

**(Mis)powered practice: A critical investigation  
of nurses' manual handling experiences in Australia**

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## Statement of authorship

This thesis contains no material extracted in whole or in part from a thesis by which I have qualified for or been awarded another degree or diploma.

No parts of this thesis have been submitted towards the award of any other degree or diploma in any other tertiary institution.

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgement has been made.

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All research procedures reported in the thesis received the approval of the relevant Ethics Committees (where required).


This thesis contains five (5) original papers published in international peer-reviewed journals and one (1) manuscript prepared for submission. The ideas, development and writing of all the papers in this thesis were the principal responsibility of me, the candidate, under the supervision of Professor Nel Glass and Dr Alicia Evans from the School of Nursing, Midwifery and Paramedicine.

The contribution of co-authors to manuscripts is indicated in the declaration accompanying each publication in the thesis, where the specific percentage of student contribution is noted. My contribution to the work is as follows:

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2	Reconceptualising manual handling: Foundations for practice change.	Published 2012. <i>Journal of Nursing Education and Practice</i> , 2(3), 203-212.	Principal author; responsible for collection and review of literature, responsible for conceptual development and design. First author for creation and revision of manuscript upon feedback from co-authors. Author accepting overall responsibility for the publication.
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Date: 23/01/ 2015

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## Dedication

In the prevailing politics and culture of 20th century Ireland and Australia, my grandmother was denied the opportunity to follow her own academic interests. This thesis is for all that she could not have.

In loving memory of Charlotte 'Lottie' Turley

12<sup>th</sup> July 1920 - 27<sup>th</sup> June 2013.

### ***ALL I EVER NEEDED TO KNOW I LEARNT FROM MY NAN***

If it's important, find a way.

Sometimes you have to give up things, even when it's hard.

Let go when you're ready, and not a moment before.

Be brave in the face of adversity.

So stay calm when it's serious, but you can make a big fuss when it's not.

If something is important to you, bang on about it until everyone else caves in!

Keep your sense of humour, right up until the end.

There's never a better moment to interrupt a conversation than the second you think of something to say.

And when you do, say something totally unrelated - it's sure to throw everybody!

Be interested in others; and have compassion.

Rather than argue, just pretend to agree - and then go ahead and do what you were going to do anyway!

Nobody is perfect, despite what they tell you.

Say what you think - and sometimes say what you think they want you to say.

Competition feels good - but only if you are winning the footy tipping.

If in doubt - ask. Ask everyone their entire life story, regardless of where you are, or who is waiting for you.

There's no better clanger than telling the Vicar "Two sherries and I'm anybody's!"

For your one extravagance, have many!

Most importantly -

It's okay to care about people. It's more than okay to care about people.

Thank you Nan.

## **Abstract**

Inherent in the nursing role are manual handling activities required for the provision of patient care. The physical demands upon nurses have resulted in high rates of musculoskeletal disorders (MSDs) within the profession. Despite the development of programs intended to reduce MSDs, sustainable solutions have remained elusive. Nurses continue to be disproportionately represented in the statistics for injuries arising from manual handling. Over 95% of nurses are likely to incur at least one MSD during their professional lifetime.

The scholarly literature provides little evidence of the inclusion of nurses in the manual handling dialogue, despite their intimate knowledge of the healthcare environment. This thesis reports on a study of nurses speaking about their perspectives on current manual handling practices and their experiences of participation in injury prevention programs. The research explored nurses' experiences of manual handling within acute and aged care health facilities in two Australian states, with the intent to make explicit the assumptions underlying contemporary approaches to manual handling issues.

The overall aim of this research was to explore nurses' manual handling experiences in the specific context of healthcare organisations. An improved understanding of manual handling from the perspectives of nurses has the potential to explicate aspects of manual handling not previously considered in the development of programs to reduce injuries. The overarching intention of this study was to give nurses the opportunity to verbalise and examine their manual handling experiences and perceptions, with an aim to explore any possible transformative practices.

A qualitative research design was developed incorporating critical social science methodology. Thirteen nurses working in private or public healthcare organisations across Victoria and Tasmania participated in this study, in addition to the researcher. The two methods for data collection were semi-structured interviews and researcher reflective journaling. Data analysis was multi-layered and incorporated realist and critical themes.

The findings revealed an overarching theme of power relations embedded in participants' experiences of the complexities of manual handling in healthcare facilities. The nurses spoke repeatedly of power issues and the pervasive nature of this theme was threaded throughout their stories. Specifically, a critical analysis of power relations revealed

inequities of power distribution, and thus a central theme of (mis)power was identified as a key component within the overarching theme of power relations.

(Mis)power was identified as problematic in participants' daily manual handling practices and comprised two major themes: voicing practice issues and the innate tensions of how to practice. Voicing practice issues revealed three subthemes: feeling punished, silenced and disillusioned. How to practice comprised a single subtheme, that of dialectical tensions.

This research has identified that socio-political factors impact upon nurses' manual handling practices and if these cultural aspects of nursing are overlooked or misunderstood, manual handling safety issues will persist. Foregrounding these contextual influences and critically analysing the dominant paradigms that currently shape the development and implementation of safe handling programs is imperative.

The oppression of nurses and their exclusion from manual handling dialogue currently limits the effectiveness of ergonomic advances and policy directives for manual handling. Insights gained from this study contribute to new perspectives on the development of sustainable solutions to manual handling issues in healthcare. The marginalisation of nurses reported in this study concurs with previous scholarly research in other fields of nursing practice and scholarship. This study presents a unique contribution to the current discourse on manual handling by specifically utilising a multi-layered critical lens to inform dialogue that may be pivotal to future developments in the occupational wellbeing of nurses.



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## List of Acronyms

AAMHP	Australian Association for the Manual Handling of People
ACU	Australian Catholic University
ANF	Australian Nursing Federation (former name of ANMF)
ANMF	Australian Nursing and Midwifery Federation
APA	American Psychological Association
ASCC	Australian Safety and Compensation Council
CDC	Centre for Disease Control and Prevention
DHS	Victorian Government's Department of Human Services
DON	Director of Nursing
EU	European Union
HREC	Human Research Ethics Committee
HRO	High reliability organisation
HSE	Health and Safety Executive of Great Britain
KT	Knowledge translation, a framework comprising the knowledge-to-action model of research design
LBP	Low back pain
MH	Manual handling
MSD	Musculoskeletal disorder
MSI	Musculoskeletal injury, alternative term for musculoskeletal disorder
NDS	National Data Set, the Australian compilation of workers' compensation statistics
NIOSH	National Institute of Occupational Safety & Health, part of the CDC, responsible for research and guidelines for occupational health issues
NUM	Nurse Unit Manager
NZ	New Zealand
OH&S	Occupational Health and Safety
RN	Registered Nurse
UK	United Kingdom
USA or US	United States of America
VNBIPP	Victorian Nurses' Back Injury Prevention Project
WRMSD	Work-related musculoskeletal disorder

## Glossary of terms

**Bedside nurses** - a colloquial term commonly used to refer to nurses who provide clinical care in hospitals, as distinct from nurses who work in management or other roles that do not entail direct patient care for the period of a nursing shift.

**Biomechanics** - the science of movement as explained by forces that are exerted on parts of the human body, especially the effect of the muscular system on skeletal structures.

**Body mechanics** - an approach developed for manual handling tasks that historically was intended to reduce injuries by instructing nurses how to lift and handle patients; without evidence-base; although now superseded by ergonomic principles, body mechanics remains a focus of various individual clinicians.

**Competency** - used by participants to refer to the mandatory testing of skills, by demonstration of technique in the presence of an assessor or trainer who deems the nurse to be competent or otherwise. Assessment process is often subjective, rapid and cursory, regardless of the availability of formal assessment criteria for assessment. This is the key component used to measure program uptake, and a focus of hospital accreditation programs.

**Discourse** - used to indicate a particular way of thinking that is commonly accepted and precludes alternatives, without questioning the way in which a particular form of thinking shapes a concept. In this thesis, the term discourse is not intended to be understood in the specific manner described by post-structuralists such as Foucault, but as the main way people speak of manual handling and the dominant way in which manual handling issues are approached.

**Ergonomics** - looks at the interaction, or 'fit', between work and people, to optimise wellbeing and performance. It is a systems-orientated scientific discipline, with three specific, but often overlapping, domains: physical, cognitive and organisational ergonomics.



**Hoist** - mechanical lifting equipment utilising hydraulics to lift and lower a patient, once patient has been positioned in a brand-specific 'sling' attached to the hoist. A hoist can be a stand-alone item requiring manual pushing and manoeuvring or attached to a gantry system and suspend from the ceiling.

**Lifting machine**, sometimes called '**lifter**' in some northern hemisphere continents - alternative term for hoist.

**Manual handling, 'moving and handling'** - broadly refers to movements requiring manual effort to physically manipulate a patient or object. Note that common parlance is directed by an occupational health frame in healthcare, hence 'manual handling' frequently denotes 'manual handling program', 'manual handling risks' or 'manual handling training' although the distinction is not always explicit or easy to ascertain. The overlapping conceptualisations bounded by the same term were also present in the interviews in this study.

**Manual handling aids** - non-mechanical, non-electrical devices designed specifically to assist in manual handling tasks, for example slide sheets.

**Manual handling equipment** - primarily refers to mechanical equipment, such as hoists, that are designed to reduce the manual load associated with lifting or moving a patient. Often used more broadly by practising nurses to also refer to non-mechanical manual handling aids used to assist in a manual handling task, for example, slide sheets that reduce friction during moving of patients.

**Manual handling interventions** - refers to programs to reduce manual handling injuries.

**Manual handling programs** - a specific program, either commercially obtained or developed 'in-house' by the healthcare organisation; designed to reduce the incidence of injuries arising from manual handling activities in the workplace.

**Manual handling strategies** - refers to:

- i) specific techniques, or a combination of techniques, to achieve a certain manual handling outcome, such as transfer of a patient from a bed to a chair; or
- ii) sometimes used to indicate the overall approach to addressing a manual handling issues and reduce injury rates or compensation claims.

**Manual handling techniques** - methods of moving or handling patients and objects according to specified ergonomic principles with the intention of reducing the likelihood of injury.

**Manual handling training** - specific sessions to teach staff skills regarding:

- i) how to lift, assist and transfer (patients) using 'body mechanics'; or
- ii) how to use specific aids and equipment to lift, assist or transfer patients and objects; or
- iii) may comprise training informed by ergonomic principles, with or without equipment available; or
- iv) a combination of all or any of i), ii) or iii).

**Manual materials handling** - the use of the human body to lift or move inanimate objects.

**Moving and handling** - an alternative term for 'manual handling' that is used in some countries such as US and NZ; see entry for 'manual handling'.

**Musculoskeletal disorders** - conditions affecting the muscles, ligaments, tendons, nerves, joints or spinal discs. In this thesis the term refers to disorders of the musculoskeletal system arising from manual handling activity, exclusive of impact injuries, falls and systemic disease processes such as rheumatoid arthritis.

**Musculoskeletal injuries** - alternative term used in some countries to refer to 'musculoskeletal disorders'; see entry for musculoskeletal disorders above.

**No Lift** i) (specific) frequently refers to a commercially available program marketed by O'Shea and Associates and intended to reduce manual handling risks and injuries; majority of Victorian and Tasmanian nurses have had exposure at some time to this program that had a large market share throughout these states;

- ii) (colloquial) may be used as generic term referring to various manual handling programs designed to reduce MSDs, not necessarily the commercial program branded with this name;

iii) (historical) at times, this term is used to refer to the 'no lifting' policy introduced to counter manual handling concerns, prior to recognition of injury risks from activities other than lifting.

**No lifting** - the policy adopted by Victorian branch of ANMF (formerly ANF) in 1998 to reduce injury risk exposure where possible; followed the UK No Lifting policy of 1992, and similar policies in other states (e.g. NSW Nurses' Association in 1998). Focus on assessment of risks and patient needs, and use of equipment.

**Physio** - colloquialism used to refer to physiotherapists, physiotherapy or physical therapists (meaning determined by syntax in most cases).

**Refresher** - refers to brief training sessions intended to 'refresh' participants by revising the concepts and skills previously introduced in earlier manual handling training sessions; duration of refresher and frequency of attendance vary.

**Riskman** - a commercially available computer program for reporting incidents in healthcare organisations; used by the majority of healthcare facilities in Victoria and Tasmania.

**Slide sheets** - common name in Victoria for a large sheet made of friction-reducing material that is placed under patients to reduce the manual effort required to reposition or transfer a patient from one surface to another, for instance bed to transportation trolley.

**Sling** - a specifically tailored, commercial product that is placed around and under a patient, allowing raising and lowering of a patient by mechanical means, once attached to a hoist. Usually made of cloth or plastic; designed with straps and buckles for attachment to hoist.

**Trainers** - staff members who undergo varying amounts of additional training, usually 6 to 15 hours, in the program of choice at their healthcare organisation. Trainers are subsequently expected to teach the recommended manual handling techniques to their peers.

**Training** - refers to:

- i) training in the use and management of mechanical manual handling equipment available in an organisation; or
- ii) training for movement and handling in accordance with ergonomic principles; or
- iii) general skills training in manual handling utilising body mechanics.

## Research outputs, awards and scholarships

### Publications

#### Publications: blinded, peer-reviewed journals

**Kay, K.,** Evans, A., & Glass, N. (2015). Moments of speaking and silencing: Nurses share their experiences of manual handling in healthcare. *Collegian: The Australian Journal of Nursing Practice, Scholarship & Research*, 22(1), 61-70. doi: 10.1016/j.colegn.2013.11.005

**Kay, K.,** Glass, N., & Evans, A. (2014). Loaded both ways: The impact of dialectical tensions on nurses' manual handling practices. *Journal of Nursing Education and Practice*, 4(1), 218-228. doi:10.5430/jnep.v4n1p218

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**Kay, K.,** Glass, N., & Evans, A. (Mis)power and marginalisation: Nurses' perspectives on moving and handling patients.

#### Publication note

Particular consideration was given to the selection of appropriate journals. The prime focus was to enable widespread dissemination and engagement across disciplines and fields of inquiry. To this end, journals were deliberately targeted to include some with high impact factors alongside other quality open access journals yet to be scored. Thus nurses with

limited access to subscription journals, scholars and the broader manual handling community of practice may be assisted to collaboratively discuss and critically appraise both the context and suitability of manual handling approaches in healthcare.

## Conferences

### National and international conference papers: peer-reviewed

**Kay, K.,** Glass, N., & Evans, A. (2014). *(Mis)power and (mis)handling: (Mis)understandings of the marginalisation of nurses*. SAFER Handling Conference, Annual Australian Association for the Moving and Handling of People 6th Biennial Conference, Brisbane, Australia, May 26.

**Kay, K.,** Glass, N., & Evans, A. (2012). *Silently speaking: The impact of nurses voicing manual handling experiences*. Professional Issues in Practice Conference: The Future is Now, Australian Nursing Federation (Victorian Branch) Conference, Melbourne, Australia, September 21.

**Kay, K.,** Glass, N., & Evans, A. (2012). *Was it good for you too? Challenging the Boundaries* Conference, Moving and Handling Association of New Zealand, Auckland, New Zealand, March 21.

**Kay, K.,** Glass, N., & Evans, A. (2011) *Reconceptualising manual handling: Empowering nursing practice*. 2011 Professional Issues in Practice Conference: Our Profession in Focus, Australian Nursing Federation (Victorian Branch) Conference, Melbourne, Australia, June 23.

**Kay, K.,** & Glass, N. (2010). *Up close and personal: Manual handling, social capital and culture change*. "Moving On" - Exploring New Directions in People Handling, Australian Association for the Moving and Handling of People 4th Biennial Conference, Sydney, Australia, October 13.

**Kay, K.,** & Glass, N. (2010). *Challenging people handling: When training isn't enough*. "Moving On" - Exploring New Directions in People Handling, Fourth Bi-Annual Australian Association for the Moving and Handling of People Conference, Sydney, Australia. October 13-14.

## **Research conference paper: peer-reviewed**

**Kay, K., & Glass, N. (2010).** *An exploration of nurses' beliefs, attitudes and experiences relating to manual handling.* Nursing and Midwifery Research Candidate Conference, Monash University, Melbourne, Australia, September 28.

## **Invited presentations**

**Kay, K. (2013).** *The secret life of us: Manual handling unpacked and uncensored.* The Physiotherapy Company Annual Conference, Melbourne, Australia, August 30.

**Kay, K. (2012).** *International Patient Handling Program.* Victorian No Lifting Coordinators' Network, Melbourne, Australia, November 23.

**Kay, K. (2012).** *Problem solving for manual handling.* Victorian No Lifting Coordinators' Network. Melbourne, Australia, March 30.

**Kay, K., Glass, N., & Evans, A. (2011).** *Challenging people handling.* Australian Catholic University Post Graduate Association Inaugural "Research in 5" Symposium, Australian Catholic University, Melbourne, Australia, September 15.

**Kay, K., & Glass, N. (2011).** *Close encounters: Manual handling, social capital and culture change in Victorian healthcare.* Victorian No-Lifting Coordinators' Network, Melbourne, Australia, May 6.

**Kay, K., Hofmeyer, A., & Glass, N. (2010).** *Counts, causes, culprits and checklists.* Victorian No Lifting Coordinators' Network, Melbourne, Australia, June 6.

**Kay, K., Glass, N., & Hofmeyer, A. (2010).** *An exploration of nurses' beliefs, attitudes and experiences relating to manual handling utilising the knowledge-to-action framework.* Inaugural Nursing Research Symposium, Australian Catholic University/St Vincent's & Mercy Private Hospital, Melbourne, Australia, May 12.

## **Academic presentations**

**Kay, K., Glass, N., & Evans, A. (2014).** *(Mis)powered practice: A critical investigation of nurses' manual handling experiences in Australia.* Faculty of Health Sciences Higher Degree Research Seminar, Australian Catholic University, Melbourne, Australia, December 8.

**Kay, K.,** Glass, N., & Evans, A. (2013). *Moving and handling (mis)power: Power relations and the marginalisation of nurses*. Faculty of Health Sciences Higher Degree Research Seminar, Australian Catholic University, Melbourne, Australia, December 9.

**Kay, K.,** Glass, N., & Evans, A. (2012). *An exploration of nurses' beliefs, attitudes and experiences relating to manual handling*. Faculty of Health Sciences Higher Degree Research Seminar, Australian Catholic University, Melbourne, Australia, December 10.

**Kay, K.,** Glass, N., & Evans, A. (2011). *The good, the bad and the critical: Nurses' manual handling experiences*. Faculty of Health Sciences Higher Degree Research Seminar, Australian Catholic University, Melbourne, Australia, November 21.

**Kay, K.,** Glass, N., & Evans, A. (2011). *An exploration of nurses' beliefs, attitudes and experiences relating to manual handling*. Master of Philosophy Confirmation Seminar, Australian Catholic University, Melbourne, Australia, February 22.

### **Awards and scholarships**

**Kay, K.** (2014). Faculty Research Student Support Scheme (FRSSS). Faculty of Health Sciences, Australian Catholic University, Melbourne, Australia.

**Kay, K.** (2012-2014). Australian Catholic University Postgraduate Award (ACUPA). Australian Catholic University, Melbourne, Australia.

**Kay, K.** (2012). International Conference Travel Grant. Australian Catholic University, Melbourne, Australia.

**Kay, K.** (2012). Faculty Research Student Support Scheme (FRSSS). Faculty of Health Sciences, Australian Catholic University, Melbourne, Australia.



## **Chapter One**

### **Introducing the Research**

## **Introduction to the thesis**

When I commenced nursing in the early 1980s I had no awareness of manual handling, its importance, the associated personal risks, nor the potential impact it could have on my personal life or my career. Whilst early in my pre-registration education I was taught ways to lift, move and carry patients, this instruction, or my interpretation of it, was bereft of specific regard for the wellbeing of the nurse.

Over subsequent years, I worked with many nurses who had been injured in the course of handling and caring for their patients. Advice to prevent nurses 'hurting their backs' was minimal in earlier years and primarily focused on recommendations to lift with another nurse wherever possible. Notably, 'hurting their backs' implied that sole responsibility for injury prevention lay with the nurses and the phrase continues to saturate contemporary discussions of manual handling injuries. Manual handling policies and protocols have proliferated in more recent times, although perhaps surprisingly, their introduction has not heralded the anticipated reduction in nurses' manual handling injuries.

My concern for the ongoing number of nurses, including myself, who were injured due to the intensely physical nature of patient care, ultimately directed my attention and efforts to work in the area of manual handling, and subsequently to undertake research in this field. This thesis is the result of my enduring curiosity about this topic, a desire to expand knowledge, to promote change and my aspirations for the improvement of the manual handling circumstances of nurses. The study explores the manual handling experiences of 13 practising nurses interviewed in Australia in 2012 and interrogates the contextual influences on manual handling activities within healthcare organisations.

## **Chapter overview**

In this chapter I will provide a frame of reference for this critical investigation of nurses' experiences of manual handling in healthcare. In the first instance I will contextualise the issues that prompted the development of this research study by providing an overview of nurses' manual handling injuries. To make explicit my position in the field I declare my own assumptions and understandings of manual handling issues prior to undertaking this study and further highlight my motivation for this study in terms of my personal and professional involvement in manual handling to date. The significance of the research, research scope,

aims and ultimately the research questions will then be outlined. This will be followed by an introduction to the philosophical framework that underpins the research design. This chapter concludes with an explanation of the styles utilised within the thesis, a content summary for each chapter and a précis of the key points contained within the current chapter.

## **Background**

The predominance of injuries suffered by nurses has been apparent for several decades. Early estimates of the annual prevalence for nurses' low back injuries was between 40% and 50%, with a lifetime prevalence ranging from 35% to 80% (Buckle, 1987). This was further supported by international literature noting similar injury rates globally (Al-Eisa & Al-Abbad, 2013; Fragala, 2011; Garg & Kapellusch, 2012; Harcombe, McBride, Derrett, & Gray, 2009; Hignett, 1996; Hignett, et al., 2007; Karahan, Kav, Abbasoglu, & Dogan, 2009; Kneafsey & Haigh, 2007; Nelson, 2006; Owen, Keene, & Olson, 2002; Qin, Kurowski, Gore, & Punnett, 2014; Serranheira, Cotrim, Rodrigues, Nunes, & Sousa-Uva, 2012; Smedley, et al., 2003; Stenger, Montgomery, & Briesemeister, 2007; Szeto, Wong, Law, & Lee, 2013; Tinubu, Mbada, Oyeyemi, & Fabunmi, 2010; Yassi & Lockhart, 2013).

Although the potentially causal nature of the relationship between nursing activities and musculoskeletal disorders (MSDs) has been debated intermittently, scholars generally concur that this relationship is highly plausible (Yassi & Lockhart, 2013). Patient-related activities produce increased risks for MSDs that include, but are not confined to, low back pain (LBP) and injuries to other areas of the body. However specific safety thresholds for total risk exposure within a working day, as opposed to thresholds for individual tasks, are yet to be determined and are confounded by other non-patient handling activities. Of particular interest is a recent systematic review that examined 89 publications and concluded that technique, personal characteristics and non-occupational factors do not discount the work-related nature of MSDs for nurses (Yassi & Lockhart, 2013). More pertinently, the authors of the review made a call for new policies on manual handling in healthcare, in light of their findings.

Manual handling issues have continued in the face of the abovementioned prevalence statistics and remain a key occupational health concern. High rates of manual handling injuries persist within the nursing profession and successful methods to address this

problem are yet to be identified. The impact is two-fold: injured nurses experience distress and disruption to their lives, and patient care outcomes continue to be challenged whilst this issue remains unresolved. In the absence of effective processes to minimize manual handling risk exposure, suboptimal patient care may evolve consequent to a nursing workforce afflicted by high injury rates (Nelson, Collins, Siddharthan, Matz, & Waters, 2008). It is also plausible that nurses may resort to alternative self-protective behaviours such as delay or avoidance of physically demanding tasks, redeployment to less physically taxing roles or departure from the nursing workforce, in their attempts to preserve their own health and functionality, although these propositions have not yet been well investigated.

## **Initial assumptions**

Prior to commencement of this research, I had accepted the conventional wisdom that manual handling injuries were associated with the poor uptake of recommended safe practices taught variously to nurses in undergraduate training or at their workplaces. Moreover, I believed that the performance of manual handling tasks divergent from policy guidelines could be explained, at least in part, by the psychological concept of 'learned helplessness' (Cooper, Meyer, & Holman, 2013; Sullivan, 2009). Additionally, as a clinician I had observed numerous attempts by nurses to perform manual handling tasks according to contemporary policies, only to find themselves thwarted by constraints within the clinical setting, such as idiosyncratic aspects related to the patient's condition, insufficient space, lack of staff available to assist or difficulty accessing suitable lifting equipment in a timely manner.

Upon reflection, I realised that my explanation of nurses' manual handling practices by way of learned helplessness was excessively simplistic and devoid of recognition and comprehension of the socio-political context of nursing. Without conscious consideration of the implications, I had unthinkingly assumed that manual handling recommendations were founded on a strong evidence-base and hence were the most appropriate means to reduce injuries.

I unquestioningly assumed that my colleagues' behaviours were at fault without critically and comprehensively appraising the circumstances. The impact of the socio-political constraints on nurses' manual handling practices was not visible to me during my time as a

clinician. Unwittingly I had accepted 'taken for granted' premises that underpin manual handling programs and appear to be uncontested truths. This realisation, that I had formerly assimilated the beliefs and values of the dominant group, and unwittingly contributed to the marginalisation of nurses, was an uncomfortable revelation that emerged during the early phase of reviewing literature for this study. An entry from my reflective journal noted my confusion associated with this unexpected insight:

*Previously [as a clinician], I had denied the vague uneasiness I had sometimes noticed, in a quest for survival [in the workplace] and the wish to conform ... I see now how my thoughts were loaded with assumptions.*

*[My] taken for granted beliefs, the assumptions that I had overlooked ... my acceptance of the status quo ... I wonder how I so quickly deflected away from questioning the system, the socio-political constraints? ... I didn't have the language then to describe my experiences or discontent, and suspect that my perceptions were part of experiencing marginalisation at some level, unrecognised [at the time].*

I interrogated further my own experiences in the workplace in the following excerpt:

*I knew something didn't feel quite right as I worked as a nurse and tried to improve manual handling safety, but I certainly didn't have the ... confidence to steadfastly challenge the norms in many instances. At times I did speak up ... but ... subsequently experienced confusion, guilt or remorse after such 'meetings' with supervisors or managers, or even colleagues at times ... I have to be aware that this was my journey, and may differ from that of participants in my research.*

At a later date, whilst examining my initial motivation for undertaking post-graduate research in the field of manual handling, I returned to the above concept with a journal entry noting:

*I wonder, had I been more versed in critical social science, would I have voiced my motivation for research in terms of socio-political constraints, false consciousness and a desire to challenge the status quo? I wasn't ready then: I was engulfed by the managerial discourse(s) of healthcare.*

The above reflections suggest that I had adopted a belief that manual handling injuries arose from aberrant individual conduct rather than potentially unrecognised systemic deficiencies. I have since come to view my former behaviourist explanation as an illustration of the embodiment of hegemonic influences on nurses because I had unthinkingly accepted the perspective that nurses were failing in their adherence to safety

guidelines. As such, I had inadvertently propagated and fortified a worldview that impeded critique of the dominant norms by apportioning blame to the nurses and their actions, thereby strengthening the status quo. Becoming aware of my own ignorance reinforced my commitment to adopt a research philosophy that accommodated alternative perspectives, and did not privilege a particular position.

## **Motivation for study**

### **Personal engagement**

My personal interest in manual handling, I realise in hindsight, evolved partially from my own experiences of manual activities during my employment as a nurse. A back injury I had suffered as a first year student nurse had alerted me to the vulnerability of nurses in their workplaces. The literature demonstrates that my early experience of injury was not atypical: Australian research reports low back pain 12-month prevalence rates ranging from 30% to 71% for nursing students in studies utilising validated questionnaires, sample sizes from 284 to 897 participants and response rates greater than 90% (Mitchell, O'Sullivan, Burnett, Straker, & Rudd, 2008; Mitchell, et al., 2009; Smith & Leggat, 2004). Studies have also identified a slight increase in injury rates after the transition from student to qualified healthcare worker (Mitchell, et al., 2008).

### **Professional participation**

My official interest in manual handling commenced in 2001 when I volunteered to teach manual handling safety to colleagues at an acute healthcare organisation. Prior to this, no specific manual handling strategy existed within the organisation and minimal manual handling equipment was available. An external consultant was contracted to establish a manual handling safety program and develop staff trainers within the organisation. I joined this initiative but despite being highly motivated, I personally struggled to integrate a patient handling approach that was completely unfamiliar to me. The newly introduced program contrasted substantially with the patient handling techniques I had been taught previously as a student nurse. What ensued were my haphazard and naive attempts to teach nurses the theory and skills of which I myself had barely grasped. Local support was unavailable yet trainers were required to produce staff competent in recommended manual handling methods and provide documentary evidence of same. Almost invariably, I

found that there was little opportunity to provide clear learning opportunities for skills acquisition and consolidation in the fast-paced healthcare environment.

### **Puzzling impediments**

Ambiguity combined with the overwhelming expectations placed on trainers and constraints inherent in the clinical setting hampered local advances in manual handling safety. I was puzzled by the lack of organisational space, insufficient resources and the inconsistent priority allocated to manual handling in my healthcare organisation and discovered that my experiences were mirrored elsewhere.

Furthermore, the minimal interest or enthusiasm displayed by my colleagues aroused my curiosity and dismay. With such startling injury rates apparent within the nursing profession, I wondered how the current circumstances had evolved. Whilst nursing had long been recognised as a high-risk occupation for MSDs, these injuries continued virtually unabated within the profession. As noted previously, my focus was formerly limited to the actions of individual clinicians, their deviations from policy and possible explanations such as learned helplessness.

### **Expanded engagement**

When a dedicated position for a manual handling project manager was created within a local healthcare facility, I successfully applied for this role. I was inspired to actively advance manual handling safety for clinicians and support staff. The precise title of my new appointment was emphatically grounded in training and should have heralded many of the challenges I would later face. A misplaced belief in the efficacy of training to resolve manual handling issues, despite prior lack of success, is not uncommon. Whilst training strategies are frequently adopted by healthcare organisations as an attempt to meet legislative compliance regimes, I had naively overlooked the assumed link between training and safety outcomes that was embedded in my new position.

Positive aspects of my new position also existed. The development of this role allowed for improvements in manual handling not easily achieved by an external consultant. As an insider, I had the potential to facilitate the manual handling program due to pre-existing relationships with other staff and an understanding of the organisational culture and

climate. I had envisioned the possibility of enhanced safety through a 'bottom-up' approach that encompassed collaboration with clinicians and also clearly valued their perspectives.

I saw my formal move into the occupational health and safety department as an opportunity to improve the wellbeing of my fellow nurses, as indicated in my journal entry about this pre-research endeavour:

*I treasured the chance to give something back to the hundreds and thousands of nurses I'd known over the previous quarter of a century. In my mind, this step was for all those nurses who had taught me, stood by me, pulled together with me under difficult circumstances, kept me going and showed me so very clearly that the wellbeing of nurses is important to nurses, despite the challenge this presents in their professional circumstances. My belief is that the safety of each of those nurses is equally as important as the needs of those within their care.*

Whilst the sentiments above are noble and optimistic, my aspirations for improving the manual handling circumstances of nurses were not realised in the abovementioned role. Unexpected impediments and unforeseen obstacles appeared and endured, bringing forth many questions regarding the adequacy of contemporary approaches to manual handling. This thesis is the culmination of my efforts to contribute to the growing body of research in manual handling.

## **Research significance**

As already noted, manual handling is an integral part of the work of nursing and high MSD rates persist despite attempts to prevent injuries. Notably, many interventions have ignored the complexity of manual handling in clinical settings, relying on training strategies adopted in materials handling industries. Traditionally, manual handling has been driven by the medical and allied health professions with little consideration given to the context and perceived requirements of the nursing role. Manual handling training programs are overwhelmingly developed by non-nursing personnel such as ergonomists, allied health or occupational health officers, often with little regard for nurses' beliefs, attitudes and experiences. Although intended to provide nurses with specific knowledge and skills to manage manual handling risks, manual handling training programs are generally evaluated by organisational outcomes such as injury reporting rates and costs associated with injury claims. Scrutiny of training quality and content is rarely reported in the manual handling literature.



Thus the burden of responsibility for injury prevention frequently resides with individuals under the assumption that adequate preparation and resources have been provided to allow nurses to practice manual handling as prescribed in training programs (Maxwell, 2014). However, the neglect of specific contextual factors and environmental constraints can limit the resolution of manual handling issues and for this reason, the challenge to protect nurses from injury requires urgent attention.

Furthermore, the evidence-base for guidelines is scant, yet often assumed, possibly consequent to the reliance on professionals from disciplines such as medicine, physiotherapy and ergonomics. However, training staff in 'techniques' to lift 'properly' began on the advice of a sole physician in 1946 (Collins & Menzel, 2006). Systematic literature reviews demonstrate the inadequacy of training programs to combat manual handling risks and may be explained, at least in part, by the nature of clinical practice that is embedded within both organisational culture and professional contexts (Rowland & Kitto, 2014).

There is a dearth of literature available exploring the experiences of nurses and their attitudes and beliefs regarding manual handling, beyond particular aspects such as the use of equipment or specific interventions employed (de Ruiter & Liaschenko, 2011; Gropelli & Corle, 2010; Krill, Staffileno, & Raven, 2012; McDermott, Haslam, Clemes, Williams, & Haslam, 2012). No literature was located that allowed for general examination of nurses' experiences and perceptions relating to manual handling, nor any that utilised critical social science as the underlying theoretical framework.

## **Scoping the research**

As previously discussed, the management of manual handling in healthcare remains problematic as identified by the high prevalence of MSDs amongst clinical nurses. The subordinated position of nurses within the healthcare hierarchy, combined with cultural and contextual influences on nurses' practices, make distinct nurses' manual handling experiences from those of their counterparts in other healthcare disciplines. Manual handling injuries have also been identified amongst other healthcare professionals such as physiotherapists, and it is plausible that there are some common features shared by different disciplines in the handling of patients. This presumed commonality may account for the tasking of physiotherapists, given their extensive knowledge of biomechanics, to

teach manual handling safety to nurses. However the breadth of tasks arising from the provision of nursing care contrasts with the specific and often limited actions required of physiotherapists and other clinicians when dealing with patients. Furthermore, an under-appreciation of the context for nursing care may offer an explanation for the failure of manual handling programs to prevent injuries in this professional group. For these reasons, it is imperative that nurses' experiences of manual handling are investigated separately from the potentially disparate cultures of other professions.

Accordingly, I considered it paramount to confine this exploratory study to the nursing profession. I actively sought to design a research project that explicitly acknowledged nurses' experiences and promoted the recognition of their contribution as crucial to the management of manual handling issues. Nurses' perspectives on manual handling may differ substantially from those who develop, select, provide and monitor manual handling programs in healthcare. Nurses' experiences and perspectives relating to manual handling have rarely been explored and this study will specifically address this important research gap.

## **Research focus**

As described above, the explicit intention of this study was to explore nurses' manual handling experiences and their perspectives and understandings of those experiences. Furthermore I wished to undertake research that had the potential to facilitate change. An enhanced understanding of nurses' perspectives was sought in order to uncover mechanisms that generate and contribute to the socio-political circumstances of nurses in relation to manual handling safety. Notably, these contextual aspects of manual handling issues for nurses have been poorly recognised to date. Thus I sought to embed my research in a framework that openly valued nurses' manual handling experiences to ensure that nurses' experiences and perspectives were no longer overlooked. Nurses utilise manual handling constantly in their professional practice and contemporary safety interventions have failed to protect the vast nursing workforce from injury.

## **Research aims**

The overall aim of this research was to investigate manual handling issues from the perspective of nurses, in order to elicit their knowledge and experiences of manual

handling and explore any possible transformative practices. My goal was to hear the nurses' manual handling stories and investigate their experiences using a systematic and rigorous approach. My ongoing intent was to foreground their concerns and explore the mechanisms that contributed to the manual handling context for the nurse participants in my study. I envisaged that this research could potentially critique the contemporary values and norms that dominate manual handling in healthcare, whilst recognising that I could not anticipate what this study would reveal until I had collected and analysed the data.

This study aimed to explore nurses' manual handling experiences in the specific context of healthcare organisations. Concurrently I sought to identify potential barriers to improved manual handling safety in light of an expanding repertoire of policy directives and legislative mandates in this area. In particular, I was open to examining structural barriers to successful injury prevention, rather than assume that MSDs arose solely from the unfettered behaviour of individual nurses. Although beliefs and attitudes are commonly discussed in terms of motivations for behaviour, this research adopts a divergent approach. In this study, beliefs and attitudes are viewed as essential to revealing and understanding the context of manual handling, and not as factors to be judged and critiqued in order to promote conformity to prevailing norms. This aim of this research was to explore the perceptions and experiences of nurses in relation to:

- manual handling activities and the management of associated risks arising from the delivery of patient care;
- the development and implementation of injury prevention programs, including training in specific techniques;
- contextual influences on safe manual handling practices; and
- the personal and professional influences on nurses' manual handling experiences, existing decisions and possible transforming practices.

The overarching intention was to gain a greater understanding of the socio-political context within which nurses function, by giving nurses the opportunity to verbalise and explore their manual handling experiences and perceptions.

## Research questions

An essential feature of a robust research design is the clear delineation of research questions to circumscribe the area of interest (Flick, 2009). Research questions necessarily direct the choice of methodology and methods required to generate suitable knowledge in response to these questions (Denzin & Lincoln, 2005). The development of a piece of social research is often based on a real-life issue (Crotty, 1998), as was the case for this study on nurses' manual handling experiences.

The clarification of aims for the study enabled the identification of strategies most likely to assist in answering the research questions, and the integral links between research purpose, methodology and methods were identified. My initial concerns centred around the extent of understanding of nurses' circumstances and experiences in relation to manual handling in the clinical setting, both by nurses themselves and other professionals within healthcare facilities. This directed the development of my first research question as central to this study wherein I sought to foreground the nature of nurses' experiences, associated beliefs and attitudes.

Research question 1:

What are the beliefs, attitudes and experiences of nurses pertaining to manual handling?

Further research questions were developed to allow more comprehensive exploration of nurses' experiences of manual handling. In particular, nurses' perceptions of how other professionals respond to their knowledge and practices could contribute to understanding better the manual handling circumstances and ongoing issues for nurses. Thus the second research question investigated interactions with others, again as perceived by the nurses.

Research question 2:

How do nurses perceive their knowledge of manual handling and safe practices is received by other healthcare professionals?

The third research question was specifically generated to focus on practical applications of the findings generated from the study. This final research question, presented below, was also structured to incorporate the identification of potentially transformative practices.

Research question 3:

How can nurses' knowledge of manual handling be incorporated into the development of interventions to reduce injuries?

## **Philosophical framework overview**

With an overall objective of conducting an in-depth investigation into the knowledge and experiences of nurses in relation to manual handling, the epistemology of qualitative research was chosen as congruent with this study. Indeed, a qualitative approach values subjectivity in conjunction with recognition of the position of the researcher within the study, thereby necessitating reflexivity as an important component of rigour (Alvesson & Sköldberg, 2009; Cresswell, 2005; Taylor & Francis, 2013). Rather than asserting universal truths that can be objectively studied, the contextual nature of qualitative epistemology emphasises processes that value an individual's experiences and reflections. My goal to hear the nurses' stories about their manual handling experiences strongly supported my decision to develop a research design with the qualitative paradigm.

My ontological assumptions regarding the nature and construction of reality recognised the influences of the social world on nurses' knowledge and experiences, and the structure of healthcare as historically and politically embedded. Critical social science provided a theoretical framework appropriate to my study aims embracing an emancipatory intent. Gaining an enhanced understanding of manual handling issues from nurses' perspectives was one component of this study. Additionally, my overall aim was to go beyond description and foster change. Validating the participants' experiences and the potential for emancipation from oppressive socio-political structures, once identified, was central to this research and congruent with the critical theory. Oppression of nurses has been reported by scholars (Dong & Temple, 2011; Dubrosky, 2013; Fletcher, 2006; Roberts, DeMarco, & Griffin, 2009; Rose & Glass, 2008) although a critical lens has not been used to investigate the manual handling circumstances of nurses previously.

Critical realism is characterised by a stratified ontology that allows for the existence of social and physical structures independent of human recognition, whilst also incorporating a hermeneutic dimension (Clark, Lissel, & Davis, 2008; DeForge & Shaw, 2012). This approach emphasises an examination of the interplay between individual agency factors,

such as experiences, beliefs and personal meanings, and structural factors, such as culture, social norms and other contextual aspects of the environment. Consideration of these components assists in the identification of the mechanisms that give rise to a particular outcome pattern within a given context. In contrast to successionist causality of post-positivist paradigms, critical realism embraces generative causation whereby different outcome patterns are triggered according to the particular constellation of factors present in a particular context. The ability of critical realism to offer an account of patterns underlying the manifest content was harnessed in this study and contributed an additional level of data analysis that could potentially offer opportunities for transformation by foregrounding previously unacknowledged mechanisms.

## **Thesis style and presentation**

### **Thesis by publication**

This study is presented as a thesis by publication in accordance with section five (PhD by Publication) of the Australian Catholic University's Guidelines on the Preparation and Presentation of a Research or Professional Doctoral Thesis for Examination (Australian Catholic University, 2014). The thesis therefore presents the research conducted during the candidature in conjunction with the published papers produced for the study.

Although the number of journal articles required is not specified by the Australian Catholic University, to allow flexibility according to the characteristics of a particular study, it is stated that at least half of the prepared papers must be accepted for publication in peer-reviewed journals (Australian Catholic University, 2014). In this thesis, five of the six papers presented have already been published in scholarly journals after scrutiny by blinded peer-review processes. The sixth manuscript has been prepared for submission for publication.

### **Thesis structure**

While many theses present publications as separate chapters, the framework for this thesis is that of five chapters in which the six original publications are embedded. This was an intentional decision to maximise the flow and integration of the key sections where the publications feature, namely the chapters discussing the current literature and the research findings. In addition, entries from my reflective journal will be threaded throughout this thesis in acknowledgement of my own subjectivity, and to provide examples of reflexivity

that evolved subsequent to my reflections. Chapter one provides the framework for the research, introducing background and motivation for the study, and an overview of the research details. There follows in chapter two a review of the literature.

The first paper in chapter two is "Debunking the Manual Handling Myth: An Investigation of Manual Handling Knowledge and Practices in the Australian Private Health Sector" (Kay & Glass, 2011). This publication presents a survey of nurses' knowledge and practices for safe manual handling in an acute care setting. As recommendations for safe practices are couched in an ergonomic framework, this paper illustrates discrepancies between the level of ergonomic knowledge possessed by nurses and assumptions held by administrators and scholars regarding nurses' knowledge of essential ergonomic principles. The published literature review "It's Not About the Hoist: A Narrative Literature Review of Manual Handling in Healthcare" (Kay, Glass, & Evans, 2014a) is the second paper contained in chapter two and overviews the key themes found within the manual handling literature. This second paper is followed by a published appraisal from a high profile scholar in the manual handling field that was printed in the same issue of the respected *Journal of Research in Nursing* (Kneafsey, 2014).

Chapter two continues with an update of literature to account for the period between manuscript acceptance and thesis submission. The chapter is completed by a third original publication, a conceptual paper titled "Reconceptualising Manual Handling: Foundations for Practice Change" (Kay, Glass, & Evans, 2012). Although publication dates may appear to contradict this order of inclusion in the thesis, the writing and acceptance of the literature review preceded the generation of this third paper regarding the conceptualisation of manual handling. This third paper in chapter two calls for dialogue in both the research and manual handling communities in order to interrogate the assumptions underlying contemporary and dominant approaches to manual handling.

The theoretical framework and methodology for this thesis is expanded upon in chapter three. Here the major tenets of critical theory and critical social science are described in relation to the study design. Critical realism, as a key aspect framing the data analysis, is then addressed. The research methods are subsequently discussed, particularly noting their relevance to emancipatory research. The final section of this third chapter reviews ethical and critical processes, these being crucially important aspects for critical research designs.

Chapter four outlines the process of data analysis as contained in the first of two published papers "Moments of Speaking and Silencing: Nurses Share Their Experiences of Manual Handling in Healthcare" (Kay, Evans, & Glass, 2015). This manuscript reports the dataset for one of the major findings that emerged from the data, 'voicing practice issues'. The next paper in chapter four, "Loaded Both Ways: The Impact of Dialectical Tensions on Nurses' Manual Handling Practices" (Kay, Glass, & Evans, 2014b) delineates the remaining major theme, that of 'how to practice'. These two major themes combine to create the central theme of (mis)power. The findings are ultimately discussed comprehensively in terms of the concept of (mis)power, as presented in the last manuscript within this thesis entitled "(Mis)power and Marginalisation: Nurses' Perspectives on Moving and Handling Patients".

Finally, reiteration of the research questions and reflection on the findings in terms of the research methodology is presented in chapter five. This concluding chapter promotes critical appraisal regarding the trustworthiness of the study. Chapter five also details the implications and recommendations arising from this research.

## **Formatting styles**

The styles used throughout this thesis are consistent with the sixth edition of the Publication Manual of the American Psychological Association (APA) (American Psychological Association, 2010). The principles of the APA manual have been adopted in this thesis, notwithstanding the fact that the APA manual was developed for the formatting of journal articles and not for in-depth guidance on the formatting of theses.

The main body of text in this thesis is written in '12 point Calibri' font, and text within tables is reduced to '11 point Calibri' for ease of reading. In chapter four, I introduce each participant with a vignette written in '*10 point italicised Verdana*' font. In deliberate contrast to the main thesis text, research participant quotations are presented in '11 point Georgia' font. Respect for participants is a cornerstone of critical methodology, and attempts to reduce the power differential and the authorial nature of thesis construction have directed my decision to strive for faithful representation of their voices in the visual medium of print. Aligned with these principles, I have actively chosen to preserve the original syntax and vocabulary used by participants. Hence data offered throughout this thesis will not always conform to the conventional rules of English grammar.



As a qualitative researcher, I am both a participant in the research, and the researcher. Thus I delineate my own reflective journal entries by a distinctive font style: '*10.5 point italicised Trebuchet MS*'. Quotations from interviews or journal entries with a minimum length of forty words are displayed in a dedicated paragraph indented 1.27 cm, whereas those shorter than this threshold are bounded by double quotation marks within the body of the text.

The above formatting patterns are not applied to the published papers as typesetting is determined by the journal in which each manuscript appears.

## **Chapter summary**

This thesis examines the manual handling experiences of 13 practising nurses who were interviewed in the Australian states of Victoria and Tasmania in 2012. It diverges from mainstream manual handling safety literature in that it is informed by critical social science.

This introductory chapter has outlined the foundation for the research presented in this thesis. The chapter opened with an introduction and summary of the background to nurses' manual handling injuries arising in the workplace. My personal interest and pre-research assumptions progressed to key matters pertinent to research design. An explanation of the research significance and scope was offered prior to clarification of the aims and research questions that will be addressed in this thesis. A preliminary discussion of the philosophical framework in relation to qualitative research in the field of critical inquiry then followed. Finally, the presentation of this thesis in terms of requirements, styles, structure and chapter content were explained in order to orientate the reader to subsequent chapters. In chapter two which follows, a published literature review will be supplied in conjunction with a background paper and a publication proposing the reconceptualisation of manual handling in order to progress the occupational concerns of nurses.

## **Chapter Two**

### **Conceptualising Manual Handling:**

#### **Literature Review**

## Introduction

In Chapter One I outlined the pathway that directed the development of this research. The chapter included an overview of the problem of high manual handling injury prevalence amongst nurses in addition to my own experiences in this field. In this second chapter I will further expand upon the background for this study, with an emphasis on the scholarly manual handling literature and the key concepts contained therein. This chapter will therefore explore the breadth of research regarding strategic responses to the manual handling issues raised in healthcare.

There are three original papers in Chapter Two that were developed and published as components of this thesis. These publications provide a backdrop against which the current study is constructed. The first paper, written early in my candidature, examined the ergonomic knowledge-base of a sample of nurses working in an Australian healthcare organisation. I have deliberately placed this paper in advance of the other two publications in this chapter. My decision was based on the aim to assist the flow of the thesis upon reading as this first publication represents my initial scrutiny of existing manual handling approaches.

The first publication identified a mismatch between ergonomic knowledge and self-reported assessments of safe practice and prompted me to look beyond assumptions that sufficient knowledge would successfully prevent nurses' MSDs. Optimal knowledge and skills transfer are common objectives across manual handling safety programs, in anticipation of reduced injury events. Whilst this might appear a plausible solution to manual handling issues, I reflected on the soundness of this assumption, prevalent in clinical settings and evaluation studies alike, given the breadth of international efforts embracing this perspective yet falling short of similarly stated aspirations.

Following from the first publication in this chapter will be a review of the literature pertaining to manual handling within healthcare facilities. The second paper is provided here and explores the ongoing manual handling issues in healthcare. This paper is an extensive review of the contemporary and dominant discourse prior to 2012. Immediately following this is a blinded peer-review of the manuscript. The critique was undertaken by a prominent United Kingdom (UK) scholar researching in this specialty field and published simultaneously in the same issue of the journal. As is necessary due to publication delays

and the dynamic nature of knowledge development, I continued to search the scholarly and grey literature. Therefore an updated review of the literature spanning December 2011 to September 2014 is included in the subsequent section of Chapter Two.

Lastly, the third original publication will be presented before the chapter summary. The final publication in this chapter is a discussion paper which elaborates on key concepts that emerged consequent to the preceding papers. The three publications combine to inform the current study by highlighting the dearth of research exploring manual handling from the perspectives of nurses who provide direct care to patients. Consideration of nurses' beliefs and attitudes regarding manual handling has the potential to enhance our understanding of contemporary manual handling issues in healthcare. Historically, nurses' perspectives have received minimal attention in contrast to a large collection of epidemiological or evaluation studies found in the scholarly literature.

## **Publication 1**

### **Introduction to publication 1**

The first publication is "Debunking the Manual Handling Myth: An Investigation of Manual Handling Knowledge and Practices in the Australian Private Health Sector" (Kay & Glass, 2011). The paper relates to the background and the early rationale for my study. Ergonomic principles are central to contemporary manual handling education and training initiatives prevalent throughout most Australian healthcare organisations. This paper specifically highlights the potential for misunderstandings about nurses' comprehension of ergonomic principles, including misplaced confidence regarding nurses' knowledge of ergonomics and hence their ability to translate ergonomic knowledge into practice. Moreover, the assessment of skills and knowledge transfer following the training of student and registered nurses in safe manual handling practices has rarely been reported. Nonetheless, scholars frequently assume, or explicitly assert, that their participants had sufficient ergonomic knowledge to enact safe practices. Such claims are rarely referenced with supporting evidence (for example, see Holman, Ellison, Maghsoodloo, & Thomas, 2010; Kneafsey & Haigh, 2007; Kneafsey, Ramsay, Edwards, & Callaghan, 2012).

## Declaration

**Kay, K., & Glass, N. (2011).** Debunking the manual handling myth: An investigation of manual handling knowledge and practices in the Australian private health sector. *International Journal of Nursing Practice*, 17, 231-237. <http://dx.doi.org/10.1111/j.1440-172X.2011.01930.x>

## Declaration by candidate

In the case of the first original publication in Chapter 2, the nature and extent of my contribution to the work was the following:

Nature of contribution	Extent of contribution (%)
<i>Principal author responsible for literature search, development and writing of the manuscript. Responsible author who accepts overall responsibility for the publication.</i>	80

The following co-authors contributed to the work:

Name	Nature of Contribution
Professor Nel Glass	<i>Contributed to review and editing of the manuscript</i>

Candidate's signature:

	January 27, 2015
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## Declaration by co-author

The undersigned hereby certify that:

(1) the above declaration correctly reflects the nature and extent of the candidate's contribution to this work, and the nature of the contribution of each of the co-authors;

(2) they meet the criteria for authorship in that they have participated in the conception, execution, or interpretation, of at least that part of the publication in their field of expertise;

(3) they take public responsibility for their part of the publication, except for the responsible author who accepts overall responsibility for the publication;

(4) there are no other authors of the publication according to these criteria;

(5) potential conflicts of interest have been disclosed to (a) granting bodies, (b) the editor or publisher of journals or other publications, and (c) the head of the responsible academic unit; and

(6) the original data are stored at the following location(s) and will be held for at least five years from the date indicated below:

**Location**                      School of Nursing, Midwifery & Paramedicine

Co-author's signature:

Professor Nel Glass 	January 27, 2015
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**Publication 1: Debunking the manual handling myth: An investigation of manual handling knowledge and practices in the Australian private health sector.**

Kay, K., & Glass, N. (2011). Debunking the manual handling myth: An investigation of manual handling knowledge and practices in the Australian private health sector. *International Journal of Nursing Practice*, 17, 231–237. <http://dx.doi.org/10.1111/j.1440-172X.2011.01930.x>















## **Summary of publication 1**

Programs embedded in ergonomic principles are the mainstay of current efforts to address manual handling issues internationally. However there appears to be substantial variation in the content, time allocation and implementation of ergonomic programs within different healthcare organisations (Denis, St-Vincent, Imbeau, Jette, & Nastasia, 2008). Initially I questioned the effectiveness of current programs to provide nurses with sufficient ergonomic knowledge and skills in the light of the rather ubiquitous nature of manual handling programs. It seemed plausible that manual handling practices discrepant from policy might be explained by deficiencies in a nurse's understanding of the underlying ergonomic rationale for safety recommendations.

This first publication in this chapter informed the study reported in this thesis by prompting consideration of factors influencing manual handling issues beyond an individual's comprehension of ergonomics. As reported in the publication, the majority of participants believed that they conducted their manual handling activities in a safe manner. However, the participants scores on the survey questionnaire also indicated low levels of understanding of ergonomic principles, throwing into doubt the ability of participants to practice safely despite the confidence reflected in their self-reports. Familiarity with ergonomic principles are viewed as foundational in contemporary manual handling programs. The results reported in this first publication, gives cause to dispute the commonly held notion that nurses are adequately informed about principles central to manual handling safety.

This publication examined the knowledge and self-reported safety behaviours of nurses, in relation to the ergonomic principles that underpin local and international safety recommendations for manual handling tasks. Focused on survey results from one hundred participants, this first paper highlighted the confusion and contradictions for clinical nurses in their understanding and adoption of ergonomic-based safety principles. The publication offers a platform from which the research design for this thesis developed. It suggests that the resolution of manual handling issues does not reside solely in correcting the actions of disaffected clinicians who are adequately informed of pertinent knowledge. An exploration that allows a wider view of ongoing issues, inclusive of nurses' experiences, appeared crucial to advancing manual handling safety in healthcare.

The second publication in this chapter more broadly reviews and critiques manual handling issues in healthcare by the use of a narrative literature review. This was a critical paper that informed the research design for this thesis.

## **Publication 2**

### **Introduction to publication 2**

The second publication presented in this chapter reviews the manual handling literature and expands further to include aspects of safety culture and safety climate. Notably, "It's Not About the Hoist: A Narrative Literature Review of Manual Handling in Healthcare" (Kay, et al., 2014a) underscores the dearth of literature examining nurses' perspectives on manual handling issues. An introduction to the context for manual handling in healthcare and conceptual definitions associated with manual handling are included in the initial sections of this second publication.

The paper includes an overview of global legislative frameworks as a backdrop to more localised manual handling directives. In order to explore more fully the manual handling issues relevant to nurses, the progression of injury prevention approaches from single factor training programs to present-day multidimensional, ergonomic programs is also examined.

As nursing activities entail the manual handling of both goods and people, the literature that spans general industry is included when such papers tangibly contribute to the body of knowledge regarding nurses' manual handling activities. The review cites articles that are illustrative of the breadth of manual handling literature, and highlights selected issues associated with attempts to explain and resolve manual handling issues in healthcare.

The evidence derived from epidemiological studies of both registered nurses and student nurses is also appraised. The decision to include student nurses in this literature review is two-fold. Firstly, this highly accessible group carries a substantial burden of research relating to manual handling, despite their limited exposure to manual handling when compared to their registered counterparts. Secondly, a high prevalence of manual handling injuries exists amongst nursing students. Anecdotally, it appears that student nurse manual handling injury rates may be poorly recognised by clinicians, educators and administrators in general. The student nurses' experiences are congruent with one of the implicit intentions of this research study to expand knowledge and visibility of manual handling issues for nurses.



## Declaration

**Kay, K.,** Glass, N., & Evans, A. (2014). It's not about the hoist: A narrative literature review of manual handling in healthcare. *Journal of Research in Nursing*, 19(3), 226-245.  
<http://dx.doi.org/10.1177/1744987112455423>

## Declaration by candidate

In the case of second original publication in Chapter 2, the nature and extent of my contribution to the work was the following:

Nature of contribution	Extent of contribution (%)
<i>Principal author responsible for literature search, development and writing of the manuscript. Responsible author who accepts overall responsibility for the publication.</i>	80

The following co-authors contributed to the work:

Name	Nature of Contribution
Professor Nel Glass	<i>Contributed to review and editing of the manuscript</i>
Dr Alicia Evans	<i>Contributed to review and editing of the manuscript</i>

Candidate's signature:

	January 27, 2015
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## Declaration by co-authors

The undersigned hereby certify that:

- (1) the above declaration correctly reflects the nature and extent of the candidate's contribution to this work, and the nature of the contribution of each of the co-authors;
- (2) they meet the criteria for authorship in that they have participated in the conception, execution, or interpretation, of at least that part of the publication in their field of expertise;

(3) they take public responsibility for their part of the publication, except for the responsible author who accepts overall responsibility for the publication;



(4) there are no other authors of the publication according to these criteria;

(5) potential conflicts of interest have been disclosed to (a) granting bodies, (b) the editor or publisher of journals or other publications, and (c) the head of the responsible academic unit; and

(6) the original data are stored at the following location(s) and will be held for at least five years from the date indicated below:

**Location**                      School of Nursing, Midwifery & Paramedicine

Co-authors' signatures:

Professor Nel Glass 	January 27, 2015
Dr Alicia Evans 	January 27, 2015

**Publication 2: It's not about the hoist: A narrative literature review of manual handling in healthcare.**

Kay, K., Glass, N., & Evans, A. (2014). It's not about the hoist: A narrative literature review of manual handling in healthcare. *Journal of Research in Nursing*, 19(3), 226-245.

<http://dx.doi.org/10.1177/1744987112455423>











































## Summary of publication 2

The second publication serves as a background for the current study. The paper reviewed the contemporary international literature on manual handling in the specialised context of healthcare, finding that the substantial body of research comprised epidemiological or intervention evaluations, the latter being largely case studies of limited duration. An examination of the manual handling literature identified the predominance of the post-positivist paradigm. Objectivity and universal laws were presumed; deductive reasoning and hypothesis testing were applied in response to data for injury rates and compensation claims and generalisability of results was implied or asserted. Notably, there was a dearth of literature pertaining to nurses' experiences of manual handling. Approaches to manual handling tasks that evolved in materials handling industries appear to overlook the context within which patient-related manual handling tasks arise. Furthermore, recommended thresholds for manual handling are dependent on materials handling data and neglect the dynamic and inconsistent characteristics of a human load. Contemporary interventions were modelled on training and administrative measures such as policies and guidelines were commonplace yet not well supported by evidence in the scholarly literature.

Whilst definitions of manual handling and MSDs vary, common characteristics relate to the expenditure of effort to facilitate the movement of an object or person, and associated injuries that ensue in the face of over-exertion. The complex nature of mechanisms of injury for MSDs, combined with the use of statistical estimates to predict safety thresholds, confound injury prevention efforts. This is problematic because it can potentially mask assumptions within safety programs. Therefore strategies for injury prevention have developed within the confines of conventional medico-scientific theoretical frames, dominated by the biomechanical model.

Biomechanical approaches emphasise issues pertaining to load exposure and utilise ergonomic principles in an attempt to reduce injury events. Ergonomic strategies rely on identification of injury risk and predominantly address the physical aspects of manual handling issues. This brings a sharp focus on the physical aspects of manual handling at the expense of psychosocial factors that have been reported in the literature in recent years. Furthermore, the efficacy of injury prevention strategies is reliant on formally recognised injuries, which are assumed to be an accurate indicator of injury rates. The impact of underreporting is ignored or dismissed, as are other contextual influences on manual

handling in healthcare. Overall, there has been a broad progression from early intervention efforts that relied on training in specific, unsubstantiated techniques towards ergonomic-based programs that ideally incorporate training as only part of a multifaceted intervention. Although systematic reviews wholeheartedly report the inability of technique training, ergonomic or otherwise, to counter manual handling risks, many organisations, regulatory and accreditation bodies continue to focus on these limited measures. Thus a focus on changing an individual's behaviour, in terms of manual handling practices, is reinforced rather than examining issues embedded in the environment and systems within the healthcare organisation.

## **Published review of publication 2**

### **Introduction**

The following paper from the Journal of Research in Nursing provides a brief commentary on the previous publication, "It's Not About the Hoist: A Narrative Literature Review of Manual Handling in Healthcare". The reviewer concurs with key points contained in the journal article, restating the persistence of high injury rates in healthcare despite mandated changes such as the regulation of manual handling in the UK. The complexity of the manual handling of patients is acknowledged and ambiguity surrounding practice are noted also. Similarly, the commentary closes with a reminder of the important influence that contextual factors can have on manual handling safety.



## **Review: It's not about the hoist: A narrative literature review of manual handling in healthcare.**

Kneafsey, R. (2014). Review: It's not about the hoist: a narrative literature review of manual handling in healthcare. *Journal of Research in Nursing*, 19(3), 246-247.  
<http://dx.doi.org/10.1177/1744987112455573>



## **Publication 3**

### **Introduction to publication 3**

The published literature review discussed earlier in this chapter was written necessarily prior to designing and commencing the current study. The process of preparing for and undertaking semi-structured interviews furthered my own understandings of manual handling in healthcare. Previously I had considered the influence that workplace and safety culture may have on nurses' manual handling actions. For that reason I introduced the literature on safety culture and safety climate in the published review. At that time, I reflected on the significance of nurses' attitudes and beliefs as determinants of their choices in regard to the utilisation, or otherwise, of recommended practices in manual handling. Whilst aspects of the healthcare culture may indeed shape individual attitudes to manual handling tasks and practices, assumptions and limitations embedded in the current conceptualisation of manual handling and intervention programs may also play a part. The following paper expands upon this last point in particular.

## Declaration

Kay, K., Glass, N., & Evans, A. (2012). Reconceptualising manual handling: Foundations for practice change. *Journal of Nursing Education and Practice*, 2(3), 203-212. <http://dx.doi.org/10.5430/jnep.v2n3p203>

## Declaration by candidate

In the case of the third original publication in Chapter 2, the nature and extent of my contribution to the work was the following:

Nature of contribution	Extent of contribution (%)
<i>Principal author responsible for literature search, development and writing of the manuscript. Responsible author who accepts overall responsibility for the publication.</i>	80

The following co-authors contributed to the work:

Name	Nature of Contribution
Professor Nel Glass	<i>Contributed to review and editing of the manuscript</i>
Dr Alicia Evans	<i>Contributed to review and editing of the manuscript</i>

Candidate's signature:

	January 27, 2015
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## Declaration by co-authors

The undersigned hereby certify that:

- (1) the above declaration correctly reflects the nature and extent of the candidate's contribution to this work, and the nature of the contribution of each of the co-authors;
- (2) they meet the criteria for authorship in that they have participated in the conception, execution, or interpretation, of at least that part of the publication in their field of expertise;

(3) they take public responsibility for their part of the publication, except for the responsible author who accepts overall responsibility for the publication;



(4) there are no other authors of the publication according to these criteria;

(5) potential conflicts of interest have been disclosed to (a) granting bodies, (b) the editor or publisher of journals or other publications, and (c) the head of the responsible academic unit; and

(6) the original data are stored at the following location(s) and will be held for at least five years from the date indicated below:

**Location**                      School of Nursing, Midwifery & Paramedicine

Co-authors' signatures:

Professor Nel Glass 	January 27, 2015
Dr Alicia Evans 	January 27, 2015

### **Publication 3: Reconceptualising manual handling: Foundations for practice change.**

Kay, K., Glass, N., & Evans, A. (2012). Reconceptualising manual handling: Foundations for practice change. *Journal of Nursing Education and Practice*, 2(3), 203-212.

<http://dx.doi.org/10.5430/jnep.v2n3p203>





















### **Summary of publication 3**

As this study evolved, my understanding of manual handling issues changed considerably to the point that it was transformed to encompass a much wider perspective on manual handling. Initially I noted within the scholarly and grey literature an intense focus on manual handling programs. It appeared that the modification of an individual's performance of manual handling tasks was the mainstay of these programs. Notably, MSD rates amongst nurses remained high in the face of this approach to injury prevention, prompting me to look beyond individual factors and towards other potential influences on manual handling practices. Therefore I began to review and critique the broader structural features of healthcare that may function as barriers to manual handling safety. "Reconceptualising Manual Handling: Foundations for Practice Change" provides a platform from which the concepts for the current study emerged and hence consolidated the design for the research reported in this thesis.

The publication interrogates the underlying assumptions embedded within the current strategic approaches to manual handling issues in healthcare facilities. Overwhelmingly injury prevention programs adopt similar central features that prioritise the integration of ergonomic principles in manual handling manoeuvres. However, there is limited direct evidence for the content of these programs and their transferability to clinical settings. In addition, manual handling programs in their current formats are presumed efficacious. This is despite the findings of systemic literature reviews that signal the limited value of training and compliance strategies without comprehensive changes at the organisational, rather than the individual, level.

This publication suggests that a narrow gaze on the performance of prescribed actions in order to ameliorate manual handling injuries may account for the limited success of contemporary manual handling programs in healthcare. Additionally, the biomechanical model constrains the development of more effective solutions to the risks of incurring a manual handling injury. Although ergonomic developments may be integral to injury prevention strategies, their application in practical terms has reinforced the focus on physical aspects of manual handling.

Socio-political critique of the assumptions underlying current methods used to address manual handling issues could offer knowledge critical to the advancement of the successful



prevention of MSDs currently sustained by nurses. Analysis of the context of manual handling for nurses has the potential to make visible the socially constructed norms and values that impact upon nurses in their manual handling practices. Central to this aim is the inclusion of nurses' voices in dialogue to transform their manual handling experiences.

## **Recent literature**

As previously mentioned, literature pertaining to manual handling in healthcare was continually searched and reviewed subsequent to acceptance of the publication of "It's Not About the Hoist: A Narrative Literature Review of Manual Handling in Healthcare" in 2012. Database alerts were established during the initial literature review period to ensure that later publications or citations relevant to the scope of this thesis were identified. As I was aware that other healthcare professionals and employees suffered injuries from manual handling activities, I also scanned the literature on these groups in the event that nurses' experiences may have been subsumed into studies on these other occupational groups (Alperovitch-Najenson, Treger, & Kalichman, 2014; Campo, Weiser, Koenig, & Nordin, 2008; D'Arcy, Sasai, & Stearns, 2012; Gropelli & Corle, 2010). To ensure the adequacy of my strategies to remain updated on scholarly endeavours in the manual handling field, I also manually checked the reference lists of recent manual handling publications for any key papers that may have escaped my earlier detection.

The overwhelming bulk of literature located from 2012 to 2014 had similar content to that which had been included in the published review presented earlier in this chapter. Over the past decade fewer publications have been dedicated to manual handling epidemiology alone, although comparisons of MSD prevalence between occupational groups continues (Alperovitch-Najenson, D., et al., 2014; Long, Bogossian, & Johnston, 2013; Qin, et al., 2014). The recent longitudinal study by Harcombe and colleagues (2014) confirmed earlier cross-sectional findings of high rates of MSDs amongst nurses, and highlighted that these injuries are not confined to the lower back but occur at various anatomical locations. Formal MSD data, often accompanied by estimates of the financial burden to employers or insurers, formulated the rationale for overwhelming majority of manual handling intervention studies reported in the past three years (Mayeda-Letourneau, 2013; Restrepo, et al., 2013). This was not an unexpected finding as it was consistent with earlier findings across this discourse.

A recent publication by Punnett (2014) discussed the issues surrounding causality for MSDs, concluding that epidemiological and laboratory evidence have given rise to general agreement about the musculoskeletal consequences of excessive physical loads. She identified, however, that the definition of 'excessive' has been revised and debated for some time. Yassi and Lockhart (2013) conducted one of the most comprehensive literature reviews to date, in which they examined the work-relatedness of low-back pain amongst nurses. However injuries to other parts of the body have also been investigated (van Rijn, Huisstede, Koes, & Burdorf, 2010; Viikari-Juntura, 2010).

The recent literature on manual handling has evolved in that there is a broad acceptance of the need for multidimensional programs rather than the now out-dated, single-factor interventions of earlier years. Case studies evaluating ergonomic-based programs continue to be reported (Berthelette, Leduc, Bilodeau, Durand, & Faye, 2012; Schoenfisch, Lipscomb, Pompeii, Myers, & Dement, 2013; Yu, et al., 2013). However, the majority of workplace interventions are unique, and single studies provide insufficient evidence to make generalised efficiency claims for their use in other healthcare organisations (Tullar, et al., 2010). Overall, the inconsistent outcomes from manual handling programs accord with the limitations created by economic and organisational constraints within healthcare, highlighting the significance of context in managing manual handling activities. Pertinently, the systematic review by Hogan et al (2014) highlighted that manual handling training has not been shown to effectively produce transfer of training or behavioural changes that are expected to reduce work-related musculoskeletal disorders (WRMSDs).

A sub-discipline of participatory ergonomics is becoming increasingly prominent. This approach to manual handling safety includes not only the teaching of ergonomic principles to nurses, but also a collaborative approach to identification of manual handling issues and the implementation of preventative programs (van Wyk, Andrews, & Weir, 2010). Whilst many papers emphasise the importance of stakeholder participation to the success of injury prevention programs, consistent application of this ideal does not appear evident in the implementation of programs despite stated intentions. Although not confined to healthcare alone, Dixon and Theberge (2011) highlighted the marginalisation of workers consequent to the social and organisational structure of workplaces, and the consequent constraints this produces on worker participation in varying initiatives.

International attempts to improve manual handling in healthcare have included the establishment, in the United States of America, of a formal accreditation process for manual handling consultants, expansion of ergonomic qualifications specific to patient handling at Loughborough University in the UK and a nationwide program facilitated by 'ergo-coaches' in the Netherlands (Knibbe, et al., 2007). Similarly, the use of mechanical aids to reduce manual handling injury risks continue to be promoted (Burdorf, Koppelaar, & Evanoff, 2013; Myers, Schoenfisch, & Lipscomb, 2012; Schoenfisch, et al., 2013; Zhang, Barriball, & While, 2014). Additional influences on manual handling safety have also been reported by some scholars who maintain that organisational factors cannot be overlooked (Koppelaar et al, 2013). Suggestions for guidelines and policies have proliferated further in the scholarly and grey literature, although they continue to direct attention to physical risk assessments for manual tasks (Kuijer, et al., 2014; Kuijer & Verbeek, 2013; Lowe, Weir, & Andrews, 2014). Whilst the majority of guidelines, and indeed ergonomic programs, attest to aspects of manual handling beyond physical characteristics, the emphasis and precise implementation of strategies to manage non-physical factors is understated at best.

A notable evolution in the manual handling literature is the appearance of longitudinal studies, primarily of ergonomic programs and the adoption of assistive devices for manual handling tasks (Garg & Kapellusch, 2012; Theis & Finkelstein, 2013). Prospective studies on the use of devices have also commenced such as the Danish study by Anderson et al (2014) which concluded that daily patient transfers were clearly associated with an increased risk of back injuries to healthcare workers. Although a large cohort was surveyed, their study only investigated sudden onset back injuries thus excluding the cumulative development of MSDs. The small number of prospective studies and their associated limitations do not yet allow generalised conclusions to be drawn regarding MSD risks in healthcare beyond that which has previously been established.

Whilst the manuscript "It's Not About the Hoist: A Narrative Literature Review of Manual Handling in Healthcare", was published in 2014, it was finalised and accepted for publication in 2012 (Kay, et al., 2014a). To ensure that a comprehensive and contemporary appreciation of the scholarly literature informed this thesis, I continued to search and monitor the manual handling literature and other relevant fields subsequent to the publication. Research data commonly used was that obtained from organisational records and the costs of workers' compensation costs, although increasingly, self-report surveys are

contributing to an understanding of MSDs in the nursing profession. Further, there is general agreement regarding the manual handling risks associated with patient care in the healthcare setting. Recent epidemiological studies of longitudinal and prospective designs have broadly confirmed the high prevalence rates found previously in cross-sectional studies.

The complex nature of nursing work, in settings that encompass multiple and potentially unpredictable variables, has resulted in the recognition of the key risks for MSDs. These risks include awkward postures, excessive forces in combination with working conditions that include long hours, loads which exceed recommended limits, and limited autonomy over workload. In the face of substantial evidence for risks associated with nursing practice, there remains an over-reliance on technology and behavioural solutions to counter these risks (Hignett, Carayon, Buckle, & Catchpole, 2013). Load reduction is a cornerstone of ergonomic safety programs based on moderate levels of evidence for investment in engineering controls such as assistive equipment (Tullar, et al., 2010). The focus on load reduction appears to be at the expense of examining other features that increase the risk of injury, for example space constraints that generate awkward postures during manual handling tasks. Ergonomic principles dictate that inappropriate postures adopted during manual handling tasks place additional loads on tissues, leading to fatigue, tissue damage and ultimately injury. However, the mitigation of risks due to awkward postures are commonly relegated to training individuals in 'ergonomically correct' postures with little evidentiary support and a multitude of scales developed on which to assess performance. A review of the extant literature in the period subsequent to the published literature review within this chapter illustrates the ongoing development of manual handling programs embedded in ergonomic principles. Nevertheless, the legacy of training as a means to resolve manual handling issues still permeates many injury prevention programs. This is a significant issue for the health profession.

## **Chapter summary**

This chapter has provided an introduction to manual handling issues through the presentation of three published papers and an additional summary of more recent literature in the field. The first paper presented insights into levels of ergonomic knowledge and concurrent perceptions of safe practice, as demonstrated in a cohort of nurses in a

private Australian healthcare facility. The discrepant findings between knowledge of basic ergonomic principles and self-perceptions of safe practice were apparent in the findings and promote reflection on the conventional belief that training programs have imparted adequate knowledge to employ safe manual handling practices.

The second paper included in this chapter reviews the contemporary manual handling literature prior to acceptance for publication in 2012, and is complemented by an updated section on more recent literature at the end of the chapter. The context for manual handling is purveyed in terms of legislative and administrative frameworks. The development of training programs was initially embedded in technique training devoid of an evidence-base, but has progressed towards ergonomic models of injury prevention, latterly intended to include collaboration with employees in contrast to interventions driven by managerial decision-making. Although providing a comprehensive outline of literature pertinent to manual handling, a key contribution of the published literature review is to foreground the virtual absence of nursing perspectives and input into manual handling issues overall, and the substantial oversight of contextual factors to date.

The third paper in this chapter interrogated further the understanding of the context of manual handling for nurses and challenges conventional notions and conceptualisations of manual handling and intervention programs, particularly in light of the sustained high levels of MSDs amongst nurses. The underlying assumptions regarding the evidence-base and efficacy of training programs, however constituted, and the suitability of policy recommendations for clinical settings, were dissected. Systematic literature reviews provide supportive evidence for the need to re-evaluate approaches to manual handling injury prevention. It is in this publication that I reiterate the need for critical analysis and comprehensive transformation of manual handling at the macro level, rather than reliance on nurses' behavioural changes.

The literature on manual handling is replete with exemplars of preventative programs based on assumed evidence and hence claimed as implementation of best practice. However what seems to be missing is a critical analysis of the contemporary conceptualisation of manual handling. The experiences of nurses in manual handling have been largely ignored or deemed of little consequence in comparison with objectivist, scientifico-technical recommendations for risk reduction. The overall focus on the physical

aspects of manual handling had precluded recognition of the context for nurses and the impact on manual handling issues for their daily practice.

## **Chapter Three**

### **Methodology, Methods & Processes**

## **Introduction**

In this current chapter I will discuss the theoretical framework and methodology that framed the research study reported in this thesis. An overview of critical theories will be provided in order to orientate the reader to the use of a critical lens for viewing the data collection and analysis processes. Critical theory and critical social science will be presented and referenced to some of the key scholars in this field of social inquiry. In particular, the seminal work by Fay (1987) and his enlightening commentary on the limits of critical social science will contribute to an examination of the philosophical underpinnings for the current study. Thus the methodological frame will be explicated, in conjunction with a description of the two research methods utilised, that of semi-structured interviews and researcher reflective journaling. Then follows the delineation of both the critical processes and the ethical processes employed in this study. The chapter closes with an overview of the main points discussed herein.

## **Research aims and questions**

As the research design for a study is necessarily framed by the aims and specific research questions, I will first revisit the aims and research questions for the study before expanding upon the methodology further. The overarching intention of this research was to gain a better understanding of the socio-political context of manual handling for nurses, and to give nurses the opportunity to verbalise and explore their experiences and perceptions in relation to manual handling.

The pathway to developing and clarifying the research questions is summarised in Figure 3.1 below. As previously discussed in chapter one, the three research questions that guided this study informed the research design to ensure that methods employed were congruent with the knowledge sought. The research questions were as follows:

1. What are the beliefs, attitudes and experiences of nurses pertaining to manual handling?
2. How do nurses perceive their knowledge of manual handling and safe practices is received by other healthcare professionals?
3. How can nurses' knowledge of manual handling be incorporated into the development of interventions to reduce injuries?



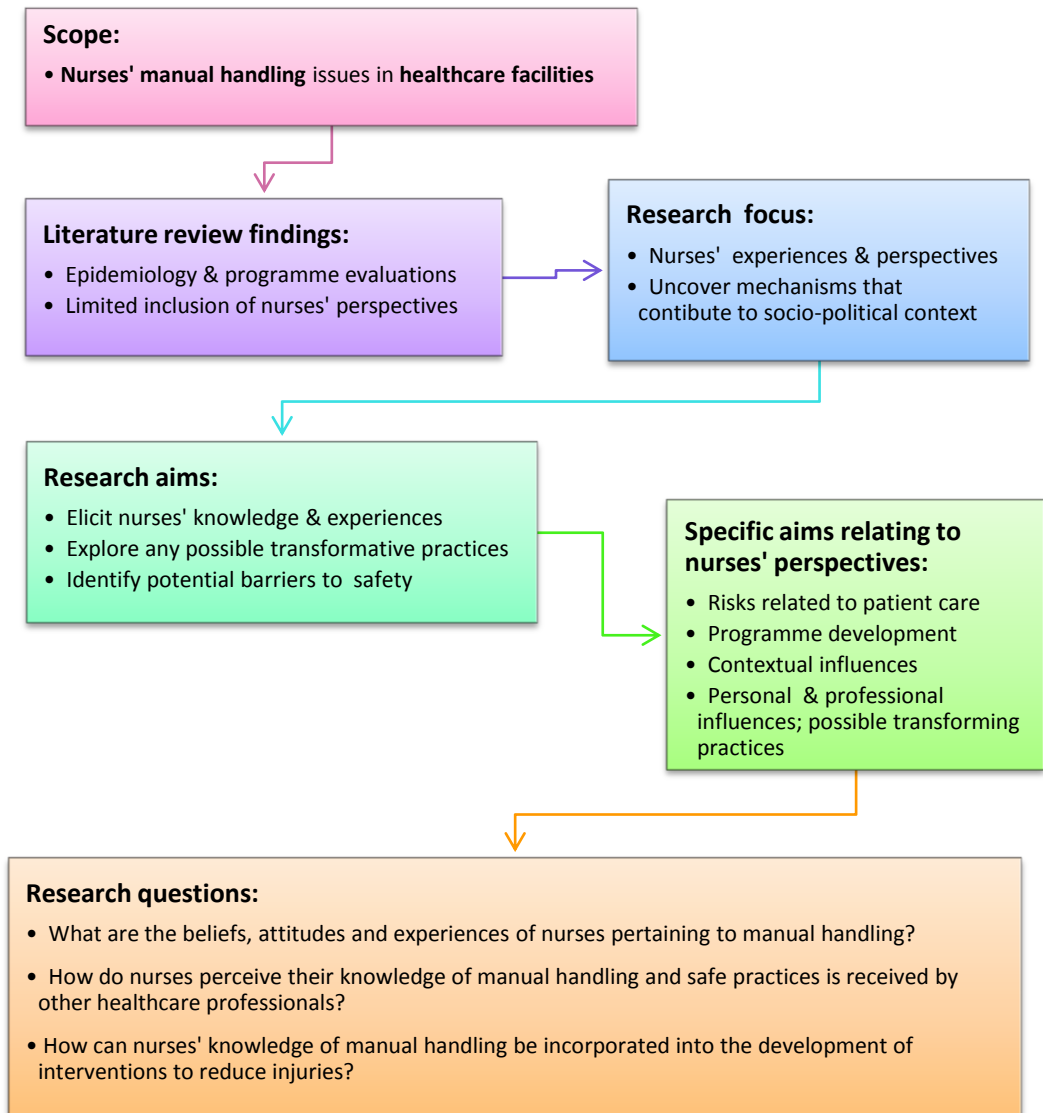


Figure 3.1. Process for development of research questions.

In my exploration of the understandings nurses generated as a result of their manual handling experiences, I was not focused on the mechanistic actions of nurses during patient care episodes. Rather I was interested in how they experienced their circumstances pertaining to the expected implementation of recommended safety protocols, and the meanings they attributed to their experiences. An improved understanding of manual handling from the perspectives of nurses caring directly for patients within healthcare organisations has the potential to explicate aspects of manual handling that had not been previously considered in the development and application of interventions to reduce risks and injuries.

This study encompassed an examination of the beliefs, attitudes and experiences of nurses in order to develop a deeper understanding of the nurse participants' perceptions of occupational manual handling. The knowledge generated by the participants in this study and the raised visibility of nurses after dissemination of the research findings, was anticipated to promote the inclusion of nurses in deliberations on manual handling issues. I aspired to obtain new knowledge that may ultimately redirect actions to improve the work-life of nurses more successfully than contemporary approaches to injury prevention have thus far achieved.

Having outlined the aims and research questions, I will now present the research design and critical methodology employed to address these questions.

## **Research design**

### **Qualitative research**

A researcher's epistemological stance directs attention towards the identification of a chosen approach to particular research problems. In seeking to understand human knowledge from the perspectives of practising nurses, the epistemology of a qualitative research design was congruent with the study's aims. When using a qualitative approach, there is an assumption that knowledge is relative and context dependent and as such people's subjective experiences, intentions, ideas and emotions are central to this investigation (Taylor & Francis, 2013). Thus the underlying assumptions of qualitative research include the acknowledgement of data collection and interpretation as subjective processes and dependent on theoretical frameworks. The ontological premise of the existence of interpretation-free, theory-neutral facts as postulated by quantitative research paradigms are comprehensively refuted by qualitative approaches to research (Alvesson & Skoldberg, 2009).

Alvesson and Skoldberg (2009) noted the growing and ongoing disparity and polarisation of empirical method from philosophical considerations and opine that it is useful to "assume the existence of a reality beyond the researcher's egocentricity and the ethnocentricity of the research community" (p. 3). Implicit in their claim is the notion of multiple realities, rather than one legitimate 'truth' determined by the researcher. Further, research that is heavily reliant on techniques and procedures underplays the ambiguity and complexity

inherent in the processes of design, investigation and analysis. Unexamined selectivity in conceptualisation, observation and interpretation disregards the need for reflection that qualitative researchers view as an essential component of research design.

## **Determining the most appropriate qualitative methodology**

My own professional experiences had challenged me to question the continued presence of specific occupational health issues for nurses. My desire was to highlight nurses' manual handling circumstances in order to promote change. Although I knew the broad area in which I wanted to conduct my research, I was initially uncertain about the most suitable methodology to achieve this. The inclusion of clinicians in devising research questions relevant to the clinical environment held particular appeal for me and I considered the suitability of knowledge translation (KT) to inform my research design. However, I realised that there were multiple ways to facilitate the contribution of nurses and I decided that knowledge translation would be an inherent part of my study regardless of the final methodological choices for my thesis. I did not believe that knowledge translation alone could provide a comprehensive methodology, as demonstrated in the following journal entry:

*[Using] KT for my study somehow reinforced an aspect of manual handling that I was not comfortable with ... a possible assumption embedded in research based on the knowledge-to-action framework, that manual handling concerns were centred on improving the use of contemporary evidence, and I truly questioned that 'the evidence' was even available ... it seemed that the 'problem' was viewed as nurses' lack of compliance with recommendations, supposedly effective and evidence-based.*

Refinement of my research questions ultimately directed the methodological choices I made to ensure the research design was congruent with my aims for this study.

## **Qualitative 'Critical' methodology**

### **Critical theory & critical social science**

*Research methodologies that endeavour to bring about social change must reflect a research process that is in itself emancipatory (Rose & Glass, 2008, p. 13).*

I concurred with the argument of Rose and Glass (2008) regarding a need for research specifically designed to critically examine the complexities of nurses' experiences in order

to advance nursing practice. The desire to develop nursing knowledge more expansive than description and understanding drew me to a theoretical framework that engaged a critical examination and analysis of the structures in which nurses practice. Believing it may be possible to transform the context in which nurses functioned, in this instance in relation to manual handling requisite for patient care, the methodology chosen for this study was an emancipatory framework located within the critical paradigm.

The explicit intention of research located in the critical paradigm is the generation of knowledge that has the potential for emancipation (Taylor, 2007; Walter, Glass, & Davis, 2001). Nurses function within a variety of historical, social, political, cultural and economic contexts and emancipatory reflection affords an opportunity to critically analyse these contextual features and how they impact upon nurses' practices. Taylor (2004) noted that such critical analysis may include a deconstructive/reconstructive process. Hence an emancipatory research design provides a suitable framework to examine the manual handling experiences of nurses because systematic scrutiny of the socio-political structures impacting upon manual handling safety may provide opportunities to challenge and reorder previously unidentified aspects of manual handling issues. A key objective for my research was to provide opportunities for transformation and change, as is noted in the third aim of my study that embraces the potential empowerment of nurses to transform their circumstances in relation to manual handling. Thus the research aims were congruent with critical research objectives and hence a critical methodology was selected for this study.

The origins of critical theory are attributed to the Frankfurt School, established in 1924 as The Institute for Social Research (Crotty, 1998). A complicated history ensued for members of the Institute that was re-established at the University of Frankfurt in 1951. It was not until this period that the term 'critical theory' was coined and the associated philosophical stance was formally associated with the Frankfurt School, although critical theory is not exclusively confined to these theorists (Fay, 1987).

Critical theory espouses reflection on and critique of society. Horkheimer, a first generation critical theorist of the Frankfurt School, emphasised the practical nature of critical theory in promoting human emancipation as a result of identifying circumstances that limit human freedom. Conceptual challenges arising from the complexities of modern societies created

a second generation of critical theorists of whom Habermas is perhaps the most prominent (Rush, 2004).

Additionally, the term critical theory also refers to a metatheory of social science, for which Fay (1987) uses the term 'critical social science' to distinguish from critical theory commonly associated with the generations of German philosophers and social theorists aligned with the Frankfurt School as noted above. In defining critical theory as a metatheory, Fay refers to a theory of science, that being an analysis of the nature of social science and the inherent assumptions therein. Common to all critical theories however is a basis in social inquiry that aims to enhance the freedom of human beings by countering domination and is thus ideologically orientated.

The assumptions inherent in critical theory include the need for liberation of oppressed groups by means of collective action subsequent to enlightenment of group members regarding their social circumstances (Fay, 1987, 1996). Fay asserted that the intent of critical theory is to explain social order, or a particular aspect of social life in a manner that fosters transformation of the existing social order based upon the newly acquired self-knowledge and insights gained. Fay (1987) encapsulates this in his statement that critical social science entails "interpreting in a cognitively respectable manner the social world in which we live in such a way that this world's oppressiveness is apparent, and in such a way that it empowers its listeners to change their lives" (p. 23).

Critical theory incorporates a theory of self-estrangement in that it presupposes the construction of self-understandings in ignorance of certain aspects of human existence and the resulting frustrations that arise from this 'false consciousness' (Fay, 1987). It is proposed that once a theoretical understanding of the social world is attained by an individual, such as a research participant, this enhanced understanding gives rise to possibilities for social transformation. A key part of this developing process is reflection or as Fay terms it, the power of human reason (Fay, 1987).

Therefore, "critical social science is based on an assumption relating to the power of human reason. It asserts that through rational analysis and reflection people can come to an understanding of themselves and can re-order their collective existences based on this understanding" (Fay, 1987, p. 142). Fay (1987) further expanded that critical social science must be simultaneously scientific, critical and practical. The term scientific refers to the

ability to provide comprehensive explanations based on empirical evidence that is subject to public evaluation whilst the critical characteristic denotes a 'sustained negative evaluation' of the current order according to explicit, rational criteria (Fay, 1987). The practical aspect of a critical social science is its ability to stimulate its audience to alter their lives based on their enhanced understanding of their social conditions and newly-acquired self-knowledge. Hence the practical nature of critical social science is highlighted by an intimate relationship between the acquisition of knowledge and action consequent to this knowledge.

### **Key tenets of critical methodologies**

There are five key tenets that distinguish critical theories from other theoretical research approaches. These guide researchers in the development of their epistemological-ontological links which are essential throughout their research processes.

#### **Power and marginalisation**

Critical approaches to qualitative research assert that we exist within a power-laden milieu that has been socially constructed (Hesse-Biber & Leavy, 2011). Assumptions inherent in critical theory include the need for liberation of oppressed groups who are inherently marginalised, by means of collective action subsequent to enlightenment of group members regarding their social circumstances (Fay, 1987, 1996).

Critical social theory asserts that oppression occurs when a dominant group determines the set of norms which are deemed 'correct' by a society, and those who cannot claim legitimate membership of the dominant group are deemed powerless, marginalised and inferior, as are their beliefs and values (Dong & Temple, 2011; Glass & Davis, 1998).

I sought to embed my research in a framework that valued the nurse participants' manual handling experiences and the meaning they attributed to those experiences within their professional environment. During the literature review conducted for this research study, I became strongly aware of the problematic nature of power and oppression of nurses and I therefore wanted to sharpen my critical research lens to explore this in my study (Dong & Temple, 2011; Fletcher, 2006; Matheson & Bobay, 2007; Mooney & Nolan, 2006; Roberts, 1983; Roberts, et al., 2009; Rose & Glass, 2008).

Whilst considering the impact of power on nurses, I also reflected on the potential power differential that existed in relations between participants and myself as 'the researcher'. My commitment to being reflexively aware in my interactions became increasingly important to me, as the following journal entry implies:

***Wrangling with authority - my own!***

*My major stumbling block with 'critical' is the dilemma it brings for me about my authority to design and conduct this research. I realise that researching in itself assumes a certain authority - but I am uncomfortable with that ... questions that float in my head quite constantly are "Who am I to judge? Who am I to determine what is 'false consciousness'?" At present, the best I can do is recognise and examine these thoughts ... I realise I cannot hope to perfectly and accurately represent the participants' views ... Anything I see, think or interpret is just that - filtered by me, an historical being with experiences, beliefs and values of my own, no matter how hard I try to be open ... So the transparency seems quite crucial - it's the best I can do and fits well with critical, emancipatory design, as far as I understand it.*

**Silence and Invisibility**

Oppressed groups may be subject to unjust treatment, the denial of rights and the dehumanising of individual group members. The devaluing of those who do not conform to the dominant norms can have numerous negative consequences for those who are oppressed. In particular, negative perceptions of the oppressed group members may be internalised by the oppressed individuals themselves, further consolidating their oppression (Dong & Temple, 2011; Roberts, et al., 2009). Subjugation oppresses the voices of the marginalised, minimises non-dominant perspectives and as such, renders their experiences invisible, thereby impeding critique of the domination and maintaining the status quo (Dong & Temple, 2011; Ogle & Glass, 2006). In my journal I reflected on these concepts:

*Although a little dated, I read Elizabeth Ellsworth last night (1989) - the title of her article grabbed me: "Why doesn't this feel empowering? Working through the repressive myths of critical pedagogy" ... a timely reminder about ... the posture of invisibility; questioning the use of 'rational' (hence what does 'critically analyse' mean - I wonder, if not based on some form of reason and logic?!); intersections of various oppressive, and possibly oppositional dynamics - it helped me to identify some of my concerns. But the shining light was the permission it gave me to view the narratives*

*as partial and partisan, hence voices as multiple and problematic ... and [shining the light on] silence.*

### **Consciousness raising and enlightenment**

The key objective for an emancipatory framework is to identify strategies for emancipation (Fay, 1987). An assumption of this approach is that individuals need to recognise the presence of oppressive structures in order to transform their social world (Fay, 1987; Lather, 1991). Hence a comprehensive understanding of oppression is vital to the potential empowerment of the oppressed (Fay, 1987). Validation and subsequent empowerment can be linked to such critical analysis of the social context, thereby making personal experiences both public and political (Cheek & Rudge, 1994).

Critical social science claims that liberation, as both a process and endpoint, is gained from an understanding in the form of self-knowledge, which is linked to a knowledge of the society within which people exist. A liberated state is conceptualised by Fay (1987) as "a state of reflective clarity in which people know which of their wants are genuine because they know finally who they really are" (p. 205). Enlightenment is viewed as the revelation of an audience's 'true nature' obtained in a scientific manner (Fay, 1987). Fay (1987) succinctly outlines the requirements for this process as follows "giving up such illusions requires abandoning self-conceptions and the social practices they engender and support, things people cling to because they provide direction and meaning in their lives. It involves acquiring a new identity" (p. 98).

### **Empowerment and transformation**

Critical methodology seeks knowledge which has the potential for emancipation. The process of enlightenment, a movement from false consciousness towards an enhanced awareness of alternative perspectives of human existence, offers the possibility of social transformation. The recognition of alternative perspectives can galvanise people into action in order to free themselves from the conditions in which they've become entrenched (Taylor, 2007). Scholars such as Fletcher (2006) have clearly articulated the need for empowerment of nurses:

*Yet, despite what we know, nursing is still challenged by negative stereotypes and nurses are not empowered - what we are doing as nurses and nurse leaders does not seem to be working (p. 50).*



Empowerment is a term that has become common in everyday conversation and therefore requires some clarification to avoid misunderstandings regarding its meaning in terms of critical social science. Fay (1987) presents empowerment as the practical force by which an audience is 'galvanised' into transformative action. Lather (1991) provides a description of empowerment that encompasses a comprehensive analysis of the determinants of powerlessness, a recognition of systemic oppressive forces and the personal and collective actions undertaken to transform the social conditions that are experienced by the oppressed. An important contribution to the definition of empowerment is presented by Lather (1991) with her emphasis on an individual's connection with their own power in relation to their personal context, rather than empowerment arising externally and bequeathed to individuals.

### **Emancipation**

Emancipatory research provides a broad lens through which to view the phenomenon of manual handling in healthcare. It enables exploration of the socio-political structures which affect nursing by means of critical examination and analysis of the relevant oppressive structures (Rose & Glass, 2008). Research undertaken in this framework offers a constructive alternative to the negative consequences of oppression and marginalisation. The practical component of critical theory offers the potential for group resistance in the form of social action and solidarity amongst group members to counter oppression. Emancipation has been defined as "a state of collective autonomy in which they have the power to determine rationally and freely the nature and direction of their collective existence" (Fay, 1987, p. 205). As already discussed, the potential for emancipation is contingent upon conditions which foster an enhanced self-understanding and enlightenment regarding existing social constraints and the identification of alternative conceptions to redress the situation.

### **Advantages and disadvantages of critical methodological approaches**

Although not necessarily assuming a totally negative view of society, the scrutiny of social phenomena with an emancipatory intent suggests a degree of negativity inherent in such ventures (Alvesson & Sköldberg, 2009). Ideologies, power relationships and cultural beliefs and practices that incorporate taken for granted assumptions may warrant scrutiny and negative evaluation if they are believed to curtail (or potentially curtail) freedom of

thoughts or actions. As institutions evolve, ideas considered good in the first instance may ultimately produce negative outcomes contrary to original intentions. Thus critical reflection and awareness can function to ensure that goals, systems and procedures work in ways that are positively aligned with socially acceptable intentions, rather than remain unexamined and assumed to be in the best interests of all stakeholders (Alvesson & Skoldberg, 2009).

Fay (1987) also provided a critique of the capabilities of critical social science, particularly in relation to the utility of rational thought processes to meet the goals of critical inquiry. He argued that there exists a limit to the knowledge that we can have about ourselves and contends that the power of rational analysis and reflection are moderated by "an inherent opacity to human life" (Fay, 1987, p. 144). Cultural traditions and the embedded nature of our existence can limit the capacity for insight into own character.

I too noted the challenge of critical aspirations within the complexity of human existence:

***How to live the 'critical' I espouse?***

*I remember that I am a participant too, as much as a tool for data collection, and marvel ... at how much my experience with this research mirrors the research itself - as the dialectical tensions emerge for participants, in the tentative subtheme of 'how to practice?' and likewise I feel both personal (within) and professional tensions (in relation to my position as student, researcher, nurse, potential academic).*

*[I] want to avoid the potential disconnect with 'nurses at the coal-face', an issue that was cited by participants in my research ... But I do worry whether I will ultimately privilege the dominant ideology, unintentionally, by engaging in academic roles, in spite of my critical intent both for my research and for my own way in the world?*

## **Critical realism**

Critical realism provides a multilayered approach to data analysis and was utilised to allow for exploration of deeper layers beyond the manifest content of interview data. Attention to structural and systemic factors allows for analysis beyond individual narratives, supporting the explicit emancipatory axiology of critical realism: the intent for human freedom, individual and social emancipation. Applying a critical realist lens enables examination and reflection on the structural factors and generative mechanisms influencing manual handling for nurses in the course of their professional duties related to

patient care. Attention to structure expands investigation beyond individual agency, the latter being a focus of much of the research literature in the management of manual handling risks. When viewed through this lens, contextual influences on manual handling can be incorporated into improving the current understandings of nurses' manual handling circumstances.

My position on critical realism draws substantially from the work of Parlour and McCormack (2012), DeForge and Shaw (2012), and Clark et al (2008). Critical realism offers an alternative to the limitations of positivist claims that there is only one correct way to view reality. A realist ontology, that a real world exists independent of our perceptions, is retained by critical realists and combines with a subjectivist epistemology, that we have fallible, imperfect conceptions of the natural and scientific worlds. Based on a realist ontology, critical realism rejects the multiple realities of relativism, but accommodates different perspectives on reality and deems these to be equally valid. Unlike the objectivist epistemology of positivism, critical realism allows for human perspectives by embracing a subjectivism (Figure 3.2 below). The values of the researcher and their link with those researched are thereby acknowledged as influences shaping a study (DeForge & Shaw, 2012). However, the distinction from positivism also arises from divergent understandings of realism. Critical realists view theoretical terms as referring to actual features of the real world rather than simply abstract concepts constructed to enable prediction. Moreover, beliefs, attitudes and intentions are similarly accepted as part of the real world by critical realism, despite the inability to directly observe these mental states (Maxwell, 2012). Furthermore, as indicated in Figure 3.2, critical realism is founded on historical realism, in that social, political, cultural and economic factors shape reality. This worldview incorporates the notion of reification whereby a collection of social structures may come to be perceived over time as real (DeForge & Shaw, 2012).

### Critical realism:

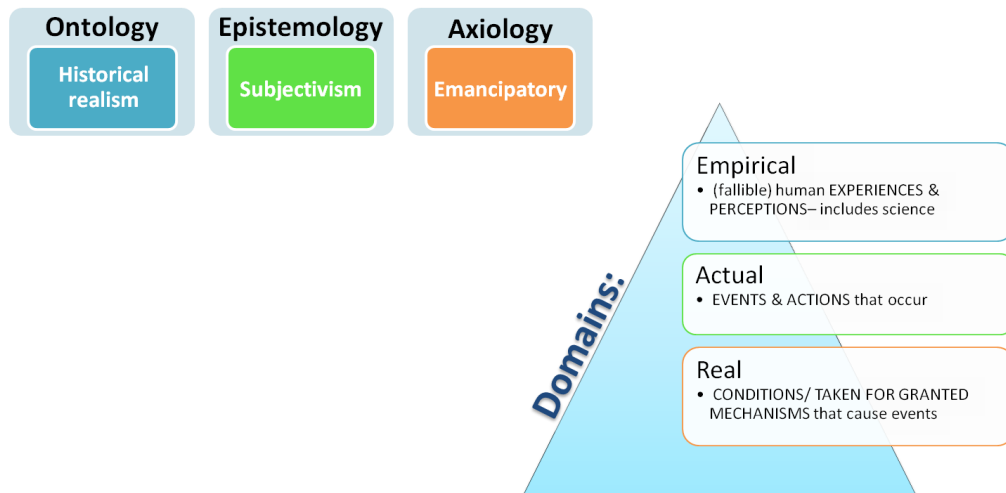


Figure 3.2. Key aspects of critical realism.

The separation of causal mechanisms from the events they generated and that are observed in reality, first proposed by Roy Bhaskar, formed the basis for the central tenet of critical realism: that the social world is stratified (Martin, Wilson, & Fleetwood, 2014). Critical realism proposes a reality that can be conceived as divided into three domains: the domain of the real, the domain of the actual and the domain of the empirical. The deepest level is the domain of the real, where a combination of conditions can trigger taken for granted mechanisms that cause events or actions to occur in the domain of the actual (DeForge & Shaw, 2012). The events or actions that occur in the domain of the actual are experienced or perceived, however fallibly, in the domain of the empirical.

An advantage of critical realism is the ability to explore the domain of the real by discovery of the underlying generative mechanisms that give rise to patterns or demi-regularities within the actual domain, according to the presence of the particular constellation of conditions existing within a particular context (Clark, et al., 2008; DeForge & Shaw, 2012). This proposition, that causal powers exist and endure regardless of whether they are activated, or even noticed, enables exploration of alternative generative mechanisms to the status quo (Martin, et al., 2014). Thus the causality of critical realist explanations is situationally contingent, bound by local context and generative mechanisms rather than universal laws (Gerrits & Verweij, 2013; Maxwell, 2011).

## **Methods**

A qualitative research design is compatible with investigations relating to the subjective nature of human experience. The particular methods in this study have been selected according to the values of critical inquiry to ensure methodological congruence. Specifically, the methods were chosen to provide avenues for nurses to voice their perspectives on their manual handling experiences in their own words and to encourage reflective critique in an endeavour to foster change that is in itself emancipatory.

### **Participants**

Thirteen participants in this study were from different healthcare facilities across two south-eastern states of Australia, with a maximum of two participants within the same organisation. All participants were employed to provide direct care to patients at the time of interview or in the preceding twelve months. Each had participated in a variety of safety interventions and programs throughout their careers. Demographic parameters were not preset but I sought to include participants across a variety of age-groups, locales, facilities, years of experience in nursing, educational backgrounds and exposure to manual handling programs.

Nurses from either the public and private healthcare sectors within Victoria and Tasmania were eligible for inclusion. Inclusion criteria for participation required recent experience in direct patient care. This was defined as working in the healthcare sector at some period during the past twelve months prior to participation in the study. These nurses were most suited to provide the intimate knowledge of manual handling in clinical healthcare settings. However newly registered nurses of less than three months post-graduation were excluded from participation due to their limited exposure to the clinical environment, as were student nurses whose practice circumstances are limited and intermittent.

Seven of the nurse-participants had prior experience as trainers within local manual handling programs in addition to their direct patient care responsibilities. These seven participants had received additional, although varied, manual handling education in comparison with their colleagues and were expected to train their peers in safe manual handling practices.

Nurses excluded from this study were also those whose primary role was not the provision of direct care to patients, as their experiences would not provide the data appropriate to the research questions. For example, educators, managers, supervisors and executive nurses were not included. Further, manual handling coordinators and occupational health and safety nurses have a distinct knowledge base and their roles contrast markedly with those providing care directly to patients. These two specialised groups were also excluded from this research study.

## **Recruitment**

Participants were recruited by announcements in professional settings that included journals, conferences and seminars. A brief article (Appendix A) about the proposed research was published in the Australian Nurses' Journal (Victorian Branch) inviting volunteers to contact me to discuss the research further with them. The journal is distributed throughout Victoria and Tasmania, and the majority of participants were reached by this medium. Recruitment also occurred by means of presentations at nursing conferences and seminars in Melbourne where several nurses approached me in person, and by the snowball method whereby some participants chose to give my contact details to their friends and colleagues. I noticed that word of my research had spread further, when I was intermittently contacted by nurses in other Australian states. Perhaps less surprising was a number of queries I received from nurses who were colleagues of some of my professional contacts who had allowed me to practise my interview skills, and pilot interview questions, with them before I commenced formal data collection.

Upon initial contact with a prospective participant by either telephone or email, I explained my research study briefly including an overview of my broad aims and what participants were being asked to do. After answering any specific questions that arose, I then forwarded the Participant Information Letter (Appendix B) to those who indicated further interest, together with a reply paid envelope in which a signed Consent Form (Appendix C) could be returned at a later date, if they remained interested in my study.

Some potential participants wished to speak further with me in order to make their decision, and I had particularly extensive discussions with one who required clarity about possible practical applications of the research findings. Despite my intentions to contribute to improvements in manual handling safety, I believed it important to acknowledge to her

that a direct connection between my study and legislation or policy changes was unlikely. In maintaining respect for my participants, I was committed to transparency and this included an honest appraisal of the likelihood of immediate outcomes. Although I quietly feared that this person would be disappointed and lose interest in the study, I strongly believed that she had the right to make a fully informed consent decision.

Each time I spoke with a potential participant, or a participant whom had already provided me with a signed consent form, I reiterated their right to change their mind and withdraw at any time, much to the amusement of some. However, it was my belief that in some instances nurses are not given the opportunity to consent to research in which they, at times unwittingly, participate within healthcare organisations. I was also aware of the potential minimisation of consent during the data collection phase and I actively reiterated key points regarding consent prior to, and during the semi-structured interviews. In many instances, the participant waved me on, sometimes stating "I know all about that" or indicating that they had no problems or need to discuss their rights any further. It is plausible that they in fact did not have any problems with a de-identified individual interview. Nevertheless I reflected on the possibility that they may not be quite so well versed in their rights, or the distinctions between consenting to research as opposed to medical treatment, and persisted to advocate for their rights during my contact with them.

## **Data collection**

### **Triangulation**

Method triangulation, enables examination of the phenomenon under study from different perspectives. The use of multiple methods has traditionally been viewed as an action proposed to strengthen the data and findings of a study, by overcoming the weaknesses of a single method (Flick, 2007; Freshwater & Cahill, 2010; Freshwater, Cahill, Walsh, & Muncey, 2010). As a strategy to promote the quality of qualitative research, two subtypes of methodological triangulation have been differentiated, those being 'within-method' and 'between-method' triangulation (Flick, 2009). Within-method triangulation derives from the use of different strategies within a single method, such as the incorporation of different subscales within a survey to measure a particular item or construct.

Between-method triangulation is more complex as different methods lead to convergent, or complementary, results (Flick, 2007). More recently, the emphasis on triangulation has

shifted towards enriching knowledge by increasing the scope and depth of findings, rather than direct attempts to counter epistemological limitations of individual methods (Flick, 2009). Triangulation was incorporated into the research design for this study by the planned use of three methods, these being focus groups, semi-structured interviews and researcher reflective journaling.

### **Focus groups**

In alignment with the methodological framework described above, I had planned to conduct two focus groups with nurse participants who met the inclusion criteria. The focus groups were intended to allow the nurses to collaboratively explore their experiences and concerns. It was also envisaged that this would afford nurses with an opportunity for validation of their experiences and thereby foster emancipatory potential arising from the enhanced awareness of their social situatedness (Glass & Davis, 1998).

This method was intended to provide an overview of the key aspects of manual handling as portrayed by the nurses' discussion. The focus group setting was envisaged to foster interactions between the participants, and between myself and the participants, as we explored the commonalities and differences between our experiences in manual handling.

Focus groups lean towards emic side of the emic/etic continuum in that they enable responses from participants to be freely constructed in ways congruent with their own internal organization of concepts and perceived associations to the questions asked (Stewart, Shamdasani, & Rook, 2009). However, there is still some degree of structure inherent in this method as the intention of the discussion is directed, or focused. In addition, the setting in which the focus group takes place will potentially influence the nature of data obtained. For instance, the focus group moderator will influence proceedings, intentionally or otherwise due to subtle or explicit characteristics related to social interactions, and other features such as social desirability may shape participants' responses (Putcha & Potter, 2004).

Nevertheless, there are distinct advantages that arise from focus groups. The benefits of this method include the generation of large volumes of data created by the interactions between group members (Putcha & Potter, 2004) and direct interaction between the researcher and the participants. The latter facilitates a deeper understanding of the participants' experiences as the researcher is able to seek clarification of meaning. Further



questioning of participants responses and direct observation of non-verbal cues can enrich the data by way of supplementing or contradicting verbal communications. In addition, this method encourages the use of reflexivity and intersubjectivity between the researcher and participants, both of which are key tenets of emancipatory research.

I had planned to hold one-hour focus group sessions, each with four to six participants, in a private room at my university campus, at a time convenient to the participants. Each participant would be reminded of their obligation to maintain the confidentiality of other participants, and this would be reiterated at the commencement of the group interview. For the same reasons, I had planned to instruct participants to introduce themselves using first names only. However, I was unable to implement the focus group method for this study due to the reticence of participants to speak in front of anyone other than myself. A small number of participants initially agreed provisionally to consider focus group attendance, but later retracted their interest. A journal entry I made during my quest to establish a focus group summarises the situation:

*A participant expressed her concern about identification by other nurses in a group, fearing repercussions. Ultimately, the inability to find nurses willing to participate in focus groups (FGs) redirected the methods to interviews - participant concerns and geographical separation of majority of participants prevented this from going ahead. I now see this as similar to Annette Street's insight regarding the imposition of 'research demands' on the nursing culture (lack of suitability). Nurses were agreeable to speak with me, but reserved or concerned about agreeing to speak with others present.*

A later entry expanded on the point above:

*[The focus group difficulties] could symbolise or represent the reluctance of nurses to speak publicly ... possible subjugation of nurses resulting in perpetuation of their silence (and invisibility re manual handling)?*

The findings from the planned group interactions were intended to be used reflexively to inform the development of topics and questions for the subsequent individual interviews. The questions developed for the group setting listed below in Table 3.1 and additional prompts would have encouraged participants to expand, reflect or clarify their thoughts and ideas. In response to the inability to conduct focus groups, I incorporated many of the focus group questions into the semi-structured interviews, and these are detailed in the next section of this chapter.

Table 3.1

*Interview Questions Planned for Focus Groups*

1	Does your practice as a nurse involve any manual handling activities?
2	What types of manual activities do you undertake whilst caring for patients?
3	Can you tell me about your experiences of manual handling during your nursing practice?
4	How do you approach tasks that involve manual handling at work?
5	Do you think that manual handling tasks at work impact upon your health in any way?

### **Semi-structured interviews**

Nurses who deliver direct patient care are repeatedly exposed to manual handling risks in the course of their daily practice. I therefore conducted Individual in-depth, semi-structured interviews with nurses to gain greater knowledge and understanding of their experiences. The advantage of a semi-structured format is the balance between structure and flexibility, as this method allows for the use of open questions and the use of probes to enable the researcher to seek more information (Gillham, 2005). The interviews were also reflexive as ideas generated within an interview were incorporated subsequently into later interviews. Reflexivity is central to qualitative research and participants in the individual interviews were encouraged to be both reflective and reflexive regarding their manual handling experiences. In developing the final interview schedule, I generated a number of questions pertinent to each research question, and these are highlighted in Tables 3.2, 3.3 and 3.4 as presented on the next two pages.

Table 3.2

*Initial Pool of Interview Questions Devised for Research Question One*

<b>Research question 1:</b> <b>What are the beliefs, attitudes and experiences of nurses pertaining to manual handling?</b>	
1	Can you tell me about your experiences of manual handling when you are nursing patients?
2	What kind of activities involve manual handling when you are caring for your patients?
3	What happens when you are moving or transferring patients? How is that accomplished?
4	How do you approach the tasks that require manual handling?
5	Can you give me an example of when your nursing practice included manual handling? What happened? What did you think and feel about that event?
6	Do you believe patient handling relates to your own health and wellbeing? Did you think about manual handling and your health before you started nursing?
7	Have you ever been injured in any way from manual handling at work? (What did you do after this happened?)
8	How do you care for yourself during patient handling tasks?
9	What influences your decisions during patient handling activities?
10	How do you decide what to do?

Table 3.3

*Initial Pool of Interview Questions Devised for Research Question Two*

<b>Research question 2:</b> <b>How do nurses perceive their knowledge of manual handling and safe practices is received by other healthcare professionals?</b>	
1	How do you think others view your knowledge of manual handling?
2	What do you think about other people's perceptions of nurses' manual handling knowledge and practices?
3	Do you have any suggestions for future manual handling programs?
4	Have you discussed your thoughts with anyone else?
5	How do you think your ideas would be received by other healthcare professionals?

Table 3.4

*Initial Pool of Interview Questions Devised for Research Question Three*

<b>Research question 3:</b> <b>How can nurses' knowledge of manual handling be incorporated into the development of interventions to reduce injuries?</b>	
1	Have you been involved in any manual handling programs in your workplace(s)?
2	What did these programs involve?
3	How did you find the programs? Do you have any thoughts about those programs?
4	What did you learn from your participation in these programs?
5	How did it impact upon your clinical practice?
6	Have you ever been expected to teach your nursing colleagues about manual handling?
7	What was the nature of this role?
8	Do you have any thoughts about your participation in the manual handling program?

The large number of proposed interview questions in the above tables had the potential to create interviews that would be hurried and more complicated than necessary. I had been an interviewee myself for other research projects, and recalled the slight overwhelm I had felt when one interviewer opened up four pages full of questions to cover. For that reason, in conjunction with recognising the need to actively listen and remain distraction-free during interviews, I determined a smaller subset of questions to be asked in each 1 hour interview. Initially five questions were planned, however an additional question was added to both the start and end of the interview schedule. These central interview questions are listed below, in Table 3.5. Additional questions to probe and further explore meaning were employed with each participant to allow for flexibility according to the comments and insights that arose in each conversation.

Table 3.5

*Key Questions for Semi-Structured Interviews*

1	Do you think that manual handling is a part of your role as a nurse?
2	Can you tell me about your experiences of manual handling when you are nursing patients?
3	Can you give me an example of a time when your nursing practice involved a manual handling task?
4	What did you do? What happened?
5	Have you been involved in any manual handling programs at work?
6	Do you have any thoughts about the program you participated in?
7	Have you had positive experiences of manual handling in your work?

### **Researcher reflective journaling**

*I want the staff to be heard - I've heard so many of their stories, and I want to stop the blame on individuals and have the real, and generally ignored, issues addressed. How can nurses practice safely and look after themselves when they experience so many conflicting priorities (productivity versus safety)? Nurses have been so good at putting the needs of others before our own wellbeing.*

I use this example from my own research journal to introduce the third research method planned for this study. Whilst the intersubjective nature of interviews and focus groups has already identified the inclusion of myself, the researcher, within the study, reflective journaling provided another avenue for researcher participation and assist with reflexive consideration of my own influences on the study. This method situated myself as the researcher participant directly within the research and the research process. In this way, my impact on the study is made available for scrutiny in this researcher-participant role (Walter, et al., 2001), in addition to recognition of the bidirectional nature of this association. This is congruent with critical methodology as it embeds the researcher within the study, encourages self-disclosure and reinforces the non-hierarchical nature of the research. The use of reflexivity in this manner reinforces the notions of intersubjectivity and reciprocity, which are important components within an emancipatory framework that aid in equalising power relations between myself as researcher-participant and the nurse participants in this study. Intersubjectivity places the researcher within the research in a collaborative, rather than hierarchical, relationship thereby promoting respect by

researching with, rather the researching on participants (Davis & Taylor, 2006; Walter, et al., 2001).

Researcher reflective journaling facilitates self-aware analysis of my own role in the research and so makes visible the researcher-participant voice. Reflective journaling promotes transparency within the research process and contributes to claims of integrity and trustworthiness in qualitative pursuits (Finlay, 2002). By incorporating subjectivity in this manner, my reflective insights as the researcher contribute additional data to the study (Rose & Glass, 2008).

Using a 'detector statement' as suggested by Taylor (2006) to examine my beliefs, the use of a reflective journal allowed me to examine my motives for my research choice. The mobility of my position became noticeable as I oscillated between contrasting positions. However, I repeatedly returned to notions of validation, respect, and abuse of power and how these impacted on the professional and personal experiences of nurses.

In my journal I remarked on my increasing self-awareness in relation to the research:

*I'm coming to realise just how much 'bias' I have - well, embedded assumptions that I take for granted - this is where my commitment to reflexivity will be pivotal - and I've only just realised how important that is (after reading Taylor) ... it's inevitable that my own assumptions and beliefs will influence participants when I do interviews and focus groups ... the key point is to recognise and acknowledge that.*

In response to the above, I ensured that I had regular critical conversations with my supervisors in addition to reflecting on my contribution to each interview. I also created a simple list that I took to each interview, hoping to aid in my recognition of my impact upon the data collection:

- A. Zip it! [don't jump in and speak unnecessarily].
- B. Be present and transparent.
- C. Be open - explore the contrary (to my perspective or expectations).
- D. Avoid solutions (even when technical problems are raised by participants).
- E. Probe:       Tell me more?  
                  What do you think/feel about that?

## **Reflexivity during data collection**

After I had completed my first three interviews, I became concerned about my performance, particularly puzzling over the potential for my own influences to go unnoticed by myself. My fear was that I may be directing participants in some subtle way, although I was not able to detect this in my review of the audio-recordings. Nevertheless, I requested an urgent meeting with both my supervisors before continuing with subsequent interviews. A journal entry summed up my apprehension:

*The intensely varied nature of each interview had me questioning whether I was 'doing it right', despite my belief that truth/knowledge is contextual.*

In an email to my supervisors, I explained that:

*It is identifying my own assumptions (mid-interview) and when to probe further that I'm not confident about yet, although [during the interviews] I kept reflecting on Alicia's advice [to look for contrasts and contradictions to my own worldview]. How effectively I achieved that in these early ones is up for debate though!*

The outcome of the meeting was both constructive and validating for me as a researcher, as I later wrote with some relief:

*We discussed the welcoming that participants had given me ... the opportunities to gain insight into their lives. As such, the context for each interview enriched the data collection process in subtle ways, allowing me to frame each interview in a way that blended comfortably with our surrounds. Ultimately I view the relaxed, friendly and surprisingly open tone of all three interviews to date as an indication of the success of my efforts to promote reciprocity and intersubjectivity rather than reproducing the conventional researcher-interviewee power hierarchy.*

## **Research processes**

Qualitative research respects the subjectivity of participants and their experiences. Conducting research guided by critical social science further emphasises the strong ties between research processes and ethical considerations. For this reason, my research design demanded an authentic commitment to ethical actions commensurate with critical methodologies, indicating an inherent overlap between the ethical and critical processes. I will now discuss these processes with an awareness that any separation of the two

processes is artificially created; an explanation of either process is necessarily linked to the other.

## **General ethical processes**

Ethical conduct in human research involves an approach to research which focuses on acting in the right spirit, rather than simply doing the right thing. As a researcher, I was committed to searching for knowledge and understanding following the recognised principles of ethical research. Implementing the study honestly and with rigour, and disseminating the results in ways that permit scrutiny are essential to this objective. Research merit forms the basis for ethical conduct and demands attention to rigour and validity within the research design. Hall and Stevens (1991) combined the concepts of validity and reliability into a standard for the evaluation of rigour, referred to as adequacy. They argue that this is an appropriate measure for research on human experiences as it reflects the adequacy of a research study to meet its nominated objectives. Numerous alternative terms have been proposed by other scholars as criteria for establishing the trustworthiness and credibility of qualitative studies (Ignacio & Taylor, 2013). Examples of criteria for rigour include stability, consistency and equivalence, or credibility, transferability, dependability, confirmability and authenticity (Elo, et al., 2014; Harper & Cole, 2012; Ignacio & Taylor, 2013; Lincoln, 1995; Schwandt, Lincoln, & Guba, 2007).

Ethical research is premised on the key values of justice, beneficence and respect for persons (Australian Government, 2007). Justice encompasses a clear commitment to ensuring that both the benefits and burdens of research activities are distributed in an egalitarian manner. Additionally, human research may involve the potential for participants to suffer some degree of harm and this must be anticipated, managed and minimised accordingly.

## **Formal ethical review process**

The data collection methods in this study were carefully designed to ensure that respect and concern for the participants' wellbeing was paramount during the entire research process. The proposal for this research was submitted and subsequently approved by the Human Research Ethics Committee (Appendix D) in order to ensure independent oversight and evaluation of the proposed study. Appendices E through to G document my compliance with the ongoing ethical review process at my university and the formal permissions to



continue with the study. Australian Catholic University removed the distinction between data collection and completion of a study in 2013, in terms of formal ethical review, necessitating annual reporting and review until final notification of completion at the time of thesis submission.

As previously indicated earlier in this chapter, potential participants were provided with a participant information letter, approved by the Human Research Ethics Committee at the researcher's institution (Appendix B). They were encouraged to discuss their thoughts with friends or family prior to deciding whether to join the study, in addition to asking the researcher to further explain any aspects that remained unclear. Those deliberating on the choice to participate were informed again about the nature of involvement in this research, any potential discomfort or inconvenience that may arise, and the options provided to address these potential consequences. Potential participants were reminded of their right to be fully satisfied with explanations offered by the researcher before proceeding, and also of the avenues for complaint if required.

Voluntary, informed consent was formalised in a written consent form (Appendix C) prior to data collection. In addition, participants were regularly reminded of their ability to withdraw from the study prior to, or during the interview process, without any need for explanation of their decision. During the interview process, the option to interrupt recording or cease the interview entirely was reiterated. I also monitored the participants throughout the interviews, holding their welfare ahead of data collection objectives if any conflicts arose between these two interests. I arranged the interviews to be held at times and locations that minimised any inconvenience to the participants and data collection was not undertaken at the workplace of any participant in an effort to ensure confidentiality and minimise harm. To further protect the confidentiality of participants, additional measures were utilised in the reporting phase of the study. Pseudonyms replaced participants' names, and potentially identifying information was deleted at the point of transcription. For example, reference to specific workplaces, colleagues or programs were not transcribed but written as 'XXXX' or replaced by an abstract noun such as '[organisation]' if required to ensure conservation of meaning.

The potential complexity of research precludes the anticipation and prevention of all possible ethical issues, despite meticulous planning and execution of the research process (Ignacio & Taylor, 2013). Thus attending to ethical processes throughout the research

journey is essential, and this is further highlighted in the following section whereby the significance of ethical action embedded in critical research frameworks is expanded upon.

## **Critical processes**

Power and marginalisation are key tenets of critical methodologies and the conduct of research must be in a manner congruent with the aims of critical social theory. Crucial is the recognition of the potential impact of power relations on social interactions, most pertinently in this study in terms of the impact this may have consequent to participation. It was essential that my interactions with participants and care for their wellbeing accorded with critical social science. With an ideology that seeks to not only make visible the power embedded in oppressive socio-political structures, but also to challenge the status quo and facilitate emancipation of those who are marginalised, critical researchers must take active steps to prevent reinscribing power differentials within the research process itself. Inequities of power can be inherent characteristics of studies that involve direct contact between the researcher and the researched. Thus critical social science places importance on the value of reflexivity throughout the whole research process. An important component of rigour is the reflexivity of the researcher, and this can aid in the anticipation and reduction of power imbalances that develop consequent to the researcher's expertise and authorial position.

The interplay between ethical and critical processes has already been highlighted, and several aspects that accorded with the nature of critical research have been discussed in the sections above and within the earlier methods section. Recruitment methods and informed consent entail respect for the autonomy of participants above goals for the research and transparent, coercion-free consent has been examined earlier in this chapter. Other attempts to reduce or eliminate the potential power differential between myself and the participants include actively emphasising participants' rights prior to, during and after interviews. In one interview, we interrupted the recording for a period of time, however I also calmly reiterated this option when any participant appeared uncomfortable. In my attempts to facilitate reciprocity, I contributed to the interview discussion rather than remaining silent and expecting answers from participants. I answered questions about my experiences also, often at the end of interview by agreement in order to avoid biasing the direction of our discussion. If participants requested information unrelated to the research questions, I allocated time after the interview to answer their queries. My intention was to

reciprocate the time and effort participants had contributed to my goals, and for this reason I developed a summary report of the research in addition to sending published papers to the participants (Appendix H).

Although not an exhaustive list of all actions taken, the points discussed in the sections above exemplify my attempts to reduce or eliminate the power differential between myself and the 13 participants with whom I explored the manual handling issues raised in interviews.

## **Chapter summary**

The purpose of this chapter has been to delineate the underlying methodology that informed this study, in conjunction with the research methods adopted for data collection. The methodological considerations for this research design were outlined and the associated theoretical framework, that of critical social science, explained. The importance of ensuring methodological congruence with the research questions was also emphasised. The suitability of the critical paradigm has been reviewed in order to situate the research within an emancipatory framework in light of aspirations towards consciousness raising, enlightenment, empowerment, transformation and emancipation. The methods used, these being semi-structured interviews and researcher reflective journaling, were introduced in conjunction with a clarification of the ethical aspects central to this study. Critical realism, incorporated in the data analysis, was also discussed in this chapter.

The relevant aspects of the research processes inherent in this study have also been discussed to highlight a commitment to conducting the research with both rigour and the consistent application of ethical principles throughout the entire study. I have included examples from my reflective journal to make transparent my position as the researcher in this study, and as demonstration of the intersubjective and reflexive nature of this research.

Chapter Four will comprise the research findings on the manual handling experiences of nurses. I will present the participants and explain the data analysis process that generated the key themes emergent from the study followed by a discussion of the findings in terms of the theoretical framework.

## **Chapter Four**

### **Research Findings & Discussion**

## Introduction

In the previous chapter I have explained critical methodology upon which this research was designed, and the research methods used for the study. I also provided the basic demographics for the sample of participants in the preceding chapter. I have chosen to include richer descriptions of each participant within this current chapter in an effort to highlight the connection between participants and their data. I wished also to maintain recognition of the intersubjective nature of this study that enabled participants and myself to explore their experiences and perspectives together and jointly contribute to the data generation within the interviews. This next chapter will extend further the methodology in relation to the data collection and analysis initially outlined in the introductory chapter. In alignment with critical theory and the importance of context, I will then briefly 'paint a picture' of the participants to familiarise the reader with those who contributed to the interactive interview process.

The chapter will then proceed from a focus on the interview contexts to an extensive description of the data analysis process. Subsequent sections in this chapter will present findings from this study inclusive of three journal manuscripts, two of which have been published with the third currently prepared for review. The two papers already accepted for publication, numbered as publications 4 and 5 in this chapter, present separately each of the major themes found in my study. In contrast, the sixth manuscript for publication has been prepared as a synthesis of the findings in order to clearly bring together the elements that combined to form the central theme of (mis)power. The publication manuscripts necessarily contain a summary of the research design, data analysis and the findings and each manuscript highlights specific aspects of the findings. The papers contain explicit portions of transcripts of participants' contributions, to illustrate the different findings identified in the analysis and to allow scrutiny of the findings generated by this study. The perceived dialectical tensions associated with explicit revelations of manual handling experiences within the existing healthcare culture, the impact of participants' voicing their professional experiences and the potential for transformation as revealed during critical reflection, will be reviewed in these papers. Inevitably there is some overlap between publications and the contents of this chapter, where an extended discussion of the findings is presented.

Throughout the chapter I will continue to interweave my own reflections in the form of research journal excerpts that add further insights into the research process and as such complement the interview data. Finally, a synthesis of the material herein will be provided as a summary to close this chapter.

## **Interviewing the participants**

### **Overview**

This project adopted a qualitative research design as it sought to understand the rich and textured experiences of nurses performing manual handling in the context of their daily professional lives (Richards & Morse, 2007). I will first introduce the participants and my experiences with them, before continuing with discussions of the data analysis and findings.

### **Emotional safety**

The initial study design had incorporated both group and individual interviews, with the intention that the focus groups would highlight important points to explore further in subsequent individual interviews. However, whilst 13 participants agreed to be interviewed individually, focus groups were identified as problematic early in the recruitment phase. Aside from the logistical challenges of gathering together participants geographically dispersed across two Australian states, all the participants were hesitant to discuss manual handling issues in a public capacity. Although the topic of manual handling is not generally viewed as a sensitive topic, I was not entirely surprised by the lack of enthusiasm for discussion in a focus group setting. In my own professional experience I had witnessed conflicts between management representatives and clinical staff consequent to unresolved manual handling issues in the workplace. If staff did not conform to the dominant ideology that reinscribed existing manual handling safety programs, their dissention was treated with disdain in various forms. Understandably, the potential consequences of being identified as dissenting in a group setting could be a powerful deterrent to speaking up, either in the workplace or a research focus group. This is an assumption that I hold, based on my experience in the field, although I was prepared to test this assumption by including focus groups into my data collection methods.

Focus group participation brings with it additional issues regarding privacy and confidentiality. The potential identification by others in attendance at a focus group session was a prominent obstacle. Although focus group members are requested to keep all information related to the group confidential, the potential for a confidentiality breach exists if group members do not abide by such requests.

One participant contacted me suggesting that I contact her workplace to recruit additional participants. I was aware that targeted recruitment within organisations was neither my objective nor approved by my university's Human Research Ethics Committee, thus I thanked her for the suggestion but did not take any further action. Then followed another email less than a week later explicitly indicating her concerns about identification, if I followed her recruitment suggestion. She also asked to be interviewed at a location some distance from her workplace and home. My reply, as follows, was promptly sent in order to allay her anxiety:

*"Absolutely and thank you. I wasn't clear - I'm sorry. I would never conduct this research in the workplace ... no activity will happen at the workplaces, and no workplace will have any idea which nurses in Victoria or Tasmania have participated".*

*"Please be assured that your confidentiality and anonymous participation will be maintained completely. It's really important that you are comfortable and it is critical that people can speak in a safe environment, so I completely understand and I am sorry if I have caused you unnecessary concern".*

This seemed to reassure the participant who quickly wrote back that she was "pleased" that I would not be conducting interviews at her workplace as her views were somewhat different from "management".

## **Establishing the connection**

Potential participants initially contacted me by telephone, text message or email in response to recruitment announcements and advertisements. I deliberately replied using the same mode of communication that each had chosen to contact me, asking permission to forward the Participant Information Letter prior to speaking with them to answer queries. It was my intent to ensure that each nurse was informed to their satisfaction about the research and that they understood their right to decide whether to join the study, and more particularly, their ability to refuse without feeling any pressure from me. A journal entry reflects my thoughts on this subject during the recruitment phase:

*Two of the people who made initial enquiries about the research decided not to participate. Both these nurses had been injured, and sounded frustrated with their experiences subsequently. Given their questions to me, I suspect that they were looking for some way to directly improve their lot rather quickly. Having spoken with me and found that the research aims were not quite what they were seeking, both these nurses clearly stated that they would initiate any further contact if required. I felt a tinge of disappointment, but I soon realised that I considered it a 'good' outcome after all as these two nurses were indeed making their own choices. I hoped that I had successfully conveyed their right to autonomy in this instance (research participation) and perhaps this indicated a level of personal empowerment for them in making their choices. More pragmatically though, I also realised that their decisions could easily have been explained by more pressing priorities in their lives.*

## **Commencing the interview**

During my own employment as a nurse I had encountered many instances where nurses' participation in evaluation or informal research activities was deemed a requirement by the employer, frequently in association with quality assurance initiatives. For this reason I emphasised the voluntary nature of participation in my research. I noticed that all who chose to participate quickly dismissed any further discussion on consent at the commencement of the interviews. Several participants spontaneously reported their familiarity with obligatory quality assurance activities in their workplace as an explanation of their low prioritisation of the consent process.

The apparent minimisation of concerns for consent may also have indicated some eagerness to get the discussion underway. However I wished to highlight the opportunity to renegotiate participation throughout the study and developed a routine at the commencement of each interview to this aim. Upon meeting with each participant, I outlined again the freedom to choose to participate, withdraw, take a break or stop the audio-recording at any time. In light of the participants' willingness to proceed, I felt particularly responsible for ensuring that consent was explicitly addressed. In one of my many attempts to highlight the rights of participants, I asked each participant whether they would like further explanation, additional time to consider, to reschedule our meeting or alternatively proceed with the interview. I tried to ensure everything was clear and acceptable to my participants and each expressed their interest in continuing immediately.



## **The interview experience**

Insider-outsider dichotomies are frequently noted in qualitative studies (Burns, Fenwick, Schmied, & Sheehan, 2012; Scott, et al., 2011) and clearly I was an insider in the data collection processes for this research, both preceding and during interviews. The most typical example of this was the presumption of shared understandings that all the participants exhibited at various times. Although there may be a degree of common practical knowledge between nurses, the participants typically abbreviated some of their responses, suggesting "you know what it's like" or similar phrases. I quickly developed a repertoire by which I could respectfully request more information rather than risk my misinterpretation of their meaning. I became adept at smiling as I asked participants to tell me more "to make sure it is your words, not mine". At other times I explained that I didn't want to "put words in your mouth, because it's your experience that is really important here". Occasionally, depending on my assessment of our interaction, I would simply repeat their phrasing of "you know what I mean", and let my voice tail off, allowing them time to add a little more detail, or joke with them and say "I bet I don't! This is your story".

## **Introducing the participants**

My respect for the nurses who volunteered to participate, and the nature of qualitative research design that values subjective experience, prompted in me a desire to present participants in a more personal way, whilst maintaining their anonymity. Although brief demographic details were collected, and are presented later in this chapter within publication 4, my aim in this section is to recognise each participant as an individual greater than that bounded by classifications common to basic demographic data. I reflected on this in the following journal entry:

*I have been thinking a lot about how to describe the participants - I don't want them to be reduced to a simple set of demographic details. A focus on only participant ages, locations, years of professional experience ... whilst relevant at one level, could easily dismiss or replace the human, interpersonal aspect of their contribution to the study. If only the words spoken in interviews were attended, the context in which those utterances were made could be too easily overlooked, and possibly the individuals themselves divorced from the data they offered. Whilst maintaining their confidentiality, I did not want them so easily forgotten.*

Hence in the following paragraphs I will portray the most salient points about each interview to acquaint readers with the nurses in this study. As mentioned previously, gender-neutral pseudonyms have been used throughout, and all potentially identifying information has been removed or altered. I have also chosen to use female pronouns in reference to all participants, in order to stymie potential inadvertent identification of male participants due to their lower numbers within the nursing profession.

The findings from this study will be discussed in subsequent sections of this chapter, but I have chosen to include a visual representation of the articulated content of each interview. Within the following sections for each participant will be a word cloud that I utilised to recall the most prominent points in each interview, as indicated by the larger font sizes. In this manner, I aimed to connect with each interview experience and gain an overall sense of the content of that interview. I liken this to honouring the participants and their data by firmly locating them within the research process, in both the data collection and reporting phases.

### **Alex**

*My first impression of Alex was a smiling face whizzing past in a car, waving and calling to me as she drove by looking for a place to stop. This was made more entertaining by the fact that we had never met before, and both assumed we had correctly identified each other. Alex had come to pick me up from the local train station, after I had travelled several hours to meet her. She greeted me with a warmth and openness that I had not expected; a welcome surprise that quelled the slight tinge of nervousness I felt for my first interview.*

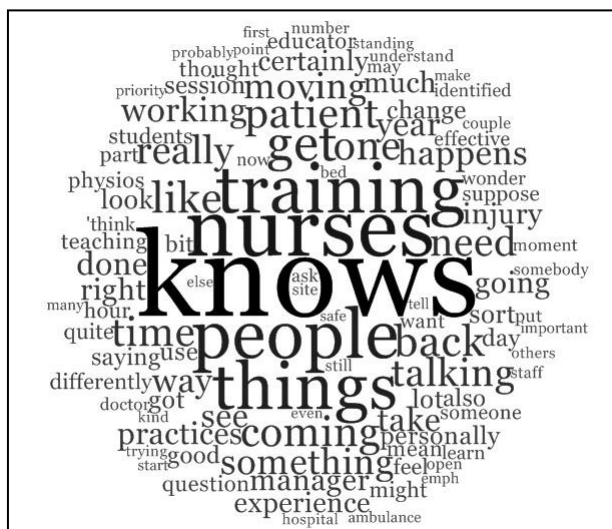
*As I climbed into her car and we headed to a local café, we chatted easily as if we were already colleagues, and the camaraderie continued throughout. Later she proudly stated to the people in the café that I had come from Melbourne to interview her about her work.*

*Alex insisted not only that I come back to her home after we had eaten, having previously orchestrated payment for our lunch, but also that I stay at her home until my return train some six hours later.*

*It appeared that I had become her 'guest for the day' as she talked to me about her life, workplace and community. Some hours later, I was delivered back to the station for my return journey with a packed lunchbox and bottled water.*



*As I approached the house in which I was meeting Dominique, I noticed the preparation that had already been undertaken prior to my arrival. The front door was open in anticipation and I was lead cordially towards a round kitchen table dressed with a crisp, bright tablecloth, recently ironed. There stood a tall jug of iced water and two clean, tall crystal glasses. It was a hot day. My host instantly poured our drinks as we greeted each other and chatted lightly. A small pile of papers, the top one hand-written, sat neatly on the table in front of Dominique. As we discussed the interview questions, she occasionally referred to these notes, although they were mostly information compiled to show me details of the manual handling program she participated in. At completion of our time together, Dominique invited me to join her and a friend for lunch at the local university, if I had time free. I was never quite sure if that was partly because we had run overtime and we could have continued talking a while longer, although I did not doubt the sincerity of the invitation for a moment.*



Dominique had travelled some distance to meet me at her friend's house, in her attempt to reduce my time in transit that day in unfamiliar territory. My nerves were quelled once again as I was met with a friendly smile and overt eagerness to ensure that my trip was 'worthwhile'. Dominique had a contrasting lifestyle and vocational background to myself, yet we seemed to be at ease with one another after a single telephone call.

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manual handling experiences and concerns. She was also confused by the multiple corporate programs that had been purchased by her employer, yet each replaced by successive executives, seemingly according to the personal preferences of those superiors.

Dominique seemed well informed about ergonomic principles. Although she embraced the interdisciplinary nature of her working unit, she found it frustrating that the nursing role seemed poorly understood by other professionals, particularly the physiotherapists who provided manual handling training at her facility. She visually enacted the technique she was taught that left two nurses holding a patient with neither able to tend to the personal hygiene task required. Dominique was interested to know about the management of manual handling in other facilities, and for this reason we had agreed to conduct the research interview first, followed by an hour of discussion and time when she could utilise my knowledge of the field. Whilst Dominique agreed to tentatively audio-record the second session guided by her questions, I did not ultimately include this in my data set as the content was outside the scope of my study. I was pleased to leave her with some contacts and resource links in return for her assistance with my work.

## **Jessie**

*Following my interview with Dominique I had an interview with Jessie scheduled approximately two hours later, which was the time it would take me to drive to her house, where we would meet. I arrived in her locale approximately 10 minutes early, and stopped at a nearby park to focus my mind before continuing on. For some reason, I decided to call Jessie before my arrival, although we had re-confirmed arrangements carefully the previous night. When a male voice answered, I gave my name only to ensure Jessie's confidentiality and asked to speak to her. To my surprise I was informed that she was out for the afternoon! I scrambled to explain, somewhat obtusely, as Jessie's privacy was paramount, about a possible planned meeting with her at her home. I carefully suggested that perhaps I was mistaken about the arrangements. Despite some temporary confusion on her husband's part, whom Jessie had obviously informed about my visit, I met up with Jessie some 20 minutes later.*

*I was again welcomed into the house of someone I had never met before, this time served tea and cakes on their best china. Our interview in the formal lounge room was briefly interrupted by young family members, and in the background we could hear family activities in the room next door. The most memorable moment was when Jessie's husband burst through the*



*to facilitate a safe environment and if it's not okay for someone to speak further then that's their choice. Initially I feared this interview had been ineffective and I doubted my grasp on qualitative, critical, interviews.*

In hindsight I realised that there was a reason I was uncertain about my interview with Jessie. The participants in the two prior interviews had visibly indicated that they had benefited from the experience, each in their own way. Alex had a realisation during her interview about her responses to different categories of healthcare professionals, and her unrecognised subordination to the physiotherapist in charge of manual handling education. Dominique appeared relieved to talk about manual handling with somebody, and seemed pleased to be able to ask me technical questions after the interview. However, I did not see any obvious benefit for Jessie, or note any change during the interview. It seemed that after only two interviews, I had unwittingly developed an expectation that each participant would gain insight into their situation! The absurdity of this idea caused me some amusement once I realised my own misunderstanding. Ironically, some months later, Jessie sent me a message stating that she'd enjoyed our time together so much that she was happy to help out again if I was doing any other research studies.

## **Harley**

*My time with Harley was a delight, a surprise, and rather humbling. We had met briefly once or twice before at nursing events, but I did not know her well and she was evidently quite chuffed to have me drive some distance to interview her. After I politely declined her offer of food, she took me outside where we stayed for the entire interview, as this enabled her to smoke. We were frequently interrupted by her dog's noisy demand for somebody to throw a ball. Apparently I am not very good at ball tosses whilst interviewing, as Harley gently chided me, mid-sentence, and took over this duty several times.*

*I did not have to actively start up the interview - Harley began speaking about manual handling before I could even reach my for my audio-recorder. Two hours and 20 minutes later, we completed the interview. Two and a half hours later, I was leaving with my arms full of home grown vegetables that she clearly wanted me to have, including a small pot of herbs that I was instructed to give to my mother (Harley quickly ascertained that I was not a gardener). I had not anticipated the issue of gifts before, as I had always felt that I was indebted to the participants for assisting me in my research endeavours.*

*The most striking aspect of this interview was the depth to which Harley had been thinking about manual handling issues for some time. She maintained a committed yet optimistic view about potential improvements, despite having campaigned for over two decades for a mechanical aid suitable to her specialised area that had not yet been purchased.*



Figure 4.4. Word cloud of interview with Harley.

As I indicated in Harley's introduction above, this interview threw up some unexpected features, beyond that of fresh produce. Indeed, I did not feel able to graciously decline her offer, despite having briefly made such an attempt initially. I quickly decided that, for all my concerns regarding power inequalities in interview settings, I would be at risk of reinscribing any existing power differential if I over-ruled her offer for fear of being judged as 'unethical'. I decided that it was more respectful to accept her practical gift, as this action could equally have served to reduce any existing power differential between us, rather than indicate my exploitation of a participant.

The long duration of this interview was partly due to the unhurried manner in which Harley spoke, and I tried to ensure throughout that I matched this pace of communication. There were also regular digressions during the interview when Harley told me anecdotes about other aspects of her professional life. In these instances I noticed my own internal dilemma as I attempted to maintain a sense of reciprocity by not dominating the interview entirely with my agenda. I thought that seemingly irrelevant information might contribute to a greater understanding of Harley's worldview, at the same time acknowledging that I may





noticed her frustration about unresolved manual handling issues that she felt were not adequately addressed by 'management'. She was quite cynical about the actions and intentions of those in more senior positions within her organisation. This was the first interview that I noticed carried undertones of seriousness that I had not perceived in the same way as those I previously completed with other participants. I felt that the frustration was both in the content that was verbalised, as well as the tone of voice and body posture that I observed during the interview. I didn't notice the same 'heaviness' in Koh's manner before or after her interview. Half way through the interview, Koh pointed to the audio-recorder, without speaking at all, and I realised that she wanted me to turn it off. I did so immediately, and she told me about an experience at work that she did not wish to have included in the data. I had no problem with this decision, and assumed that the interview was finished. However, a few minutes after this event, she indicated that she was ready to recommence and she calmly completed the rest of the interview. I was mindful to ensure that she was not feeling distressed and I ascertained that she had her family with her that night in case there was anything lingering. I rang her the next day to thank her and was pleased to hear that there was no ongoing disquiet for her, but that she simply wanted to maintain her privacy about one particular event in her professional experience.

## **Quinn**

*It had taken some considerable effort to meet up with Quinn as she had a significant life event impending and she had little free time. However, she remained deeply committed to participating in this research, despite many competing demands around the time of data collection. The first booking for an interview with Quinn was postponed at the last minute, understandable in her circumstances, however I was aware that this might indicate some ambivalence regarding participation. Although I reiterated that she was not obliged to go ahead with the interview, Quinn contacted me some days later, to reschedule. I admired her commitment, and her stamina and accepted her offer to go ahead at the new time after she persuaded me that she really felt strongly about supporting this project. It was of some surprise to me that Quinn later remarked, in my call to thank her post-interview, that she had quite enjoyed the interview as it served to distract her from the intense activity that was going on in other aspects of her life.*



## Lu

*Both Lu and I travelled some distance to meet for her interview. In fact, Lu had travelled a considerable distance in her desire to meet up far away from her workplace and colleagues. However I assumed that at least one person knew of her possible participation as Lu was recruited by a snowball referral. An acquaintance had given my contact details to Lu, apparently after suggesting that Lu should participate, a statement it seems that Lu agreed with!*

*I was standing in front of the designated shop, having arrived 20 minutes earlier to seek out a quiet location where we could talk privately, when Lu arrived and introduced herself. We discussed our options for the interview, and Lu chose a small library with a desk located in a corner away from others. I was concerned about Lu's privacy and whilst she was openly comfortable with the setting, I noticed that I almost whispered at times in an effort to keep the volume of our conversation down.*



Figure 4.7. Word cloud of interview with Lu.

In contrast to my previous interview in which Quinn was visibly cross about manual handling issues, Lu was almost despondent, but with a smile throughout! At the time I was focused on the interview, trying to control the volume of our conversation whilst attending to the direction of the interview and ensure I responded, or probed further, as appropriate. However when I later reflected on this interview, I recalled a heaviness in the way Lu spoke and the disappointment she expressed. After many years nursing in a variety of settings, there was a sense that Lu had seen it all, and didn't really expect much to change. She felt

that nurses were undervalued and that administrators, politicians and the general public did not understand the sacrifices nurses made in order to care for their patients. Lu resented the way the management of her organisation repeatedly reminded staff that they were "there for the patients" whenever workplace issues were raised. When declaring an injury she had suffered from manual handling, her voice became firmer explaining that she wasn't ashamed she had been injured because she "had earned her stripes". However, she spoke also of colleagues that had been injured yet were too afraid to report the fact. Lu was quite clear about the reasons for underreporting at her workplace: people were fearful of losing their jobs.

The aspect of the interview that impacted upon me most significantly was the depressive nature of Lu's work environment. She had considered leaving nursing, partially in response to the heavy nature of the work involved but also consequent to the lack of respect she felt nurses received. Lu reported that most of her colleagues were unhappy and wanted to leave also, but none could afford to. Lu had promised them all that if she won the local lottery, then she would give them each \$100,000 and they could all retire early. Lu was quite sincere about this dream, although resigned to the fact that it was unlikely to be realised.

## **Jamie**

*Jamie picked me up from the rather deserted train station in her area, apologising for her messy car as she cleared a space for me to sit down. Jamie was quite vibrant, yet had a grounded manner about her. We returned to her home to conduct the interview, but not before she had driven me around the local area to show me the sites. I was really quite touched by the way in which participants such as Jamie welcomed me and proudly shared their lives with me in this small but significant way. The trust extended to me in actions such as this were indicative of the open and unselfconscious way Jamie participated in the interview subsequently.*

*A rambunctious family pet, with a very amusing name, repeatedly interrupted our discussion by escaping from its enclosure. This probably provided some light relief for us amidst the serious topics we were exploring. Ultimately a final push from the escapee put paid to our interview running overtime.*

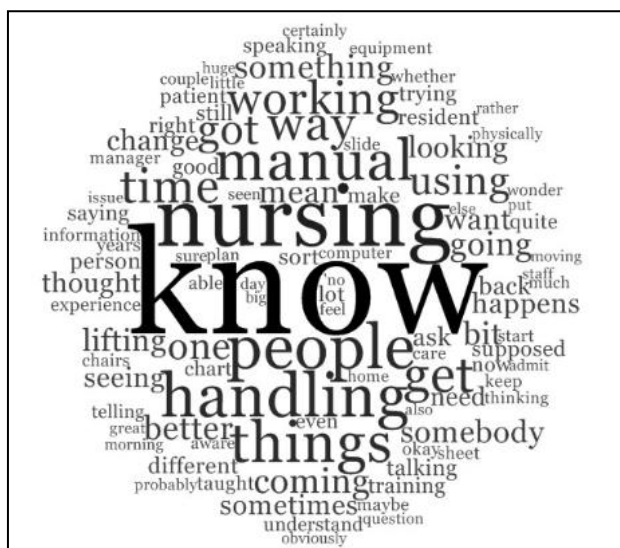


Figure 4.8. Word cloud of interview with Jamie.

My interview with Jamie is best encapsulated by the journal entry I wrote shortly after the interview:

*Jamie is a quietly spoken nurse who firmly believes in following the orders [policy] and nurses doing what they are told. She views policies as the truth, the safe way to handle patients, and doesn't question the current approach to manual handling directly, although she did express some concerns about being overlooked in manual handling decisions. Her major focus is aligned to a culture of compliance, i.e. making individuals follow policy ... Jamie doesn't consciously recognise any external barriers to safety in manual handling as she believes there is sufficient equipment in her organisation to enable staff to perform activities safely. She does not question whether these items are suitable and believes that lack of uptake [in use of equipment] is due to the attitudes of some staff such as "lazy" and "stuck in their ways".*

*Jamie also believes, like Alex in the first interview, that concerns about time pressures are related to attitudes also ... she later mentions time pressures in daily practice and time and cost issues that restrict training of staff, but does not link this limitation to injuries or manual handling issues directly. Jamie's focus is quite local - on colleagues and their practices, and reflects on the possibility that manual handling safety is low priority for some nurses who "see it as a side issue" ... Despite the fact that she often has sore wrists at work, Jamie doesn't view this specifically as an MSD. Disillusionment was expressed about many aspects of manual handling (not only about her colleagues lack of commitment) including the lack of nursing input into equipment purchases, and the lack of public understanding about the work of nursing.*

**Chris**

*Chris approached me at a conference after I had finished my presentation. She was eager to participate in the forthcoming research I had mentioned, and was one of the few participants who initially agreed to consider participating in a focus group, although ultimately she declined, preferring to speak privately in an individual interview. Like several others, Chris went to great lengths to meet me away from her workplace or colleagues, deciding to travel to Melbourne and discuss her thoughts in the safety of a private room at my university. Once ensconced comfortably in the interview room, Chris seemed to speak openly and in a rather relaxed manner, despite the content of our discussion and her dissatisfaction with manual handling risks for nurses.*

*After ringing Chris to thank her the next day, her response was: "Thank you for giving me the opportunity. I really enjoyed it and look forward to the finished result". I was pleased that she thought it worth the effort to participate, especially given the distance and time it had taken for her to meet with me.*



Figure 4.9. Word cloud of interview with Chris.

The complex arrangements for Chris's interview, and her consideration and rejection of focus group participation prompted my thoughts about emotional safety, that I have elaborated on earlier in this chapter. My reflective journal entry written after Chris's interview exemplified my developing thoughts at the time:

*I now see this as a little like Annette Street's recognition of the importance of not imposing 'research demands' on the nursing culture. Nurses were agreeable to speak with me privately, but reserved or concerned about ... speaking when others were present. This could indicate something about nurses recognising their vulnerability when speaking publicly - it may possibly be explained by the subjugation of nurses, resulting in a perpetuation of their silence (and also the invisibility of manual handling demands and issues).*

The next day I completed the entry noting:

*How amazing - participants thanking me for being able to participate! However, I like to believe that some of them may have been pleased to have the chance to speak up in safety about their thoughts - that is part of my intention for doing this research, to give nurses voice and the potential to facilitate change.*

### **Riley**

*My interview with Riley was more unusual than I had anticipated. It was scheduled on a day that I was feeling somewhat stressed and I discussed the appropriateness of conducting the interview with my supervisors. However I was quite confident that I could focus and be present with Riley, and fortunately I was not mistaken and a truly enjoyable interview ensued.*

*However, the unusual aspects of the interview refer to the conditions under which the interview took place. Riley had suggested a coffee shop in a region that I did not know, and I was happy to agree to this. I arrived early, as I always did when meeting participants, and entered into a very noisy shop! As I looked around and wondered how the event would unfold in this environment, Riley arrived and introduced me to her niece who subsequently sat with us listening to the whole interview. I paid extra attention throughout on this day as I was never entirely certain whether the interview recording would be audible!*





Figure 4.10. Word cloud of interview with Riley.

I was especially aware of the unusual nature of this interview, where the participant had chosen a public place that did not afford much privacy for our conversation, and that a young relative was present for the interaction. However, Riley was clearly comfortable with the situation so I included her niece in the conversation initially, and she read a book whilst we spoke about manual handling. The interview was as lively as the environment. Riley was quite positive throughout our conversation and happily expanded on any points when requested. She grimaced and smiled almost simultaneously when she recalled that she had occasionally encouraged colleagues to perform manual handling practices that were not recommended, for the benefit of the patient. She whispered briefly when referring to the lack of awareness of allied health clinicians in regard to nursing activities. I noted that Riley had briefly suffered from back pain but she was adamant that it could not be work-related, although the cause was unknown. It appears that in Riley's view, work-related injuries must be associated with an event or incident.

My journal entry after my follow-up call reads as follows:

*Whilst closing the interview, Riley used my final question to affirm me! At that time, Riley complimented me on the way I had conducted the interview, noting that I had "used her own language" in my questions and "kept [the discussion] open". This was a delightful, unexpected serendipity - this participant had been aware of the process during the interview, as well as the content! When I rang to thank Riley for her participation, again I received a very supportive response from her.*





interview she contradicted this and did not wish to discuss other nurses' practices. Casey willingly shares her knowledge of manual handling safety with her colleagues. Casey is quite confident about her knowledge and skills in manual handling, and also, it seems, with the subservient position of nurses. In her workplace, nurses must follow allied health decisions regarding the most appropriate way to handle patients in her facility. Presented as working collaboratively, Casey outlined the process whereby nursing staff "will try" for several days to follow the handling instructions determined by allied health professionals before requesting a reassessment or a change in the instructions.

### **Dakota**

*At the beginning of the interview Dakota said "I'm very passionate about [manual handling] and I don't want to take over [the interview]" and at the end again expressed concern saying she "was worried it's been too all [about] me". I explained that that was precisely the goal of the interview.*

*Dakota has been actively interested in manual handling for several years, and has previously been a trainer in organisational manual handling programs. She was very keen to participate in the study, contacting me before going on an international holiday to arrange an interview time upon her return. Dakota opened the interview herself and was very vocal throughout the whole of the interview. I am quite verbose myself at times, but in this interview I struggled for several minutes to close the interview as she expanded on additional points. I was aware that Dakota was heading to work herself immediately after the interview, however even this time constraint did not prevent us going overtime slightly. Even as she entered the lift to depart for work, she thought of another point that she wanted to make before leaving.*



# Data Analysis

## Overview

*I didn't follow norms of coding (i.e. grounded theory, phenomenology) nor use of a specific software application such as NVivo. Instead I chose a 'bricolage-like' approach to stepping through analysis, taking pieces from the data and structuring analysis with the flexibility of this generative approach (using immersion, listening and re-listening, reverting to transcribing to generate the important themes identified using a critical lens).*

Critical methodology does not carry with it a prescription or preference for specific methods to analyse data, unlike some other qualitative methodologies. Thematic analysis is a term used by a variety of scholars, but frequently indicates different steps, processes or nuances that are not clearly articulated or uniformly adopted. My approach to data analysis was in response to this lack of uniformity regarding analysis in combination with an intense desire to avoid decontextualising the data unnecessarily. In my view, this was a risk if only selected segments were extracted from each interview to generate categories and ultimately themes. I recognised that I could not avoid some degree of categorisation, but my preference was to work with the whole and as such I adapted a general approach to thematic analysis that allowed flexibility in this process.

Data collection and data analysis were undertaken simultaneously, along with reflexive journaling, resulting in an iterative process as is commonly utilised in the qualitative paradigm. This allowed for insights and meanings discovered in each interview to inform subsequent interviews and contemporaneously contribute to the process of analysis.

Multiple levels of data analysis were conducted in order to collate the data from individual participants and comprehensively address the research questions. The initial phase comprised field notes made immediately after each interview, either in auditory or written form, and the repeated listening and re-listening to each interview. All participants were offered copies of the interview recording and these were distributed to those accepted this invitation.

The interviews were analysed for themes, initially by auditory review, then subsequently reviewed in written form after transcription. Subsequently, by the incorporation of critical

realism, 'themes' were identified based on the areas of discussion in the interviews and aspects identified as important to the majority of participants.

**Transcription**

Although I ultimately transcribed the interview data, this was after much deliberation about the appropriateness for a critical investigation. I did not wish to follow a standardised procedure that may easily have overlooked essential non-verbal cues, and wished to avoid any tendency to reduce interviews to only written text. Thus the listening and re-listening to recordings was an essential step to promote immersion in each interview. Variations in tone, volume, speed and other speech patterns combined with expressions and facial gestures would not be captured on audio transcription outputs and to this end I also made journal entries immediately after each interview.

I was aware that I was undertaking a critical analysis of the data, as distinct from discourse analysis, however I noted the pauses, expressions of emotion, tones and gestures as I recalled them during the listening and transcribing phases of analysis. These additional features of the interviews helped provide me with a 'rich tapestry' rather than a limited, basic representation devoid of facial expressions or meaning underneath the spoken word.

In the interests of transparency, and to support my own reflexivity, I chose to transcribe also my own contributions to the interviews. I wanted to appreciate the dynamics of the conversation, including how I may have guided an idea during the interview, but I also wished to emphasise the reciprocal nature of this research, an intrinsic part of critical methodology.

**Levels of data analysis**

The data analysis process applied to the interview data is presented below in Table 4.1 and was originally published in the manuscript "Moments of Speaking and Silencing: Nurses Share Their Experiences of Manual Handling in Healthcare" (Kay, et al., 2015), that follows in this chapter. My data analysis process was based on a modification of Braun and Clarke's (2006) six phase framework for thematic analysis. The middle column of the table represents the stages I utilised within the analytic process, and the last column lists the analytical steps associated with each stage. The first column of Table 4.1 included the phase of Braun and Clarke's (2006) framework that most closely resembles a stage within my own

data analysis framework. The table is explained in the remainder of this section however it is important to note that whilst the stages are listed sequentially in this table, the process is oversimplified by this form of representation. Tabulated stages may inadvertently misrepresent the dynamic and iterative nature of the data analysis process and therefore it may not accurately represent the data analysis process. Tabulating the analytic process presents a distorted linear view comprising discrete phases, rather than the fluid, overlapping nature of progression between phases that allowed movement between phases in either direction.

Table 4.1

*Data analysis process compared to Braun and Clarke framework*

Braun and Clarke (2006) phase	Stages in current study	Analysis steps in current study
<u>Phase 1</u> (auditory review) Familiarising yourself with your data	<u>Stage 1</u> <ul style="list-style-type: none"> <li>• Read reflective journal entries</li> <li>• Listened and re-listened to interviews</li> <li>• Read notes on non-verbalised data</li> </ul>	Review of reflective journal entries and deep immersion in interview recordings
<u>Phase 2</u> Generating initial 'codes'	<u>Stage 2</u> <ul style="list-style-type: none"> <li>• Reflected and assimilated verbal and non-verbal aspects of data</li> <li>• Preliminary synthesis</li> <li>• Independent review of sample data to confirm analysis findings</li> </ul>	Realist analysis: identification of key aspects
<u>Phase 1 (repeated)</u> (written review) Familiarising yourself with your data	<u>Stage 3</u> <ul style="list-style-type: none"> <li>• Transcribed interviews</li> <li>• Bookmarked key aspects</li> </ul>	Transcription of interviews to validate initial aspects identified
<u>Phase 3</u> Searching for themes	<u>Stage 4</u> <ul style="list-style-type: none"> <li>• Identified critical tenets</li> <li>• Grouped aspects into themes</li> <li>• Applied critical tenets to key themes &amp; subthemes</li> </ul>	Critical analysis: clarification of key themes & subthemes
<u>Phase 4</u> Reviewing themes <u>Phase 5</u> Defining and naming themes	<u>Stage 5</u> <ul style="list-style-type: none"> <li>• Reviewed data in light of critical realism</li> <li>• Searched for pertinent quotes</li> <li>• Additional theme identified</li> </ul>	Alignment of realist themes with emergent critical themes
<u>Phase 5</u> Defining and naming themes	<u>Stage 6</u> <ul style="list-style-type: none"> <li>• Integrated exemplars with multilayered critical realism analysis</li> </ul>	Integration of critical analysis of realist experiences
<u>Phase 6</u> Producing the report	<u>Stage 7</u> <ul style="list-style-type: none"> <li>• Wrote and presented findings</li> </ul>	Discussion, write-up and presentation of findings

Multiple levels of data analysis were conducted in order to collate the data from individual participants and comprehensively address the research questions. The initial phase comprised field notes made immediately after each interview, either in auditory or written form, and the repeated listening and re-listening to each interview. All participants were offered copies of the interview recording and these were distributed to those accepted this invitation.



Immediately after each interview I wrote field notes to encapsulate my impressions of the most prominent features of the interview's content. Shortly after I listened to the interview in its entirety, without attempting to make any notes in the first instance. I later re-listened to each interview several times in the following weeks in order to gain a more comprehensive overview prior to undertaking detailed transcription. During subsequent transcription I annotated any new insights that arose during the process. Upon completion of transcription, I reviewed the data in a variety of ways to confirm consistency of the themes generated across these different review techniques. The multiple ways I examined the data included:

1. tabulating an entire transcription into small sections based on content of the sentence, paragraph or section thereof and categorising each row with a summary word or phrase;
2. creating a separate summary of the key points or ideas within each interview;
3. 'coding' a sample of the interviews within a formal software program, NVivo10 (QSR International), to ascertain if concepts, themes and subthemes were robust and aligned across different techniques; and
4. creation of visual representations of each interview such as word maps and word clouds to examine the verbal content in another medium.

Once provisional themes had been identified, I consulted the key points noted by my supervisors in their review sample, and also re-listened to the interviews again to confirm or revise my analysis.

Congruent with critical methodology encompassing that which is both spoken and that which remains unsaid (Glass, 2003a, 2003b; Nagar-Ron & Motzafi-Haller, 2011; Schick Makaroff, 2013) full transcription of the interviews was not planned for this study. However, the extensive amount of data obtained lead me to decide on personally transcribing the interviews. This activity, whilst time consuming, enabled me to more completely connect with the data offered by participants. During the transcription process, key ideas were identified and other features of participants' voices and responses were noted. Insights and key themes within each interview were flagged using a 'bookmarking' option within the Express Scribe Transcription Software (v5.21, distributed by NCH Software). This function allows comments to be listed in a separate frame and linked to the time location in the interview recording.

The analytical steps I adopted allowed me to develop a deeper examination of the data than available by auditory or written review alone, and generated insights potentially overlooked by the use of only one review technique. In this way, the realist themes identified by auditory review were cross-checked by comparison with written transcription. However upon completion of transcription of the interviews, I continued to re-listen and re-read the interviews, rather than rely solely on the written transcriptions. Thus during both auditory review and written transcription, a number of critical themes were identified.

## **Researcher reflective journal data**

My journal was an additional research method utilised to express and explore the many discrete yet interwoven aspects of my research in the field of manual handling and also to explicate and acknowledge the manual handling challenges I had personally encountered, both as a nurse and later as a program coordinator. More importantly, the reflections led to a process of reflexivity whereby I was able to more deeply explore any issues that occurred in the research and as such, actively interrogate my research skills to further improve the research process.

Journal entries illustrated my constantly unfolding research journey coupled with glimpses of new ideas and insights, and the challenges and excitement as my own beliefs and understandings evolved, altered and generally expanded. An entry on reflective journaling itself illustrates the clarity and utility I found with this method:

*Reflective journaling [has] assisted me to acknowledging the need to ... make visible, to myself and others, my own expectations, beliefs and assumptions ... reflexivity helps keep me open to 'What alternative understandings could my data produce?'*

## **My journey through data analysis**

The entries below encapsulate my own journey, transformative in parallel with the aims I had for the study itself.

*AWAKENING ('Enlightenment'):*

*I woke up this morning ... some of what I had been exploring in my own study ... had consolidated in my mind: the power relations surrounding and inscribed in nursing; patriarchal and paternalistic controls from the managerial discourse; a move from domination by the medical profession to patient outcomes and patient economics, and the impact of this Western business model on nursing - especially devaluing [of*

*nursing work], by excluding the caring nature of nursing in any monetary model of management of healthcare - only nursing hours that are counted ... and [nursing is] further devalued by the lack of skill mix recognition or replacement by non-qualified care assistants (however titled).*

*I was re-engaging with my thesis and my data, yet at a different level. It was like I'd been tip-toeing tentatively around the edges until that moment ... felt like I was part of [my study].*

**INTERWEAVING ('Empowerment?'):**

*I considered my former (lack of) understanding of data analysis ... [I now] look forward to keeping close to the participants' voices and the experiences by undertaking the transcription and analysis myself. As I read a recent doctoral thesis, I began to analyse the analysis. Suddenly that opened up to me the possibilities for creativity and the link to conceptual frameworks, rather than trying to impose theoretical constructs onto predetermined categories of data!*

*So what would happen if manual handling for nurses was viewed differently [from current conventional understandings]? What if the socio-political context for manual handling was foregrounded?*

**BELIEVING ('Emancipation'):**

*I also felt more comfortable in acceptance of what this thesis is - no longer disappointed about my previous desire to 'save the world'. But a 'left-field' approach appeases me, along with the opportunity to widen perspectives on manual handling, given my concerns that even nurses' professional associations, however named, may possibly be perpetuating the status quo and adding to disempowerment of nurses inadvertently (Heavens above, I did that myself in earlier years without realising).*

*Finally, I am truly convinced of the value of qualitative research, especially emancipatory methodologies.*

## **Publication 4**

### **Introduction to publication 4**

The following article is published in the journal *Collegian*, a respected publication of the Australian College of Nursing and distributed in print to all members. It provides a comprehensive overview of a dataset from the original research reported in this thesis, exploring the findings related to participants' experiences of speaking about manual handling issues in their workplaces.

The substantive content of this publication is presented against a background of varying definitions for manual handling across geographical and administrative settings. The manuscript progresses to an overview of injuries believed consequent to manual handling activities before discussing the study findings. The persistent and seemingly underappreciated prevalence of manual handling related musculoskeletal disorders (MSDs) in healthcare is also noted in terms of constraints that cloud or preclude recognition of MSDs due to limited conceptualisations of MSDs and challenges determining causality.

Notably, this paper includes the demographic details in the first table, and also a summary of the data analysis process devised for this study. Although covered in more depth in the previous sections of this thesis, these were essential to provide sufficient background to the journal readership when the manuscript was developed.

## Declaration

**Kay, K.,** Evans, A., & Glass, N. (2015). Moments of speaking and silencing: Nurses share their experiences of manual handling in healthcare. *Collegian: The Australian Journal of Nursing Practice, Scholarship & Research*, 22(1), 61-70. <http://dx.doi.org/10.1016/j.colegn.2013.11.005>

### Declaration by candidate


In the case of the fourth original publication (located in Chapter 4), the nature and extent of my contribution to the work was the following:

Nature of contribution	Extent of contribution (%)
<i>Principal author responsible for literature search, development and writing of the manuscript. Responsible author who accepts overall responsibility for the publication.</i>	80

The following co-authors contributed to the work:

Name	Nature of Contribution
Dr Alicia Evans	<i>Contributed to review and editing of the manuscript</i>
Professor Nel Glass	<i>Contributed to review and editing of the manuscript</i>

Candidate's signature:

	January 27, 2015
---	------------------

### Declaration by co-authors

The undersigned hereby certify that:

(1) the above declaration correctly reflects the nature and extent of the candidate's contribution to this work, and the nature of the contribution of each of the co-authors;

(2) they meet the criteria for authorship in that they have participated in the conception, execution, or interpretation, of at least that part of the publication in their field of expertise;

(3) they take public responsibility for their part of the publication, except for the responsible author who accepts overall responsibility for the publication;



(4) there are no other authors of the publication according to these criteria;

(5) potential conflicts of interest have been disclosed to (a) granting bodies, (b) the editor or publisher of journals or other publications, and (c) the head of the responsible academic unit; and

(6) the original data are stored at the following location(s) and will be held for at least five years from the date indicated below:

**Location**                      School of Nursing, Midwifery & Paramedicine

Co-authors' signatures:

Dr Alicia Evans 	January 27, 2015
Professor Nel Glass 	January 27, 2015

**Publication 4: Moments of speaking and silencing: Nurses share their experiences of manual handling in healthcare.**

Kay, K., Evans, A., & Glass, N. (2015). Moments of speaking and silencing: Nurses share their experiences of manual handling in healthcare. *Collegian: The Australian Journal of Nursing Practice, Scholarship & Research*, 22(1), 61-70.  
<http://dx.doi.org/10.1016/j.colegn.2013.11.005>























## Summary of publication 4

The phrase 'manual handling' itself is not universally adopted and would be considered foreign to healthcare clinicians on several continents where the more familiar phrase 'moving and handling' is in use. However both terms of reference embrace the core elements pertaining to the application of force essential to the manipulation, relocation or stabilising of an object or individual. Resting upon such definitions thus are the body stressing and overexertion injuries or MSDs, that may arise in consequence, and the confounded nature of causal attribution in these circumstances.

The difficulties and ambiguities arising from the multifactorial aetiology of MSDs, and challenges in determining causal links, have given rise to underestimations of MSD prevalence amongst nurses. Notwithstanding this, international recognition of MSDs amongst the nursing profession has led to a widespread development of guidelines and targeted injury prevention strategies in various forms. These safety programs have been largely based on ergonomic principles developed in other industries and presumed to transfer effectively to the healthcare environment.

The findings from the current study, as reported in this published journal article, provided new information by revealing the omnipresent power relations that existed for the participants interviewed. Underlying the participants' experiences of speaking about manual handling issues and attempting to manage their circumstances, was an inequity of power, a finding I named '(mis)power'. (Mis)power resulted in the exclusion of participants' perspectives in development or evaluation of injury prevention programs imposed by their healthcare organisations. The contestation of the aptness of manual handling practice recommendations for clinical settings was diminished, if not completely overlooked, as participants felt silenced, punished and disillusioned when they tried to actively contribute to the manual handling dialogue.

Of significance to the publication presented here is the impact of marginalisation of nurses in relation to manual handling. Socio-political constraints hinder the ability of nurses to voice their concerns about manual handling practice issues. The impact of devaluing nursing input for practice-related issues such as manual handling, is twofold: firstly, disincentives to report unresolved manual handling issues effectively mask their presence and secondly, the hesitancy of participants to report MSDs creates an inaccurate

representation of injury prevalence, reducing MSD visibility and further minimising the manual handling issues encountered by nurses in their professional lives. The absence of critique of the dominant ideology underlying current injury prevention programs maintains the status quo and hinders the identification of contextually-appropriate solutions to prevent MSDs within the nursing profession.

The intent of critical theory is empowerment and emancipation (Cheek & Rudge, 1994; Dong & Temple, 2011; Fay, 1987; Roberts, et al., 2009; Walter, et al., 2001). Emancipatory intent refers to the liberation from oppressive socio-political constructs, and this is relevant to the findings reported in this paper whereby nurses were not able to speak freely about their manual handling experiences. Enlightenment about the conditions in which nurses practice, by increasing the awareness of the socio-political constraints, can lead to identification of alternative, transformative ways to challenge the status quo. Participants interviewed in this study reflected on their circumstances and several nurses noted insights that they had gained from this process:

I think I opened up a little bit [to] myself ... about barriers to reporting ... I mean ... just suddenly [as] I was saying to you, I sort of consolidate[d] my view about barriers to reporting.

Another participant stated:

It's actually made me think about it, that one right there, in the last point I made ... I'm going to question the physio[therapist] from now on. Yes, I will! I will, because, yeah, [pause] I've never, ever questioned the physio ... Now that we've spoken ... I think I should be able to make decisions about it, not the physio!

Whilst Riley pondered:

What I will actually do is go back to my workplace ... the sort of the manual handling things we can do ... you've made me think about [that] ... There you go!

## **Publication 5**

### **Introduction to publication 5**

This next manuscript is printed in the Journal of Nursing Education and Practice after blinded peer-review. This open access journal was deliberately targeted to maximise dissemination in allowing nurse clinicians, who frequently do not have institutional access to publisher databases, to freely access and download the paper.

Whilst the previous publication in this chapter focused on the visibility of ongoing manual handling issues and related MSDs, this current paper explores a dataset from the study related to the conflicting concerns that nurses experience when faced with manual handling tasks during patient care episodes. These conflicts were noted to be dialectical tensions that form the major theme of 'how to practice' as revealed in the study. Such tensions were noted to pervade and problematise nurses' manual handling experiences and their decisions regarding the adoption or otherwise of manual handling practices recommendations.

## Declaration

**Kay, K.,** Glass, N., & Evans, A. (2014). Loaded both ways: The impact of dialectical tensions on nurses' manual handling practices. *Journal of Nursing Education & Practice*, 4(1), 218-228. <http://dx.doi.org/10.5430/jnep.v4n1p218>

## Declaration by candidate

In the case of the fifth original publication (located in Chapter 4), the nature and extent of my contribution to the work was the following:

Nature of contribution	Extent of contribution (%)
<i>Principal author responsible for literature search, development and writing of the manuscript. Responsible author who accepts overall responsibility for the publication.</i>	80

The following co-authors contributed to the work:

Name	Nature of Contribution
Professor Nel Glass	<i>Contributed to review and editing of the manuscript</i>
Dr Alicia Evans	<i>Contributed to review and editing of the manuscript</i>

Candidate's signature:

	January 27, 2015
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## Declaration by co-authors

The undersigned hereby certify that:

(1) the above declaration correctly reflects the nature and extent of the candidate's contribution to this work, and the nature of the contribution of each of the co-authors;

(2) they meet the criteria for authorship in that they have participated in the conception, execution, or interpretation, of at least that part of the publication in their field of expertise;

(3) they take public responsibility for their part of the publication, except for the responsible author who accepts overall responsibility for the publication;



(4) there are no other authors of the publication according to these criteria;

(5) potential conflicts of interest have been disclosed to (a) granting bodies, (b) the editor or publisher of journals or other publications, and (c) the head of the responsible academic unit; and

(6) the original data are stored at the following location(s) and will be held for at least five years from the date indicated below:

**Location**                      School of Nursing, Midwifery & Paramedicine

Co-authors' signatures:

Professor Nel Glass 	January 27, 2015
Dr Alicia Evans 	January 27, 2015

**Publication 5: Loaded both ways: The impact of dialectical tensions on nurses' manual handling practices.**

Kay, K., Glass, N., & Evans, A. (2014). Loaded both ways: The impact of dialectical tensions on nurses' manual handling practices. *Journal of Nursing Education and Practice*, 4(1), 218-228. <http://dx.doi.org/10.5430/jnep.v4n1p218>

























## Summary of publication 5

The previous publication in this chapter proposed that the marginalisation of nurses had resulted in participants feeling silenced, punished and disillusioned when attempts were made to voice manual handling concerns. As such, nurses' manual handling experiences and their unique perspectives may have been overlooked. Such an omission plausibly contributes to a limited understanding of the manual handling issues faced in daily nursing practice.

This second publication explicates research findings that highlighted the competing demands upon nurses in clinical practice. Organisational goals and cultural expectations regarding the primacy of patients' needs were found to hinder the adoption of recommended manual handling practices intended to promote wellbeing of clinical nurses.

A critical lens has provided new knowledge that advances the understanding of manual handling embedded within the provision of patient care in healthcare contexts, by foregrounding the ubiquitous influences that contribute to injury risks by means of functioning as potential barriers to self-care. Taken for granted assumptions about the ability of nurses to apply ergonomic recommendations can result in the development of safety programs that neglect consideration of the challenges within clinical settings. Demands for productivity, cultural expectations of the nursing role, space and equipment constraints and a perceived incongruence of recommendations with the clinical environment combine to undermine the potential contribution that technical solutions embedded in ergonomic programs may make to the prevention of MSDs.

Confusion, expectations, uncertainty and frustrations in the context of (mis)power as revealed in this study contribute to the dialectical tensions and remain problematic for nurses in their manual handling practice. Dialectical tensions were experienced by participants in this study and occurred intrapersonally as well as interpersonally. The belief that patient needs are paramount (and even over-ride concern about one's own safety and potential risk of injury) appeared taken for granted to the extent that all participants implied or explicitly expressed this notion as incontrovertible and fixed.

A journal entry written during data analysis identified with the participants' comments on the conflicts they experienced:

*This highlights to me the presence of dialectical tensions within and surrounding the research. I feel like I am peeling back layer after layer as I review the data and the findings that emerged in the preliminary analysis. The multiple levels of experience for the participants and dialectical tensions continue to emerge as something more than just the simplistic contradictions that I used to see them as, or more narrowly I would use the term 'management rhetoric' prior to really engaging with this research. I see now how some of my thoughts were previously loaded with assumptions, possibly consequent to my own frustrations as a nurse in the manual handling field and thus identifying with their experiences at times.*

In managing the apparent conflicts within and around nurses when they are faced with manual handling tasks, the dialectical tensions experienced by nurses distracts attention away from the underlying mechanisms that produce such circumstances. In this way, the status quo regarding approaches to manual handling issues is maintained, and the sustained injury prevalence amongst nurses continues due to interventions of limited efficacy. The next manuscript in this chapter has been prepared for submission to an appropriate journal and expands on the findings reported thus far.

## **Manuscript 6**

### **Introduction to manuscript 6**

This manuscript was drafted to provide a synthesis of the study's findings. It functions to draw together the publications presented earlier in this chapter that detailed the two major themes generated by this study. As a manuscript prepared for publication, there is unavoidably some repetition for the reader of this thesis: a stand-alone journal article necessarily requires an overview of the research design to allow a journal's readership to assess the rigour of the reported findings. The manuscript contributes to this thesis by presenting an integration of the findings with the critical framework upon which the study is based. The major themes in combination form a more thorough foundation for the concept of (mis)power, than each can offer individually. An enhanced understanding of the (mis)power in nurses' manual handling circumstances then allows for the implications of the findings to be developed. Recommendations arising from the study complete the manuscript. The implications and recommendations are further discussed in chapter five which reviews the research in its entirety, however it was a conscious decision to introduce these elements into the sixth manuscript to highlight the significance of the study in this paper. If published, this manuscript is likely to be accessed by a broader audience than the readers of the thesis. Therefore, making the conclusions and implications visible within this final manuscript for publication may potentiate the possibility of transforming the manual handling circumstances of nurses.

## Declaration

Kay, K., Glass, N., & Evans., A. (to be submitted for review). (Mis)power and marginalisation: Nurses' perspectives on moving and handling patients.

### Declaration by candidate

In the case of the sixth original publication (located in Chapter 4), the nature and extent of my contribution to the work was the following:

Nature of contribution	Extent of contribution (%)
<i>Principal author responsible for literature search, development and writing of the manuscript. Responsible author who accepts overall responsibility for the publication.</i>	80

The following co-authors contributed to the work:

Name	Nature of Contribution
Professor Nel Glass	<i>Contributed to review and editing of the manuscript</i>
Dr Alicia Evans	<i>Contributed to review and editing of the manuscript</i>

Candidate's signature:

	January 27, 2015
---	------------------

### Declaration by co-authors

The undersigned hereby certify that:

(1) the above declaration correctly reflects the nature and extent of the candidate's contribution to this work, and the nature of the contribution of each of the co-authors;

(2) they meet the criteria for authorship in that they have participated in the conception, execution, or interpretation, of at least that part of the publication in their field of expertise;

(3) they take public responsibility for their part of the publication, except for the responsible author who accepts overall responsibility for the publication;



(4) there are no other authors of the publication according to these criteria;

(5) potential conflicts of interest have been disclosed to (a) granting bodies, (b) the editor or publisher of journals or other publications, and (c) the head of the responsible academic unit; and

(6) the original data are stored at the following location(s) and will be held for at least five years from the date indicated below:

**Location**                      School of Nursing, Midwifery & Paramedicine

Co-authors' signatures:

Professor Nel Glass 	January 27, 2015
Dr Alicia Evans 	January 27, 2015

## **Manuscript 6: (Mis)power and marginalisation: Nurses' perspectives on moving and handling patients.**

### **Abstract**

The nursing profession continues to experience high injury rates associated with moving and handling patients. A study framed in critical, emancipatory methodology comprised semi-structured interviews with 13 nurses.

Recommended moving and handling techniques taught in training sessions were perceived as generally unsuitable for use in clinical environments. Safe handling policies disregarded important contextual factors that potentially placed nurses at risk of injury.

Critical theory informed the analysis and highlighted previously taken for granted assumptions and socio-political constraints on nursing practice. Key findings identified overarching themes of power relations and (mis)power. Participants experienced practice tensions and marginalisation. They felt silenced, punished and/or disillusioned and consequently were unable to achieve recognition of their perspectives within their own healthcare organisations. A self-perpetuating cycle of (mis)power in relation to manual handling suggests that the oppression and marginalisation of nurses has hindered the effectiveness of formalised injury prevention programs to achieve their stated aims. The socio-political organisation of healthcare has profound impact on nurses manual handling circumstances and must be considered in future efforts to prevent MSDs.

### **Introduction**

The work of nursing comprises a multiplicity of tasks in which manual handling is an implicit component (Fragala & Fragala, 2014). Within the nursing profession, there continues to be persistently high rates of musculoskeletal disorders (MSDs) in the face of a proliferation of programs intended to counter this outcome (Long, et al., 2013). For the scope of this manuscript, MSDs will be used to signify the various types of injuries that arise from manual handling activities in the course of employment. Musculoskeletal disorders will be deemed to exclude slips, trips, falls and impact injuries in this instance.

The scholarly literature is replete with numerous case studies of safety programs for manual handling associated with patient care activities that have been developed by

ergonomic or allied health consultants (Kay, et al., 2014a). The preponderance of studies utilising the expertise of ergonomists and other professional groups with minimal input from nurses is noteworthy. The privileging of these non-nursing professionals in the planning of injury prevention strategies may contribute to beliefs that marginalise nurses and devalue their inclusion in decisions regarding manual handling interventions.

Training staff in safe handling techniques appears to be the mainstay of many manual handling programs reported in the literature however systematic reviews repeatedly question the efficacy of training programs to prevent injuries (Clemes, et al., 2010; Martimo, et al., 2008; Robson, et al., 2012; Verbeek, et al., 2011b). Training records are commonly used to assess compliance with regional regulations for manual handling safety, despite evidence of the inadequacy of this approach to resolve manual handling issues (McDermott, et al., 2012).

The ongoing nature of manual handling difficulties for nurses prompted the study discussed in this paper. The lack of resolution for this occupational safety issue suggested the need to re-examine the manual handling circumstances of nurses and seek new perspectives. Notably there has been little attention given to the experiences and perspectives of nurses in regard to the priorities, development and implementation of programs intended to reduce the incidence of MSDs amongst this professional group (Kay, et al., 2014a). We intended to redress this oversight by way of foregrounding the voices of nurses in relation to manual handling issues.

Critical theory was chosen as the underlying philosophical framework for the research design. We argue that a critical lens offers the potential for emancipatory alternatives to the dominant ideology in which manual handling is currently embedded. We present here the findings generated from this study in terms of power differentials and the taken for granted assumptions that were revealed by this dataset.

## **Background literature**

An examination of the contemporary international literature on manual handling in healthcare included an extensive search of the scholarly literature from 1999 to 2011. The review of literature identified two major categories of research: epidemiological studies and case studies on interventions. The narrative literature review reporting these findings

has been published elsewhere and a summary of the key points will now be outlined before progressing to the study details (Kay, et al., 2014a).

Within the literature reporting specific interventions, there was an increasing recognition of the complexities of the moving and handling of individuals whose physical or mental capacity is compromised. Exemplified in the literature was a purported shift in programs towards multidimensional approaches that comprise several aspects combined together in one program (Clemes, et al., 2010; Dawson, et al., 2007; Martimo, et al., 2008). However, sustainable solutions for preventing MSDs in healthcare environments have not yet been found and an underlying focus on training has persisted in the absence of clear, effective strategies to reduce the MSD burden (Nelson, et al., 2006).

The impact of context on both manual handling and reporting practices may be easily subsumed by a focus on official organisational data collated to determine MSD rates. Scholars have noted the potential inaccuracy of official injury data due to underreporting of MSDs (Galizzi, Miesmaa, Punnett, Slatin, & The Phase In Healthcare Research Team, 2010). Specific injury prevention strategies are frequently developed in response to the recognition of risks identified when manual handling incidents occur. Manual handling injury data, if incomplete, will necessarily be an inaccurate representation of injury risks and lead to the omission of crucial aspects of manual handling that contribute to MSDs.

An additional finding of our literature review was that the bulk of studies were based on quantitative methods with only a small number embracing qualitative methodology. The few studies that examined nurses' perspectives were most commonly limited in scope to experiences of MSDs, specific programs intended to prevent MSDs, or attitudes to manual handling equipment (for example, see Gropelli & Corle, 2010; Schoenfisch, et al., 2013). Further, the majority of studies did not clearly articulate the philosophical assumptions of their research design. However the adoption of biomechanical explanations of injuries and the development of preventative measures based on ergonomic principles suggests that the most common approach is a positivist standpoint characterised by a realist ontology, that objects exist independent of our perceptions of them, and an objectivist epistemology that seeks a neutral, value-free knowledge of reality.



## **Study impetus**

The absence of explicit theoretical perspectives reported in the majority of scholarly papers reviewed raised concerns about contemporary and historical approaches to manual handling issues. It is plausible that some aspects of nurses' manual handling circumstances are hidden amidst taken for granted beliefs regarding the accuracy of injury reporting and the anticipated effectiveness of ergonomic programs. As mentioned already, efforts to redress MSDs may be subverted if injury measures are inaccurate and expected program outcomes are assumed yet not realised. In such instances, specific aspects of manual handling issues may be overlooked, underappreciated or rendered invisible if not clearly indicated in empirical data. Consequently attention may be redirected towards MSDs in terms of a focus on agency, in the form of compliance behaviour, rather than examination of complex contextual influences on injury rates.

In this paper we will first provide a brief overview of the study, including the research design, after which we will outline our findings. We will then progress to a discussion of the critical explanations our study offers for nurses' manual handling issues.

## **Research overview and design**

The overall aim of this study was to explore nurses' perceptions and experiences of manual handling in healthcare and their participation in injury prevention programs. We also aimed to validate and give voice to the participants' experiences and knowledge, thereby hoping to facilitate their ability to transform their circumstances in relation to manual handling.

The research questions were:

1. What are the beliefs, attitudes and experiences of nurses pertaining to manual handling?
2. How do nurses perceive their knowledge of manual handling and safe practices is received by other healthcare professionals?
3. How can nurses' knowledge of manual handling be incorporated into the development of interventions to reduce injuries?

The research was framed in a critical methodology based on the emancipatory intent of the investigators to provide opportunities for reflective practice, enhanced awareness and the

potential for empowerment. Comprehensive details of the methodology and methods have been published elsewhere and will therefore be reiterated in brief in this current paper (Kay, et al., 2015).

### **Theoretical framework: Critical theory and critical realism**

The origins of critical theory are attributed to the Frankfurt School, a group of German philosophers and social scientists from the early twentieth century, although not confined exclusively to these theorists (Alvesson & Sköldberg, 2009). Critical theory's explicit emancipatory axiology is to counter oppression of marginalised groups and thus redress inequities of power and resources. By making explicit taken for granted assumptions that have been shaped by social, political, cultural, gender and economic factors until they are ultimately considered real, critical theorists aim to foreground these unrecognised elements of the dominant ideology and enable identification of transformative solutions to counter oppressive structures (Fay, 1987).

Critical realism is similarly characterised by a worldview shaped by the above factors and the notion of reification whereby a collection of social structures may, over time, come to be perceived as real. Unlike the objectivist epistemology of positivism, critical realism allows for human perspectives by embracing a subjectivist epistemology, acknowledging the values of the researcher, and their link with the researched, in shaping a study (DeForge & Shaw, 2012). Critical realism proposes a stratified ontology whereby taken for granted mechanisms in the domain of the real lead to events and actions in the domain of the actual (DeForge & Shaw, 2012). The main aim of critical realism is to explore the domain of the real by uncovering the underlying generative mechanisms that give rise to patterns or demi-regularities within the actual domain, in the presence of a particular constellation of conditions (Clark, et al., 2008; DeForge & Shaw, 2012).

### **Data collection and analysis**

The two research methods used in this study were semi-structured interviews and researcher reflective journaling. Reflective journaling promoted reflexivity of the researcher. Reflection on her own assumptions and their impact upon the research design and process supported epistemological congruence and transparency, which are essential aspects of critical research paradigms.

The 13 interview participants were registered nurses between 25 and 64 years of age, currently working in healthcare facilities in the Australian states of Victoria or Tasmania. Participants were recruited via announcements in professional journals and at professional conferences, and also through professional contacts and snowball referrals from participants in the study. Following university ethical approval, semi-structured interviews were undertaken at the location chosen by each participant. The interviews were between 61 and 132 minutes in duration and the central interview questions are outlined in Table 4.2 below. Interviews were digitally recorded and transcribed verbatim.

Table 4.2  
*Key Questions for Semi-Structured Interviews*

1	Do you think that manual handling is a part of your role as a nurse?
2	Can you tell me about your experiences of manual handling when you are nursing patients?
3	Can you give me an example of a time when your nursing practice involved a manual handling task?
4	What did you do? What happened?
5	Have you been involved in any manual handling programs at work?
6	Do you have any thoughts about the program you participated in?
7	Have you had positive experiences of manual handling in your work?

Central to data analysis was a process of data immersion, visually represented in Figure 4.14 below, that initially entailed identification of preliminary themes from repeated listening to the interview recordings. Later followed the re-reading of interview transcriptions in combination with the researcher's journal entries regarding observations of participants' body language, silences, pauses and other conversational subtexts (Cecil & Glass, 2014). A modified version of Braun and Clarke's (2006) thematic analysis was utilised in this study. The conversion to a seven-stage analytical process incorporated critical realism as an additional component of analysis subsequent to the identification of key themes and subthemes (Kay, et al., 2015). Figure 4.14 illustrates the complexity of the data immersion process and the iterative nature of data analysis as represented by the concentric yet overlapping circles that ultimately combine immersion and synthesis with analysis and application of theory.

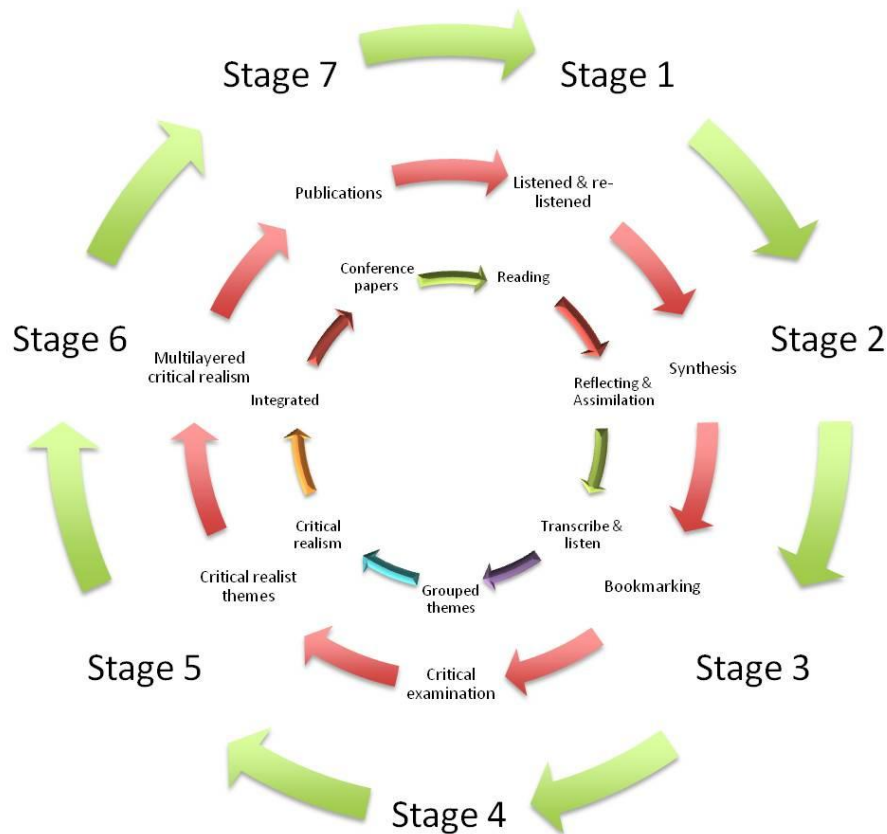


Figure 4.14. Data immersion process.

## Findings

The data revealed an overarching theme of 'power relations' as fundamental to the participants' experiences of manual handling. Moreover, the inequities of power in manual handling experiences for nurses was prominent and threaded through all the interviews. In most instances, participants did not refer to 'power relations' specifically and the notion of power differentials was implicit in their explanations. Hence the central theme revealed in this study was a particular aspect of power relations named '(mis)power'.

The term (mis)power was created to indicate the dissatisfaction expressed by participants in terms of inappropriate, negative power or negative use of power, in relation to manual handling issues. Participants statements ranged from "you're told what to do and that's what you do ... there will be no negotiation! You won't ask questions ... and that's it!" to unassuming statements from several other participants explaining that "nurses don't have a voice". Whilst the majority of nurses expressed this perspective, one participant did not rally against the subordinated position of nurses (in reference to manual handling)

appearing to accept unquestionably that "it's up to the physio to decide ... It's not for us to make that decision [about the manual handling of residents]". However all other participants identified the unfavourable position of nurses in the hierarchy of healthcare, specifically in relation to manual handling. One participant calmly suggested:

I think in a nursing role we need to stand up for ourselves a bit more ... We probably need to value [ourselves] a little bit more, the things that we do. And not be ... second best to the other professions.

Two subcategories of (mis)power emerged from the data (see Figure 4.15 below). 'Voicing practice issues' and tensions related to 'how to practice' were the major themes that made up the central theme of (mis)power. Voicing practice issues comprised three subthemes in which nurses reported feeling punished, feeling silenced and feeling disillusioned when they attempted to voice manual handling issues (for a detailed explanation, see Kay, et al., 2015). The theme of how to practice was characterised by the dialectical tensions experienced by nurses when undertaking manual handling activities. Dialectical tensions can be viewed as the tension created in the struggle to negotiate coexisting, opposing forces that are polarised yet interdependent (Orbe & King, 2000). Participants in this study experienced these tensions intrapersonally, for example when addressing concerns for their own safety in combination with desires to assist with optimal patient outcomes. Dialectical tensions were also experienced interpersonally when conflicts between organisational or patient expectations contrasted with explicit requirements to action safe manual handling practices and have been detailed more comprehensively in a previous publication (Kay, et al., 2014b).

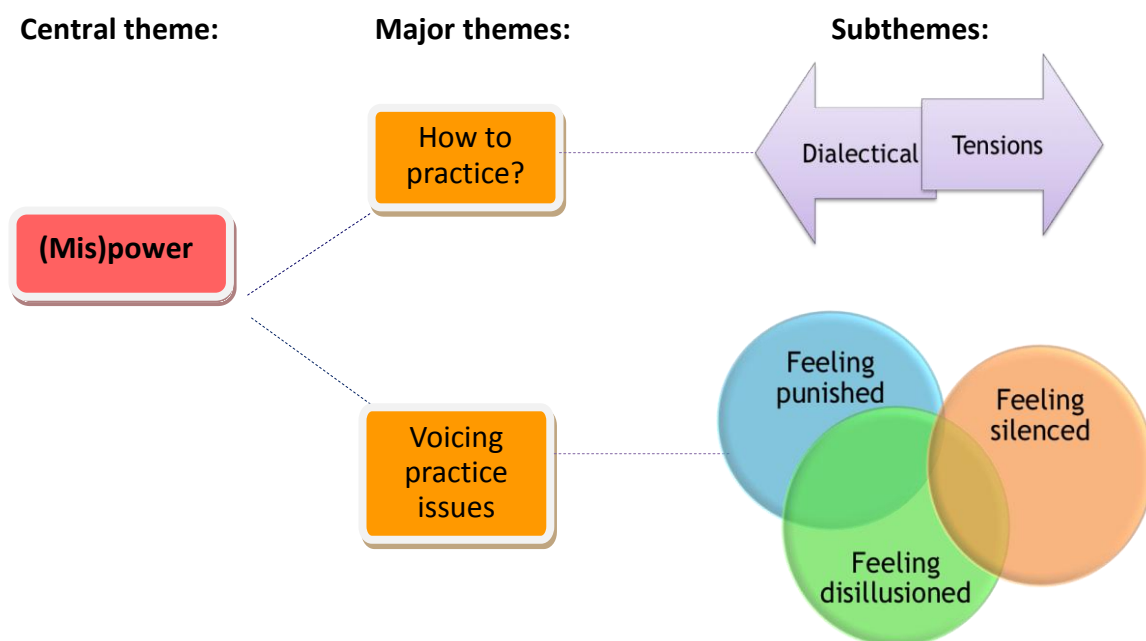


Figure 4.15. Themes and subthemes of (mis)power.

### Integrating critical analysis with research findings

Several literature reviews have identified flaws in contemporary approaches to manual handling, yet none have specifically foregrounded the marginalisation of nurses as demonstrated in this study. (Mis)power was revealed in the nurses' experiences of feeling silenced, punished and disillusioned when they attempted to raise manual handling issues in the workplace or offer input into planning and program development (Kay, et al., 2015). Additionally, they experienced dialectical tensions in relation to manual handling practices as intrapersonal tensions and interpersonal conflicts impeded their ability to conform to policy directives (Kay, et al., 2014b).

The research findings in this study highlighted several previously taken for granted assumptions. Participants appeared to assume that organisational data regarding injuries was an accurate reflection of the magnitude of manual handling injuries amongst nurses. For many, this belief co-existed in the presence of their expressed reservations about reporting injuries for fear of negative repercussions such as punitive responses and further marginalisation. Additional assumptions centred around the appropriateness of manual handling programs to adequately address manual handling injury risks and the presumed efficacy of this approach. Overwhelmingly, participants embraced an agency-focused

explanation for MSDs, despite the majority noting the limited feasibility for recommended practices in clinical areas.

A critical lens can offer new insights into nurses' manual handling circumstances by identifying the socio-political nature of manual handling issues that have not been adequately investigated to date. This study found that nurses felt silenced, punished and disillusioned when they spoke of unresolved manual handling issues or raised criticisms about the adequacy of manual handling programs at their workplaces. Overlooked contextual aspects of healthcare, in the form of social structures that hinder explicit identification of manual handling issues, prevent their consideration when developing strategies to prevent MSDs. This neglect of nurses' concerns produces a cycle of reinforcement of the status quo as represented diagrammatically in Figure 4.16 below. The socio-political factors that constrain manual handling safety initiatives, such as the active subjugation of nurses and their voices, simultaneously mask the identification of inequities in power. The continued use of socio-political power (see uppermost textbox at top of figure), or the misuse of power as identified in this study by the concept of (mis)power (upper textbox on the right), leads to misunderstandings about the nature and magnitude of the manual handling issues, ineffective attempts for resolution and the adoption of inappropriate policies in the clinical environment. Ultimately this perpetuates further misunderstandings of the socio-political position of nurses in the workplace (lower right textbox).

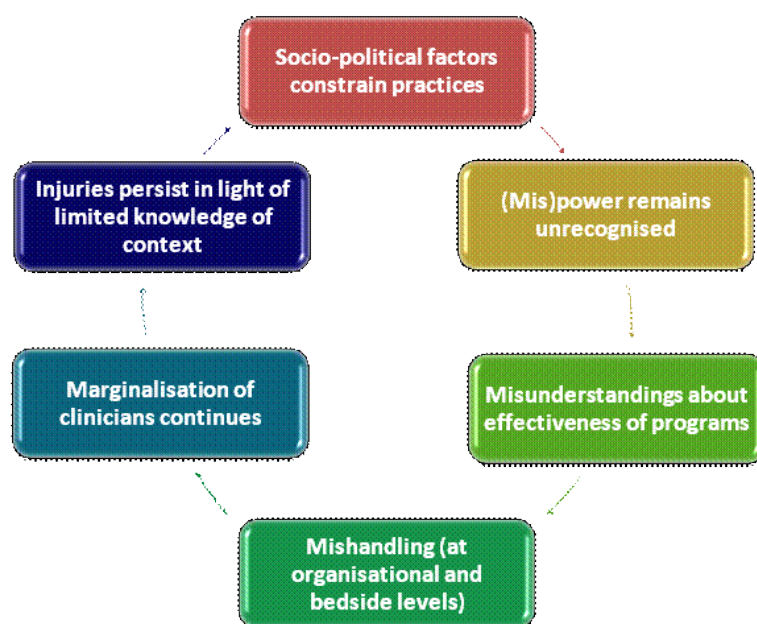


Figure 4.16. Impact of socio-political factors on manual handling.

The cycle continues as moving and handling issues remain misunderstood and thus handled inappropriately, or mishandled, both at the macro level of the organisation, and the micro level of individual nurses in their daily practice (lowermost textbox). Tied to recommended procedures that are neither effective or suitable for clinical environments is the reinforcement of the marginalisation of nurses (lower textbox on left). The taken for granted aspects regarding the suitability and effectiveness of contemporary approaches to manual handling, consequent to ongoing marginalisation of nurses, lend easily to continued blame on individual nurses for injury events. Based on the supposition that the injury prevention programs deployed in healthcare organisations are sufficient to prevent MSDs, issues of compliance or suboptimal performance become the presumed causes of injury outcomes. The result is that injuries persist in the presence of continued exposure to unrecognised injury risks (uppermost textbox on left). Constrained by socio-political inequities that inhibit the ability of nurses to voice their perspectives without derision or judgement, the cycle of (mis)power and marginalisation becomes self-perpetuating.

## **Conclusion**

When viewed through a critical lens, the data illustrated that socio-political structures were constraining factors for nurses' safety in the realm of manual handling. These factors were identified as barriers that had largely been overlooked, under-acknowledged or minimised in other studies. A critical research design enabled the identification of the oppression and marginalisation of nurses that impeded the development of safe handling practices suitable for adoption in healthcare settings.

The nurses in this study experienced marginalisation in manual handling interventions, policies and practices. They were largely excluded from the development and decisions pertinent to manual handling programs introduced into their workplaces, and specific manual handling concerns raised by participants were often minimised or ignored. The study participants felt silenced, punished and disillusioned and also experienced conflict in relation to the utilisation of recommended practices they found unsuitable for their clinical environments. Thus the participants were unable to change their manual handling circumstances within the current structure of healthcare in which they experienced subjugation of their perspectives and disregard by other professionals in relation to the participants' intimate knowledge of manual handling in the clinical setting. Almost all participants expressed a desire for change in approaches to manual handling. Some



participants repeatedly offered their input during the construction of new clinical areas, or for improvement of current clinical settings, but their suggestions were rejected by project managers and policy makers. In some instances, the marginalisation experienced by participants led to their deployment of covert actions to manage their manual handling circumstances.

The findings from this study highlight the need to recognise and value nurses' manual handling knowledge in order to improve their manual handling safety. The study also makes note of the associated challenges this transformation presents in light of the current structure of healthcare. A critical analysis of the data identified the socio-political constraints on nurses, and hence their practices. The identification of socio-political influences that contribute to the ongoing exposure of nurses to manual handling risks, and the concomitant risk of personal injury, may explain the persistence of MSDs despite intervention attempts over recent decades.

Advances in ergonomics, based on the biomechanical model of movement and injury, demonstrate the privileging of scientific theory testing over the manual handling experiences of nurses providing care to patients. Whilst the scientific, technical knowledge embraced by ergonomic developments may assist in injury prevention, it has only partially addressed manual handling issues for nurses. The ideology of the sub-discipline of participatory ergonomics has promoted a more inclusive approach to the implementation of injury prevention programs, although the application of participatory ergonomics is yet to be realised in practical terms within healthcare. Widespread and increased attention towards social, cultural and political sensitivities is required, both within and outside of ergonomic propositions.

### **Implications and recommendations for practice**

Despite the allocation of time, effort, intentions to reduce injuries and financial investment in resources for manual handling safety, the centrality of context to manual handling issues is yet to be adequately recognised in contemporary, generic safety programs. Indeed, the utility of a generic manual handling program is now thrown into question. The authors recommend that future manual handling policies and programs in healthcare are inclusive of contextual knowledge and structured to suit more aptly the clinical environments in which manual handling is performed.

Several specific practical applications are suggested as a consequence of the findings of this research. Firstly, current accreditation processes for healthcare organisations focus primarily on training records and injury statistics and thereby reinforce the status quo. Aggregate administrative data potentially underestimates the true prevalence of MSDs. Hence this data is of limited value in addressing structural constraints on manual handling safety unless the multiple constellations that constitute the contexts for healthcare risks are respected and embraced. Therefore it is suggested that alternative means to monitor injury prevalence are adopted, for example the use of anonymous self-reporting surveys. Contingent on such reporting would be an adequate understanding of the nature of MSD symptoms, rather than limited views of MSDs as injuries that are severely disabling. If manual handling training programs continue to be included in injury prevention strategies, it must be recognised that their contribution to injury prevention is partial and incomplete. Most significantly, that contribution is of dubious value unless the content, quality and impact of safety programs are evaluated, and accreditation of organisations ought to include alternative parameters to that of attendance records.

A related practice recommendation suggested is the introduction of the assessment of program efficacy by independent evaluation to reduce conflicts of interest. This recommendation contrasts with the prevailing practice of assessment by those developing or implementing manual handling safety programs. Demand characteristics and organisational imperatives can produce biased, favourable reports of programs and thereby maintain the invisibility of manual handling concerns of nurses. In addition, manual handling safety is frequently taught by individuals unaware of the true nature of the tensions and pressures within a clinical environment. The context of healthcare renders many standardised manual handling procedures unsuitable for use outside the training room. For this reason the final and most pressing implication for practice is the need for extensive and genuine collaboration with clinicians in order to accurately identify and address the difficulties faced in clinical practice. The omission of nurses from manual handling developments promotes their marginalisation and precludes effective and durable solutions to the high prevalence of MSDs.

### **Research recommendations**

Future research is suggested to examine the applicability of these findings to other contexts and research designs inclusive of mixed methods and quantitative data could contribute

additional understandings of manual handling issues in healthcare. It is important to extend our examination of MSDs beyond the limited administrative data upon which contemporary interventions are based, in light of the under-representation of injury prevalence created by patterns of underreporting.

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## Synthesis and summary of findings

The findings indicate the complexity of manual handling in healthcare and challenge the notions of technical methods alone, predominantly recommended actions based on ergonomic principles, as sufficient to comprehensively address manual handling issues that continue in the daily professional lives of nurses. Whilst strategies that ease the biomechanical loading on nurses' bodies, such as the use of aids and mechanical devices, may appear logical, simple and expedient ways for organisations to comply with legislative and insurance industry demands, the prevailing injury rates question the efficacy of this dominant approach to manual handling in healthcare. Furthermore, formal MSD rates as determined by administrative data underestimate the prevalence of manual handling issues, suggesting that the full extent of manual handling issues is not completely visible. Socio-political factors impact upon nurses' manual handling experiences and further diminish the full extent of unresolved issues, particularly in light of power inequities that preclude reporting of these issues and consequent injuries.

The research presented in the three papers of this chapter highlights the urgent need to foreground and examine the power imbalances present in contemporary approaches to nurses' manual handling issues. I argue therefore that socio-political considerations warrant examination in the quest for manual handling safety solutions. Hence this thesis suggests that progression in the field of manual handling safety is complex and the development and implementation of relevant safety policies and programs should consider power and other contextual influences on the prevention of nurses' MSDs.

A potentially additional theme was examined in the early stages of data analysis. Tentatively labelled 'hope', I noted that participants frequently expressed an expectation that the next generation of nurses would be more able to demand action on manual handling difficulties associated with the provision of care to patients. However, after discussion with my supervisors and re-examination of the data in light of the identified themes, the category of 'hope' was abandoned. Participants expressed an expectation of future improvement to nurses' manual handling circumstances, however unable to achieve this themselves, they transferred the mantle of responsibility to future generations of nurses whom they viewed as less bound by the constraints they themselves had

experienced. Notably, the younger nurses interviewed in this study felt similarly silenced, punished and disillusioned, and unable to transform their circumstances.

The marginalisation of nurses revealed in this study may explain their expectation of future developments. Participants who voiced alignment with progressing nurses' manual handling safety may have seen this as less confrontational to the dominant discourse of manual handling. In this way, their current disillusionment was couched in more acceptable expressions of their concerns rather than overt criticism of their circumstances and workplaces.

## **Chapter summary**

Rather than adopt a more conventional technico-scientific approach to manual handling issues, this research aims to foreground socio-political constraints that impinge on manual handling by nurses within healthcare organisations. The emancipatory intent of critical research is to foster transformation and offer the potential for liberation from contextual constraints, specifically in this thesis, that of the disempowering nature of nurses' manual handling circumstances.

Nurses caring directly for patients were chosen for this study in order to highlight the particular experiences and perspectives of this group, and explore their beliefs and ideas regarding manual handling in healthcare. This is a deliberate contrast to the abundance of publications in the scholarly and grey literature that privilege the voices of regulators, healthcare administrators and occupational health and safety specialists.

This study draws on the experiences of nurses to uncover essential knowledge relating to the manual handling context in healthcare. A critical view of manual handling can potentially empower nurses and create more appropriate and effective interventions to address this important healthcare workforce issue.

I contend that the findings from this research contribute to an understanding of the inability of existing manual handling policies and programs to successfully and sustainably prevent manual handling injuries. The recognition and exploration of the manual handling context for nurses enables the identification and generation of reflective and potentially transformative approaches to manual handling.

## **Chapter Five**

### **Conclusion &**

### **Implications for Practice**



## Introduction

The preceding chapters provided first the background for this study, inclusive of my own motivation, and identified concerns regarding manual handling for nurses scoped in this instance within healthcare organisations. The literature review of chapter two then noted the foundations of contemporary measures to address manual handling risks premised upon a specific technico-scientific approach; the biomechanical model has been widely accepted as the basis for the assessment and mitigation of risks of injuries associated with the physical exposure from manual handling activities. The subsequent development of injury prevention programs have arisen within the confines of this model, in the main overseen by allied health professionals and of late, ergonomists. Noticeable is the absence of nursing input towards solutions for manual handling issues that arise in their practice, in the face of the limited efficacy of the currently accepted management of manual handling risks in clinical environments. However stakeholders in healthcare facilities do not seem to be aware of unsatisfactory outcomes from contemporary measures to prevent MSDs in the nursing population.

With a clear intent to conduct research that was not only exploratory, but also stimulated a potential for change, I embraced an emancipatory research design embedded within a critical social science framework. Semi-structured interviews and researcher reflective journaling provided data for the multi-layered analysis that incorporated critical and realist themes. The philosophical framework has been discussed in detail in chapter three, followed by the presentation of participants, their data and the findings in chapter four.

This final chapter adds the important component of reflecting on the research process, in addition to the findings and implications of the research in terms of manual handling practice and nurses' occupational wellbeing. The chapter commences with a review of the research aims and questions, followed by conclusions and implications of the findings. Then follows recommendations for practice and future manual handling research, before outlining the key contributions made by this study. An examination of the strengths and limitations of this study precedes the final section comprising a summary of the complete thesis.

## **Reviewing the research aims and questions**

This research was developed to explore nurses' manual handling experiences and their ongoing concerns about manual handling issues. The aim of the study was to foreground nurses' perspectives on manual handling in healthcare and 13 nurses from public or private healthcare facilities participated in semi-structured interviews to this end. Participants from regional and metropolitan organisations were included. The elicitation of nurses' knowledge in relation to manual handling had the potential to contribute to the identification of barriers to the successful prevention of MSDs.

Unacknowledged contextual factors might explain, at least in part, the continued high prevalence of MSDs within the nursing profession. This stream of thought diverges from mainstream beliefs that frame injuries as avoidable, in the main, if nurses diligently comply with recommended practices for manual handling as prescribed in organisational policies and procedures. Recommended manual handling practices intended to prevent MSDs are currently legitimised by the dominant approach to manual handling safety, that of ergonomic programs, and are weighted heavily towards training and the use of assistive equipment.

I had formerly assumed that barriers to the prevention of MSDs might be consequent to deficiencies in nurses' ergonomic knowledge, or insufficient skills in handling practices, in addition to the limitations of space, equipment and resources that have been identified in many healthcare facilities. I realised that this study had the potential to uncover specific barriers to the performance of these recommended practices. However, I now believe that I did not appreciate the full scope of contextual influences on manual handling actions as has been revealed in this study.

In the early planning phase, I did not envisage the enormity of my ambitions for this research, in that my understanding of manual handling issues would ultimately be expanded far beyond ergonomics and associated biomechanical models. In effect, I underestimated the extent and impact of socio-political factors, such as the hierarchies within healthcare and the social organisation of nursing, on nurses' manual handling practices. The oppression of nurses in general, and their marginalisation in the domain of manual handling in particular, contributes to disproportionately high injury rates. The research process, particularly the intersubjective and reflexive aspects of critical social

science, transformed my own worldview regarding manual handling, and also presented opportunities for participants in this study to explore potentially transformative actions of their own in response to prevailing manual handling issues.

The study had four specific aims embedded in the investigation of nurses' perceptions and experiences of manual handling in healthcare facilities. The first aim explored the manual handling activities essential in the provision of nursing care and an overview of the management of injury risks arising from these activities. More specifically, the second aim sought nurses' views and experiences regarding the development and implementation of programs deployed to mitigate these risks. The third aim investigated contextual influences, seeking to identify factors that impact positively or negatively on manual handling practices, and therefore impact upon the occupational health of nurses. Finally, the research aimed to probe influences on nurses' manual handling experiences relating to the social organisation of nursing and healthcare, with a view to explicating possible interpersonal influences on nurses' experiences and decisions. In consequence, potential opportunities to transform manual handling for nurses could be identified.

The aims and research questions are discussed here as discrete entities for ease of explanation and flow of text, however they are interconnected and overlap. The aims, being scoped from the same emancipatory intent, articulate with one another. Similarly, each of the research questions necessarily relates to the other questions in order to fulfil the goals of the study. The first research question was as follows: 'What are the beliefs, attitudes and experiences of nurses pertaining to manual handling?' This question particularly addressed the first two aims of the study, that of exploring nurses' manual handling activities and exposure to injury risks and also the participants' experiences of formal manual handling programs designated to prevent MSDs. All participants noted the manual handling demands ever present in their daily nursing practice, and this accords with scholarly research investigating nursing tasks, physical demands and MSDs (Alperovitch-Najenson, Sheffer, Treger, Finkels, & Kalichman, 2014; Trinkoff, et al., 2006; Waters, et al., 2007; Yassi & Lockhart, 2013). In all cases, attempts to manage the risk of MSDs focused on employer appointed programs that disseminated recommended practices for manual handling safety and were enshrined in organisational policy.

The participants struggled with recommended manual handling practices and responded in varying ways. Ultimately, participants believed that recommended practices did not

articulate well within the clinical environment, regardless of the success of procedures demonstrated to them in training sessions. All participants expressed a belief that nurses 'do their best' to prevent injuries, although individual enactment of this philosophy varied. References such as "try to do it the right way" or "most of the time" indicated the problematic nature of dictated procedures for professional practice. Further discussion, when these comments arose during the interviews, confirmed the conflicted nature of clinical care with manual handling directives.

One participant was adamant that she always performed manual handling 'the right way', however she was aware that others did not achieve identical levels of compliance with policy. The overwhelming majority of participants indicated that it was not possible to follow recommended procedures at all times due to the complex needs of their patients and the fast-paced nature of the healthcare environments. The frequency of policy incompatibility with clinical practice varied across the participant group. Seemingly, the inability of nurses to maintain their own safety whilst manual handling was accepted with reticence in the absence of visible alternatives. This was reinforced by the prioritisation of a patient's needs above the welfare of caregivers. Participants rationalised their circumstances with reference to historical comparisons, recalling times that predated the manufacture of assistive equipment or later periods when equipment was less widely available, and this appeared to dampen their current concerns mildly. The participants overtly praised organisational efforts for injury prevention, however upon further probing they regularly expressed their cynicism regarding their employers commitment to their safety. Adding to their scepticism, many participants were confused or unconvinced about the determination of 'correct' practice in a climate of evolving recommendations for safety in manual handling activities that sometimes contradicted prior advice.

In order to explicitly explore the participants' views about their interactions with other professionals in relation to manual handling, the second research question asked the following: 'How do nurses perceive their knowledge of manual handling and safe practices is received by other healthcare professionals?' My original intention for this question was to gain an understanding of the participants' experiences with others in the healthcare organisation, in relation to manual handling. Again I had framed this question with a view to exploring nurses' knowledge and skills to perform practices deemed safe according to ergonomic principles within the organisation's program. The limitation of my own

understandings prior to conducting this research is evidenced here by my focus on manual handling within the dominant discourse for injury prevention. I was looking to identify whether discrepancies existed between nurses' and other professionals' assessments of nurses' manual handling knowledge and skills, but did not then fully realise the scope of issues that existed outside the ergonomic frame. My third research question was 'How can nurses' knowledge of manual handling be incorporated into the development of interventions to reduce injuries?' The wording of this question could similarly indicate a framework that potentially privileged organisational programs, however it was not confined to this perspective and allowed a broader examination of manual handling issues to be explored. Additionally, the third research question was informed by my literature review findings that noted the absence of nurses from dialogue about manual handling and decisions regarding safety efforts.

The second and third research questions were thus generated to focus on practical applications of the study findings and relate most strongly to the third and fourth specific aims discussed above. I aimed to explore both contextual influences on manual handling practices as well as personal and professional influences on nurses' manual handling experiences.

The findings from this study emphasise the importance of personal and professional influences on manual handling activities and allow possibilities for change to be identified. The participants felt silenced, punished and disillusioned in their attempts to raise manual handling concerns or offer input into programs, and some participants clearly articulated that they felt undervalued as a result. The marginalisation was subtly perceived by participants, although they did not use the term marginalisation but instead referred to their frustrations, anger, acquiescence or fear. These emotions arose when participants' attempts to be involved in decisions about manual handling were denied, ignored, overruled, minimised or contradicted. The majority of participants felt ridiculed, frustrated or threatened in their attempts to raise their concerns. Some participants indirectly indicated their dissatisfaction. For example, many proposed ideas for managers, executives and politicians to work alongside nurses, hoping that this may prompt a greater understanding of the nature of nurses' work and the challenges faced. Participants perceived that their work was "invisible" and too frequently performed "behind closed doors". They felt this confounded understanding of the demands of their profession.

Another aspect that arose from interviews was in regard to the development of assistive equipment. The existence of this equipment was seen to mislead employers and the community at large into believing that manual handling issues had been resolved, when the participants themselves were adamant that this was not the case.

Few participants questioned the positioning of allied health professionals at the helm of manual handling programs, citing the superior knowledge of allied health professionals in the fields of human anatomy and physiology. However, an underlying frustration was commonly expressed by participants believing that other healthcare professionals did not understand the breadth of nursing activities, and the limitations this imposed in regard to the suitability of recommended practices for nurses. The demand for more contextually appropriate MSD prevention programs was highlighted in statements by participants offering new terms for advancement in this field; participants made reference to the need for "Phase 2", or a "revamp" or similar references to a need for review of current circumstances. One participant acknowledged limitations in manual handling programs by calling the current approach "No Lift Light", suggesting an abridged, light-weight version of a safety program, rather than a comprehensive and effective approach to MSD prevention.

The socio-political constraints on nurses as a result of their subjugated position in healthcare hierarchies became increasingly apparent during the interviews, and the subsequent data analysis. Most commonly cited by participants were the conflicts they experienced regarding time pressures that prevented personal safety considerations during manual handling activities. Participants perceived that the minimal time and resources allocated to safe manual handling indicated further the poor appreciation of their circumstances.

The contextual constraints resulting from the oppression and marginalisation of participants prompted me to recognise constraints that were present in my own worldview when I was designing this study, as I have already stated. A journal entry signified my own enlightenment regarding the potential transformation of nurses' manual handling circumstances:

*Upon completion of the study, I now believe that 'the missing piece' I had imagined nurses might add to manual handling programs was optimistic, indeed imaginary! My way of thinking 5 years ago was oversimplified. The 'jigsaw' I had compared manual handling to, was much bigger than I realised.*

Some time later, puzzled by my own perturbation, I was able to at last shed the boundaries I had accepted when thinking of manual handling only in terms of existing frameworks for manual handling safety:

*When I developed the third research question [promoting nurses' input into development of interventions] I had in mind the potential for some hitherto unknown key points that nurses could add to the current structure of manual handling programs to resolve outstanding issues! Possibly I was thinking there was a way to fine tune recommended 'safe' practices (determined according to ergonomics and materials handling approaches). I now see 'the issue' as the persistently high prevalence of MSDs [in nursing] in the light of oppression and marginalisation (and not simply the need to make slight alterations to ergonomic-based interventions).*

## Conclusions

This research highlighted the significance of context on the nurse-participants' manual handling practices and was not designed to be generalisable to the wider nursing population. The findings discussed in this thesis are relevant to the nurses who participated in this study, however it is plausible that aspects of the study may resonate with other nurses. Critical realism, incorporated into data analysis within this study, explains the possibility of different constellations of conditions in the domain of the real generating the same outcome, or event, in the domain of the actual. Therefore, whilst situationally contingent events are perceived and experienced in the domain of the empirical, it is possible that different contexts may give rise to similar experiences for nurses outside the study. Precise replication of the contexts for study participants is not necessary and thus transferability of findings is possible as determined by the readership, not the researcher.

This study uncovered the impact of socio-political factors on the manual handling circumstances and experiences of the participants. Analysis revealed that the marginalisation of the participants contributed to their current manual handling circumstances when working as nurses in healthcare facilities. Socio-political aspects within the structure of healthcare included the subjugation of the nurse-participants, the privileging of science and the medical model and subordination of nurses to allied health professionals and ergonomists. Additionally demands associated with managerialism and economic rationalism produced organisational goals such as productivity targets that conflicted with the time resources required to implement manual handling safety policies.

This created intrapersonal and interpersonal conflicts for the participants. The marginalisation of participants in manual handling was maintained by taken for granted assumptions pertaining to the efficacy and evidence-base for contemporary programs and the presumed suitability of recommended practices for clinical settings. When participants attempted to raise manual handling issues that contested these premises, they felt that their concerns were minimised, ignored or overruled.

## **Implications**

The oppression of participants' voices in relation to manual handling in healthcare facilities hinders the visibility of unresolved manual handling issues and perpetuates the exposure of these nurses to injury risks. Fears of negative repercussions created significant issues for reporting if MSDs did arise in participants' workplaces, creating a culture of underreporting and masking the extent of the manual handling problems for nurses. The exclusion of participants from the dialogue regarding manual handling issues and associated injury prevention decisions, prevents critique of the dominant discourse and maintains the status quo. The marginalisation of the nurses and the minimisation of their manual handling experiences and perspectives has rendered the manual handling circumstances of nurses unchanged with continued high levels of exposure to risks of musculoskeletal injury.

If the current overarching conceptualisation of manual handling and the management of associated risks is not contested, the high prevalence of MSDs amongst nurses is likely to continue unabated. There is a risk that the incidence of MSDs will be shielded from public view if reporting rates decrease but injuries do not, consequent to the ongoing oppression of nurses and fear of reprisal or curtailed employment prospects. It is imperative that improvements to nurses' manual handling circumstances are made, notwithstanding the growing worldwide shortage of nurses. However, the current power-laden structures within healthcare organisations do not promote a redistribution of power. It is likely that the move to transform manual handling will evolve from those with most at stake, the nurses themselves.

## **Recommendations for practice**

The current discourse on manual handling issues is dominated by a conceptualisation that assumes the adequacy of formal programs to prevent MSDs. Simultaneously this generates



and reinforces a focus on individual behaviours, assuming that injury events arise from inadequate performance of practices recommended by the program of choice at each organisation. Attention to contextual influences on manual handling risks, inclusive of power inequities within healthcare, is diverted instead to behaviour change strategies in conjunction with policy mandates and manual handling injury prevention programs. Individuals who are injured are routinely given 'refresher' training if they report their injury, further stigmatising the injured nurse on the assumption that degradation of their skills in manual handling has occurred. This perspective of agency-based causality for MSDs is ultimately reinforced by refresher training for all nurses at varying intervals and competency-based assessments.

A key recommendation is to cease the practice of competency-based assessments for manual handling. Manual handling competency assessments maintain focus on individual performance at the expense of addressing socio-political constraints that direct nurses' manual handling practices. Furthermore, the use of competency assessments is predicated on effective, evidence-based recommendations, adequate skills and knowledge to function as recommended, and an accurate process of assessment. In practice, there is little proof that any of these conditions are fulfilled. I have previously discussed the limits of an evidence-base for manual handling guidelines, and the lack of scrutiny of training content and quality. The assessment process is commonly suboptimal, undertaken in non-standardised conditions with a precariously subjective pass or fail judgement made, in the presence of numerous organisational demands.

The abandonment of competency assessment in manual handling is also supported by the generic and artificial setting in which the testing is conducted and the vast number of complex handling manoeuvres that would require demonstration in order to comprehensively determine mastery of skills. A more compelling case for the removal of competency assessments is the false impression of safety that is implied by the process, and its use as a mechanism for further oppression, particularly when an injury is reported.

There are also legal and insurance implications for the documentation of 'manual handling ability' as determined by competency assessments. The assessments provide healthcare organisations with written proof of their efforts towards employee safety and in the event of compensation claims, non-compliance with mandatory assessment diminishes support for a claimant.

The above discussion leads to the second major recommendation arising from the findings of this research: the need for facility accreditation based on independent assessment of manual handling safety programs. Documentation of training and competency assessment for manual handling are key aspects used by healthcare accreditation agencies. Numeric tallies of both training attendance and competency assessments are easily obtained and collated to show that a healthcare facility has met their legal obligations for the occupational health and safety of staff. However the quality and frequency of training and assessment are not comprehensively reviewed, and thus injury risks are again assumed to be the result of factors outside the control of the facility and residing in the practices of individual clinicians.

A third recommendation is to obtain more accurate data regarding the prevalence of MSDs amongst nurses, rather than simply the prevalence of reports. As discussed in chapter two, survey findings in the scholarly literature consistently suggest significantly higher rates of MSDs than those indicated by formal records of injuries or compensation claims within organisations. An ongoing focus on the number of reports, in contrast to the number of injuries, is deleterious to injury prevention goals if the two are not well correlated.

Administrative databases from healthcare facilities, insurance companies or regulatory bodies are all vulnerable to reporting bias and underreporting has previously been noted in the occupational health literature. Furthermore, the application of fines or insurance premiums directly proportional to injury rates can generate hidden incentives within organisations to discourage reporting. Inaccurate reporting impedes the visibility of MSDs, and as a consequence, the extent of manual handling risks that persist within healthcare organisations remains poorly recognised. In such circumstances, injury prevention attempts are ill-informed and manual handling issues remain unresolved. It is suggested that anonymous surveys of nurses would obtain more accurate estimates of the extent of MSDs as has proved successful in smaller research projects. This should be implemented anonymously in order to protect the confidentiality of nurses. In this way, nurses are more likely to report their MSDs without fear of potential negative repercussions from employers.

## **Recommendation for research**

The most prominent recommendation is to conduct research that expands upon this study, particularly incorporating critical methodologies as these have been notably absent to date. It would be useful to conduct similar qualitative studies for different groups of nurses and also to expand to other geographical locations. This study comprised Australian nurses from regional and metropolitan areas in two Australian states. Different results may be found for research conducted in different regions or different countries. The combined outputs from multiple studies could be used to inform quantitative research designed specifically to examine the generalisability of the findings.

## **Contribution to body of knowledge**

This study has expanded contemporary understandings of manual handling by making the following contributions:

- Presented an exploration of nurses' manual handling experiences using a critical, emancipatory methodology;
- Validated nurses' manual handling experiences and the meaning attributed by nurses to those experiences;
- Provided opportunities for reflexive self-analysis and collaborative sharing of experiences;
- Generated knowledge pertaining to manual handling which has the potential for transformation and empowerment of nurses;
- Extended the knowledge of manual handling issues previously gained from empirical inquiry;
- Demonstrated the ability of alternate methodologies, such as qualitative inquiry, to contribute to the scholarly discourse related to manual handling;
- Generated new knowledge not previously identified in the contemporary research;
- Highlighted the significance of context for manual handling in professional nursing practice; and
- Established the presence of socio-cultural and political factors as key influences on nurses' manual handling circumstances.

## **Strengths and limitations of study**

Qualitative methodology allows for alternative interpretations of the data in accordance with the possibility of multiple realities. In this study, pertinent is the combination of critical social science in conjunction with data analysis embedded in critical realism, thereby eliciting nurses' multiple perspectives on manual handling issues and seeking identification of mechanisms that generate the events and circumstances experienced by participants.

In contrast is the limitation regarding the inability to conduct focus groups upon discovering that participants were not willing to speak before others. This prevented methodological triangulation as originally intended. In response I adopted a number of strategies during the data analysis phase to support the trustworthiness of the findings. Themes were identified by approaching the data in multiple ways, such as writing field notes shortly after completion of each interview, repeated auditory review to identify provisional themes, annotation during transcription, individual interview summaries, categorisation via tabulation of complete interviews and visual representations in word clouds. Several of the interviews were also interrogated using analytical software or independent review by both my supervisors to enhance rigour.

Although manual handling involves other healthcare disciplines, this study deliberately focused on nurses in order to foreground their experiences. Whilst some may construe this as a limitation, it is more helpful to view this boundary as a strength: the subjugated position of nurses in the healthcare hierarchy demands that their experiences and perspectives be given consideration in their own right, not mixed with the cultural mores of other healthcare professionals.

My personal background in clinical nursing and manual handling interventions facilitated my understanding of some of the contextual aspects of which participants spoke. Potentially, however, my familiarity with nursing and manual handling could have generated biases that influenced the research overtly or covertly. Thus the method of researcher reflective journaling was included in the research design, as commonly used by qualitative studies, to promote rigour. Attending to rigour by means of reflective journaling throughout the entire research process promoted reflexivity, hence transparency and credibility of the study. In combination with critical discussions with my supervisors and

dissemination of findings at conferences, reflective journaling assisted in the identification of preconceived ideas and assumptions that may have otherwise remained unrecognised.

A strength of this study lies in the recruitment of participants, aligned with pre-specified inclusion criteria, beyond a single healthcare organisation. The participants' combined experiences spanned multiple facilities and injury prevention programs across metropolitan and regional locations, in contrast to the bulk of literature investigating a single organisation or intervention. The participants varied in age, years of experience, educational and professional backgrounds. All were currently employed in their nursing roles, however this was incidental as clinical nursing duties within the previous 12 months were sufficient to warrant inclusion based on recent practice. Participants worked in private or public healthcare organisations in the domains of acute care, rehabilitation or aged-care and therefore the themes were developed from nurses' experiences in different facilities, rather than restricted to a particular organisation or injury prevention program.

The findings presented here are from the analysis of interviews with a purposive sample of 13 nurses, in addition to researcher reflective journal entries. There may be different issues or challenges faced by other nurses and the findings are not intended to be generalised to the larger nursing population as a whole. However, the findings alert the reader to the complexity of manual handling issues in healthcare and the importance of context and socio-political influences. These aspects of manual handling have previously received little attention in the development of manual handling interventions.

## **Thesis summary**

The new knowledge gained from the nurses' perspectives on manual handling experiences enabled the foregrounding of socio-political constraints on their manual handling practices in healthcare facilities. An increased awareness of the circumstances in which nurses practice facilitates opportunities to identify potentially transformative actions that challenge the status quo and empower nurses to improve their manual handling circumstances. It is envisaged that similarities with some aspects of the participants' stories may resonate with readers of this thesis and the publications contained herein.

This study was designed to be clearly distinguished from clinical quality assurance projects conducted within healthcare organisations or evaluation studies of specific intervention

programs. Instead this research presents a rigorous and systematic investigation of manual handling issues for nurses by deployment of a distinct theoretical framework, that of critical social science.

I did not structure this study to invite attribution of blame to any parties associated with manual handling nor privilege any group, but rather to add to the contemporary dialogue surrounding manual handling in healthcare by investigating the perspectives of nurses. The identification of socio-political factors influencing nurses' manual handling activities, in particular nurses' subjugated positions in healthcare organisations and their marginalisation in manual handling field, was an outcome not explicitly anticipated. Nevertheless a critique of the dominant ideology was predicted in order to expand the options for improving nurses' manual handling safety. Re-evaluating the management of manual handling issues was expected to challenge contemporary conceptualisations of manual handling and associated assumptions. Identification and acknowledgement of socio-political structures and constraints, as found in this study, assist with explanations for the previously perplexing and limited success of ergonomic approaches to injury prevention in healthcare.

This research does not afford weight to suggestions for increased compliance with particular programs, regulations or other dictates. Current regimes for manual handling interventions place emphasis on reducing injury reports and claims. Implicit in strategies to reduce reports of MSDs and associated compensation costs is that these reporting rates accurately reflect injury rates. Scholarly research utilising anonymous survey questionnaires casts doubt on the validity of this assumption. Furthermore, claims and costs for MSDs can be reduced, perhaps more easily in the current climate of economic rationalism in Western societies, by minimising reporting and claims submission. The appearance of reducing injuries is enacted in such scenarios, rather than an actual reduction in injury prevalence. Punitive consequences of injury reporting exist at macro and micro levels: insurance premiums are correlated with injury rates and thus tied to organisational finances, and nurses who report MSDs experience further marginalisation. The overall effect is to discourage reporting of MSDs at both the organisational and individual levels, whilst overt beliefs regarding the agendas behind manual handling programs remain publicly unchallenged. Notably, the majority of participants in this study alluded to, or openly

expressed, their scepticism regarding managerial sincerity regarding nurses' occupational health.

This study was not created to offer specific problem solving advice for manual handling tasks, or education about a preferred technique or lifting skill. Such offerings would themselves be indicative of endorsement of the status quo that has visibly dominated the literature on manual handling over recent decades. The purpose of this study was to expand the body of knowledge beyond pre-existing and limited understandings of nurses' manual handling injuries. New insights into nurses' manual handling circumstances foreground previously hidden constraints impacting their safety, and open up possibilities of transformative practices for nurses to empower and liberate themselves as a consequence.

In interpreting the findings from this research, it is important to emphasise that the findings do not necessarily negate prior attempts to reduce MSDs, particularly developments arising from the biomechanical model. Ergonomic programs utilised to date may ultimately be one component of the successful prevention of MSDs amongst nurses. The key point highlighted by this study is that ergonomic programs, in the formats currently adopted, are insufficient to reduce MSDs when used as a stand-alone strategy. My main objective for this study was to add to the body of knowledge by presenting sound research regarding contextual and subjective aspects pivotal to improving manual handling outcomes for nurses. As a result, the inability of ergonomic approaches alone to solve manual handling issues in healthcare can be positioned within a broader framework.

This research focused on the findings from the 13 nurses' accounts of their experiences, and examined the data with a critical lens. Critical methodology, extended by analysis using a critical realist framework, revealed aspects of manual handling underlying the observable events measured in empirical research that is steeped in the more traditional, quantitative paradigm. The resolution of manual handling issues and therefore the prevention of MSDs is hindered whilst unrecognised mechanisms remain invisible to nurses and other stakeholders. The current study revealed previously overlooked factors that impact upon nurses' manual handling circumstances, practices and related injuries. The social organisation of healthcare and the deeply embedded power relations inherent in healthcare hierarchies, generated circumstances for nurses whereby they are oppressed, marginalised and subordinated to other professional groups in the workplace. Devalued

and excluded from organisational decisions, the socio-political structure of the systems in which nurses practice has dire implications for their occupational wellbeing. Suboptimal management of manual handling issues persists consequent to insufficient understandings of the context for nurses' manual handling activities. This thesis strongly indicates the need for inclusion of clinical nurses in the manual handling dialogue, valuing nurses' understanding of the clinical context and acknowledgement of the position of nurses in the hierarchy of healthcare in order to facilitate the empowerment of nurses and their liberation from the oppressive circumstances that currently expose them to unreasonable risks of injury.



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# Appendices

## Appendix A - Journal Article: Recruitment

	<p>ences and/or concerns in a small group, or during a private interview.</p> <p>High rates of manual handling injuries continue within the nursing profession. Nurses are ideally placed to offer unique insights into the manual handling issues within clinical settings. This critical knowledge could assist in the development of more suitably tailored manual handling solutions.</p> <p>An Australian Catholic University postgraduate student from the School of Nursing and Midwifery and Paramedicine, Kate Kay, explained that the study would explore manual handling in Victorian hospitals from the clinical nurse's perspective. "The research aims to improve our understanding of the manual handling challenges faced by nurses when caring for patients, by providing an avenue for nurses to speak freely about their experiences and beliefs."</p> <p>Kate is a critical care nurse and a member of the Victorian No-Lifting Coordinators Network. She has a keen interest in nurses' manual handling issues and her concerns have prompted a return to study in order to investigate the ongoing issues. "It is hoped that this research will uncover new insights and validate the nurses' experiences and challenges. Further, this information could assist in finding better ways to prevent manual handling injuries."</p> <p>For further information or to participate in the study, please contact Kate on <a href="mailto:kakayk001@myacu.edu.au">kakayk001@myacu.edu.au</a> or telephone 0431 70 4532.</p>
<p>22</p>	<p><b>Manual handling and nursing – what do you think?</b></p> <p><i>Are you concerned about manual handling? Are you worried about being injured at work? Do you have something to say?</i></p> <p>Here is an opportunity to speak of your thoughts and ideas on this subject. Your input is important. A new study is looking at nurses' perspectives on manual handling issues associated with patient care. The Victorian study will provide the opportunity for nurses to confidentially share their manual handling experi-</p>

## Appendix B - Participant Information Letter



Project Title: **Nurses' manual handling beliefs and experiences.**  
Principal Supervisor: Professor Nel Glass  
Co-Supervisor: Dr Alicia Evans  
Student Researcher: Ms Kathryn Kay  
Course: Master of Philosophy

Dear Participant,

### **Introduction.**

You are invited to take part in a research project examining the manual handling experiences and perspectives of nurses. This project is part of a higher degree study as detailed above. This letter explains the purpose of the research, and what is involved if you decide to participate. Please feel free to ask any questions that you may have about the project. Before choosing whether or not you would like to participate, you may want to talk about it with a colleague or friend.

### **Introduction.**

You are invited to take part in a research project examining the manual handling experiences and perspectives of nurses. This project is part of a higher degree study as detailed above. This letter explains the purpose of the research, and what is involved if you decide to participate. Please feel free to ask any questions that you may have about the project. Before choosing whether or not you would like to participate, you may want to talk about it with a colleague or friend.

### **Purpose of the research project.**

This project aims to gain an understanding of nurses' experiences of manual handling in healthcare settings. It is hoped that this information will help improve manual handling safety for nurses by assisting in the development of new approaches to successfully prevent manual handling injuries.

### **Participation.**

Participation in this research project is completely voluntary. You do not need to give any explanation if you do not wish to take part. If you decide to participate, you can still change your mind and withdraw from the study prior to completion of the interview, without giving a reason.

If you decide to join this study, you will be asked to sign a consent form after you are satisfied that all your questions have been answered. We ask you to sign the consent form to formally tell us that you have understood what you have read and that you agree to take part in the interviews for this research project.

You will be invited to take part in a small focus group interview, then an individual interview held at a later date. You may choose to take part in either or both of these activities. All interviews will be conducted by the student researcher and each will last approximately 45-60 minutes. To ensure your confidentiality, the interviews will not be conducted at your workplace. The interviews will be held at a time, day and location agreeable to you and the discussion will be digitally recorded.

You will be given the option to review the data from your individual interview so that you can check it and make any changes or comments that you feel are necessary.

### **Possible benefits.**

This research project gives participants the opportunity to discuss their experiences and/or concerns about manual handling, including factors that support or diminish nurses' safety when caring for patients. Research which encompasses reflection on personal experiences can offer the possibility of heightened understanding, validation through recognition of shared concerns and new insights.

There has been very little prior research regarding nurses' manual handling perspectives and experiences. It is anticipated that this study will generate new evidence to inform policy and practice changes, thereby contributing to the development of better ways to protect nurses from manual handling injuries.

The findings of this research will be reported in the form of a post-graduate thesis, with the intention to publish the research in scientific journals and present at professional conferences. If you wish, we will send a summary of the research findings to your nominated email or postal address.

**Possible risks.**

It is not anticipated that any harm or discomfort will occur related to your participation in the interviews for this study. You may choose to stop recording the interview at any time, or decide not to contribute further to the focus group. In the event that discomfort or distress arises from talking about your manual handling experiences, you may choose to contact your organisation's 'Employee Assistance Program', or I can provide you with the contact details of qualified counsellors who can provide independent professional support. For more urgent assistance, Lifeline offers a 24 hour counselling service (telephone 13 11 14).

**Confidentiality.**

Confidentiality will be maintained by the investigators and upheld in any report of the study. There is a potential risk that another focus group participant may breach confidentiality, although this is anticipated as unlikely to occur. Only first names will be used in the focus group, and participants will be reminded that they must not discuss any details of the focus group with others. This requirement is included on the consent form signed by all participants.

All identifying features will be removed from any transcripts of the interviews and transcripts will be anonymised by the use of pseudonyms. Names on the consent forms will not be retained with the data. The results from the study may appear in publications or be provided to other researchers, but this will be communicated in a form that does not identify participants in any way. All data will be stored in a locked filing cabinet in the Principal Supervisor's office, and computer files will be password protected. Data disposal will be undertaken according to National Health and Medical Research Council guidelines which include appropriate disposal by way of shredding of paper files and deletion of digitally stored information.

**Complaints or questions.**

If you have any questions about this project, before or after participating, please contact the Principal Supervisor, Professor Nel Glass, on telephone number (03) 9953 3478, or the Co-Supervisor, Dr Alicia Evans, on telephone number (03) 9953 3385, in the School of Nursing and Midwifery, at the Melbourne Campus of the Australian Catholic University, 115 Victoria Parade, Fitzroy, Victoria, 3065. Alternatively the supervisors can be contacted via email at [Nel.Glass@acu.edu.au](mailto:Nel.Glass@acu.edu.au) or [Alicia.Evans@acu.edu.au](mailto:Alicia.Evans@acu.edu.au).

**Ethical review.**

This study has been approved by the Human Research Ethics Committee at Australian Catholic University. In the event that you have any complaint or concern, or if you have any query that the Supervisors and Student Researcher have not been able to satisfy, you may write to:

Chair, Human Research Ethics Committee,  
C/- Research Services,  
Australian Catholic University  
Melbourne Campus,  
Locked Bag 4115,  
FITZROY VIC 3065.

Alternatively, you can make contact by the following means:

Telephone: (03) 9953 3158  
Facsimile: (03) 9953 3315

Any complaint or concern will be treated in confidence and fully investigated. Any participant lodging a complaint will be informed of the outcome.

**What to do next.**

If you agree to participate in this project, please sign both copies of the Consent Form and return the copy entitled "Consent Form, Copy to be returned to Researcher" to the Student Researcher, Ms Kathryn Kay in the stamped, self-addressed envelope supplied with these documents. Please retain your copy of the Consent Form for your own records.

Thank you for your consideration of this research project.

.....  
Student Researcher

Kathryn Kay



## Appendix C - Consent Form



### CONSENT FORM

#### Copy for Participant to keep

Project Title: **Nurses' manual handling beliefs and experiences.**  
Principal Supervisor: Professor Nel Glass  
Co-Supervisor: Dr Alicia Evans  
Student Researcher: Ms Kathryn Kay

- I have read and understood the information provided in the Letter to Participants.
- Any questions I have asked have been answered to my satisfaction.
- I understand that I will discuss my experiences with the researcher privately and/or as part of a group.
- The interview will take place at a time, location and day suitable to the participant.
- I understand that I may choose to participate in either an individual interview, a group discussion, or both types of activities. Each of these activities will last approximately 45-60 minutes.
- I understand that each discussion will be digitally recorded.
- I agree to treat all information disclosed by co-participants as confidential.
- I realise that I can withdraw from participation prior to completion of the interview(s), without giving a reason.
- I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me in any way.
- I will be sent a summary of the findings if I request it.
- I have been given a copy of the Information Letter to Participants and this Consent Form.

NAME OF PARTICIPANT:

Signature: .....

Date: .....

Student Researcher: Ms Kathryn Kay

Signature: .....

Date: .....

## CONSENT FORM

Copy to be returned to Researcher

Project Title: **Nurses' manual handling beliefs and experiences.**  
Principal Supervisor: Professor Nel Glass  
Co-Supervisor: Dr Alicia Evans  
Student Researcher: Ms Kathryn Kay

- I have read and understood the information provided in the Letter to Participants.
- Any questions I have asked have been answered to my satisfaction.
- I understand that I will discuss my experiences with the researcher privately and/or as part of a group.
- The interview will take place at a time, location and day suitable to the participant.
- I understand that I may choose to participate in either an individual interview, a group discussion, or both types of activities. Each of these activities will last approximately 45-60 minutes.
- I understand that each discussion will be digitally recorded.
- I agree to treat all information disclosed by co-participants as confidential.
- I realise that I can withdraw from participation prior to completion of the interview(s), without giving a reason.
- I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me in any way.
- I will be sent a summary of the findings if I request it.
- I have been given a copy of the Information Letter to Participants and this Consent Form.

NAME OF PARTICIPANT:

Signature: .....

Date: .....

PARTICIPANT'S CONTACT DETAILS:

Telephone:.....

Email:.....

Student Researcher: Ms Kathryn Kay

Signature: .....

Date: .....

## Appendix D - Human Research Ethics Committee (HREC) Approval



---

### Human Research Ethics Committee Committee Approval Form

**Principal Investigator/Supervisor:** Nel Glass Melbourne Campus

**Co-Investigators:** Alicia Evans Melbourne Campus

**Student Researcher:** Kathryn Kay Melbourne Campus

**Ethics approval has been granted for the following project:**

An exploration of nurses' beliefs, attitudes and experiences relating to manual handling

**for the period:** 20.05.2011-10.01.2012

**Human Research Ethics Committee (HREC) Register Number:** V2011 39

**Special Condition/s of Approval**

***Prior to commencement of your research***, the following permissions are required to be submitted to the ACU HREC:

The following **standard** conditions as stipulated in the ***National Statement on Ethical Conduct in Research Involving Humans (2007)*** apply:

- (i) that Principal Investigators / Supervisors provide, on the form supplied by the Human Research Ethics Committee, annual reports on matters such as:
  - security of records
  - compliance with approved consent procedures and documentation
  - compliance with special conditions, and
- (ii) that researchers report to the HREC immediately any matter that might affect the ethical acceptability of the protocol, such as:
  - proposed changes to the protocol
  - unforeseen circumstances or events
  - adverse effects on participants. The HREC will conduct an audit each year of all projects deemed to be of more than low risk. There will also be random audits of a sample of projects considered to be of negligible risk and low risk on all campuses each year.

Within one month of the conclusion of the project, researchers are required to complete a *Final Report Form* and submit it to the local Research Services Officer.

If the project continues for more than one year, researchers are required to complete an *Annual Progress Report Form* and submit it to the local Research Services Officer within one month of the anniversary date of the ethics approval.

A handwritten signature in black ink, appearing to be 'J. Jones', is written over a horizontal line.

Signed: ..... Date: .....20/05/2011.....  
(Research Services Officer, Melbourne Campus)

## Appendix E - HREC Approval Extended to 30/06/2012

-----Original Message-----

From: Gabrielle Ryan [<mailto:Gabrielle.Ryan@acu.edu.au>]

Sent: Tuesday, 13 December 2011 11:57 AM

To: Kathryn Kay

Cc: Gabrielle Ryan

Subject: Extension approved V2011 39

Dear Nel,

V2011 39

An exploration of nurses' beliefs, attitudes and experiences relating to manual handling

Thank you for returning the Ethics Progress Report for your project V2011

39 An exploration of nurses' beliefs, attitudes and experiences relating to manual handling

The Deputy Chair of the Human Research Ethics Committee has approved your request to extend the period of data collection. The new expiry date for data collection is the **30/06/2012** .

We wish you well in this ongoing project.

Kind regards,  
Gabrielle Ryan

Ethics Officer | Research Services

Office of the Deputy Vice Chancellor (Research) Australian Catholic University Locked Bag 4115,  
Fitzroy, VIC, 3065

T: 03 9953 3150 F: 03 9953 3315

## Appendix F - HREC Approval Extended to 31/12/2013

---

From: Gabrielle Ryan <[Gabrielle.Ryan@acu.edu.au](mailto:Gabrielle.Ryan@acu.edu.au)>  
Sent: Wednesday, 15 August 2012 3:20 PM  
To: Nel Glass; Kathryn Kay  
Cc: Gabrielle Ryan  
Subject: Extension approved V2011 39

Dear Nel,

Ethics Register Number : V2011 39  
Project Title : An exploration of nurses' beliefs, attitudes and experiences relating to manual handling Data Collection Date Extended : 31/12/2013

Thank you for returning the Ethics Progress Report for your project.

The Deputy Chair of the Human Research Ethics Committee has approved your request to extend the period of data collection. The new expiry date for data collection is the **31/12/2013** .

We wish you well in this ongoing project.

Kind regards,  
Gabrielle Ryan

Ethics Officer | Research Services  
Office of the Deputy Vice Chancellor (Research) Australian Catholic University Locked Bag 4115,  
Fitzroy, VIC, 3065  
T: 03 9953 3150 F: 03 9953 3315

## Appendix G - HREC Approval Extended to 31/12/2014

-----Original Message-----

From: Ms Kylie Pashley [mailto:Kylie.Pashley@acu.edu.au]

Sent: Monday, 17 March 2014 11:16 AM

To: Prof Nel Glass; Kathryn Kay

Cc: Ms Kylie Pashley

Subject: V2011 39 Extension approved

Dear Nel,

Ethics Register Number : V2011 39

Project Title : An exploration of nurses' beliefs, attitudes and experiences relating to manual handling Data Collection Date Extended : **31/12/2014**

Thank you for returning the Ethics Progress Report for your project.

The Deputy Chair of the Human Research Ethics Committee has approved your request to extend the period of data collection. The new expiry date for data collection is the 31/12/2014 .

We wish you well in this ongoing project.

Kind regards,  
Ms Kylie Pashley

Ethics Officer | Research Services

Office of the Deputy Vice Chancellor (Research) Australian Catholic University PO Box 456,  
Virginia, QLD, 4014

T: 07 3623 7429 F: 07 3623 7328

## Appendix H - Participant Letter: Summary of Results



Project Title: **Nurses' manual handling beliefs and experiences**  
Principal Supervisor: Professor Nel Glass  
Co-Supervisor: Dr Alicia Evans  
Student Researcher: Ms Kate Kay  
Course: Doctor of Philosophy

Dear [participant's name inserted in original, removed here to preserve confidentiality],

It has been some time now since we met to discuss your thoughts and experiences about manual handling with me. I am still exceedingly grateful for your generosity. The time, effort and honesty you gave to this project has been crucial to its success and again I want to thank you for all that you contributed.

This research project is nearing completion and I am expecting to submit my thesis for examination within the next two months. As promised when we last communicated, I am sending you a summary of the findings from the study. Of course, this is the abbreviated version of the entire document, but I hope it will convey to you an overview of what has been achieved. I have also attached two journal articles that have been published on the results in the event that you may like to read more about the findings. A third article synthesising the results is being prepared and I will forward a copy to you if it is accepted for publication. If you would like any additional information, then please let me know and I will follow up with you further. My contact details remain unchanged and are supplied in the email to which this letter is attached.

As you may recall, there had been minimal research undertaken that had investigated manual handling from the perspectives of clinical nurses. Thus the overall aim of my study was to explore nurses' manual handling experiences and perspectives. My overarching intention was to gain a greater understanding of the socio-political context for nurses, by giving participants the opportunity to verbalise, in an environment where they felt safe to declare and explore their manual handling experiences.

This research was embedded in critical theory and sought to uncover mechanisms that shape the socio-political circumstances of nurses in relation to manual handling safety. Critical theory is concerned with countering oppression and redistributing power and resources. There have been numerous scholars who have reported on the oppression and marginalisation of nurses in the healthcare hierarchy. Marginalisation commonly results in oppression of the voices of marginalised group members and renders their experiences invisible. However, the recognition of oppressive structures through critical analysis promotes identification of transformative actions and potential liberation from the socio-political constraints.

The explicit details of the two major themes, 'how to practice' and 'voicing practice issue' are presented in the attached publications "Loaded Both Ways: The Impact of Dialectical Tensions on Nurses' Manual Handling Practices" and "Moments of Speaking and Silencing: Nurses Share Their Experiences of Manual Handling in Healthcare" respectively. In essence,

my analysis of the data from the 13 participants interviewed found that they felt conflicted about how to practice manual handling, as represented by a subtheme I have named 'dialectical tensions'. The other subthemes uncovered were those of 'feeling silenced', 'feeling punished' and 'feeling disillusioned' that occurred when participants attempted to voice concerns related to manual handling practice issues.

It may not surprise you that the overarching theme resulting from this study centred around the concept of power relations of which the most prominent aspect was the central theme called '(mis)power'. You will see below a diagram that represents the key findings, grouped according to the central theme of (mis)power, and its component major themes and subthemes. The term (mis)power was conceived to represent the inappropriate or negative use of power as perceived by participants in this study.

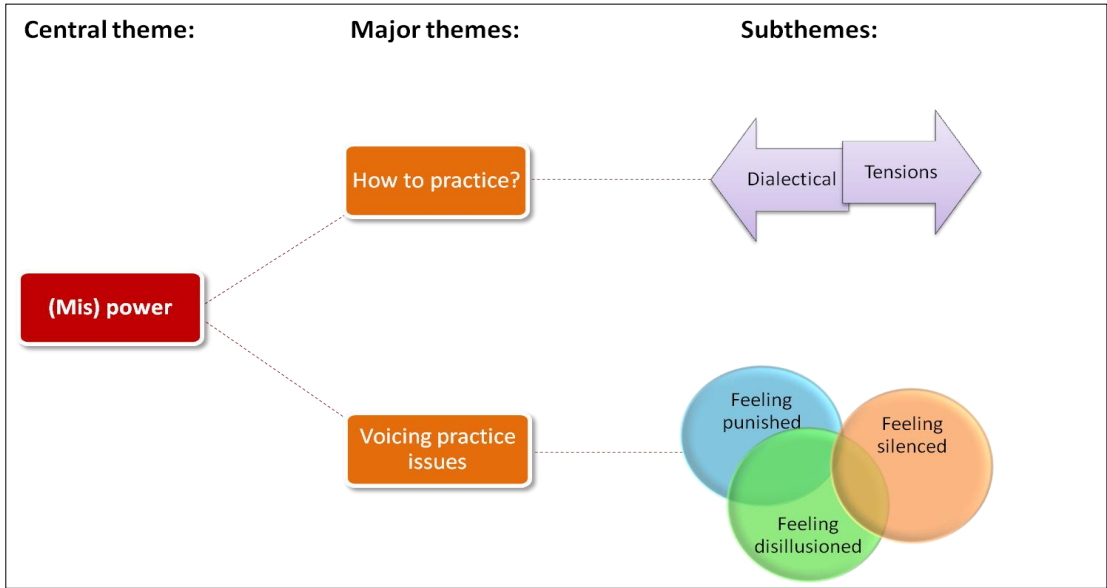


Figure 1. Key findings from project.

The implication of these findings is that socio-political factors reinforce (mis)power, as nurses feel silenced, punished or disillusioned if they attempt to report manual handling issues or injuries, and tensions between clinical demands and recommended practices remain unresolved. Additionally, the lack of recognition of contextual factors perpetuates a misunderstanding regarding the suitability of current manual handling programs to prevent injuries.

This research is the first, to my knowledge, that reports on the marginalisation of nurses in relation to manual handling safety, and the impact of nurses' socio-political circumstances on manual handling injuries. Major recommendations include the need to revise contemporary approaches to injury prevention based on these findings, particularly in regard to the suitability of current recommendations for the clinical environment. The findings also suggest that the inclusion of clinical nurses in the development of injury prevention strategies is crucial to the success of future efforts in this domain.

I hope that this summary provides some tangible feedback in return for your contribution to this study. Once again, thank you for supporting this research.

Kind regards,

Kate



## Appendix I - Permission to Reproduce Publication 1



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**Title:** Debunking the manual handling myth: An investigation of manual handling knowledge and practices in the Australian private health sector

**Author:** Kate Kay, Nel Glass

**Publication:** International Journal of Nursing Practice

**Publisher:** John Wiley and Sons

**Date:** May 24, 2011

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## Appendix J - Authors' Right to Reproduce Publication 2



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**Title:** It's not about the hoist: A narrative literature review of manual handling in healthcare  
**Author:** Kate Kay, Nel Glass, Alicia Evans  
**Publication:** Journal of Research in Nursing  
**Publisher:** SAGE Publications  
**Date:** Sep 27, 2012

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## Appendix K - Permission to Reproduce Review of Publication 2



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**Title:** Review: It's not about the hoist:  
A narrative literature review of  
manual handling in healthcare

**Author:** Rosie Kneafsey

**Publication:** Journal of Research in Nursing

**Publisher:** SAGE Publications

**Date:** Sep 27, 2012

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## Appendix L - Authors' Rights to Reproduce Publications 3 and 5



Journal of Nursing Education and Practice

**Publication 3:** Reconceptualising manual handling: Foundations for practice change  
**Authors** *Kate Kay, Nel Glass, Alicia Evans*

**Publication 5:** Loaded both ways: The impact of dialectical tensions on nurses' manual handling practices  
**Authors** *Kate Kay, Nel Glass, Alicia Evans*

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## Appendix M - Authors' Right to Reproduce Publication 4



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**Title:** Moments of speaking and silencing: Nurses share their experiences of manual handling in healthcare

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