fast changing requirements of businesses in regards to the health of the workforce; ii) OHNs are the largest healthcare providers who have access to the working population to address social problems such as lifestyle diseases; iii) the need for OHNs to provide a quality service to businesses; iv) the core competencies of the OHN which reflect general nursing competencies; and vi) that frameworks can be used to identify training needs and guidance along a career pathway.

### **2.3.3 Challenges for OHNs**

Literature relating to the challenges for OHNs delivering healthcare revealed no general international differences. There are shortages of nurses globally according to Holloway, Baker and Lumby (2009) which impacts on all practice settings. In the UK the number of nurses working in OH is small and workloads are increasing for



this ageing workforce (Paton, 2008). There was no literature about challenges for OHNs working in New Zealand.

#### **2.3.4 Small OHN Workforce**

The OHNs role within some workplaces overlaps with other OH professionals. A cross-sectional investigation into the scope of OHN practice in Australia during 2003 (Mellor & St Johns, 2007) identified OHNs competed with other professionals such as health and safety advisers, and ergonomists in the workplace. The OHNs were identifying themselves as OH and safety practitioners and undertaking activities related to employee's health. A concern regarding this was raised by the NZOHNA in response to the consultative document, *Independent Taskforce on Workplace Health and Safety* (Independent Taskforce, 2012). OH in this document included different specialities such as health and safety advisers, OHNs and physicians. The question from the NZOHNA Group submission to the Independent Taskforce was who does and needs to do what? Mellor and St Johns (2007) considered OHNs may find their role under threat and need to identify their scope of practice.

This query of who does what to implement legislation and health initiatives is an international concern. Dawson and Hunter (2011), Garrett (2005) and Paton (2008) all discuss the need for OHNs in the UK to work collaboratively with other healthcare professionals (physicians, nurses, allied health professionals, psychologists and ergonomists) to deliver OH. These three articles propose OH delivery is more effective when addressing workplace issues using a multi-professional approach.

The *Council for Work and Health Report* (Dawson & Hunter, 2011) recommended a set of core competencies for the multi-disciplinary team. These competencies would define a pathway for those entering and already working in this field to recognise the professionals who meet competencies by their professional board. The model of OH delivery also needs to be one of clinical excellence in the best interest of the employer, the employee and the professional (Harrison et al., 2012). Competencies become the central issue for the professional who have the interface with the employee, in seeing, treating and interpreting health information.

The literature review identified there were non-OH professionals making clinical decisions regarding the health of the employees (Blizzard, 2006). This Canadian

narrative inquiry identified HR professionals making health decisions. The narrative inquiry research was undertaken to explore whether HR professionals require the support of OHNs in managing return to work programs and supporting the worker to remain at work. The sample were nine HR professionals employed in businesses with more than 20 employees. Evaluation of the data revealed the management of OH issues such as stress and mental health problems were influenced by the personal perception of the employee's character by the HR professional and job role within the business rather than on health history. A greater understanding on the role of the OHN by other professionals and businesses, supports the need according to Blizzard to employ nurses in managing OH in the workplace particularly in the provision of health promotion and illness management. The study provides an example of OHN lack of visibility in the business world.

### **2.3.5 OHNs Address Lifestyle Diseases**

The WHO (2005) reports on the risk factors of obesity, diabetes, physical inactivity, smoking, high cholesterol and recommended workplaces address these social concerns. Although the burden of disease varies throughout the world, articles from the USA (Chickotas & Olszewski, 2007; Marinescu, 2007) and Australia (Mellor & St John, 2009) identify OHNs have a role in addressing these concerns. The ageing working population has health issues such as musculoskeletal problems, chronic conditions and increased stress. The *Document of Trends and Issues of Occupational Safety and Health in Japan* (Higashi, 2009) report these are health issues OH should address through health promotion activities.

The *New Zealand Primary Health Care Strategy* (MoH, 2001) identify working conditions as one of the elements where health inequality can be addressed. This is reflected internationally (Mackay, Cole, & Parnell, 2003). The document, *Investing in Health: Whakatohutia te Oranga Tangata* (MoH, 2003), a framework for activating primary health care (PHC) nursing was written by PHC nursing experts. Although OH was not represented, it was mentioned in the service description of nurses practicing in PHC settings. No articles from New Zealand were retrieved from the literature outlining how OH can contribute to the delivery of health promotion to the working population.

The delivery of health promotion by OHNs is important in supporting and maintaining the health of the working population. Naumanen-Tuomela (2007) through a survey of 93 Finnish OHNs found health promotion was perceived as beneficial in improving the health and wellbeing of the working population. This benefit is supported by Thompson and Wachs (2012), Marinescu (2007) and Vanhoorne et al. (2006). The knowledge and skills of the OHN make them an important resource for clients, community members and other healthcare professionals. There is a need according to Holloway (2012), to maximise the contribution all nurses can make to positive health outcomes.

### **2.3.6 OHNs Must Provide a Quality Service to Businesses**

Businesses expect OHNs will have the skills and knowledge to provide a high quality OH service to protect and promote the health of the working population (WHO, 2012). Of the literature retrieved two research papers explored the perception of business management on the OHN's role (Mellor & St John, 2009; Nelson, 2001) and the activities they would like them to undertake. The data revealed businesses expected the OHN to implement health promotion programmes, promote the rehabilitation of injured workers, and management and research, to support and maintain the health of their workforce. Nelson (2001) replicated previous research undertaken by Martin et al. (1993). Of the 69 questionnaires sent to managers, 46 were returned 70% response rate. Traditional roles such as providing healthcare and teaching emerged from the data. Developing health promotion was noted as a future activity for OHNs in Mellor and St Johns (2009) larger cross sectional survey where 416 Australia College of Occupational Health Nurses were asked to distribute questionnaires to their immediate managers. The response rate was from 40 (10%) managers which is low. This the authors believed was due to the study being undertaken during the Christmas period when many people were on leave. Also it is assumed the OHNs passed the questionnaire onto their manager. The findings revealed however, were consistent with Nelson (2001). Managers expected nurses to undertake health promotion and case management activities. This expectation according to Mellor and St Johns (2009) indicates managers are aware that a healthier workforce can lead to high productivity and a healthy business.

The findings identified from an internet-based survey to Masters-prepared OHNs affiliated to the AAOHN (Hart, Olson, Frederickson & McGovern, 2006) was businesses expected three main competencies from OHNs. These were, communicate effectively with a variety of stakeholders, understand the relationship between occupational exposures and health outcomes, and stay current in their field of practice. The survey used closed questions and there was no opportunity for participants to write in responses. The response rate to this survey was low, being 26.5%. The authors acknowledge there was potential for bias as respondents were drawn from AAOHNs, and only OHNs with a Masters qualification were eligible to participate, which may have influenced the limited sample size.

Articles from the USA (Roy, 2013) and the UK (Paton, 2008) concur that the expectation of international governments and businesses poses a challenge for OH in ensuring the OHNs are able to practice a range of specialized skills. OHNs need to be able to demonstrate the relevance of their skills and knowledge to businesses (Mellor & St John, 2009). This can be articulated through a competency framework. General nursing competencies are considered in the following section of this chapter.

### **2.3.7 General Nursing Competencies**

Nurses have a legal and ethical duty to conduct themselves according to current scope and standards of practice (Marinescu, 2007). The policy document of the NCNZ (2007) outlines the role it has in protecting the health and safety of the public by setting standards and ensuring that nurses are competent to practice under the Health Practitioners Competence Assurance Act 2003. The Council is the regulatory authority responsible for the registration of nurses. It sets standards for continuing competence, requiring an annual declaration of continuing competence from each nurse like all OHNs. RNs are accountable for ensuring all health services they provide are consistent with their education and assessed competence, meet legislative requirements and are supported by appropriate standards.

The *Occupational Health and Safety in New Zealand: Technical Report 7* (Ministry of Business, Innovation & Employment [MBIE], 2006) was included in the criteria of this literature review. From this report it is noted the OHN is required to have a nursing qualification recognised by the NCNZ (2007). However, no specific OH

competency is necessary. The report stipulates there is a general lack of awareness about the role undertaken by OHNs which could result in under-utilisation of their skills and knowledge.

Two documents were retrieved describing standards for OHNs. The first one was developed by the AAOHNs (2013) *Standards of Occupational Health and Environmental Health Nursing*, and the other designed by the RCN, UK (2011) *Integrated Career and Competency Framework for Occupational Health Nurses*. These frameworks describe the accountability of the OHN and reflects the values and priorities of the profession. The frameworks formalise the knowledge and skills of the OHN, to demonstrate professionalism and proficiency to employers, and to the general public. Both are guides for OHNs and their employer to review competency, personal and professional development, and career progression. The two frameworks are similar and the standards are reflected in general nursing competencies from their respective countries as well as focus on workplace issues as identified by the descriptive study undertaken by Hart et al. (2006). Due to the varying requirements businesses have of the OHN, the nurse can be in a position of being expert in some areas of occupational and environmental health practice and novice in others (AAOHN, 2003). The OHN framework is required to be flexible and continually improved to meet the needs of the nurse, their professional body and business (Harriss, 2002).

The *New Zealand Occupational and Environmental Health Nursing Competencies* (NZNOHNA, 2004) does not demonstrate clear evolving competency and nurse's evidence of achieving the *New Zealand Nursing Council Practice Standards for Registered Nurses* (NCNZ, 2007). The document is not organised under the NCNZ (2007) four domains of practice: i. professional responsibility; ii. management of nursing care; iii. interpersonal relationships; and iv. inter-professional health care and quality improvement. International literature (Bean, 2006; Workplace Health & Safety, 2015) implies the need for OHNs to review and update their OHN competency framework on a regular basis to meet the needs of the OHN, the business and their Nursing Regulatory Board.

An article from the UK explored the development of an OHN competency framework (Olver & Zahopoulos, 2005). The article reported how a group of OHNs working in the National Health Service used a competency-based approach to develop practical and clinical skills required for a trainee OHN employed into their workplace.

The OHNs used brainstorming exercises to identify the skills and knowledge the trainee would require to be competent to practice. These linked into the Nursing Council of the UK core competencies and reflected the findings of the presented surveys earlier in this chapter. The article does not indicate whether research informed the development of the competency framework.

### **2.3.8 Frameworks Used to Identify Training Needs and Guidance for the OHN Along a Career Pathway**

The current New Zealand OHN competency document (NZOHNA, 2004) is not well articulated and not presented in a format to be easily accessible by the OHN in day-to-day practice. No research articles were retrieved exploring the validity of application of specialist nursing frameworks to the nurse's practice. The *Standards of Occupational Health and Environmental Health Nursing* (AAOHN, 2013) identified nine categories of professional practice standards whereas in the UK (RCN, 2011) seven competencies were identified. The standards from the countries were assigned to three levels: competent, proficient and expert. Both the frameworks described the leadership of all aspects of care using a biopsychosocial model within a health and work context reflecting the requirements of their respective government's policies and business needs. They also provided a framework and guidelines for the OHN who works in a variety of workplace settings allowing each nurse to manage their own evolving scope of practice.

Two competency framework documents from New Zealand *New Zealand National Diabetes Knowledge and Skills Framework* (2009) and the *Pain Management Knowledge and Skills Framework* (2013) Each document demonstrates the knowledge and skills nurses require to guide decision making and judgement to assess health needs and provide advice and support people manage their health. The frameworks were consulted and developed by nurses who work in these two specialities. The nurses determined the levels of practice, aspects of care and educational pathway to be utilised by nurses working in these specialities, and aligned the expectations with the NCNZ (2007) competencies for registration. It is for these reasons I considered these documents to be of use. The process leading to the final design of the frameworks were not systematically recorded.

The authors of these nursing frameworks from the USA, UK and New Zealand consulted widely with nurses working within their nursing speciality. The

frameworks although created for nurses working in a wide variety of settings demonstrated the steps necessary for the nurses to move through the levels of nursing practice from competence, experienced to expert practice, by building on the previous set of skills and knowledge. They all are mapped against their nation's general nursing competency framework.

## **2.4 Knowledge Gaps Identified**

The literature reviewed demonstrated the world of business is changing, and OHNs need to ensure they have the necessary knowledge and skills to support the working population to maintain and enhance their health and wellbeing. OHNs internationally were found to undertake a wide range of common workplace activities. No article was found from New Zealand identified OHNs job responsibilities. Do OHNs working in this country undertake similar activities?

Two documents retrieved (AAOHN, 2012; RCN, 2011) provide OHNs guidance for competencies for nursing practice. Both documents are also used by nurses to identify training needs and scope of practice. OHNs working in New Zealand are guided by *New Zealand Competencies for Practicing as an Occupational and Environmental Health Nurse* (NZOHNA, 2004). Review of this document revealed it does not articulate well the knowledge required to deliver evidence-informed best practice to the working population. Also it does not enable the nurse to easily identify their training requirements and assist with meeting the requirement of the NCNZ (2007). The diabetes and pain management frameworks utilised the New Zealand Nurse Specialist Framework structure designed for nurse specialists to articulate their practice. This capability framework detailed the expectations for the nurse working in a speciality area, centred on the main domains of knowledge for practice (Holloway, 2012). Although there is guidance on formatting such a document, there was no research article retrieved which evaluates this framework or one that informs other specialities how to produce such a document. Question raised was what does it entail in resources and time to create such a framework?

## 2.5 Conclusion

The articles from the literature review 2000 to 2015 were the foundation for this study. Having worked in the UK and here in NZ they confirmed my observations of the changing role of the OHN over the last 10 years, and the challenges faced by OHNs in both these countries. The review linked the research question, drawing on international articles which have explored the activities the OHN undertakes. The activities are similar and are reflected in the OH competency frameworks from the UK and USA. These frameworks benefit the nurse and meet the requirements of their professional body, government and business. Although there was no literature retrieved in exploring the validity of nursing competency frameworks, New Zealand is encouraging nursing specialities to develop such documents, and diabetes and pain management nurses have completed these. Their framework highlights their area of nursing encompassing evidence-informed practice, aligning them with the nursing competencies and training opportunities to progress the nurse along a career pathway.

Articles demonstrated OHNs have the knowledge and skills to support businesses to comply with legislation and government health initiatives. Also they revealed OHNs internationally undertake health promotion activities. However, this review highlights OHNs have been mainly overlooked by national public health agendas in assisting in the delivery of health promotion programmes.

The time is right with the recent introduction of the Health and Safety Act 2015, having a greater emphasis on OH, for the OHNs to review the *New Zealand Competencies for Practising as an Occupational and Environmental Health Nurse* (NZOHNA, 2004) document, drawing theory and knowledge from other international countries. Findings from this literature review reinforced my decision to apply PAR to this study. Surveys do not address the question of this study. PAR offered the opportunity for OHNs to be inclusive in the review of the OHNs competency document.



## **Chapter 3: Participatory Action Research: A Democratic Process to Improve Nursing Practice**

### **3.1 Introduction**

The chapter begins with an overview of the pathway taken to reach the conclusion that a PAR framework was the best approach to undertake this study. The chapter continues with an outline of definitions of PAR and its historic origins, together with the key principles and characteristics of this approach.

PAR focuses on carrying out research in collaboration with a group of people whose daily working activities are reviewed, with the intention of informing practice. According to McTaggart (1991) it is a spiral process composed of repeated sequences of reflecting, planning, acting and observing. The PAR process includes the study of dynamics of the PAR group by the primary researcher, so adding to the theoretical understanding of this process. I drew on the work of Kemmis and McTaggart (2005), Israel, Schulz, and Becker (2003) and Hofmeyer et al. (2012) to inform the study.

### **3.2 Determining a Research Approach**

A paradigm is defined by Weaver and Olson (2006) as sets of philosophical underpinnings from which specific research approaches (for example qualitative or quantitative methods) flow. The paradigms that underpin nursing research are classified as positivist, interpretative and critical social theory. Paradigms are characterised by their ontology, epistemology and methodology. They frame how we see knowledge, how we see ourselves in relationship to knowledge, and methodologies we choose to discover knowledge.

To determine the paradigm that would achieve the purposes of this study I firstly examined philosophical approaches used by nursing, and then considered the research design and framework to employ for this study. The positivist paradigm tests the effectiveness of an intervention drawing on traditional scientific methods. The researcher is objective. The participants provide feedback on the intervention and are not involved in determining the research process. Whereas an interpretive paradigm is a collaborative approach to research. The participants share with the

researcher specifics and experiences of problem, solutions, and outcomes (Reason, 1994). This paradigm in nursing tends to be used by clinicians and policymakers. Applying a positivist or an interpretive paradigm to this study would not have met the first objective of the research, which is to include participation of the OHNs to determine the knowledge and skills required for them to provide advice to businesses to support the health of the working population.

Critical social theory reflects the work of Marx, Habermas and Freire (Weaver & Olson, 2005). People are considered disempowered within their social context and through collective action can change their world. Participation, collaboration, empowerment and the creation of knowledge leading to a change (in nursing practice), are components of this paradigm. I chose critical social theory as the framework as this would value participation of the OHNs to reconstruct and improve their practice.

Quality in research depends on linking the research question to the best approach, and using a systematic, rigorous, and transparent process to explore the research topic and gain knowledge and understanding. The research question determines the choice of research design (Harwell, 2011). The three common designs used in health research are quantitative, qualitative and mixed methods. The first two collect data in different ways to each other and mixed methods is a combination of both (Creswell, 2013, p. 4).

Qualitative research is a generic term for investigative methodologies which aim to make sense of human behaviour or concern to be addressed (Grbich, 2007). Social research using critical social theory tends to be qualitative. The samples are smaller in number than that in quantitative methodology and are usually purposively selected. In order to assist in a change of practice, the participants need to be involved in the research process (Heron, 1996). To motivate individuals to participate in a project, there has to be something in it for the person or group, and also the research outcome needs to contribute knowledge to the methodology (Reason & Marshall, 1987).

I considered either action research (AR), appreciative inquiry (AI) or PAR as processes appropriate to undertake this study. They are each grounded in a social critical framework leading to emancipatory and transformational theory. They help to link theory and practice (Green et al., 2003). These systematic approaches are

carried out with people, not on people. AR, AI and PAR have a dual purpose (McKay & Marshall, 2001). The first inner purpose is where participants address matters that are important to them, and work together as co-researchers. The participants undertake self-reflection using an inquiry cycle, moving several times between reflection and action to understand and improve on their practice and real life situation rather than following a linear pathway. The participants are involved with the decision-making, and due to the fluid nature of these processes modifications are made as new observations are seen. The second purpose is for the primary researcher to simultaneously analyse the application of the theory to the research under study, so adding to the theory of critical social research. Each of these open-ended research approaches would allow OHNs to participate and reflect on their practice. As the approaches come from different perspectives, I needed to decide which one to use to best answer the research question and achieve the objectives of the project.

### **3.2.1 Action Research, Appreciative Inquiry and Participatory Research**

Action research can be undertaken by an individual or with a team of colleagues to improve their own practice (Titchen & Binnie, 1996). Working in a team, the researcher facilitates the process of the team, identifying the problem, encouraging them to work collaboratively and decide the action required, and evaluate the modifications made. This form of inquiry is commonly carried out by nurses who want to change their practice. AR reduces the theory-practice gap in nursing. Working together would link participants' life experiences and knowledge to research. The OHNs would need to review their practice through self-reflection. However, AR does not emphasise the importance of participants in the process, but focuses on action. The aim of the AR process is to change local practice, not to make social change. Therefore, I decided that AR was not the appropriate design for this study.

Appreciative inquiry is considered a positive approach theory to facilitate change within organisations. It has been used over the last 20 years to create change in healthcare setting, businesses, education, and by government bodies (Boyd & Bright, 2007). Problems are redefined as opportunities. Appreciation, according to Bright, Cooperider and Galloway (2006) means to increase the value in something of worth. AI starts from a positive stance, looking at what is working right and how it can be improved upon, rather than what is wrong. However, to allow

transformational change to occur problems need to be addressed (Bushe, 1998). AI is a form of AR and includes all those concerned being involved in the production of knowledge. This involves the willingness of an individual or group, from an organisation or society to co-operatively work together in a democratic manner. The process allows ownership by those involved in the project and engages people. I questioned ownership of the project, when generally the organisation is driving the inquiry not the participants. AI could provide the opportunity for Christchurch OHNs to come together to review the OHN competencies focusing on the positive stance of what is working well. I wished to be part of this study and AI does not place the researcher as an equal participant. Also it is seen as a management tool rather than supporting social change, so I did not consider it to be an approach to use for this study.

PAR recognises the ability of communities to understand and address their own problems through developing skills to make this occur (McTaggart, 1991). It provides a framework allowing group participation. The participants work collaboratively to change their social reality (Whyte, 1989) by trying out and evaluating their suggestions to improve their situation. The participants contribute to the development of the PAR process as a research model as well as meeting the goal of solving a problem (Bell et al., 2004). I chose this approach because it is an empowering process with a social agenda. It could provide the opportunity for OHNs to be included in the research activity and for me to be an equal participant to share decisions, equal partnership and knowledge (Gibbon, 2002). AR tends to look at change in professional practice, and AI uses PAR principles to change practice or organisations. The participants define the research design, own the information, and direct the process themselves (Gibbon, 2002). PAR, like AR and AI, is focused on reflective practice of the participants but PAR does not wait for an evaluation of new solutions but includes them into the on-going process (Bell et al., 2004). Since the 1990s PAR has been increasingly used as a process within healthcare, firstly in the evaluation of health services (Hills, Mullett & Carroll, 2007; Naylor, Wharf-Higgins, Blair, Green, & O'Connor, 2002), and secondly by nurses wishing to improve their practice (Abdad-Corpa, 2012; Brown, Gilbert, & Bruno, 2012; Fournier, Mill, Kipp, & Walusimbi, 2007).

### **3.3 Participatory Action Research**

Undertaking this research involved OHNs to review and update the OHN competencies in order for the speciality to have a voice in the world of business and to support the health of the working population. This study lent itself to PAR, as PAR enables transformation in a community.

There was no literature retrieved which has taken the principles of PAR and applied the process to OH. PAR has however been used by public health nurses whose work is focused on the wellbeing of the community (Brown et al., 2012). PAR would provide the opportunity for the OHNs to construct their own knowledge. The process was expected to allow the OHNs to reflect using the principles of critical social theory to question the activities they undertake. This should enable the nurses to identify changes and improve their practice and service of delivery to the businesses (Glasson, Chang, & Bidewell, 2008). Involving the OHNs in production of knowledge would add to the rigour of the study findings.

PAR suits my personal characteristics and values. I enjoy learning from others, implementing ideas, working within a group, evaluating a programme as it progresses, and adjusting it until it works. To enable change to be acceptable by a group of those it affects, it is best to include them in the decision-making process so allowing them to take ownership. I chose a PAR approach as it resonates with my goal to research with participants, rather than on them. It would also provide an opportunity for voices and experience of all participants to be part of the research. However, PAR is a process that has uncertainty. Acting as the researcher as well as the facilitator for a local PAR OHN group would bring concerns about how the project would evolve.

In planning the study, I risked not adhering to the principles of PAR, as its characteristics allow only a suggestion of the question by the principle researcher. It is the group who should decide on the research question. By being a student researcher I identified a research question, designed the proposal and obtained university ethical approval before engaging partnership with the OHNs. My choice of PAR as the preferred approach was initiated by me. However, the nurses including myself, were involved in the planning and implementation of the research project. The OHNs and I became: "Co-learners, co-researchers and co-activists of a common concern" (Burgess, 2006, p. 432). PAR and its historic origins of the process are outlined in the next section of this chapter. I liken the historic origins of

PAR to unravelling a tangled ball of string, in that it took time to unravel the historical roots of this complex process.

### **3.3.1 Historic origin**

Social theory can be traced to Aristotle, a Greek scholar although literature shows that it is not until the 20th century social theory gained momentum from various theorists (Kemmis & McTaggart, 2005; Koch & Karalik, 2006). It is unclear who the original founder of action research approaches is. A contender is John Dewey (1859-1952), a pragmatic philosopher of democracy and education who developed an understanding of reflective theory to improve knowledge and practice. Authors, such as Koch and Karalik (2006) indicate that during Dewey's lifetime, Kurt Lewin, was one of the first to study group dynamics and organisational development. Lewin was a social psychologist and educator and a member of the Group Dynamics movement in social psychology in the 1940s. In contrast, Kemmis and McTaggart (2005) believe that action research dates back to Moreno, who was working with prostitutes in Vienna during the early stages of the 20th century. John Collier, a USA Commissioner of Indian Affairs during the 1930s is another contender for the originator of action research.

Nevertheless, Lewin coined the phrase action research and as such is considered the father of this process. Lewin assisted people to address social issues such as segregation and discrimination whilst he studied how they interacted with each other. His philosophy was that people were more likely to be motivated to work more efficiently if they were involved in the decision making on workplace organisation. He advised when addressing a social problem to include the people to whom it applied to find a solution (Lewin, 1946). Lewin's work over the following 70 years has influenced researchers. The Tavistock Institute for Human Relations in the UK used the interpretation of the spiral process and repeating the cycle until a solution to the problem is found as the focus of the research approach. Other researchers interpreted this cycle to apply to their research (Hewitt, Draper, & Ismail, 2012; Lindsey, Shields, & Stajduar, 1998).

PAR is a method of critical inquiry which began at the Social Institute of the Frankfurt School in Germany. The work of Jurgen Habermas, (a theorist from this school), and Fals Borda, a Columbian socialist (who in the 1970s argued that to

change practices, the people concerned need to be part of the research with the researcher working as an integrated member of the group [2006]), influenced the critical theory methodology used in nursing research. From this liberationist approach PAR came into being and continues to be an emerging theory where the research is undertaken by the people for the people rather than on people. This process enables people from being just the subjects of research to being actively involved (Cook, 2012). PAR, however, is not just a process to solve a problem, it also contributes to the understanding of theory.

PAR continues to evolve. Participants adapt the approach to the situation they find themselves, and use it in transforming practical knowledge into scientific knowledge through a systematic process. Although the application of PAR to social sciences is growing, it is not widely understood by some nurses. One nurse recently commented to me that the principles of PAR are similar to the quality cycle, missing the point that PAR is a research process that bridges science and clinical practice. PAR not only aims to change practice, but also contributes to the knowledge of its theory process.

### **3.3.2 The Meaning and Characteristics of PAR**

McTaggart (1991) claimed that the application of PAR has resulted in too many fields of enquiry leading to researchers using a variation on the descriptors such as participatory research, action research and participatory action research. These varied titles and slightly different approaches, indicate it is an adaptable framework. PAR is flexible as well as unique in its application to research. Waterman, Tillen, Dickson, and De Kong (2001) describes it as a:

Participatory process, is educative and empowering, involving a dynamic approach in which problem identification, planning, action and evaluation are interlinked. Knowledge must be advanced through reflection and research. Theory may be generated and refined, and its general application explored through the cycles of the action research process. (p. 11)

There are two main reasons for variability. Firstly, each participant brings individual variables to the group, such as their beliefs, and culture. In turn this affects group dynamics (Waterman et al., 2001). Secondly, the PAR cycle can begin at any point and does not follow a linear process. PAR studies are all different and so cannot be

replicated. However, the process has identifiable tenets for designing, undertaking, and analysing research (Durham University, 2000). This study has drawn on the following tenets by Kemmis and McTaggart (2005, pp. 280-283). These are:

1. A spiral of self-reflective cycles, in which participants plan a change, take action, reflect on the results, reflect, return to further planning and so on. This provided the framework for the research for the OHNs.
2. A social process, in which people explore the relationships between individual and social worlds.
3. Participation: people critically explore their own knowledge and interpretations (of themselves and their actions) and how this affects their sense of identity and agency.
4. Practicality and collaboration: participants examine their own social practices (such as patterns of interaction and social organisation) and seek ways to make these more equitable and satisfying.
5. Emancipation: PAR aims to free people from, or at least reduce the restrictions imposed by unjust social structures which limit self-development.
6. A critical approach: People challenge limitations imposed on them through social media such as oppressive language, discourse, and ways of working or relating to others.
7. Reflexivity: PAR is dialectical - participants examine reality in order to change it; "a process of learning by doing".
8. Transformation of theory and practice: neither is dominant. PAR aims to develop each in relation to the other.

Tenet 1 is seen by Kemmis and McTaggart (2005) as a flexible spiral process allowing change and at the same time the creation of knowledge through dialogue. It is an emergent and iterative process of action, through the action cycle consisting of four steps - planning, acting, observing and reflecting (Figure 2).





developed, and positive interaction between the OHNs was vital to the development of knowledge (Wick & Reason, 2009). The meeting venue had to be agreeable for all participants. Various authors (Bevan, 2013; Wick & Reason, 2009) recommend easy access, to allow participants to attend meetings easily. The group agreed a room at the local hospital provided this safe space. Ground rules that govern behaviour was drawn up by the participants. These rules also apply outside the group meetings. As discussed by Cahill, Sultana, and Pain (2007) it is essential that participants are confident that their views are not discussed elsewhere and have no fear of retribution.

### **3.3.4 Participation**

PAR relies on the participation of the people who have a common interest in improving their world. It is where the community participants, in this case the OHNs and my-self became co-learners, researchers and activists (Burgess, 2006). The method used to recruit and select participants is crucial to the success of a study and can be time consuming. Participants bring with them their individual dynamics (Wallerstein & Duran, 2006) which influences the outcome of the PAR study. Participants need to be motivated and have a personal reason for participating in the project in order to make it sustainable. The OHNs had an interest in the success of this study, which increased the likelihood of them engaging in the project achieving valid outcomes (White, Suchowierska & Campbell, 2004). An interest in the study according to Israel et al. (2003) will sustain the commitment to the group over a long period of time. I could not find literary evidence that stipulates how many people should form a group but recognised it needed to be large enough to represent different views and expertise.

Cornwall (2008) identified six types of participation: co-option, compliance, consultation, co-operation, co-learning and collective action. It was anticipated that there would be two types of participation in this research. The first is collective action, where local people (the Christchurch OHNs) set the agenda and carried out research in the absence of outside facilitators. The second is consultation, where local opinions are asked for, in this case the NOHNA and affiliated OHNs. The group of Christchurch OHNs understood the goal of the study and what was expected of them by signing a research contract as described by Krogh (1996). Without the group of OHNs' willingness and commitment to undertake this research with me,

the tasks would have been impossible. It was expected that the commitment and time given by each of the OHNs would fluctuate during the time the study was in progress (Cornwall & Jewkes, 1995).

### **3.3.5 Insider and Outsider Researcher**

The primary researcher wears two metaphorical hats (Kanuha, 2000). They are the native researcher, when the researcher works with the community where they are familiar. Jenkins (2000) defines an 'insider' as a member of the group who has some link and prior knowledge of the participants' experience, which they may even have been part of. As an OHN belonging to the OHNs Christchurch group, I crossed the boundary of being an insider-outsider to further understand and gain knowledge from my fellow OHNs about their role. Being an insider had its advantages as I appreciated more fully the topic under study (Kanuha, 2000). Care had to be taken as an insider not to become too familiar with the participants as this could alter the rigour of this study. I concur with Hofmeyer et al. (2012), who argue there is limited information available on how to undertake a study with known colleagues and simultaneously be the primary researcher. I applied guidelines from Hofmeyer et al. (2012) to assist me in managing my dual role as the primary researcher and participant. This included addressing potential ethical issues between myself and the OHNs continually throughout the study to ensure the trustworthiness and credibility of the data produced, as well as the integrity of my role as the primary researcher while also being a participant. I had to juggle my position as a student, educator, researcher, and participant of the OHNs group. These positions allowed me to explore what I brought to the PAR group (Burgess, 2006).

### **3.3.6 Group Dynamics**

The term group dynamics refers to the attitude and characteristics of a group, how the group is formed, their structure, and how they function. Overarching the PAR cyclical core process is the influence of group dynamics and its effect on the outcome of the study. This section examines why and how groups are formed, and their structure.

People come together with a common interest. Social exchange theory proposes social behaviour is centred on an exchange process where people weigh the potential benefit and risks of relationships. When the rewards outweigh the risks people will join a group, but conversely when the risks outweigh the benefits they will leave a group. The OHNs in this study saw it as beneficial to be part of a group, to articulate best practice in OH nursing, which was a common bond.

Bruce Tuckman's (1965) research into group dynamics with a team of social psychologists proposed a model, *Tuckman's Stages for Group Development*. He found a group moves through conceptual space in five stages; forming, storming, norming, performing and adjourning. Stage 1, forming is bringing together the individuals of the team; to build relationships and clarify the aim of the group. At this stage, individuals may resist contributing until they understand their place within the team. To assist this transformation, force field analysis theory designed by Lewin in 1951 is an approach to use to understand factors that effect change when one's own behaviour and personal characteristics are related to the situation we find ourselves in. When the advantages outweigh the disadvantages the individual is ready to change. Stage 2, storming, is when the group begins to negotiate and express their views on the best route to take to accomplish the overall aim. The third stage, norming, occurs when the group have an understanding of each other and a feeling of cohesion leading to Stage 4. In this performing stage, the group feel confident and are able to make decisions quickly and competently. At Stage 5, adjourning, the group is dismantled. Some may feel sadness at the loss of social cohesiveness.

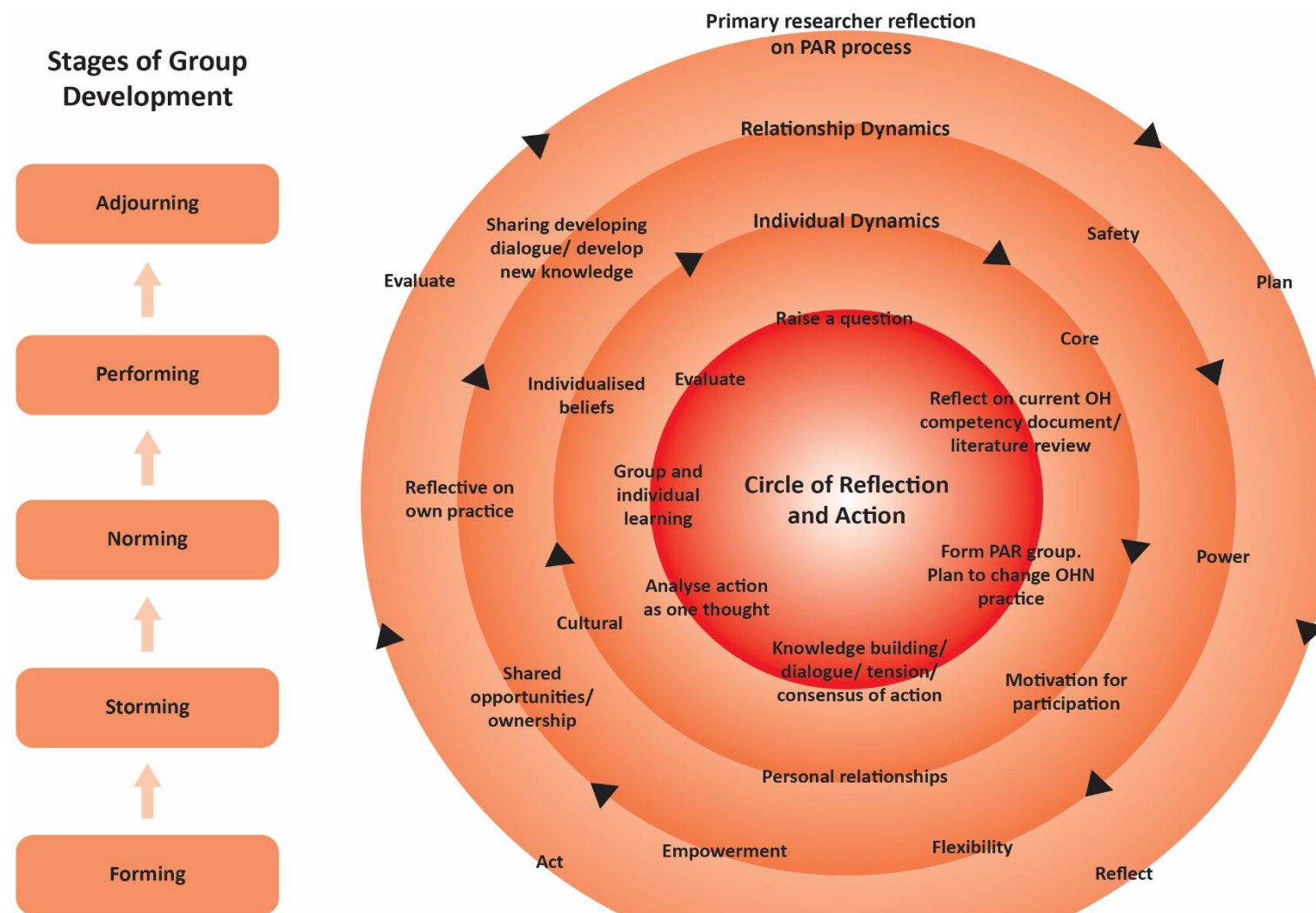
The primary researcher needs to allow the participants of the group to go through these five stages at their own pace. Bevan (2013) believes if the stages are rushed then the data collected is not as rich as if more time was given. Time can influence how individuals come together and find their place within the group. Group dynamics, according to Wallerstein et al. (2008) include individual and relational dynamics. Individual dynamics take into account individual beliefs, core values and knowledge sharing. Whereas relational dynamics include decision making, dialogue and mutual learning, the role of the primary researcher within the PAR group and the influence of power. They interrelate and influence the outcome of the group participation and the study. Being aware of interrelationship within the group and addressing any problems that may arise within the PAR group can, according

to Reason (1994), create new learning for this research practice. These factors form a second cycle of the PAR process and are illustrated in Figure 3.

### **3.3.7 Knowledge and Power**

“Knowledge is power and can command obedience” a quotation made by Imam Ali in the 10<sup>th</sup> century which is a current every day saying. One of the tenets of PAR is to decentralize knowledge so it is not the property of one person but shared between the participants. It is also assumed that knowledge has a positive effect bringing positive change. Habermas (1971) believed that knowledge was accumulative overtime and was generated when the individual was not coerced and was free to say what they were thinking. He identified three types of knowledge; critical, hermeneutic and analytical. Terry’s (1997) interpretation is that critical knowledge equates to “knowing why”; hermeneutic as “knowing how” and analytical knowledge as “knowing that”. Critical or emancipatory knowledge is looking at the sharing and development of self- knowledge through the process of critical look at existing rules, traditions and ideology which influences the power relationships in society. Ground rules of engagement needed to be drawn up by the group to limit conflict amongst them as they share and develop self-knowledge on the workplace activities OHNs undertake. Hermeneutic or practical knowledge is a process of interaction and communication leading to an understanding of lived experience and falls under the title of interpretive science. According to Habermas, it is from the combination of the three knowledge types that we are able to understand our world. The group of OHNs had a varied expertise and knowledge of OH ranging from a few years to 30 years.

In health research, knowledge according to the Canadian Institute of Knowledge (Tetroe, 2008) has expanded to include what is known as integrated knowledge translation. This involves building knowledge translation into the research process, recognising that if research evidence is to be successfully applied, the people who will ultimately use the knowledge need to be meaningfully engaged in the research process itself. The involvement of the OHNs to share learning and development of self-knowledge creates empowerment (Lindsey, Shields, & Stajduar, 1999).



**Figure 3** Group Dynamics and Stages Affects Outcome of PAR.

Informed by Wallerstein., Oetzel., Duran., Tafoya., Belone., & Rae & Duran (2006) *Conceptual logic model of community-based participatory research* p 381. San Francisco,CA: Jossey-Bass and Tuckman (1965) Developmental sequence of small groups. *Psychological Bulletin* 63(66) 384-399.

Empowerment is a buzz word (Rappaport, 1981). Michael Foucault (1926-1984), a French philosopher believed the influence of an organisation on the group as well as the power generated by the interactions of the participants within a group can affect the outcome of the study. PAR operates with an understanding of the power distribution amongst the participants, to prevent conflict between researchers and practitioners which can lead to a power struggle as the group seeks to control the project directions.

Koch (1997) identified three reasons for the failure of PAR studies. He suggests they include: iceberg subjects where practitioners do not understand the real opportunities for improvement; irrelevant subjects where there are no prospects for generating knowledge; and no client, whereby the problem or concern under investigation does not fit a PAR approach. The OHNs understood the opportunities for us as a group to make a change in practice, as well as to generate knowledge and so mitigated the reasons for this study to fail.

Discussion, listening and understanding by the OHNs can solve the issues that arise to prevent a potential threat to this study. However, conflict between participants can also have a positive effect. Power can be managed as commented upon earlier with written agreement between the group, to respect each other as participants (Israel et al., 2003) and as people. Understanding power distribution within a group is one concept of PAR. The other concept of this emancipatory process is to shift power from society to those who are affected by the problem (Baum et al., 2007). This study was to question the OHNs activities outlined in the current OHNs competency document. Did the document reflect the demands of business, the OHN and our professional body? It was expected that the knowledge generated by the OHNs should shift the understanding of business and our health colleagues into recognising that OH can assist in reducing health inequalities. The generation of knowledge and power can have a positive effect in the PAR process, allowing transformation (Cahill et al., 2007).

### **3.4 Summary**

This chapter outlined three social critical frameworks that were considered for the study. Of the three (AR, AI, and PAR), PAR was selected as it meets the aims and objectives of this study. It lends itself to the collaborative problem solving process between the OHNs, informing nursing practice, linking practice and theory and social change. The cycle of PAR involves the stages of joint planning, action, observation and reflection, where the reflection phase paves the way for further cycles of planning, acting, observing and reflecting in a spiral of learning evolved. The study however is

much more than turning the spiral cycles. PAR involves two inter-related layers of cycles occurring within a study, problem solving in action, and the research aspect of the study. As the principal researcher I was also interested in working as an equal partner within the OHNs group as well as observing the influences of the individual and group dynamics on the action part of PAR. The thesis cycle is influenced by group dynamics which in turn influences the outcome of the PAR cycle. This combination of the action research spiral cycle, the theory cycle and Tuckman's Group Theory (1965) (Figure 3, p.38) articulates the practical and theory application of PAR and its application to this study in Chapter 6.

There is inconsistency in the literature in the use of the word participant and co-researcher in the PAR process. For the purpose of reporting the PAR process and this study I have chosen to use the term co-researcher, rather than participant. I believe co-researcher an active term rather than the passive implication of the word participant has.

The next chapter outlines the application of PAR by my co-researchers to the design of this study.



## **Chapter 4: Study Design**

### **4.1 Introduction**

This chapter presents the study design and methods used in the PAR study. The context, methods, sampling, data collection, ethical considerations, rigour, strategies and my position within the research as the primary researcher are discussed. To do this, data were collected from four sources: eight group meetings where the group discussions were audio-taped and later transcribed; document reviews; two questionnaires completed individually by the OHNs; and a field journal, allowing reflection on the research process.

The study design involved six stages. The aim of the first stage was to recruit and establish a group of OHNs to reflect on their career within OH and gain an awareness of their role in the workplace. In the second stage information was collected from the OHNs through use of a self-completed questionnaire and presented to the group at the first PAR meeting. As will be shown in the following chapter the findings from the questionnaire were used to stimulate the formative process of the first action research cycle inquiry (Kemmis & McTaggart, 2005) by the OHNs.

Phase three outlines the content and action of PAR group meetings 1-4. This involved discussion of the data collected from the transcripts of the PAR group meetings. This data was analysed on an on-going basis by me as researcher and the group as participants. The identified themes were discussed at subsequent group meetings and were either accepted, or rejected, and revisited until the group reached consensus. The group's decisions shaped the turning points in the inquiry cycles (Wilson-Cooper, 2006).

The fourth phase was reflection of the PAR theoretical process of the study. This reflection included understanding what occurred to lead to the turning points and what sustained the OHNs in undertaking the study. The main data for this was my fieldwork journal, in which I recorded my thoughts on how I perceived individual and group dynamics, and ways to keep the momentum of the study. This journaling also allowed me to reflect on my position and experience as the primary researcher within the PAR group. Also a second questionnaire (Appendix 5) completed by the co-researchers provided an opportunity for the OHNs to evaluate the study was distributed to them in November 2014. It allowed the OHNs to voice their individual

opinion on how the group was working together and gather suggestions on sustaining the study. This evolved to phase five, formation of a sub-PAR group. The original PAR group reconvened (phase 6) and four subsequent meetings were held, concluding in May 2015. As in phase three, data was analysed on an on-going basis by me and my fellow co-researchers. The descriptive data from the journal and the second questionnaire were used to continually evaluate the thesis cycle of the study.

## **4.2 Recruiting the Sample**

The aim to change practice through action needed to involve people who were familiar with the topic and who had an interest in the inquiry (Glasson et al., 2006). PAR researchers Glasson et al. (2006) and White et al. (2004) found that people become involved if they understand the process. The topic needs to be meaningful to them, and there is the potential to improve their situation and others. Also they need to feel that their contribution will be valued. Following informal discussions with OHN colleagues to explore whether this research was worth pursuing, a purpose sampling approach was used to recruit participants to join me in the study. All 51 RNs who belonged to the Canterbury OHN group were invited via email to participate in the research. This group of specialist nurses, of which I am one, are affiliated to NZOHNA. We meet once a month at Christchurch to discuss topical issues associated with OH. The group's aim is to provide peer support through the sharing of knowledge and other educational opportunities. The invitation letter detailed the rationale for the project and how it was to be undertaken using the PAR approach. It included the suggestion of regular meetings, once a month over a period of time. The OHNs were invited to contact my supervisor or myself if they required further information. Interested co-researchers were asked to confirm by email if they would like to attend an information session on a specified date, where there was an opportunity to address any queries, and that no decision needed to be made until after that meeting.

I received seven electronic replies from OHNs who were willing to attend an information session at the Princess Margaret Hospital on July 6<sup>th</sup> 2014. They all lived in Christchurch. The large geographical area of Canterbury may have been a barrier against OHNs living outside the city participating in this study. The

information session served as a pre-step in establishing the purpose of the study (Coghlan & Brannick, 2010) and provided co-researchers with an opportunity to get to know each other. Although we all knew each other through our regular OHNs meetings, we had not previously undertaken research together. Collaboration does not instantly occur because people share the same profession. The seven OHNs and I came from diverse backgrounds which meant we would bring to the group different attitudes and skills (Wallerstein et al., 2008). Differences add richness to the PAR process. For collaboration to be effective it has to be carefully orchestrated over time (Bevan, 2013). The information meeting served as what Tuckman (1965) described as the norming stage of the group's relationship where participants began to find their place within the group. The safe place chosen for us to meet, was a small meeting room in the hospital that was private and easily accessible by the OHNs. During the first meeting, my dual position of facilitating the research project as well as being a participant was discussed. I endeavoured to stand back, listen while posed questions about the PAR meetings (Dewar & Sharp, 2013). This helped me carryout self-reflection, to identify and solve issues.

All the seven OHNs consented to participate in the study (Appendix 3). This group of OHNs had expert knowledge in the field of OH as well as local knowledge. Both types of knowledge are important (Brydon-Miller, Greenwood & Maguire, 2003) together with the interpretation of the results and subsequent action by the OHNs are significant to the development of the framework. The group characteristics, two nurses having 1-2 years and the other co-researchers having between 20-30 years of experience working in OH would increase the usefulness and credibility of the study results. The OHNs currently practicing at varied nursing practice levels, would be able to draw from their experience what they consider the activities the OHN should be able to do in relation to the nursing practice levels. As a group they had a vested interest in OH nursing which was expected to increase their likelihood of retention in this study (White et al., 2004).

### **4.3 Data Sources**

PAR is an approach rather than a method of undertaking research and as such there is more than one way of conducting this process (Israel et al., 2003). Data sources included data from the dialogue between the OHNs during the meetings, document review, fieldwork journal and two questionnaires. The group meetings

were pivotal to the study as they allowed the group to explore the critical elements of a competency and career framework for OHNs.

#### **4.3.1 PAR Meetings**

Eight PAR group meetings OHNs were held once a month over two time periods. Initially they were from July (information session) to November, and then following a two month summer break the group reconvened in February 2015 for a further 3 meetings. The final meeting was 11th May 2015.

The information meeting included discussion on the proposed research study to identify the critical elements of a competency and career framework to inform best practice in supporting and promoting the health and wellbeing of the working population. It was agreed that the PAR inquiry process using qualitative descriptive data would provide the framework to explore this issue. The group decided that I would co-ordinate the study, and the best approach for moving the study forward was through dialogue group work. Finding time when all would be available was discussed. As the OHNs regularly have to respond to industry demands during the hours of 8am-4pm they decided they would undertake the study after work, meeting for an hour, once a month for approximately eight meetings.

It was agreed that I audiotape the meetings which included recording observations, ongoing reflections, plans, actions and outcomes. The audio-recorder could be requested by any of the OHNs to be turned off at any-time, no such requests were made. The recordings were transcribed by myself and care was given that only myself was identifiable. The transcripts of each meeting were sent to all co-researchers before the following meeting to verify that the transcriptions were accurate. Ground rules within the OHNs group were decided on regarding personal conduct (Figure 4).

Each meeting commenced with a review of the transcript of the audio recording of the previous one to ensure validity, followed by the reading of agenda for the current meeting. At the conclusion of a meeting an agreement of the work to be carried out by the co-researchers in preparation for the subsequent one was agreed upon. The PAR meetings followed this process until the group decided they could offer no more knowledge to the proposed OHN Knowledge and Skills framework. It was sent to the NZOHNSA for feedback. At the printing of this thesis (April 2015) the

document was out for consultation by all OHNs affiliated to the NZOHNSA. The meeting's transcripts and summaries of the meeting were checked for authenticity by the co-researchers at the commencement of subsequent meetings.

- Meetings to start and finish on time, and to be approximately an hour
- Room to be a “safe place” for the group and booked for each meeting with nibbles to be provided by Stella
- Group to participate and listen actively – study depends on inclusion of each individual voice
- There are no right or wrong answers – only differing points of view
- Be open to new ideas, be creative in proposing solutions to barriers
- To share your own experience
- Group to identify opportunities for improvement and recommending possible improvement approaches
- The group will ensure the confidentiality of others at all times
- No record of the discussion will be distributed without the agreement of all participants
- Quotes will not be attributed to individuals without permission
- Cell phones to be either turned off or left on silence
- Summary of meetings to be in bullet points and circulated before next meetings electronically via email with agenda for Stella to type.

**Figure 4:** Ground Rules Agreed on by PAR OHN Group

#### **4.3.2 Document Review**

As part of the PAR process I read documents from the NCNZ, 2007 *Generic Competencies for Public Health in Aotearoa - New Zealand* and the OH nursing competencies from other countries such as USA (AAOHN, 2013) and the UK (RCN, 2011) and the New Zealand Health and Safety Reform Bill 2013 (to become Health and Safety at Work Act 2015) for relevance. These documents outlined the core activities of an OHN into a framework and assigned the activities to their countries general nursing competencies. I considered these documents were suitable to use as a basis for discussion in the PAR group meetings to align our practices with international developments and the requirements of the NCNZ. In addition, the two specialist nursing frameworks, *The New Zealand Diabetes Knowledge and Skills Framework* (MidCentral DHB, 2009) and *The New Zealand Pain Management Knowledge and Skills framework* (New Zealand Pain Management Society Nurses' Interest Group, 2011) were reviewed and then discussed by the group in meeting three (August 2014). The group decided the template of these frameworks would be used to develop an OHN Knowledge and Skills framework.

#### **4.3.3 Field Notes**

Keeping a descriptive fieldwork journal throughout the length of this study allowed me to record observations and critical reflection on specific developments of the group meetings. Notes were taken and immediately after each meeting were later expanded into field notes to record in more depth what was working well, the initiatives taken by individuals, and the challenges and frictions within the group. Initial analysis was made of the turning points the OHNs took as they worked through the cyclical process. The field notes enabled personal reflection, keeping a record of self-awareness (Bergold & Thomas, 2012), and provided me with the opportunity to describe my thoughts of the dual role of an insider and outsider. I recorded periods of confusion, lack of clarity and anxiety due to minimal control over the research process. The field notes provided a record of chronological events and development of the research as discussed by Dick (1993).

#### **4.3.4 Questionnaires**

Two questionnaires (Appendix 4 & 5) were designed by me providing the OHN opportunities to reflect retrospectively and prospectively firstly on their role within the workplace and secondly on this study. Zuber-Skerrit and Perry (2002) consider co-researcher's reflection on the process as an important element of PAR. These questionnaires allowed the OHNs to individually express their opinion rather than going through the process of group decision making which has the potential to influence their contribution.

The first questionnaire was disseminated to the nurses after the information meeting. It was designed to generate information through the process of self-examination and reflection by the group on their activities as an OHN. The second questionnaire was disseminated following the meeting held in November 2014 to identify co-researchers' personal thoughts on interventions required to ensure the sustainability of the group. This questionnaire provided the OHNs an opportunity to feedback confidentially on how we were working together, to express ideas on how we could work differently, and how satisfied they were with the progress on meeting the aim and objectives of the study.

## 4.4 Project Timeline

Traditionally PAR has no time parameters. However, this research project was designed to be conducted over a two year period with nine months for the collection of data from the group meetings, and the remaining time for preparation for the study and for writing up the thesis findings. The action plan of collecting data and timeline of the study is summarised in Table 1. It was agreed a certificate acknowledging the OHN's contribution to the study and professional hours of development would be provided.

**Table 1.** The method and timeline of collecting data

<p>June 2014: Recruitment of participants.</p> <ul style="list-style-type: none"> <li>• Information meeting held for those interested in participating in this research and on the principles of PAR. Consent form signed</li> <li>• Questionnaire to encourage group reflection on career pathway and role as OHN in their workplace</li> <li>• Reflection on the meeting – field notes</li> </ul>
<p>July 2014: First PAR meeting between OHNs</p> <ul style="list-style-type: none"> <li>• Discussion and confirmation of guidelines, and agreement of group rules</li> <li>• Discussion on the aim and objectives of the research project</li> <li>• Commence first PAR cycle – initial investigation</li> <li>• Review international OHN competency frameworks and OHN practice levels</li> <li>• Relevant documents to be sent to the group for review prior to second meeting</li> <li>• Goals for next group meeting</li> <li>• Notes written up and sent to the group for reflection to ensure accuracy of the session held. Participants to feedback on validity prior to following meeting</li> </ul>
<p>August 2014: Second PAR meeting</p> <ul style="list-style-type: none"> <li>• Reflect and review progress made in meeting one</li> <li>• Review proposed change in legislation and current OHN competency framework and general nursing competency framework</li> <li>• Brainstorm how to move forward to address each domain and requirements to meet future needs of businesses</li> <li>• Goals and action plan set for next meeting: Notes to be written and sent to the group for reflection and to ensure accuracy of the session held. Participants to feedback on validity prior to following meeting</li> </ul>
<p>September - November 2014: PAR meetings held</p> <ul style="list-style-type: none"> <li>• Reflect and review progress made in previous meetings</li> <li>• Continue PAR cycle – allowing each participant equal contribution to the process</li> <li>• Collect data continuously – Complete field notes and group reflections on the PAR process</li> <li>• Notes to be written and sent to the group for reflection and to ensure accuracy of the session held. Participants to feedback on validity prior to following meeting</li> </ul>
<p>March-May 2015: PAR meetings held</p> <ul style="list-style-type: none"> <li>• Reflect and review progress made in previous meetings</li> <li>• Continue PAR cycle – allowing each participant equal contribution to the process</li> <li>• Collect data continuously – Complete field notes and group reflections on the PAR process</li> <li>• Notes to be written and sent to the group for reflection and to ensure accuracy of the session held. Participants to feedback on validity prior to following meeting</li> </ul>

## 4.5 Analysis

The aim of the qualitative descriptive analysis is to identify patterns in the data. Each data source was manually analysed separately using thematic analysis, mapping and refining of data (Braun & Clarke, 2006) and revealed in descriptive results. The two-part analysis process adopted was carried out simultaneously.

The first part concerned the analysis of content allowing the group to feedback on the development of the OHNs document. I became familiar with the data through “immersion” (Braun & Clarke, 2006). Using an inductive process, analysis involved the generation of codes and integrated to identify themes. Areas of content were aligned with OHN nursing roles and then within these areas analysis involved determining whether they were at a novice through to expert level. Themes emerged when examining the data for process and action. An example of this is from questionnaire 1 (Appendix 4) identified clinical activities was a common theme the OHNs group undertook which when subjected to more detail analysis included audiometry and spirometry testing carried out by mainly nurses who have worked within OH for a couple of years. This the group decided was what expected for OHNs working at novice/competent level.

The second part examined the PAR process. Field notes were initially analysed for turning points, when the OHNs moved the study through different directions using group reflection. Turning points were evident by examining the data for decisions made in regards to completing the work related to and the decisions about what to do next. This was demonstrated at the November PAR meeting when the group decided through consensus that the OHNs from the CDHB would work on developing the OHN framework over the summer break and would be reviewed by the core group when reunited in February 2015. The second step examined group dynamics, how the interplay of individual and group relationships affected the outcome of the PAR group (Wallerstein et al., 2006). In regards to group dynamics the analysis involved an examination of the data, both audio-recording and field notes in regards to who was speaking, how the group were working (which included analysis of the content of questionnaires) and the extent to which people shared and challenged each other. Areas of consensus and difference within the group together with levels of engagement were explored. This analysis then examined how the OHNs moved through the stages of Tuckman’s (1965) Group Dynamic stage model (Figure 3, p. 38).



Group dynamics forms the theoretical cycle of the PAR process and its application to this study. This included narratives from the OHNs meeting transcriptions and observations and reflections made by myself and recorded in my field journal. The results of the two questionnaires were each analysed for content. Next to each response, key words were identified and grouped into themes. The responses were rechecked to ensure their fit with the themes.

#### **4.6 Rigour**

To ensure the results obtained were trustworthy, the PAR group received information about the research process, and the need for continuous collection and analysis of data as the project progressed from conception to dissemination. An audit trail was created with the decisions made in analysing the data for the core cycle of the study and the reflections on the thesis cycle. The field notes were analysed by myself and findings shared with the group. The inductive approach, a systematic procedure of repeated reading and coding of all data resulted in identifying themes that had a link to the research question (Braun & Clarke, 2006). The process was transparent and a trail was kept of actions taken. Document analysis was undertaken using thematic analysis. Triangulation of all data requiring the use of two or more methods of data collection was used to check the trustworthiness and reliability of data collected (Thomas, 2006). These elements demonstrate the rigour of how the study was conducted and why the results should be considered a rigorous. In addition, attention was given to congruence so that the components of the study were seen to align.

#### **4.7 Treaty of Waitangi Considerations and Obligations**

In designing this study, I was aware it could involve Maori nurses, and consideration needed to be given to the addressing the Treaty of Waitangi. According to the Health Research Council (HRC) guidelines for research involving Maori “The principles of partnership and sharing implicit in the Treaty should be respected by all researchers and, where applicable, should be incorporated into all health research proposals” (HRC 2010, p. 4). In addition, consideration of the review and development of the OHNs competency and career framework included addressing the disparities between Maori and non-Maori. The guiding principles for public health were reflected in the core competencies as stipulated in the *New Zealand Health Strategy* (MoH, 2003). These principles are: participation of Maori at all

levels; partnership in service delivery and protection and improvement of Maori health status.

#### **4.8 Ethical Considerations**

The study was approved by Victoria University as well as the Human Ethics Council (Appendix 1). The ethical considerations of the PAR process were included in the information sheet and consent form given to the OHNS. The group were also informed that the study was to be directed by them and its direction may change over time as a result of group decisions. The OHNs were advised the study will continue for a period of approximately nine months, and would entail regular one hour meetings. Addressing ethics and including the nurses in the discussion on the content of the consent form assisted in the building of trust and safety for the OHNs.

The signed consent form (Appendix 3) indicated the OHN had read and understood the information sheet (Appendix 2) for this study and had been given the opportunity to ask questions. The group were asked to respect privacy about their situations, experiences, and views expressed during the monthly meetings. Information from the data would only be used for the purposes of this study. The actual data produced by the group was and continues to be confidential to the group, the primary researcher and my supervisor. The audiotapes and transcribed data will be stored for two years following completion of the study and then destroyed. Everyone in the group agreed to abide by the ground rules of group 'engagement' allowing amongst others each individual to respectively participate to the group discussions. Democratic decision making and collaboration is the essence of PAR and according to Truman and Raine (2001) the research participants were not to be misled into believing the degree of influence that they have in the research project.

Risks and benefits to the participants were considered. The ground rules developed by the OHNs on working collaboratively as research partners were reviewed on an ongoing basis and modified as required. The rules provided a framework which included democratic participation by having a protocol for clear communication between participants using language everyone understood, allowing equal sharing of power ensuring a few of the participants do not dominate, agreeing on mutual respect, and everyone involved prepared to listen to others together with a protocol for handling difficulties and conflict (Durham University, 2012). Clarification of roles

and responsibilities and ownership, control and use of data and findings were agreed (Begold & Thomas, 2012). Protocol for confidentiality and identifiability of data collected was considered. The OHN were not named in the transcripts and in the write up of this study. Each OHN was given a number in the endeavour to ensure she could not be identified although the nurses were able to recognise from the transcript who said what at the PAR group meetings. I am the only participant who is identifiable.

## **4.9 Summary**

This chapter presented an overview of the design and methods used to undertake this research which are congruent with the PAR approach and lends themselves to explore the practical inquiry of this study. It provided the opportunity to create a more meaningful and greater understanding of the work OHNs undertake by using both local practical knowledge, and various data sources to determine the knowledge and skills required for us to provide the expert advice to businesses to support the health and wellbeing of its workforce. The outcome of this research, the integrated competency and career framework that is presently being disseminated nationally to New Zealand OHNs, is expected to raise the profile of OHNs within New Zealand. It is also anticipated that the framework will raise awareness among nurses of opportunities in OH, and improve recruitment by providing a career structure which moves the nurse from novice through to advanced nurse practitioner

The outcome of this research project will be a living document, responding to the continuous change in the working environment and the requirements of the OHNs who deliver the range of vital healthcare services required to the working population. The findings and analysis interpretation of this research study are described in the following chapter.

## **Chapter 5: Inside Story of Working Together**

### **5.1. Introduction**

This chapter presents the findings and interpretation of phases one to six of this study. Phase one established the PAR group and included discussion on the rationale for the study and the research question with an overview of the PAR process. Phase two developed from the initial meeting when the group decided to use a process of self-examination to explore the role of the OHNs in the workplace. The information emerged was the basis for discussion when defining the critical elements and key considerations for the competency and career framework at the subsequent PAR group meetings. Phases three and six show how the nurses used this information as they travelled through the PAR process to review the competencies for *Practicing as an Occupational and Environmental Nurse* (NOHNA, 2004) document, and develop an integrated Skills and Knowledge framework. Phase four presents the findings from the second questionnaire sent to the OHNs to obtain their feedback of the PAR process. The information emerged was implemented into the formative research process to improve group workings. Phase five captures the emergence of a sub-PAR group of two nurses and myself. This group continued to work on the research during the summer break. The sub-group drew on the information collated from the core group and continued crafting the Skills and Knowledge framework.

These six phases ultimately weaved together as the OHNs moved through the PAR process to uncover the knowledge and skills required for nurses to provide the expert advice required by industry/businesses to support the health and wellbeing of its workforce. Throughout are used figures and quotations from my journal reflections to summarise the chapters and to provide evidence of the research journey.

### **5.2 Phase 1 - Recruitment and Establishing the Group**

The aim of the first meeting was to establish the group, discuss the rationale for the study and the research question with an overview of the PAR process. A notable turning point in this meeting was when the nurses decided to discuss their life as

an OHN and their activities. The group were taking ownership of the study and becoming actively engaged.

The safe space although small was set up in a conference style layout with seating arranged around a rectangular table which encouraged interaction amongst the nurses. It was noticeable that the OHNs sat opposite each other, no person was at the head, indicating that this process was to be of equal partnership. Informal chatter and friendly banter about the daily activities allowed the group to settle. The group looked relaxed although I sensed there was some apprehension about what was expected of them. This was the first stage of the co-researchers finding their place within the group, and is described by Tuckman (1965) as formalising. The forming stage of any team is important as the co-researchers get to know one another. Although we were familiar with each other, meeting regularly at the local OHNs group meetings, the session began with the nurses introducing themselves in relation to the research. The nurses had varied experience of working in OH from 1 - 30 years so able to contribute from their perspective what they considered was required to each of the nursing practice levels.

I gave an overview of the proposed study of reviewing and updating the current OHN competency document using PAR process as the theoretical framework. The OHNs raised questions about my role in the group and sought further clarification on the reasons for undertaking this study. I explained my position within the group emphasising that this study belongs to us all. The nurses did not have any reservation about sharing their information to be used in my thesis. A timeline for the study was discussed together with an explanation about behind the scenes work involved. A tension arose amongst a couple of nurses who had concerns about the limited time they could give to the study. I assured them that they were free to be actively involved in the study at times that were convenient to them. With this reassurance, everyone in the group agreed to participate in reviewing the current OHNs competency document.

To commence the first step in the PAR cycle the research question written on a power-point slide was reflected on by the group: *What are the critical elements and key considerations of a competency and career framework for OHNs in New Zealand, enabling them to work to best practice to support and promote the health and wellbeing of the population?* The nurses agreed the question reflected the concern we wished to address. This was the first meeting, and the group were

becoming actively engaged. Everyone willingly contributed to the discussion and had a voice. This was evident during the impromptu sharing of various accounts of our careers in OH, which were met with laughter and nodding of heads as we realised that we shared similar experiences. It was noticeable that identifiable themes were emerging: the majority of the group did not choose OH as the first area to work in following RN training. There was a feeling that we relied on each other for peer support and the sharing of knowledge in gaining confidence to practice in OH. The session was not audio-recorded, as it was an information session I had not gained their consent. However, this data was captured from a questionnaire which is discussed in phase two.

Although this dialogue was important, I moved the group on through the action stage of the PAR cycle. I asked the nurses to consider the key phrases in the study question: key considerations of a competency and career framework, best practice, promote health and wellbeing of the population. The nurses wished to consider relevant international literature and documents. I was tasked to this along to the next meeting to be used as a basis for discussion.

### **Personal Reflection – July 15th**

*My challenge will be finding my place in the group. My role alternated between co-researcher, and facilitator, and carrying out reflection as well as being an insider/outsider. I was aware that I had to approach the relationship between myself and my colleagues with clarity about my position and their expectations (Dick, 2003). To be true to PAR, I needed to be an equal co-researcher. My limited knowledge in undertaking a study with my peers made me feel incompetent.*

*I was appreciative of the support from my supervisor in the lead up to the information session. My fear was the OHNs who voiced an interest in undertaking this study with me at the local OHN monthly meetings would not attend the session, and if they did, would they join me on this journey. The 7 OHNs attended the information session. I was surprised how enthusiastic they were in exploring the critical elements of a competency framework. I was pleased at this early stage that turning points occurred, where the nurses started taking ownership of the study. One of my roles is to ensure the group remains equitable and all participants have a voice.*

*It felt the OHNs were expecting me to lead them through the discussion. My role within the group is to sustain the partnership between the nurses. Without them the practical cycle of PAR would crumble. Although I know the nurses I have to continually build trust and to keep the group going.*

*Thought was given to the questionnaire – Five questions were asked and were open format to allow exploration of range of themes including how they came to work in this field of nursing and the work activities they undertook. The questionnaire was sent electronically to each of the OHNs with a brief personalised email explaining the purpose of the questionnaire and the importance of responding.*

### **5.3 Phase 2: Learning About Ourselves as OHNs**

This section outlines the interpretation of the first questionnaire. All the OHNs returned the completed questionnaire within two days following the information meeting held in July 2014. The findings were presented to the group at the meeting held in August. Three categories emerged from the analysis of the questionnaire relating to the career journey of the OHNs and the type of activities undertaken in their current role. The categories were: shared career pathway; education; and activities undertaken by the nurses depends on the type of workplace in which they work. These are explored in the following part of this section.

#### **5.3.1 Shared Career Pathway – Skills, Knowledge and Education**

OH was not the first area of choice in which the nurses had worked following completion of their RN training. The co-researchers began their career in OH through opportunistic circumstances. Three of the OHNs came into OH as part of postgraduate study involving work experience in this field of nursing a number of years ago. A fourth 'fell' in to it, when an opportunity arose to work as an OHN at an engineering business when there was a job shortage in the National Health Service. The fifth co-researcher wanted to work with people who were well and achieved this when an opportunistic position became available at a local industry. The categories from the questionnaire supports international evidence (The Council for Work & Health, 2010) of a need to address recruitment and retention in OH in order to carry out the government's initiatives, and to raise OH profile.

Seven of the eight nurses were middle age or older. There was general agreement that nurses came into this field later in their career due to the perception of the work being easier. Co-researcher 4 was comfortable within the safe environment of the PAR group to admit one of the reasons she chose to work in OH later in life was because of the opportunity of working office hours. Five of the nurses had worked in OH between 20 and 30 years, and two nurses had worked one to two years in OH. The study was undertaken by nurses who had varying levels of OH knowledge. It was recognised that the nurses with less understanding of OH will be able to identify the knowledge they believe through their working experience required for an OHN to be at competent nurse practice level. The nurses with more experience will add their thoughts to the proficient and expert practice level.

Six of the co-researchers had been supported financially by their employer, be it from private business or from the public sector to undertake postgraduate education in OH. This included certificate, diploma and masters level endorsements in OH. Of these six, one co-researcher also had a diploma in business management. Other studies the OHNs had undertaken were distance learning in ergonomics, and legislation. Education had also been practical in nature and included health monitoring courses. The OHNs also mentioned that they learn from other healthcare professionals, such as health promoters. The nurses attended various health promotion sessions arranged at their place of work or at seminars within Christchurch.

All of the OHNs appreciated the collegial support from other OHNs be it with those they work with, or from other local OHNs working within the area of Christchurch. Co-researcher 1 commented:

*It is comforting to know that I can pick up the phone and ring a nurse working in another business for advice and support. Sometimes it's just to sound an idea off a colleague, to know you are on the right track. (Meeting 1)*

The PAR group agreed that a nurse entering OH should work to the level of certificate in this speciality. The expectation regarding minimum postgraduate qualification in OH varied within the group. Co-researcher 3 believed postgraduate education to certificate level is the minimum requirement to be classified as an OHN, whereas two others co-researchers 5 and 1 considered that the minimum should be to a diploma in OH. Co-researcher 4, 6 and 8 stated that the nurse should be able to undertake education to Masters level leading to the nurse practicing at



advanced nurse practitioner practice level. For me this was inspiring. There is no record in this country of an OHN reaching advanced nurse practitioner level. Co-researchers 7 and 2 believed that the OHN should hold a formal qualification in HR. This was an indication that the role of the OHN is broad and there is a need for us as nurses to have some understanding of employment law and associated issues.

The activities information extracted from the questionnaire supported international evidence (Mellor & St Johns, 2007; WHO, 2001) that the role of the OHN is diverse, and nurses face different practice demands and responsibilities according to the business type. The OHNs undertook activities requiring understanding of the roles of management and trade unions; business methods and leadership skills; knowledge of current legislation; chemical, physical, biological and psychological hazards in the workplace and the ways they are managed through risk assessment; how the employee with health problems can be supported to return to work and remain in appropriate work; and ethical issues. The OHNs had practical aspects to their work and undertook health monitoring such as spirometry and audiometry; administering vaccinations; and undertaking fitness to work medicals. These practical activities were generally undertaken by all OHNs. Experienced OHNs coordinated the activities and if were a sole provider of OH in an organisation also undertook the assessments. They also had first aid knowledge; health promotion skills and worked across an organisation and community collaboratively.

The three themes which emerged from thematic analysis of the questionnaire were presented to the PAR group meeting held in August 2014. These were a shared career pathway, education, and the diverse activities undertaken by the OHN. The self-reflection by the OHNs saw them move towards having a clearer understanding of their career in OH and the key elements of their activities. This was particularly observed by the nurses who had 1-2 years of experience in OH.

Following discussion with the OHNs at the end of each meeting, I wrote the agenda and distributed it to each participant electronically prior to subsequent meetings. I was aware that undertaking this task may be seen as the potential for unequal power distribution within the group. Israel et al. (2012) consider that this responsibility should be shared amongst the participants.

## **5.4 Phase 3 – Developing Shared Understandings of Frameworks and Competencies**

Phase three outlines the content and action of meetings one to nine relating to the critical reflection by the OHNs on the main elements and key considerations of a competency and career framework for this speciality. This was when the group went through episodes of debate, tension, confusion, and sharing of knowledge as we repeatedly moved through the flexible spiral action research cycle - planning, acting, observing and reflecting (Kemmis & McTaggart, 2005).

The themes which emerged from the first questionnaire were used as a basis for discussion on the critical elements for a competency framework. Meeting one (August, 2014) saw tension arise as the group went repeatedly through the research cycle to reach a consensus on the definition of the four nursing practice levels. In meeting two (September, 2014) the group felt sufficiently comfortable enough to discuss incidents that had happened in their work implying the participants trusted each other and had moved into the normalising stage of group dynamics (Tuckman, 1965). The nurses in meetings five and six explored the components that sit under the fitness to work domain. The PAR process allowed the OHNs to continually re-evaluate, adapt and improve the content of the skills and knowledge framework under construction. An evaluation of the PAR process using a questionnaire was sent to the nurses following the November meeting asking them to self-reflect on the sustainability of the PAR process. Findings of this are discussed later in the chapter together with the emergence of a PAR Sub-Group and the descriptions of PAR group meetings five to eight.

### **5.4.1 Meeting 1: – Identified Themes Basis for Starting Research Cycle**

This PAR group meeting and subsequent meetings were audio-recorded with agreement from the nurses, with a reminder that I would stop the recording at any-time if they wished. The group listened attentively to my presentation of the findings of the questionnaire and nodded their head in agreement as I read out the details. To provoke a discussion and encourage active engagement I asked the group to explore the following comment: *“Some of you mentioned life experience was important, just wondering what your thinking is behind that? Could this be a barrier for young nurses to come into OH?”*

It was an open dialogue and the nurses respectively listened to each other. Co-researcher 1 believed, and others concurred, that it was not age that provided the nurse with experience but their *“background and what you can draw from it”*. The discussion moved on to the concept that the OHN, whatever their age, needed to have the *“confidence to say that you don’t know”* and to have in their possession the knowledge to know where the person asking for help can find another venue to ask for support. All the co-researchers were actively involved in the discussion, critically reflecting on their nursing experiences.

I facilitated the nurses’ conversation back to the three main themes identified from the analysis of the questionnaire. They agreed that the career history we revealed confirms that we in OH need to raise our profile to attract nurses into this speciality earlier. The other two themes, education and the OH activities formed the basic framework for discussion when comparing them to the current competency document and international documentation. At this stage I introduced the work by Holloway (2011) who explored the development of a specialist nursing framework for New Zealand. This led to the New Zealand Nurses Organisation, College of Nurses Aotearoa, Te Ao Maramatanga (NZ College of Mental Health Nurses) and Te Kaunihera O Nga Neehi Māori o Aotearoa (National Council of Māori Nurses) forming a consortium to provide a national endorsement process for professional standards and specialty knowledge and skills frameworks. This process is for specialities seeking wider national recognition. The OHNs facial expressions told me that I may have overwhelmed them by introducing this concept too early in the study. The information I gave them was acknowledged, and after a few minutes the conversation moved onto look at the layout of the diabetes and pain management nurses’ frameworks.

Following some deliberation amongst the group, they came to an agreement that if we are taking the time to review our current competency document we should follow the guidelines developed by the diabetes and pain management nurses. Co-researcher 3, led the way by saying *“we need to come up with some components. And we can start by writing down some suggestions”*. Using the list of activities identified by the diabetes and pain management nurses, as well as the OHN competency documentation from the USA (AAOHN, 2013) and the UK (RCN, 2011) which I had electronically sent to the co-researchers as guidelines, the group decided to brainstorm the components they thought appropriate to include in the

OH Skills and Knowledge framework. Co-researcher 3 volunteered to be the scribe, writing the suggestions on a whiteboard. Through this critical dialogue the group became aware of the different perspective of the OH activities by the expert and competent nurses. An example of this are the activities under the domain health promotion. This involved reviewing documentation that I had sent to them prior to this meeting and the themes emerged through self-reflection and how they wished the study to move forward. The less experienced OHNs focused on the need to have an understanding of the practical aspects of this domain. The more experienced OHNs were interested in the delivery of the programmes.

The group went through the action cycle of back and forth, sharing of knowledge, putting suggestions forward, taking them out, putting them back again until the naming conventions of the domains were agreed upon. The feeling in the group was one of hard work and achievement, working together to improve on practice. The meeting came to a close with an agreement that I would design the pictorial framework using the domains we had decided upon (Table 1, p. 63) and send it electronically to each participant before the next meeting, giving each of the OHNs time to make amendments or recommendations to the table. The first three phases covered are summarised in Figure 6 and provide a visual view of the journey the OHN took from the information meeting to the first meeting held in August.

### **Personal Reflection – August 11<sup>th</sup> 2014**

*The group are taking control of the meetings, which indicates participant engagement and in keeping with the tenet of PAR they are comfortable to voice their thoughts, so being empowered. They are sharing knowledge, and experiences. The process is moving quickly. From my view point I am having an ever deepening understanding of the issues under study and enjoying being part of this group. The OHNs as we know each other I feel have missed the first stage of Tuckman theory of group dynamics (1965) - forming, and moved into the storming/norming phase. The group due to the nature of PAR are from various backgrounds, have various expertise in OH, with different values on life. These variables will influence the effectiveness of the study.*

*I need to give the nurses time to reflect. The silence when they are doing this feels “forever”. When there are pauses in conversation, I have to be aware not to fill the*

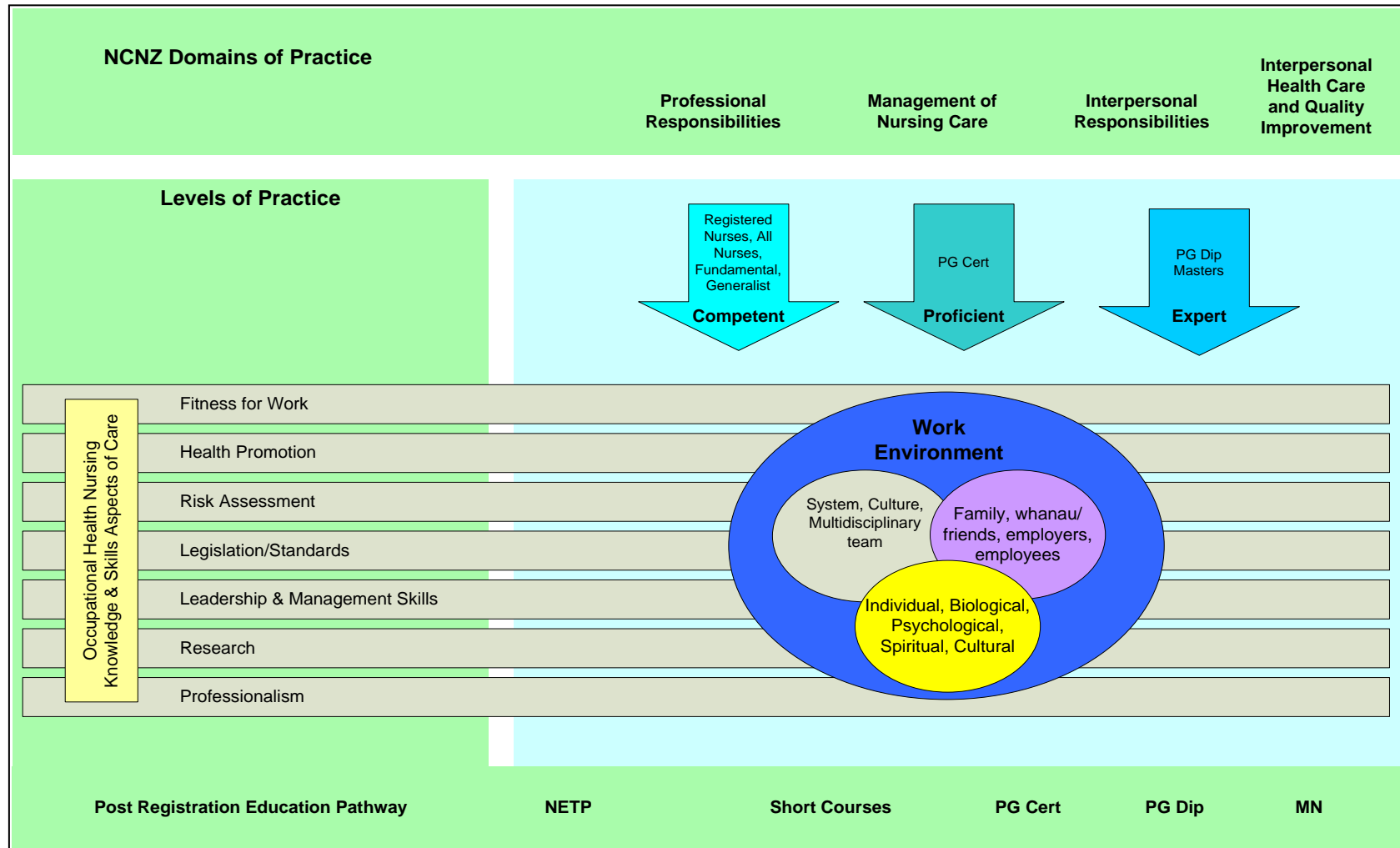
*silence. I was aware that I may have been leading the group when through my role as “fact finder” discovered that other nursing specialities Diabetes and Pain Management have designed a skills and knowledge framework. The group after some thought decided to follow their framework.*

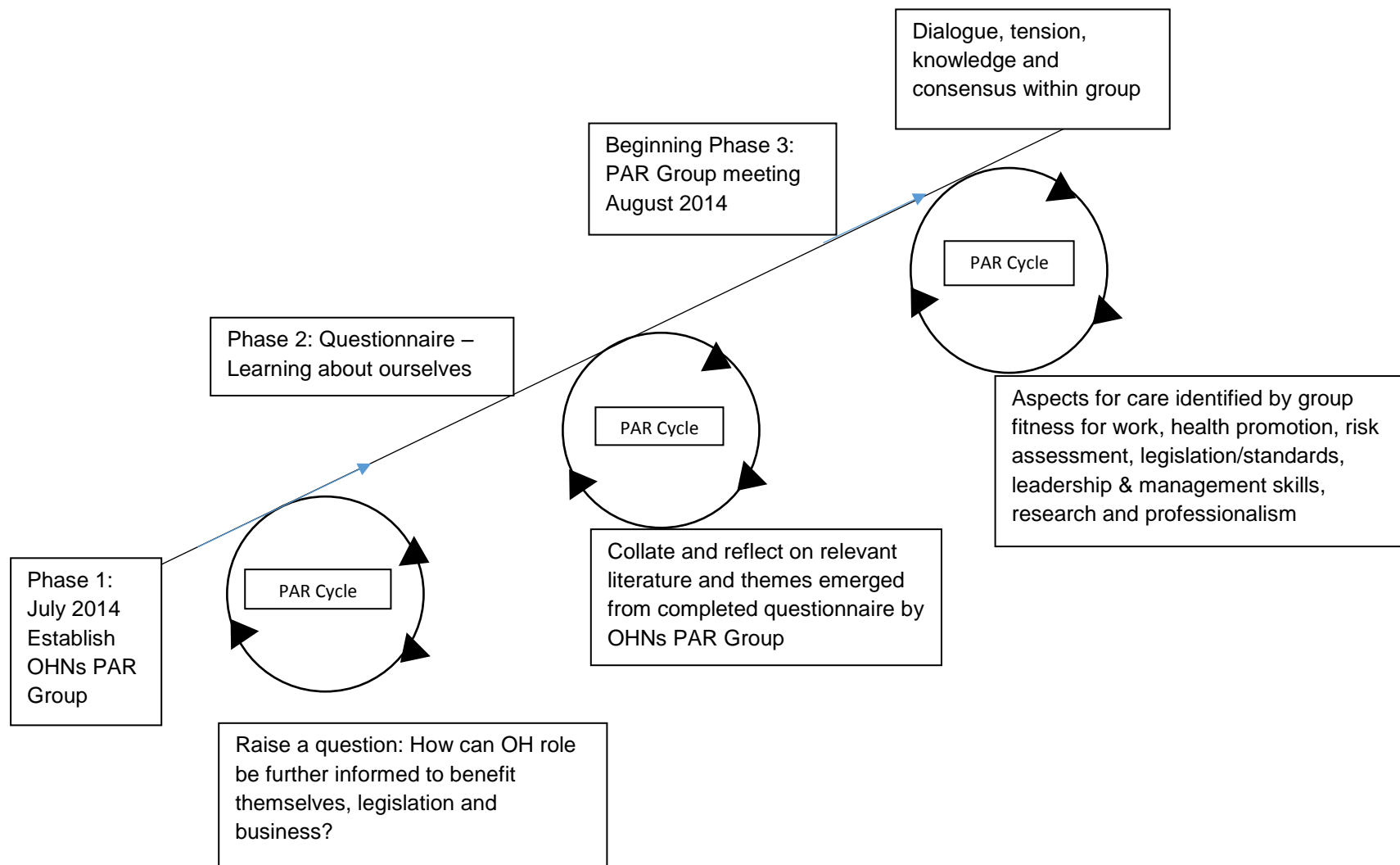
#### **5.4.2 Meeting Two: – Exploring Alternative Approaches to Shape Competencies**

This meeting began with tension in the group when I mentioned that I had contacted Dr Helen Snell, Nurse Practitioner at MidCentral DHB who led the project of designing the diabetes nurses’ framework to ask for advice in developing the OH framework. Snell suggested that when we reach the stage of document review to ask for advice from the Professional Development Unit (PDU) at CDHB who could align the nursing competencies to those tasks. Co-researcher 5 felt that we should be doing this rather than the PDU. Following a discussion Co-researcher 5 appeared reluctantly to agree *“if someone else can do it more easily than us we should let them”*. The outcome from this debate was to request the PDU to undertake this task for us.

To bring the group back to the agenda for this meeting, I asked the group to review the draft outline of the OHN Knowledge and Skills Aspects of Care which we had designed in the August meeting. The group were satisfied with the draft outline. I promptly guided the group to the next stage of the development of the draft encouraging an open dialogue on the classification of the areas of nursing practice. Using our collective knowledge and understanding of the different levels of nursing practice together with the OHN competency documents from the USA (AAOHN, 2013), the UK (RCN, 2011) and our current competencies for practicing document the group had a robust discussion. The discussion went back and forth until a decision was made to design the OHN framework to align with the NCNZ (2007) domains of practice for the RN practice levels: ‘competent’, ‘proficient’ and ‘expert’. The group considered including another level, that being novice. Co-researcher 4 was keen for this level as she felt that she was not at a competent level when starting work as an OHN at a local business as she had *“not worked in that setting before”*. Table 2 presents the proposed framework and Figure 5 illustrates the reflective cycles.

**Table 2:** Proposed Occupational Health Nurses Skills and Knowledge Framework





**Figure 5: Summary: Establishing PAR Group and Group Meetings Held July – August 2014**

This was vetoed by the group as it was considered that the document should cross reference to the Nursing Council and because “*other frameworks haven’t got this category*”. Participant 4’s perspective was heard by the group and her opinion considered, an example of one of the tenets of PAR which is to value participant’s voice in the decision making. It was agreed by the group that the *OHN: Career and Competency Development* (RCN, 2011) document criteria for each of the three levels of nursing practice was more in keeping with the NZNC (2007) criteria. With guidance from this document the levels of practice were identified and are summarised in Table 3.

**Table 3:** Criteria for the three levels of Occupational Health Nursing practice

Competent OHN	Proficient OHN	Expert OHN
Registered Nurse supervised by an expert OHN in role of preceptor and has group support. Post graduate education and training on pathway to university certificate NZQA level 8. Maintain safe practice.	Holds or working towards a recordable OHN diploma qualification or on pathway to NZQA level 8. Develops and establishes protocols and procedures at operational level. Leads on safe occupational health practice.	Commitment to on-going professional development and education. NZQA level 8 preferred but not essential if able to demonstrate high level of achievement in skills and knowledge. Innovates, develops and leads on safe occupational health practice. Leads and develops consultant occupational health.

The group found it challenging to define the criteria for each of the practice levels. A question arose concerning how is the competency of the OHN measured? Co-researcher 1 voiced “*Another PAR group after this study is completed needs to be formed to write a learning package to support this framework*” which was met with laughter by the other nurses. The idea of further study not being dismissed is a sign the group were engaged in this study. This engagement is an example of the PAR process evolving, leading to future research studies. It is not always what the co-researcher says but what is sometimes not said that can be drawn from the analysis to have meaning.

The expert OHN level was debated. The co-researchers agreed expert is a word ‘banded around’ freely. The decision of the group was that the OHN would have to



have at least five years working in OH to be considered an expert and experienced could not just be determined by postgraduate education. The rationale was an OHN could obtain a diploma within two years of working in OH, and would not as yet be expert. Co-researcher 3 commented *"I think it's commitment to on-going professional development and education"* is the wording required under the practice levels rather than being specific to the level of postgraduate education. As this conversation was not coming to a close I decided to intervene and draw this topic of discussion to a conclusion. Co-researcher 3 however had a final thought and was keen to contribute further. She suggested *"that the level of qualification needs to correlate to the New Zealand Qualification Authorised Framework"*. Debate amongst the group made for a lively discussion as well as one of learning. The group spent time understanding the different levels of practice and attempting to link them to the New Zealand Qualification Authorised Framework. This sharing and generation of knowledge is congruent to PAR.

The inclusion of the advanced nurse practitioner level suggested by co-researcher 2 caused tension. She said *"It's something we could strive for, but"* co-researcher 6 initially argued against this, asking for reflection by the group on *"what advantages are there"*? The consensus of the group was for the advanced nurse practitioner level to be included. Co-researcher 2 said *"I think there is an opening for it. We may not want it for our generation, we need to give opportunities"*. It was noted that both the OHNs with limited experience working in OH strongly agreed with this. One of the co-researchers who had 30 years expertise in OH was not so enthusiastic and thought this level was in the *"too hard basket"* but agreed to work with the group to explore this opportunity. It was uplifting to note that the less experienced OHNs were keen to address this practice level, so creating optimism for the future of this speciality.

It was agreed that the practice levels would be drafted by me, and reviewed and amended by the group if required at a later date. The meeting concluded on a camaraderie note with a comment from co-researcher 4 *"doesn't time fly when you are having fun"* which everyone agreed indicating the group were feeling fine after this meeting.

### **Personal-reflection- September 15<sup>th</sup> 2014**

*Many decisions were made in this meeting. Although robust debate is good, the group sorted the process themselves on how to solve it intuitively, maybe I should have asked the group to decide on this process at the information session.*

### 5.4.3 Meeting 3 – Working Through Nursing Practice Levels

I introduced the next stage of the development of the Skills and Knowledge framework. For each aspect of care the key activities needed to be identified to align with the nursing practice levels. The group agreed to brainstorm this activity, which indicated to me that they were working well together. There was no indication of issues with power. Based on the *Competencies in Occupational and Environmental Health Nursing* (AAOHN, 2013); the *Occupational Health Nursing: Career and Competency Development* (RCN, 2011) and with current competency framework guides, the group decided on expanding the activities firstly under the aspect of care, health promotion. Activities were agreed upon, taken out, reworded and re-introduced as the group went through the action cycle. Undertaking this exercise was a sharing of knowledge and experience in a comfortable safe environment. At one point the group diverged away from health promotion focus on the definition of competent practitioner through lived realities demonstrating their understanding of this word. Following this dialogue, the group gained greater understanding of the meaning of competent and application to the career structure of this draft framework. The topic now exhausted, the group, drawing on their own experiences and knowledge moved onto assigning health promotion activities they considered that an OHN would be able to demonstrate when practising at a proficient and expert level. The group became more cohesive when co-researcher 5 mentioned that a client declared personal information to her during a health education activity which she found difficult to address, asking for the group's opinion on how to manage this particular situation. I read this request as the nurse feeling comfortable and trusting of the group. It also could be due to relationships developed trust from affiliation to the local OHN group.

Assigning activities associated with health promotion to the advanced nurse practitioner practice level debate tension resulting in a divide within the group. Co-researcher 2 voiced *"we don't have nurse practitioners but we decided if we are to advance what does this look like?"* Co-researcher 6 added: *"There is a huge amount of training for a nurse practitioner, my experience is, are you going to get a job at the end of it?"* She went on to add *"we've pushed nurse practitioner but jobs haven't been there because they haven't been recognised by employers"*. Co-researcher 1 commented that *"It's getting industry to pay for that as well"*. In reply co-researcher 2 added to the conversation by saying *"that Nurse Practitioner will come. I think it's quite exciting"*. It was agreed that I would investigate the requirements for this practice level from the Nursing Council. The conversation about this had come to an end and the

group returned amicably to pick up the dialogue concerning health education aspects of care and its associated activities.

At the end of this meeting Co-researchers 1, 2 and 6 mentioned they would not be available to attend the subsequent meeting. The group agreed that the subsequent meeting to proceed and the absentees could catch up with events on their return.

#### **Personal-reflection- October 13<sup>th</sup> 2014**

*The group felt comfortable to discuss incidents that have happened in their working world implying the nurses trust each other. The process is fluid as shown by the way the group revisited a point previously explored to obtain greater understanding and knowledge. It was noticeable that the nurses with 1-2 year's experience particularly contributed to the content of the competence nurse level, whereas the other participants had more voice to the activities associated with the proficient and expert level.*

*There is division in the group. One of the participants is not convinced advanced nurse practitioner is required within OH. Each nurse was allowed a voice on this topic, respectfully listening to each other.*

#### **5.4.4 Meeting 4 – Gaining an Understanding of Articulating Skills and Knowledge**

Four OHNs attended this meeting. The group explored the components that sat under the risk assessment aspect of care. There was debate within the group as we discussed which domain health monitoring sits. Co-researcher 3 stated that *“it fits under risk assessment, but then does risk assessment need to be taken out of the domains and sit under fitness for work? This is not easy. Then do we include the practical tasks like being able to do a hearing test and knowing what is abnormal”*.

The PAR process allowed the OHNs to continually re-evaluate, adapt and improve the content of the skills and knowledge framework under construction. Through critical dialogue, and greater shared understanding of the issues under discussion, essential skills each nurse level requires were identified. The group worked hard and we all looked visibly tired following the conclusion of this session but had some satisfaction that *“we had done it!”* It was considered that the ‘Risk assessment’ aspect of care was the most complex to explore. The group although small had the balance of two experienced OHNs who had worked in this field for 20-30 years, and two nurses who

had relatively recent exposure to OH. Within an OH team of nurses, practical tasks tend to be mainly undertaken by competent, or proficient practice level nurses. The two less experienced nurses were in this category and contributed to the dialogue in defining description of the practical tasks be worded in a way that was real to them such as defining what is an abnormal hearing test. These two nurses wanted the activities listed. This illustrated that all co-researchers had a voice which concurs with PAR and their voice was vital in the development of the competent level. Table 4 provides an example of the draft framework. The whole framework is not included in the thesis as it is a draft for review by the national body.

The meeting concluded with a discussion on the way forward for the study. The subsequent meeting was planned for February 2015. The group tasked me and two of my OHN colleagues working at the CDHB with continuing drafting the skills and knowledge framework using the UK document as guidance during the summer period. The draft document would be sent to all participants prior to the next meeting in February. Figure 6 (p. 71) illustrates the summary of meetings from September and November.

#### **Personal-reflection – November 10<sup>th</sup> 2014**

*Four OHNs arrived for this meeting, my biggest fear was the group's interest was waning despite having received messages from the absent nurses that they were either on holiday or away on business. The 4 nurses were keen to proceed with the meeting, bringing together 2 experienced nurses and 2 nurses who had limited exposure to OH nursing.*

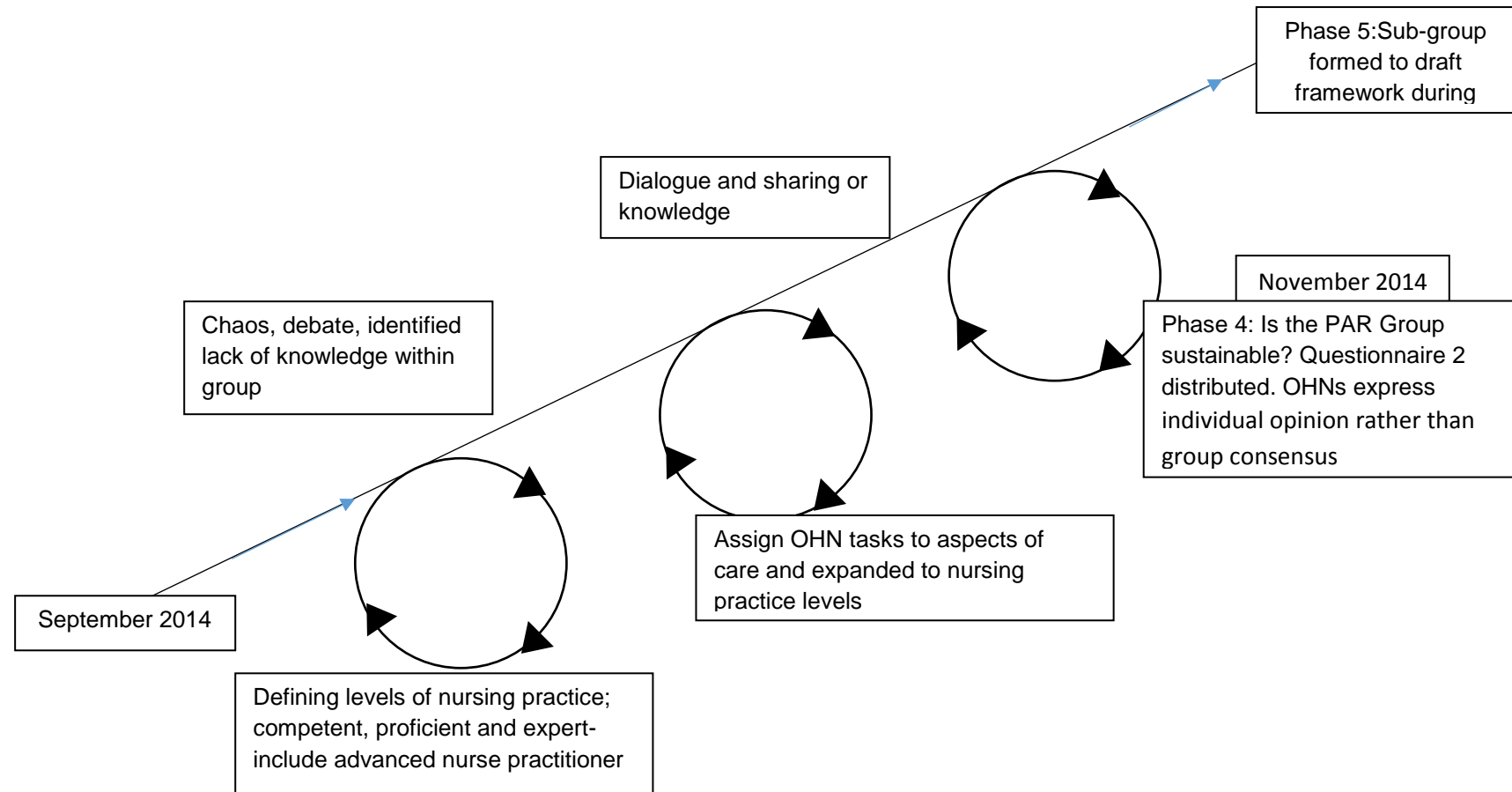
*The advanced nurse practitioner level was not discussed. I was not asked for information relating to this level – probably at this stage in the development process of the framework it was too difficult to do. Although I should have shared the information I had collated around this practice level, I held back on it. Felt it wasn't the right time to discuss it further. This study is proving arduous for all of us.*

*To provide the opportunity for the OHNs to reflect on how the group is working and suggestions on improvements. I sent each nurse electronically a mini-semi-structured questionnaire to ask for feedback. This will give me information to assess if I need to do anything to ensure sustainability the PAR group.*

**Table 4:** Levels of Knowledge and Skills for Occupational Health Nurses: Risk Assessment

<b>2: Levels of Knowledge and Skills: Risk Assessment COMPETENT</b>	<b>2: Levels of knowledge and skills – Risk Assessment PROFICIENT</b>	<b>2: Levels of knowledge and skills – Risk Assessment EXPERT</b>
<b>Competently carryout health &amp; safety risk assessment within the workplace you will be able to:</b>	<b>Proficiently carryout health &amp; safety risk assessment within the workplace you will be able to:</b>	<b>Expertly carryout health &amp; safety risk assessment within the workplace you will be able to:</b>
<ul style="list-style-type: none"> <li>Describe, using an example the differences between hazard, risk and control. (2.5)</li> <li></li> <li>Describe the general five steps to risk assessment (Health and Safety Executive. UK) (2.2) (2.5)</li> <li>Illustrate with an example how to carryout basic workplace risk assessment under supervision and working to protocols: <ul style="list-style-type: none"> <li>Identify the hazards (review resources i.e. Material Safety Data Sheets).</li> <li>Decide who might be harmed and how</li> <li>Evaluate the risks and decide on control measures</li> <li>Record your findings and implement them</li> <li>Review your assessment and update if necessary (2.1) (2.2) (2.5)</li> </ul> </li> <li>Describe with an example an understanding when health monitoring is appropriate. (1.1) (4.1) (2.1) (2.5)</li> <li>Describe with examples the difference between health monitoring and other health checks which may be undertaken as part of a wellness or health promotion activity. (2.2) (2.3) (2.6)</li> <li>Identify, using an example a normal range/measurements of vision screening, audiometry, and spirometry. Reflect on possible potential causes of an abnormal result. This may include equipment usage, individual workers variables and/or poor technique. (2.2) (2.3)</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate knowledge and interpret health &amp; safety legislation regarding assessment and evaluation of risk with minimal supervision, and participate in the monitoring and communication of risk assessment at operational level. (2.5)</li> <li>Demonstrate knowledge on safe systems of work, personal and protective equipment, environmental safety, employee job placement safety, employee and health monitoring. (1.1) (2.2) (2.5)</li> <li>Demonstrate the ability to generate and analyse data to identify employer/employee at risk. (2.1) (2.2)</li> <li>Demonstrate knowledge and understanding of influencing behaviour change to of the employer/employee to minimise risk. (2.6) (2.7)</li> <li>Discuss the ability to provide psychological support following accident/incidents. (2.1) (2.2)</li> <li>Able to demonstrate, an understanding of occupational diseases and communicable diseases. (2.2) (2.7)</li> <li>Demonstrate ability to advice on safe systems of work, for example the correct personal and protective equipment, environmental safety, employee job placement safety, and employee health monitoring. (2.2) (2.4)</li> </ul>	<ul style="list-style-type: none"> <li>Influence management to develop strategic organisation policy and procedure development for risk. (2.5)</li> <li>Demonstrate ability to communicate trends and advise on action plans to meet requirements for health monitoring. (1.1) (2.1)</li> <li>Demonstrates ability to serve as the expert to organisations, government agencies and other groups on advising on risk assessment to influence change. (1.1) (2.2)</li> </ul>

<ul style="list-style-type: none"> <li>• Make relevant referrals for further health monitoring/investigations i.e. chest x-ray following spirometry or to medical practitioner following abnormal outcome of health monitoring assessment (2.3) (2.6) (3.3) (4.1)</li> <li>• If equipment is part of your occupational health practice setting discuss using an example the quality framework (i.e. infection control/calibration of spirometry testing) which contribute to poor test quality. (4.3)</li> <li>• Describe the recall system for health monitoring requirements. (4.3)</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate ability to develop emergency strategies; implement and evaluate the programmes. (2.2)</li> </ul>	
<p>Fitness for the task assessment:</p>		
<ul style="list-style-type: none"> <li>• Describe the rationale for pre-employment medical assessment. (2.2) (2.3)</li> <li>• Discuss the application of legislation to occupational health assessment i.e.: <ul style="list-style-type: none"> <li>• Employment Act 1992</li> <li>• Disability Discrimination Act (1.1)</li> </ul> </li> <li>• Discuss the process of occupational health assessment within your own organisation:</li> <li>• Refer to appendices - task assessment specific for the organisation you work</li> </ul>		



**Figure 6:** Summary of PAR Group Meetings September – November 2014

## 5.5 Phase 4 – Sustainability of the PAR Group

This phase outlines the interpretation of self-examination process on the workings of the PAR group. All the OHNs completed the questionnaires and the findings were electronically sent to the group in November. Overall the responses to the survey illustrated the nurses were engaged in the meetings. All co-researchers were very satisfied with the meeting venue, which I consider meant that they felt it is a safe space to voice their opinions without fear of recrimination. The nurses expressed that they were very engaged in the process and were working well as a group. Co-researchers 5 and 6 commented *“that the group is working well together, as we draw from different experiences”*. Co-researcher 1 commented *that she wanted the chairperson [myself] to stay, its working well* and that *“Some excellent work is coming out.”*

Three of the OHNs expressed dissatisfaction with the progress we were making to achieve the aim of this study. Co-researcher 2 commented that she *“believes there needs to be more direction given to the group. Items discussed need to be more specific. Possibly the participatory approach is difficult as progress seems slow. Members of the group probably don’t have the energy or time to adequately read material before the meeting”*. Co-researcher 5 suggested that *“smaller objectives to make this more manageable, it will help us to stay focused”*.

Overall the evaluation showed the group were engaged in the PAR process and there was a moderate to above moderate level of satisfaction with the group progress. As a result of this questionnaire and following the discussion by the group during the November meeting, it was agreed that I continue the development of the framework during the summer break when the group temporary disbanded, with my two colleagues who worked with me at CDHB. This was to ensure continuity of the document. The draft OHN Skills and Knowledge Framework document was completed by February for the core PAR group to review.

### Personal reflection – November 12<sup>th</sup> 2014

*The group took control of the study – decided on its direction which is one of the tenets of PAR. However, I had a feeling the group was finding this study hard going – more work than was anticipated. I decided to assess how the OHNs were feeling, and their confidence in using the PAR process to undertake this study. The group wanted more direction from me – more comprehensive agenda sent to each participant electronically before subsequent meetings. The study is taking too long, may lose the participants interest. Positive note, - high level of participant involvement, good relationship*



*between nurses –reveal personal information in a safe space. Trust within group supports share learning leading to change/solution to practice.*

## **5.6 Phase 5: Formation of a Sub- PAR Group**

Using the PAR cycle, to progress the design of the framework two OHNs from CDHB joined me at two impromptu one hour sessions during December and January. As we were a small group temporary broken away from the main group, we named ourselves the sub-PAR group. One nurse and my-self were from the original group. This nurse had one year's experience working in OH, and the other who joined us was a NETP nurse who had recently become a permanent employee. The meetings were held when workload allowed during the working day, and were not audio-recorded. The rationale for the study and ground rules were explained to the new participant. Once the consent form and ground rules were agreed upon and signed by the NETP nurse, a brief resume of the PAR process was explained.

At the first meeting the sub-group continued on from the point where the core PAR group had reached. As colleagues we were familiar with working together although we had not undertaken research together. Drawing on the OHN competency documents from USA and the UK, the three of us quickly agreed on the activities that sat under the domains of the framework. The progress made in formatting the framework speeded up. We critically reflected on our practice as we moved through the PAR process. My two colleagues mainly contributed to the competent and proficient practice level, where I completed the expert level, all reflecting our current nurse practice level. The sub-group took a turning point when we agreed we required further guidance and reassurance that the content in the framework could be aligned with the domains of competencies for registered nurses (NCNZ, 2007). One of the nurses identified the individual to contact at the PDU. This PDU nurse had assisted other nursing specialities to align nursing competencies with their skills and knowledge document to discuss the OH framework and seek further advice regarding its development.

The second meeting held in January was focused on reviewing description of the domains of competencies for a RN placed against the OH activities in the framework suggested by the Nurse Educator working in the PDU. The nurses were satisfied with the design of the document. It was considered that the draft framework was completed and was ready to be returned to the core PAR group.

## **Personal reflection – December 19<sup>th</sup> 2014**

*The sub-PAR group moved quickly through the completion and review of the draft framework and aligning the key elements to the NZNC domains of competencies. The group worked well together critically reflecting on own practice using cyclical process – maybe because the group was small - only three participants, including myself and we were also familiar with our working styles. Aware of my position within group – nurse co-ordinator – not influence my colleagues to follow the path I would like the study to go. Learned to take a more conscious effort, more so than in the core PAR group to take a step back from the group. Strength of the group -filled knowledge gap in gaining an understanding of the needs of relatively new practitioners within the field of OH require to fulfil the role as an OHN. The meetings were not audiotaped as they were impromptu and I did not have the recorder available. This is a limitation of the study.*

## **5.7 Phase 6: Occupational Health Nurse Group Reconvening**

The nurses continued through the PAR process, working their way through chaos, then order and transformative moments when general agreement was reached to the tasks to include in the OHN Knowledge and Skills framework. Guidance was sought from the PDU on aligning the tasks with the Nursing Council requirements. The excerpts included in this phase illustrate these points. The final meeting held in May was when the co-researchers of the group agreed that their contribution to the designing of the framework and the PAR process had come to an end and were ready for it to move on to the next stage of being reviewed by the NZOHNA.

### **5.7.1 Meeting 5: On the Final Approach**

The OHNs arrived for the fifth meeting which implied to me that they all retrained their interest in the study. This meeting began with a review of the feedback from the questionnaire sent to each of the participants in November. I advised the group that three co-researchers indicated in responses to Questionnaire 2 were losing their enthusiasm for the study. In the group discussion it came apparent that they were feeling designing a framework was demanding more of their time than first thought, and this was the reason why I was tasked with pulling it altogether for review by the

group, to speed the study along. The group wanted more direction and a more detailed agenda.

The meeting moved on to review the draft created over summer. The nurses appeared to be pleased to see how the framework was developing. I had the sense the group were moving to the performing stage of team dynamics as described by Tuckman (1965) and reflected in Figure 3 (p. 38). They expressed their appreciation for the work undertaken by the sub-PAR group in drafting the document. It was agreed to devote the remaining time of the meeting to ensuring the domains in the draft document covered the main activities of OH and expectations of the OHN to practice at each practice level. A significant point in this discussion was the recognition within the group that given on the lack of knowledge of advanced nurse practitioner practice level, this level should be put to one side for the time being. Other stakeholders such as the NZOHNA and Nursing Council who have more understanding of the requirements of this level of nursing needed to be involved.

The group, in a positive atmosphere moved on to discuss health monitoring activities such as lung-function tests and agreed that OHNs required to be aware of normal parameters in order to recognise abnormal readings. The wording in the document was changed to reflect this. The meeting continued beyond the usual hour for a further 30 minutes which indicated that the nurses were engaged in this process. I was tasked to tidy up the document, and for the PDU to review it again to ensure the nursing competencies were correctly aligned with the OHN activities. The final review of the document to be undertaken at the subsequent meeting.

### **Personal reflection – February 9<sup>th</sup> 2015**

*We worked hard during this meeting. The group were enthusiastic, allaying my fears that a few of the nurses were losing interest in the study. The group can now see the format of the draft framework which I feel provides motivation to the nurses to complete the document and sustain the study.*

### **Meetings 6 and 7 – Reviewing the Framework**

The group revisited the competency level, so going through the action cycle providing the opportunity for the nurses to continue critically reflecting on the action previously taken and make amendments as required. The advantage of the PAR process allowed

flexibility leading to change. Co-researcher 7 reviewed the number of OH activities placed within the competency nurse practice level expressing concern that we had aligned too many. Co-researcher 1 explained *“The reason being is that we are asking for practical examples to demonstrate competency. Why have we done this, why the expansion?”* The dialogue included all the OHNs with a query from Co-researcher 3. *“It all depends on how you are going to audit practice as well, because if you are going to audit to this detail then you are going to need all that?”* The group murmured agreement and Co-researcher 3 continued with the thought:

*The other thing is does it depend on your procedures for the company, when you are discussing pre-employment looking at what pre-employment requirements are depends on your organisation because that is also what guides you when doing an audit. Because our pre-employment requirements are very different to others.*

With nodding of agreement from the nurses, Co-researcher 1 suggested:

*We [have] got to demonstrate all the way through the document, instead of breaking it down have the option of, for example demonstrate the ability to undertake skin assessment, vision test etc and have as one general activity.*

Co-researcher 4 argued that all the practical aspects that need to be demonstrated by the OHN at the competent nurse practice level should be included in the appendices of this document. She concluded this discussion by stating: *“The competence section is going to be bigger than the others because it’s the foundation for the other levels. Say demonstrate using your local procedures and refer to Appendix for examples”*. The group agreed with Co-researcher 1 commenting *“Yes at the beginning when we started this we wanted them to understand the concept of skin assessment, health monitoring and provide examples. Yes this sits in the Appendix rather than in the body of the document.”*

The group had reached a consensus demonstrating the spiral process of PAR allows the participants to develop and modify action. There was a positive feeling amongst the OHNs as the draft document was taking shape. Co-researcher 7 commented: *“What I was most excited about when I looked at this was how well we’ve done. That’s dam good ladies.”*

I moved the group on to examine the process of demonstrating competency. The dialogue between co-researchers revealed that there is not an ideal tool available to assess nurse’s competence to practice. Co-researcher 5 advised documents from the

Royal College of Nursing, UK reflect a similar process utilised by the NCNZ to assess competence. It was agreed that *“If we are going to present this as a speciality to the nursing council then it makes sense to use what they use”* (Co-researcher 2).

The group reflected on the purpose of this study to review the current New Zealand (OHNs) competency document, and develop an integrated career and competency framework for the nurses working in the field of OH. Group consensus agreed this aim could be achieved by aligning the framework with the Nursing Council competencies, which can be used by the OHN to complete their professional nursing portfolio. They concurred that diabetes and pain management specialities documents were more comprehensive and ran a risk of not being used. The document had to be simple and practical to be used by the OHNs.

The meeting concluded with a sense of achievement in this stage of development of the OHN Skills and Knowledge draft document. I was tasked to make the amendments to the framework and send it to the nurses electronically for comment. The nurses agreed to meet in May for a final review of the framework. Co-researcher 6 as the group were packing up to go home said: *“Great work everyone”*.

### **Personal Reflection – March 20<sup>th</sup> 2015**

*Conversation was robust with all participants contributing to the dialogue. Possible answers to actions explored –discussed and amended. Group respectful to each other. Motivation of group continues as they can see the Knowledge and Skills and framework taking shape. The activities to be undertaken by the OHNs are summarised and not in so much detail as those required by the diabetes and pain management nurses. It was suggested that a concise document would be more likely to be used by the OHNs.*

### **Meeting 8 – Closure**

The final meeting was held in May 2015. I photocopied seven copies of the document, one for each participant. No further requests for amendments to the framework were made by the group as the document is a draft for further consultation. This is not included in the thesis.

The nurses were euphoric with their achievement. The general comment was that they enjoyed undertaking this study, although at times it was “*working through chaos*”. Co-researcher 2 stated, “*I won’t know what to do with myself now the group meetings have come to an end*” which was met with laughter. Co-researcher 7 mentioned that she would miss the meetings and we should do another study. This stage is identified by Tuckman (1965) as adjourning or mourning, when the group is disbanded or life coming to an end. Co-researcher 3 spoke of the amount of work that creating this framework has taken and another of the “*amount she had learnt from us all*.” That she wasn’t aware how much work we all did in occupational health. “*We are amazing!*”

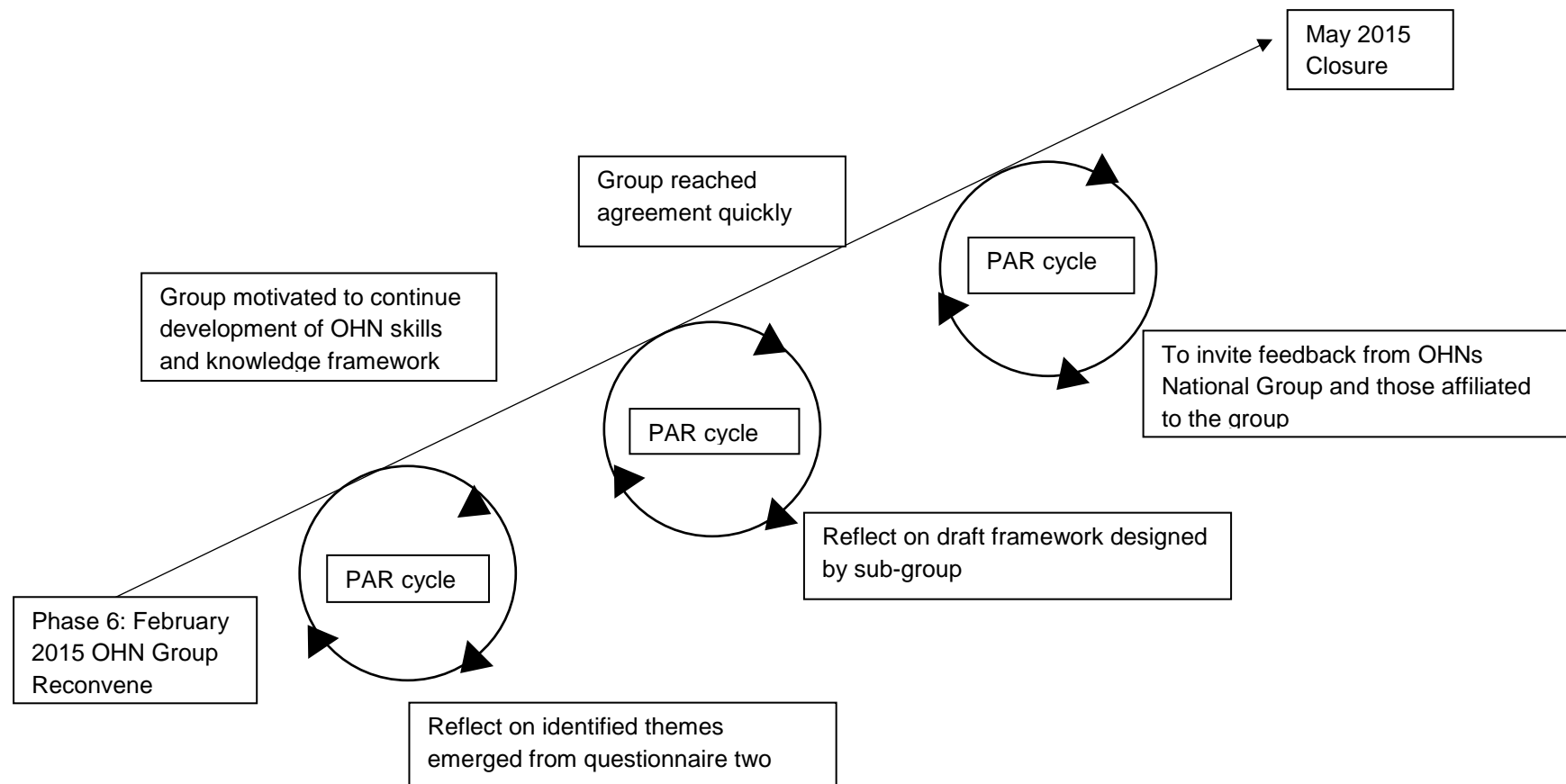
I thanked the group for their contribution to the PAR process. The document is something we can all be proud of. It was agreed that the next step in the life of the framework was for it to be taken to the NZOHN association for review. The final decision by the group was for us all to celebrate with a meal at a local restaurant. A summary of the Phase 6 which included the meetings held in February to May is illustrated in Figure 7 (p. 80).

## **5.8 Summary**

This chapter outlined how the group from June 2014 to May 2015 went through the cyclical cycle of the PAR process numerous times exploring their understanding of the activities as an OHN. The OHNs went through various phases of the PAR process, experiencing critical reflection, sharing of knowledge and learning, moments of uncertainty, empowerment, to a point when the group concluded the next step of the development of the OHN Skills and Knowledge framework was to it on to the NZOHNA Group for their feedback. PAR allowed the nurses not only to take part in research but influence OH practice.

This study was also influenced by the group dynamics which I was mindful of as the primary researcher. I was observant of good interactions between the OHNs. The sustainability of the PAR group was explored during phase three. It was evident that half of the group were not satisfied with the studies progress. Forming a sub-PAR group to continue work during the summer period was successful in addressing this. The group reconvened during February 2015 and together in a positive climate the nurses moved through the cyclical cycle to complete the draft framework.

This chapter is the conclusion of the interpretation of the PAR phases one to six. The remainder of the thesis is a discussion on the findings and implications for OH nursing practice. The challenges and limitations of the study are made as well as suggestions for future research.



**Figure 7:** Summary of PAR Group Phase 6, February – May 2015



## **Chapter 6: The Reflection of PAR in Understanding Nursing Competencies**

PAR as a process of inquiry assumes that theory and practice can be bridged by learning from the results of interventions planned after exploration of the problem (Davison, Martinsons & Knock, 2004). Knowledge translation is defined by Wimpenny (2013) as being the combination of collaborative knowledge, and research evidence to ensure best practice delivery to clients to improve health outcomes. I informed the OHNs the PAR process would provide the opportunity to explore the development of an OHN skills and knowledge framework. This chapter presents an overview of the research and framework developed. It also includes discussion, recommendations and reflections on the application of the PAR process to not only OH nursing but nursing in general.

### **6.1 Research overview**

PAR involves participation and collaboration in a cyclical process. It was used to explore the work of OHNs within the workplace and map this against the NZ competencies for RN. Bridging the gap between theory and practice is best achieved by practitioners involved in the practice. The research had two purposes. The review was part of developing an integrated career and competency framework for the nurses working OH, and secondly to record and analyse the PAR process to gain greater understanding of this research framework.

This collaborative research study relied on the participation of eight Christchurch OHNs, affiliated to the NZOHNA. Along with me, these OHNs shared a common interest to improve the practice delivery of OH to the working population. Each of the OHNs brought their own perspective to the group meetings, shaped by their experience of life and working in OH. The nurses had varying experience within this field of nursing, from one year to over 30 years. Together the group formed a partnership to undertake this inquiry, agreeing on the question, data collection and analysis and deciding on action to take. The engagement of participants from the community in the study is one of the tenets of PAR. PAR approach values participant's experience, which according to Israel et al. (1998) becomes knowledge and influences practice. Working within the PAR methodology, in a safe relaxed atmosphere of a meeting room at a hospital in Christchurch provided an environment enabled the OHNs

to come together and have a voice through reflecting and developing understanding of their practices. Bevan (2013) argues that a trusting environment is critical for people to bring about change to their situation. Before the first PAR meeting I undertook a literature review of international and national nursing competency documents, legislative and policy documents as well as research papers into work activities carried out by OHNs. I used these documents and research articles to stimulate dialogue at the PAR group meetings. Each application of the PAR process to a local inquiry is unique, even though it has identified characteristics. These characteristics are participation, communicative space, position of the insider and outsider researcher, group dynamics, and knowledge and power (Israel et al., 1998). The PAR process empowered the OHNs review and to improve OHN practice and professionalism. Research which benefits the community, making social change is the central tenet of PAR (Kemmis & McTaggart, 2005).

This research was divided into six phases that centred on regular group meetings held by the group. Phase one concerned establishment of the PAR group and discussion on the rationale of the study, the research question, and an overview of the PAR process. This was the focus of the first stage of Tuckman's model (1965), where the group need to gain an understanding of the purpose of the research, to find out what is in it for them. This was a crucial stage for the study. Each of the OHNs brought their own particular skills, attributes and personal motivation for participating in the research. If the OHNs were not motivated to undertake the research and did not wish to work with me I would not have been able to develop the proposed skills and knowledge framework.

Phase 2 evolved from this information session when the group took ownership of the study by reflecting on their role in their workplace. Three main themes emerged, which were used as the basis for discussion by subsequent group meetings when defining the critical elements for the competency and career framework. These were shared career pathway, education and the diverse role of the OHN. The themes were debated before consensus was reached by the group, as they moved through the cycles of action research. This is demonstrated in the October meeting when the group were defining the tasks that sat under the aspect of care, health promotion. We debated whether health monitoring sits under health promotion. The nurses undertook hearing tests, so it was decided it did. Then during later conversation, we decided it also sat under the fitness to work aspect of care. The process allowed the OHNs to continually review, adapt and improve the content of the skills and knowledge framework under construction.

During Meeting 3 (October), the group were sufficiently comfortable to share personal information to the group, implying they trusted each other and had moved into Tuckman's (1965) the normalising stage. By the fourth PAR group meeting, the OHNs had defined the levels of nursing practice, creating a structured approach to move from competent to proficient and expert in the area of OH. They had also named the seven aspects of care (Table 1, p. 63), and the competencies to sit under health promotion and risk assessment domains (Table 4, p. 69).

To maintain and improve participation, evaluation of the PAR process was undertaken by surveying the OHNs. A questionnaire was sent to each nurse in November asking them to reflect on how we were working as a group, and rate of progress. The findings of this revealed that all the OHNs felt engaged in this critical reflection and systematic enquiry and considered the group process was working well but not fast enough. I noted from my journal:

*The group were continuing asking questions, critically reflecting on OHN practice which maintained the dialogue within the group. It was disappointing that the questionnaire revealed, three of the OHNs were not satisfied with the rate of progress the group was making. They indicated the study was making slow progress.*

As a result of a discussion of the questionnaire findings at the November meeting, I was tasked to form a sub-PAR group to continue drafting the framework to complete the first draft document during the summer break. The achievement of the sub-PAR group was a turning point in the process. Being a smaller group enabled each of the co-researchers to have greater participation and decision making was easier, and it was quicker to progress the draft skills and knowledge framework than in the larger group of nurses. The main disadvantage working with the smaller group was that we had less knowledge and fewer skills to share. One of the nurses had previous 30 years nursing experience but only 12 months in the field of OH and another had recently joined the team from the NETP Programme. I, on the other hand had 20 years of working in various organisations as an OHN. This time-frame from beginner to experienced, meant we reflected competent to expert practice level.

The nurses increased their articulation of their knowledge on OHN role when we reviewed the international and national documents and Health and Safety legislation. I recorded in my journal that one co-researcher commented: "we do so much, cover many things". At the meeting one of the nurses further commented "that there was

*nothing like this when she came into OH, now the role is clearer*". This clarity of role was seen as something the nurses could use in their workplace.

In the three meetings held in 2015 the group continued to work through chaos, then order and finally transformative moments when we agreed on the tasks to include in the Knowledge and Skills framework. The group had moved into the performing stage of Tuckman's model (1965). Guidance was sought from the CDHB PDU on aligning the tasks with the Nursing Council requirements. An extract from the framework is shown in Table 4 (p. 69).

The study came to a close for this group when there was general agreement (May 2015 meeting) amongst the nurses that they could not contribute further to the development of the draft Skills and Knowledge framework. OHNs throughout NZ will soon have guidance on delivering an informed service to the working population and reduce health inequalities. It is anticipated that the document framework will meet the nurse's professional requirements, business needs and provide a career pathway for the OHNs. Also the framework will promote the capability of this nursing speciality to influence the health of the working population.

The next section reflects on the application of the PAR process to this study. PAR provided the OHNs the opportunity to share and gain new knowledge, which was evident from the conversation during the meetings, empowering them to bring about consistent approach to the delivery of OH nursing practice.

## **6.2 Empowering the OHNs to Bring About Change**

Through the application of the PAR process, the OHNs were empowered to create a document that articulated the role of the OHN within a framework that could be used by others. The OHNs actively explored their role and activities within the workplace through a process of self-examination. The information emerged was the foundation for dialogue between the co-researchers when exploring the critical elements for competency and careers in OH nursing. Dialogue allowed the group to learn from each other's perspective and reach varied ways of finding a solution. This practical study was meaningful and useful to the OHNs group who were pleased and proud of their success. All the OHNs involved expressed at the final meeting that they gained new understanding of the three nurse practice levels: competence; proficient and expert and their application to occupational health nursing. Through the development of the framework we articulated the diversity of the role and the application of best practice guidelines be applied to practice.

Similar to the experience of Mellor and St John (2007) who argued it was not until we had an understanding of our activities, it would have been difficult to develop the role of the OHN and articulate the scope of practice and encourage changes that reflect the needs of the workplace and profession. Undertaking this study within the guidelines of traditional research I believe would not have allowed collection of sufficient data of the various activities OHNs undertake, nor of the levels to apply these. PAR enabled the extraction of the data required to capture the diversity of this role and apply to the framework. The OHN activities over the last 10 years have moved from being centred on treatment such as providing first aid to the workers to undertaking health monitoring programmes with a focus on a holistic approach. This includes bio-psychological health such as sickness absence management and organisational theory as well as environment health and safety (Harrison, 2006). The key activities OHNs undertook in their daily work group was a combination of illness and wellness tasks.

The management of power and democracy within the group was important to sustain this study. These concepts were discussed and addressed at the initial meeting. The nurses signed a written agreement to abide by rules of dialogue and behaviour within the group. The OHNs respected each other and this was evident from the introductory meeting, courteously allowing each other to participate in discussion. Although a PAR process is messy, I did not have to refer the group back to the written document to remind them of the agreed rules. Without this agreement there would have been the potential for the study to fail if the purpose and processes of the inquiry were not understood.

### **6.3 Application of PAR Process to Nursing**

This section considers the benefits and outcomes of the PAR process and its application to not only OH nursing but nursing in general. I believe this study was successful for several reasons. The group shared a common goal in achieving the aim of the research question and the group trusted each other. They were all engaged and willingly participated in all the phases. They worked together and sustained membership. The continued dialogue between the nurses was the essence of the PAR process. Differences and opinions occurred, but this was positive, as resolving these (such as during PAR group meeting in September 2014 around the definition of health promotion and health monitoring) lead to a more informed understanding of the OHN's activities. The group was open and participative and worked in the performing stage of Tuckman's model. In contrast, I noticed from reviewing the transcript in March 2015

when common ground was easily established, the group asked fewer questions. This is demonstrated when Co-researcher 5 suggested to make the reviewing of the document easier *“to put the nursing practice levels next to each other on the same page so it will be easier to read across and ensure we are using the right words”*.

### **6.3.1 Staying True to PAR**

Managing both the practical cycle and the theoretical cycle of PAR was demanding. Using my journal was important to record my thoughts as the study emerged. The work by Tuckman (1965) and Wallerstein et al. (2008) on group dynamics to (Figure 3, p. 40) assisted me in understanding PAR. The centre of PAR, the practical cycle is influenced by group dynamics, the behaviour of individual group members (Wallerstein et al., 2008), and the way the participants relate to each other and move through Tuckman's Group Dynamic theory. According to Wallerstein et al. group dynamics can be divided into: the individual, structural and relational. Individually the OHNs brought to the PAR group many variables that influenced behaviour within the group. This included influences from childhood experiences, culture, and the motivation to undertake this study and link to OHN. Structural dynamics refers to the nature of the team. The nurse's value influenced how they communicated within the group environment. The written formal agreement of conduct within the OHN PAR group helped to also ensure that each OHN had the opportunity for her voice to be heard within a safe space. This agreement also reflected relational dynamics, such as the right to agree, and that power was theoretically shared. Although it is beyond this study, it would have been worthwhile to explore the influence of a written agreement on group dynamics of a PAR group.

### **6.3.2 Opportunity to Share and Increase Knowledge**

Times of tension, chaos, then understanding and consensus as we explored the work we undertook and aligned activities with the nursing practice levels was an opportunity to share knowledge and co-learning. No greater evidence of learning by the OHNs was

I believe exhibited by the group then when the interpretation of the nurse practice levels designed by the NCNZ (2007) was debated using the framework of the cyclical process. Critical reflection on the practice levels occurred through dialogue and review of documents retrieved from the literature search. Gradual understanding emerged as we identified the OH elements to align with the three professional nurse practice levels.

Evidence of this was during the meeting held in October when a question under consideration was: What did the group believe the skills and knowledge required by an OHN to have to be able to demonstrate competency, proficient and expert in health promotion? Following a discussion on the definition of health promotion, separating the functions of health promotion and health monitoring, the OHN PAR group moved forward from their understanding to identify the competencies to sit under the three nursing practice levels.

The PAR process encouraged us as OHNs to be involved in research. Group research in OH is not common as there is rarely the time in our daily work. It is noted by Wimpenny (2013) that the demands and time constraints of healthcare professionals within their workplace hinders research. This was remarked upon by the Occupational Health Nurse Symposium hosted by Otago Southland Occupational Nurses Group in September 2015. It was discussed that OHNs need to make time to undertake research and not to rely on international evidence.

The success of this practical study of knowledge translation (Wimpenny, 2013) using the iterative cycle of PAR going through the four steps of each cycle: plan action, observe and reflect as described by Kemmis and McTaggart (2005) relied on the inclusion of those people to whom the issue was a concern. It allowed us to have a great understanding of OHNs activities. This was reflected in the commitment to the study and enthusiasm of the OHNs to this study. The PAR process enabled the group to be empowered to control their own practice, and to share knowledge.

### **6.3.3 Professional Development**

One of the objectives in undertaking this research has been to contribute to an understanding of PAR. The group moved through multiple small PAR cycles, questioning and sharing of knowledge led us on to a pathway requiring further exploration (Kemmis & McTaggart, 2005). This was evident as the group recycled through the steps to come to an understanding of the practice nurse levels. Through this flexible process themes emerged as we became clearer as we contributed to the dialogue drawn from our collective experience and from documentation. The aspects of care of the framework were agreed upon by the group during the second meeting held in August 2014 through brain storming the activities we undertook and grouping them into themes. These were Fitness for work; health promotion; risk assessment; legislation/standards; leadership & management skills; research and professionalism.

Application of the PAR process to this inquiry led to suggestions of further work to be investigated and the need for education modules and an investigation into the support was required by the OHNs to carry out their role identified. Ideas included on-line modules. I noted in my journal at the time the nurses were interested in developing learning packages and forming another PAR group (on completion of this current study) to explore this option is evidence that the nurses were engaged and empowered by the research. This also demonstrates the group were in the norming/performing stage of Tuckman's (1965) Group model. From my journal I noted the group were expressing positive body language of sitting forward, towards each other, readily agreeing with each other. These experiences also demonstrated continue personal development of the nurses and professional development.

The next section reviews the challenges that emerged from the PAR process. These included moments of "not understanding", the lack of commitment to undertake the practical activities of the inquiry, and from my perspective the amount of time and energy required to undertake the practical as well as the writing up of the theory application of the process. This section also discusses the limitations of the study.

#### **6.4 The Challenges of PAR**

PAR is a messy process and as such can be expected that issues can arise. One of the notable moments was during Meeting 4 (November), when the group momentarily felt they did not understand or know what action to take to move the cycle forward. This occurred when the nurses were reflecting on the merits of pursuing their understanding of the advance nurse practitioner's role. Although some participants were interested in exploring this level of nursing practice, others had reservations. However, it was the words of Co-researcher 3 that "*we were opening up a can of worms*" that stopped the conversation. Following this comment, I noticed and recorded in my journal the group all sat back giving the appearance of looking "deflated". Co-researcher 2 brought the group back into discussion by suggesting to post-pone this area of inquiry. PAR does not follow cycle in uniform steps, it goes backwards and forwards, jumping from one step across to another in no order. Literature gave me the impression that PAR cycles follows a sequence of steps in an orderly fashion, but during October meeting, the nurses moved from planning by reviewing the documentation on advanced nurse practitioner to action by including it in the nurse practice level chart, reflecting on the issue and back to planning, but not able to move



onto observe until towards the end of the dialogue on this topic. The group finally came to the conclusion not to include the advanced nurse practitioner level in the proposed framework.

#### **6.4.1 Time Consuming**

The PAR process was challenging to sustain and time consuming. Although the main group were made aware of this during the introductory meeting, by November, five months into the research, the group expressed the study through the PAR evaluation questionnaire was taking considerable amount of time. Undertaking PAR is a time-consuming process (Israel et al., 2003) for not only the nurses but also for me. The amount of time the OHNs devoted to the research is difficult to quantify. Each participant attended between 7-9 meetings, 7 to 9 hours of their time which is greater than if interviewed for a research study. The OHNs also took approximately 20 minutes of their time to complete the questionnaires and up to a couple of hours reading. The amount of time I devoted to the research was greater and included reading the relevant literature, the monthly agenda and re-writing the draft document throughout the life of this research. In addition to the writing of the action cycle of the PAR process I wrote the theory of this process.

#### **6.4.2 A Novice Researcher**

Being a novice researcher and undertaking the role of primary researcher presented some challenges in undertaking this study. Being an insider allowed me to easily access the OHNs group, and form a group to undertake this study with me. Having worked as an OHN in a variety of industries, from heavy engineering, the armed forces to healthcare facilities I had some understanding of the participants varied work activities. I had to be aware however that I did not assume, nor they assume, that I knew about their work experiences; I needed the nurses to inform me. To guard against role confusion (Asselin, 2003), I maintained notes on my thoughts and feelings in response to the PAR group meetings. A demonstration of this is from my journal notes where I recorded comments following a discussion on the activities required as part of pre-employment medicals:

*I have carried out such medical examinations in my role as an OHN working in industry some years ago. I assumed that I knew this process inside out I had*

*to make a deliberate effort, and not assume to allow participant 2 to describe her method of deciding what assessment was required for a potential new employee entering employment in her workplace. I learnt that this process carried out in engineering now takes into consideration other factors such as the type of welding not previously thought important when I carried out these medicals.*

I periodically discussed my thoughts and notes with my supervisor to assist me in understanding my feelings in response to events in the meetings and stepping back from the data looking at it as a researcher not an OHN. My notes revealed in July 2014 my thoughts before the information session: *What if no one turns up?* These thoughts I was reassured by my supervisor are normal for PAR researchers. The role of my supervisor in undertaking this research thesis provided me with someone to reflect with. I feel when I undertake future PAR which is not a thesis having a supervisor is necessary to reflect and discuss material with. Such reflection would aide understanding why I am doing things this way, and how may I do things differently to not only improve outcome but also add to the knowledge of this process. The characteristics of a supervisor should be approachable and available, provide constructive feedback and be willing to enhance the facilitator's knowledge and build competence. If not working with a supervisor, access to PAR email discussion group maybe useful such as one created Dover (2008).

The group enthusiastically provided information on their reality as an OHN working in various businesses. At times I experienced the nurses digressing from the topic under dialogue such as during the October meeting when the discussion on which level to place the ability of the OHN to demonstrate the business case for health monitoring moved to chatting about the difficulty in writing such a case. This is in line with the argument put forward by DeLyser (2001), because I knew the participants the group were keen to contribute to the conversation they went off on a tangent and discussed a topic that had a tentative link to the one under discussion. This occurred a few times in the PAR group meetings and I intervened to bring the nurses back to the topic under discussion moving me from an insider to an outsider, from being an equal participant to a facilitator. From my journal I did note that when this occurred

*I had moments of panic, hoping the conversation would not go completely off course, as we had only an hour for each meeting and every second was precious. Also I thought do I have the capability to bring the group back to focus on the topic under discussion. I had to let the nurses have time to deviate*

*slightly, to air their thoughts as it was another example that they felt comfortable within the group to do this – performing stage of Tuckman's model (1965).*

The PAR evaluation questionnaire revealed that the PAR group were satisfied with me continuing to facilitate the meeting, which I found disappointing. If the group were as engaged as I believed in the study why did they not wish to rotate this role? I did not enquire into the reasoning but surmised that they believed participating in the study was as much of the commitment they could make. Another thought was would they have felt this way towards an outsider researcher? Knowing me may have led the group to assume that I would continue this role.

#### **6.4.3 Audio-recording**

Audio-recording the PAR group meetings allowed me to participate in the meetings whilst simultaneously recording what was going. The limitation of using this method of data collection was that I could not record the non-verbal clues such as body language and facial expressions. Therefore, the full picture of individual dynamics was not known. Recruiting another researcher from outside the PAR group to take the role of observer or alternatively audio-video the PAR meetings would have enriched the data produced and add to a greater understanding of the five stages of group dynamics outlined by Tuckman (1965) but may have changed group dynamics.

#### **6.4.4 Flexible Process**

PAR, a flexible process was demonstrated particularly in three instances in this study. Firstly, the development of the study question, secondly the workload was not shared evenly amongst the OHNs, and lastly not all the participants attended each of the PAR meetings. Although we didn't stay true to PAR in the design of our question, as I presented to the group a suggestion for a research question, the OHNs made the decision on what the framework would look like. The nurses devoted time to attending and participating in the group meetings but took little part in facilitating the meetings as would be expected from PAR.

I was tasked by the OHNs with identifying appropriate documents for the group to review, and facilitating each group meeting. I undertook most activities.

The level of participation by the OHNs in the process varied. Not fully participating according to literature (Kemmis & McTaggart, 2005) means the process is not considered PAR, but without the nurses' contribution when able, enthusiasm, knowledge and commitment to develop this framework it would not have occurred. The nurses have engaged in the study, gained and shared knowledge. The proposed document is now out for consultation, by the OHNs affiliated to the NZOHNA which is a different level of participation (Kingdon & Elwood, 2009).

## **6.5 Conclusion and Future Direction**

This study began with an inquiry to explore the competencies required by OHNS working in New Zealand using the PAR process. As OHNs have an important role in delivering legislative requirements and Government initiatives to businesses to support and maintain the health of the working population, they need to ensure their activities are appropriate and consistent. International literature and the skill and knowledge and the group of OHNs PAR group revealed expectations of competent, proficient and expert NZ OHN practice. Working with my colleagues has been informative, a time of sharing knowledge, as well as acknowledging the limitations of our knowledge, and of laughter as we went through the cyclical process of PAR to identify the core competencies required by OHNs.

The importance of participation by all the OHNs was the essence of the PAR process. Motivation in participating in this study may have been personal but we appeared to have had one thing in common, and that was the recognised need to review the current OHN *Competencies and Performance Criteria in Occupational and Environmental Health Nursing* (2004) document. This led to the development of the OHN Skills and Knowledge framework, a 38 page document. The framework covered seven areas where OHNs need to be competent, proficient and expert. The seven aspects of care were fitness for work, health promotion, risk assessment, legislation and standards, leadership and management skills, research and professionalism (Table 2, p. 62). Each of these areas was detailed about the expectation for the three levels of nursing practice for example risk assessment (Table 4, p. 69). The OHN Skills and Knowledge framework details both the qualifications and skill set required at different levels as well as activities to perform. The framework clearly demonstrates that there is novice to proficient practice in occupational health nursing across all the domains revealed by the OHNs.

This study has achieved its aim and dual role. It has contributed a draft document, articulating the diverse activities of the OHNs working in New Zealand, and to the knowledge about the PAR process and its application to nursing. The OHNs learned from participating in this study and undertaking the PAR process that change is achievable. PAR aims to change and make a difference and is seen as political. As a group, the OHNs from Christchurch have completed a significant piece of research.

I believe the collaborative interaction PAR approach to practical inquiry, needs to be encouraged in its application to general nursing and OH to assist with bridging the gap between practice and theory in attempt to reduce health inequality. If OHNs become more familiar with the application of the PAR process to their local practice and record the theory cycle will add to the information of this research framework as well as help bridge the gap between practice and theory.

## **6.6. Post Script**

The OHN Skills and Knowledge framework document presented to the NZOHNA was acceptable as a draft framework. The Christchurch OHN PAR group were made aware the wording of the domains have been changed in minor ways and the layout of the document enhanced. The Christchurch OHNs PAR group did not reconvene to comment on the National groups amendments. The document was electronically circulated by the NOHNA to the 250 OHNs affiliated to the organisation with an invitation by the organisation to comment on the document.

Future direction of the proposed OHN Skills and Knowledge framework has led to the development by the NZOHNA peer review form. Also education modules required to support this framework are being considered.

## APPENDICES

### APPENDIX 1: HUMAN ETHICS APPROVAL



Phone 0-4-463 5676

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## MEMORANDUM

Email

Allison.kirkman@vuw.ac.nz

TO	Stella Howard
COPY TO	Kathy Nelson
FROM	Dr Allison Kirkman, Convener, Human Ethics Committee
DATE	17 June 2014
PAGES	1
SUBJECT	<b>Ethics Approval: 21049</b> Development of Career and Competency Framework Mapped against the Core Nursing Competencies for Occupational Health Nurses Working in New Zealand Using Participatory Action Research

Thank you for your application for ethical approval, which has now been considered by the Standing Committee of the Human Ethics Committee.

Your application has been approved from the above date and this approval continues until 31 March 2016. If your data collection is not completed by this date you should apply to the Human Ethics Committee for an extension to this approval.

Best wishes with the research.

Allison Kirkman

Human Ethics Committee

## APPENDIX 2: INFORMATION SHEET

TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI



**Victoria University of Wellington**

**Graduate School of Nursing, Midwifery and Health**

### **Information Sheet for a Study on Developing an Integrated Career and Competency Framework for Occupational Health Nurses in New Zealand.**

**Date: 17<sup>th</sup> June 2014**

**Researcher:** Stella Howard: Graduate School of Nursing, Midwifery & Health, Victoria University of Wellington

I am a Masters student in Nursing at the Graduate School of Nursing, Midwifery & Health. As part of this degree I am undertaking a research project leading to a thesis. The research has been approved by Victoria University of Wellington Human Ethics Committee (Approval 2014/June). I am also employed as an Occupational Health Co-ordinator for Canterbury District Health Board. My workplace supports the undertaking of this research.

The research I am undertaking is based on the principles of participatory action research (PAR) and will involve exploring the critical elements and key considerations of a competency and integrated career framework for occupational health nurses (OHNs) in New Zealand. An integrated framework will enable OHNs to work to best practice to support and promote the health and wellbeing of the population, as well as allowing them to identify their training requirements and career planning.

I am inviting OHNs from Christchurch who are affiliated to the New Zealand Occupational Health Nurses Association to participate alongside me in this study. PAR is a collaborative process and provides an opportunity for us as OHNs to work together in designing the framework through discussion, and the sharing of skills. Participation in the research will involve attending a series of meetings to discuss aspects of occupational health nursing.

The initial phase of the research will involve a review of New Zealand and international competencies and documents relating to occupational health nursing, together with New Zealand employment legislation and proposed amendments. The findings of this review will be used to provide the basis for the first two PAR meetings with the nurses. The direction of the research will then be determined by the group. Participation in the project will be over approximately nine months and will entail monthly meetings each lasting one to two hours. Notes summarising the meeting will be sent by the researcher to participants following each meeting. The venue and agenda will be determined initially by myself and then by the group. The meetings will be audio-recorded. Participants can withdraw at any-time without giving a reason, or ask that something

that is said not be reported verbatim in the research. Just let me know at the time. However, given the participatory nature of the research information provided up to the point of withdrawal will remain part of the data for the research.

This participatory action research will form the basis of my study and the identity of the participants will be protected. All material collected will be confidential to the group. However, as the number of occupational health nurses in New Zealand is relatively small, it is possible that other occupational health nurses may recognise those involved in the research. The names of the nurses' workplaces or personal identifying information will not be sought.

The research project will be submitted for examination to Victoria University of Wellington and deposited within the University library where it will be available electronically. The field notes and audio tapes will be destroyed two years after the end of the project. At the conclusion of the study the group will be given a copy of the revised competency and integrated framework, and if they agree the framework may be jointly presented at the NZOHNA conference and ultimately be used nationally by occupational health nurses. It is also anticipated that a journal article will be written about the research.

Before committing yourself to this project I will hold an information session on Monday June 30th 2014 at 5pm, at The Princess Margaret Hospital where I will explain the basis of PAR and your role in this research project. This will also be an opportunity for you to have any questions about the research answered. Following this meeting those who wish to participate in the research will be asked to sign a written consent form.

If you have any questions or would like further information about the research project please do not hesitate to contact me or my supervisor, Dr Katherine Nelson, at Victoria University of Wellington. Contact details:

### **Principal Investigator**

Stella Howard, Occupational Health Co-ordinator, Occupational Health, Level 4, Heathcote Building, The Princess Margaret Hospital, Cashmere Road, Christchurch. Ph 03 33768606. Email: [howardstel1@myvuw.ac.nz](mailto:howardstel1@myvuw.ac.nz)

### **Supervisor**

Dr Katherine Nelson, Senior Lecturer, Graduate School of Nursing & Midwifery, Victoria University of Wellington. Ph: 04 4636138. Email: [kathy.nelson@vuw.ac.nz](mailto:kathy.nelson@vuw.ac.nz)



## APPENDIX 3: CONSENT FORM

TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI



### Consent form

**Title: Developing an Integrated Career and Competency Framework for Occupational Health Nurses in New Zealand**

**Name of Researcher: Stella Howard**

- I confirm that I have read and understand the information sheet dated June 2014 for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactory.
- I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, but that any contribution I have made to the group meetings will remain part of the research.
- I understand that any information I provide as part of this study will be kept confidential by the principal researcher and supervisor, but that others who are involved in the group meetings will know my identity and what I have shared.
- I understand that the published results or presentations will not use my name and that no opinions will be attributed to me that will identify me. However, I am aware that as the occupational health nurses workforce in New Zealand is small my participation in the research may be recognised by other nurses.
- I understand that the field notes and audio recordings of the group meetings will be destroyed two years after the end of the study.
- I agree to abide by the ground rules that are decided by the group.
- I am aware I will have the opportunity to review notes following each of the group meetings.
- I understand at the end of this study a copy of the competency and integrated career framework for occupational health nurses designed by the group will be available to me.
- I agree to take part in the above study.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

Name of participant (please print) \_\_\_\_\_

## APPENDIX 4: UNDERSTANDING YOUR OH CAREER AND ROLE WITHIN THE WORKPLACE



1. What led you to your current role in OH?
  
  
  
  
  
  
  
  
  
  
2. What support have you had in your OH career to undertake formal education (study day, courses or university studies) from the companies/organisations in which you have worked?
  
  
  
  
  
  
  
- 2a. What “on the job” education have you received?
  
  
  
  
  
  
  
- 2b. What formal education have you received?
  
  
  
  
  
  
  
- 2c. What formal education (certification, study days, university study) do you think is important to do?
  
  
  
  
  
  
  
3. Other than your daily work has assisted you in your understanding of OH?
  
  
  
  
  
  
  
4. What type of activities do you do in your current role to support the health & wellbeing of the employees of the organisation you work for?

## APPENDIX 5: EVALUATION OF GROUP MEETINGS

TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI



**November 21<sup>st</sup> 2014**

### **How Well Do You Think the Group Meetings are Going?**

As we have now been working together for the last 5 months, I just wanted to check with you on how you are feeling the group meetings are going along.

Please take a few minutes to answer the questions? Comments justifying your rating are welcome. I appreciate your feedback.

- How satisfied are you with the meeting venue?  
1 (not at all)    2    3    4    5 (very satisfied)

Comments:

- How involved do you feel with what the group is doing?  
1 (not at all)    2    3    4    5 (very involved)

Comments:

- How well do you feel the group is working together?  
1 (not at all)    2    3    4    5 (very satisfied)

Comments:

- How satisfied with the progress the group is making?  
1 (not at all)    2    3    4    5 (very satisfied)

Comments:

- Please add any suggestions on how the group can work differently together to achieve our goal of creating the OHN knowledge and skills framework. For example you might like to see rotation of who facilitates the meeting.

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