

UNIVERSITY OF SOUTHERN QUEENSLAND

MAXIMISING RETENTION OF NURSES

A Dissertation submitted by

Delphine J Hannigan, B Bus B Sc (Hons)

For the award of

Doctor of Philosophy

2013

ABSTRACT

With a growing global population and an ageing society the retention of nurses within the healthcare system is crucial, even more so than their recruitment. The dissertation examines the possible remedies to the worldwide nurse shortage, before probing the relationship between turnover and turnover intention with a focus of increasing retention. This research used archival data from the Community and Organisational Research and Evaluation Unit (CORE) of the University of Southern Queensland on Queensland Health nurses, as well as obtaining additional data directly from Queensland Health. Employee opinion surveys and turnover data for 2007–2008 from Queensland Health, a large Australian public health organisation, showed a strong correlation between nurses expressing an intention to leave and the actual separation.

Building on this, the supplied information was subjected to a model of organisational health which considered organisational climate upon well-being and turnover. Structural equation modelling created a more predictive and interpretable model to explain the variation in nurses' turnover intention. This model will provide information to enable Queensland Health to allow collaboration and consultation with staff to develop interventions which will reduce turnover and assist retention. Individual morale, individual distress, supportive leadership, and opportunities for professional growth were found to be areas of challenge.

These factors formed part of the "forces of magnetism", used in the accreditation of hospitals that have been praised for quality outcomes for patients and staff, together with superior business results. "Magnet" hospitals are recognised in part by an ability to recruit and retain nurses in times of shortage. Further analysis of the above data compared Australia's first magnet hospital with two similarly matched non-magnet hospitals. The organisational health, and thus nurse retention, of the magnet hospital was significantly better than the comparison institutions. This suggests magnet principles have a positive influence on

ii Maximising retention of nurses

organisational climate and reducing turnover intent, but further analysis is required to establish causality.

Acknowledging that continued research is required, the dissertation provides an improved model for understanding organisational health and climate within the nursing environment. Such information can aid decision-makers of healthcare services towards a greater retention of nurses, and towards the goal of meeting the need for high quality global care.

CERTIFICATION OF DISSERTATION

I certify that the ideas, work, results, analyses and conclusions reported in this dissertation are entirely my own effort, except where otherwise acknowledged. I also certify that the work is original and has not been previously submitted for any other award, except where otherwise acknowledged.

Signature of candidate
Delphine Hannigan

Date

ENDORSEMENT

Signature of Supervisor
Associate Professor Jeff Patrick

Date

Signature of Supervisor
Professor Tony Machin

Date

*This dissertation is dedicated to my youngest brother, Warren Traves RN,
Clinical Nurse, Cairns Base Hospital.*

ACKNOWLEDGEMENTS

Thanks to David Hingston, HR Informatics and Queensland Health for providing access to turnover and survey data. Thanks also to all my fellow members of the Community and Organisational Research and Evaluation (CORE) Unit at the University of Southern Queensland, especially Ken Askin and Susie Gibson for their valued help and assistance. I offer my deepest gratitude to Kim Karen, and Elizabeth, Off-Campus Library Services, for answering endless requests, and efficiently and effectively delivering the research materials I needed. To Sophie and Annmaree, thank you for your patience, support and words of advice.

To Tracey, Margaret, Gaynor and Jill, thank you for your positive support and assistance. To David, thank you for being a friend and for providing me the opportunity to access a room in which I could shut out the world and its problems and focus on the research. To Kerry, my mentor, who started me on this journey, thank you for your help, encouragement and advice!

I would like to thank my family (both by blood and by marriage) for their strong support. Extra special love and thanks go to my father and mother, who throughout their lives made great sacrifices for all of their children. May God bless you Mother for the love and protection you constantly provide, your prayers and words of comfort are heart-warming. Dad, if you happen to be watching from above, I hope you are proud of your eldest.

To Warrick, thank you for giving up many hours of your time to edit this dissertation, and for constantly providing positive support and encouragement (and the occasional prodding). You are a true friend and an incredibly talented individual!

To Professor Tony Machin, thank you for coming in at the end, believing that I could finish. In the last year you have been very important to me and I thank you for your support!

To Associate Professor Jeff Patrick, my supervisor, you never gave up on me and I thank you! May I achieve your level of positivity and help others as you have helped me.

And last, but by no means least, to Michael, my loving husband, you never cease to amaze me; in times of trouble, you provide steadfast support; in times of panic, you offer a voice of reason. My life is so much richer from your presence. May the end of this PhD signal the start of a new adventure for us; one that continues a lifetime and beyond.

TABLE OF CONTENTS

CHAPTER 1	INTRODUCTION.....	1
CHAPTER 2	GLOBAL SHORTAGE OF NURSES.....	6
2.1	Definition of a nurse.....	7
2.1.1	Types of nurses.....	8
2.2	Inequality between healthcare systems	9
2.3	Nurse ratios and quality of care.....	10
2.4	Defining the nurse shortage?.....	11
2.5	Global impacts of the nurse shortage	12
2.6	Shortage or imbalance?	13
2.6.1	Geographical imbalance.....	14
2.6.2	Other imbalances.....	14
2.7	International recruitment, migration and the shortage of nurses	15
2.8	Healthcare costs and service distribution.....	17
2.9	Ageing nurses	18
2.10	Loss of new graduates	18
2.11	Queensland's future	19
2.12	So why is the nurse shortage occurring?.....	20
2.12.1	Nurse turnover.....	21
2.12.2	The ageing of the population and of nurses	23
2.12.3	Education capabilities	23
2.12.4	International and internal migration.....	24
2.12.5	Image and public perception of nursing.....	27
2.12.6	Other factors	28
2.13	Chapter summary	29

CHAPTER 3	PROBLEMS AND SOLUTIONS TO THE NURSE SHORTAGE.....	33
3.1	An exploration of specific factors contributing to the shortage	34
3.2	Retention difficulties	36
3.3	Overall solutions/strategies to the nurse shortage	38
3.3.1	Policy and government.....	38
3.3.2	The image or perception of nursing	40
3.3.3	Recruit nurse faculty	42
3.3.4	Increase nurse graduates.....	44
3.3.5	Recruit diversely	46
3.3.6	Overseas recruitment.....	51
3.3.7	Temporary nurses	53
3.3.8	Recruit nurses no longer in nursing.....	56
3.3.9	The use of nurse practitioners and general practice nurses.....	57
3.3.10	Retaining new graduates	58
3.3.11	Retaining older nurses	59
3.3.12	Nurse to patient ratios, staffing and models, and skill mix.....	60
3.3.13	Salary/wage levels impact on nurse retention	61
3.3.14	Shiftwork, double shifts, overtime, increased workload and inability to access leave.....	62
3.3.15	Safety in the work environment	63
3.3.16	Magnet hospitals and their impact on nursing	64
3.3.17	The healthcare system	66
3.4	Chapter summary	67
CHAPTER 4	TURNOVER AND RETENTION OF NURSES IN NURSING	69
4.1	Nursing in Australia	69

viii	Maximising retention of nurses	
4.1.1	Nurses within Queensland Health	70
4.2	Turnover	71
4.2.1	Use of intention to leave.....	75
4.2.2	Models explaining turnover	75
4.2.3	Retention models.....	81
4.2.4	Retention versus turnover or a combination of both	85
4.2.5	Psychological antecedents.....	85
4.3	Organisational climate.....	86
4.4	Other factors impacting retention and turnover	87
4.4.1	The wider environment	87
4.4.2	The psychological contract.....	87
4.4.3	Nurses' primary goal – the desire to care	88
4.4.4	Organisational change	88
4.5	Retention strategies	89
4.5.1	Realistic job previews	90
4.6	Chapter summary	91
CHAPTER 5	ORGANISATIONAL HEALTH AND ORGANISATIONAL CLIMATE AND THEIR IMPORTANCE TO BOTH TURNOVER AND RETENTION.....	94
5.1	Organisational health.....	95
5.2	Employee well-being.....	98
5.3	Stress/distress	99
5.4	What is organisational climate?	101
5.4.1	Psychological climate.....	104
5.4.2	Other climates	105
5.4.3	Organisational climate and job satisfaction.....	106
5.4.4	Organisational climate and leadership	106

5.5	Climate versus culture	107
5.6	Why is organisational climate important?.....	110
5.7	Organisational health and organisational climate within Queensland Health	111
5.8	Employee opinion surveys	112
5.9	The Better Workplaces Staff Opinion Survey.....	114
5.10	Chapter summary	122
CHAPTER 6	METHODOLOGY.....	124
6.1	Chapter Seven – Linking turnover to intention to leave	124
6.1.1	Participants	125
6.1.2	Measure	126
6.2	Chapter Eight – Comparative Modelling	126
6.2.1	Participants	126
6.2.2	Measures.....	126
6.3	Chapter Nine – Critical appraisal of the value of magnet accreditation	128
6.3.1	Sample.....	128
6.3.2	Measure	128
6.4	Chapter summary	128
CHAPTER 7	LINKING TURNOVER TO INTENTION TO LEAVE	129
7.1	Costs of turnover	129
7.2	Models explaining turnover	131
7.3	Intention to leave	131
7.4	Intention to leave for nurses	137
7.5	Unemployment as a moderator	138

x	Maximising retention of nurses	
7.6	Is there a relationship between turnover and intention to leave for nurses within Queensland Health?	139
7.7	Results	139
7.8	Discussion	140
7.8.1	Limitations	141
7.8.2	Further research	141
7.9	Chapter summary	142
CHAPTER 8	COMPARATIVE MODELLING OF THE RELATIONSHIP BETWEEN ORGANISATIONAL CLIMATE AND TURNOVER INTENTION TO ENABLE ACTION TO INCREASE RETENTION	143
8.1	Employee opinion surveys	144
8.2	Structural equation modelling – the benefits and limits	147
8.3	Results	148
8.3.1	Data checking and missing data	148
8.3.2	Analysis	149
8.4	Discussion	154
8.4.1	Limitations	155
8.4.2	Further research	155
8.5	Chapter summary	156
CHAPTER 9	CRITICAL APPRAISAL OF THE VALUE OF "MAGNET" ACCREDITATION ON RETENTION AND PERFORMANCE WITHIN NURSING	157
9.1	Nursing in general	157
9.2	Problems within the healthcare system	159
9.3	Review of organisational health and organisational climate	160

9.4	Magnet hospitals	161
9.5	Forces of magnetism	162
9.5.1	Force 1: Quality of nursing leadership.....	162
9.5.2	Force 2: Organisational structure	163
9.5.3	Force 3: Management style	163
9.5.4	Force 4: Personnel policies and programs.....	163
9.5.5	Force 5: Professional models of care	164
9.5.6	Force 6: Quality of care.....	164
9.5.7	Force 7: Quality improvement	164
9.5.8	Force 8: Consultation and resources	165
9.5.9	Force 9: Autonomy.....	165
9.5.10	Force 10: Community and the hospital	165
9.5.11	Force 11: Nurses as teachers	166
9.5.12	Force 12: Image of nursing	166
9.5.13	Force 13: Interdisciplinary relationships.....	167
9.5.14	Force 14: Professional development	167
9.6	Do the benefits outweigh the costs?.....	168
9.6.1	Criticisms of magnet accreditation.....	169
9.6.2	Research	171
9.6.3	Sustainability of magnet principles	172
9.6.4	The Princess Alexandra Hospital	173
9.7	Results	174
9.7.1	Not a size effect.....	182
9.8	Discussion	182
9.8.1	Limitations	185
9.8.2	Further research.....	185
9.9	Chapter summary	186

CHAPTER 10	DISCUSSION, IMPLICATIONS AND FUTURE DIRECTIONS.....	187
10.1	Findings	188
10.1.1	Analysis One: Linking intention to leave to turnover ...	188
10.1.2	Analysis Two: Comparative modelling of the relationship between organisational climate and nursing retention.....	190
10.1.3	Analysis Three: Critical appraisal of the value of "magnet" accreditation in retention and performance within nursing.....	192
10.2	Implications for future research	195
10.3	Implications for healthcare providers.....	197
10.4	Summary	198
10.5	Recommendations	199
10.6	Conclusion.....	200
REFERENCES	.....	201
APPENDIX A	BETTER WORKPLACES STAFF OPINION SURVEY ("HOW YOU FEEL ABOUT YOUR JOB").....	236

List of Figures

Figure 1.1	Research outline of the dissertation	5
Figure 4.1	Expanded avoidability taxonomy	73
Figure 4.2	Defining undesirable turnover	74
Figure 4.3	The employee turnover decision process.....	79
Figure 4.4	The causal model of turnover	80
Figure 4.5	Heuristic model integrating performance into the turnover process	80
Figure 4.6	Conceptual model of intent to stay	82
Figure 4.7	Revised model: determinants of nurse intention to remain employed.....	83
Figure 4.8	Theoretical model of job retention for home healthcare nurses	84
Figure 5.1	Organisational health flow diagram.....	100
Figure 5.2	Mathematical model linking climate dimensions, well- being indicators, and outcomes.....	122
Figure 6.1	Plan of the dissertation and research	124
Figure 8.1	Mathematical model (including weights) linking climate dimensions, well-being indicators, and outcomes.	149
Figure 8.2	A revised mathematical model (including weights) linking climate dimensions, well-being indicators, and outcomes.	153

List of Tables

Table 5.1	Contrasting organisational culture and organisational climate research perspectives	109
Table 5.2	Subscales of organisational climate and psychological outcomes from QPASS.....	116
Table 5.3	Content of QPASS scales retained in BWSOS and their reliabilities	118
Table 5.4	Content of new item groups in the BWSOS	119
Table 5.5	Internal consistency/reliability data for BWSOS components and item sets	121
Table 6.1	Summary of demographic characteristics of participants.....	127
Table 8.1	Strongest influences from climate model on four outcomes ..	146
Table 8.2	Relative model fit statistics applied to Griffin et al.'s model	150
Table 8.3	Relative model fit statistics for the new model	152
Table 9.1	Mean, standard deviation and number of nurses for Princess Alexandra Hospital, Hospital B and Hospital C.....	176
Table 9.2	Analysis of variance for organisational climate indicators of magnet to non-magnet hospital health.....	180
Table 9.3	Analysis of variance for indicators of outcomes of magnet hospital health compared with non-magnet hospitals.....	181
Table 9.4	Analysis of variance for organisational climate indicators of Hospital X compared with Hospital Y	183
Table 9.5	Analysis of variance for indicators of outcomes of Hospital X compared with Hospital Y.....	184

List of Abbreviations

ABS	.....	Australian Bureau of Statistics
ACIRRT	.....	Australian Centre for Industrial Relations Research and Training
AGFI	.....	Adjusted goodness of fit index
AHA	.....	American Hospital Association
AHPRA	.....	Australian Health Practitioner Regulation Agency
AHPRA	.....	Australian Health Practitioner Regulation Agency
AHWI	.....	Australian Health Workforce Institute
AIC	.....	Information Theoretic measures
AIDS	.....	Acquired immunodeficiency syndrome
AIHW	.....	Australian Institute of Health and Welfare
AMOS	.....	Analysis of moment structures
ANA	.....	American Nurses Association
ANCC	.....	American Nurses Credentialing Center
ANMC	.....	Australian Nursing and Midwifery Council
ANPA	.....	Australian Nurse Practitioner Association
AUSPRAC	.....	Australian Nurse Practitioner Study
BWSOS	.....	Better Workplaces Staff Opinion Survey
COAG	.....	Council of Australian Governments
CORE Unit	.....	Community and Organisational Research and Evaluation Unit, University of Southern Queensland
DEEWR	.....	Department of Education, Employment, and Workplace Relations (Cwlth)
DEST	.....	Department of Education, Science and Training (Cwlth) (now called DEEWR)
EEA	.....	European Economic Area
EN	.....	Enrolled nurse
EU	.....	European Union
FTE	.....	Full-time equivalent (in relation to work hours)

xvi	Maximising retention of nurses
GDP	.....Gross domestic product
GFC	.....Global financial crisis
GFI	.....Goodness of fit index
HIV	.....Human immunodeficiency virus
HRD	.....Human Resource Development
ICN	.....International Council of Nurses
ICU	.....Intensive care units
JCAHO	.....Joint Commission on Accreditation of Healthcare Organisations
NHS	.....National Health Service
NHWT	.....National Health Workforce Taskforce
NPDU	.....Nursing Practice Development Unit (a unit within the PAH)
NSSRN	.....National Sample Survey of Registered Nurses
OECD	.....Organisation for Economic Co-operation and Development
PAH	.....Princess Alexandra Hospital
PGFI	.....Parsimony goodness of fit index
QPASS	.....Queensland Public Agency Staff Survey
RMSEA	.....Root mean square error of approximation
RN	.....Registered nurse
SEM	.....Structural equation modelling
UK	.....United Kingdom
US	.....United States of America
VHA	.....Victorian Healthcare Association
WHO	.....World Health Organisation

CHAPTER 1 INTRODUCTION

The shortage of healthcare professionals, and in particular nurses, as they constitute over 50% of the healthcare workforce, is a critical global issue (Doiron, Hall & Jones, 2008). Further, Australia, like the majority of other developed countries, is experiencing this shortage. Hospitals are facing difficulties in providing a consistent level of high quality care in a fast changing environment (Aiken et al., 2001; Aiken et al., 2010). Nurses provide patient care within a broad range of service models which continually change due to (a) scientific and technological advances, (b) consumer expectations, (c) the ageing of the population, and (d) the need to locate efficiencies to reduce costs in a system where costs are persistently rising (Johnstone, 2007). Twigg, Duffield, Thompson, and Rapley (2010) highlighted the mounting evidence connecting the number of registered nurses to the prevention of adverse outcomes. They reviewed research that indicated increasing the number of registered nurses decreased adverse events, including death.

Media reports continually detail the nursing shortage and its consequences. Aiken et al. (2001) and Aiken et al. (2010) suggest hospitals in many developed countries are short-staffed, with nurses overworked (due to overtime and double shifts) and faced with increased patient loads. This results in job dissatisfaction, low morale and emotional exhaustion, all of which may increase nurse turnover. In Australia, the reasons given for nurses leaving nursing include (a) pay, (b) work conditions, (c) larger workload, (d) greater complexity of patient care, (e) shorter hospital stays, (f) lack of adequate 24 hour childcare services, and (g) poor recognition of the skills and knowledge required to be a nurse (Doiron et al., 2008).

Worldwide, nursing as a profession is confronted with a quandary in relation to recruitment and retention (Johnstone, 2007). Ulrich and Zeitzer (2009) advised that solutions to recruitment and retention should be long-term solutions and not just quick fixes. There is an argument that both of these problems are very different (Buchan, 2002). Recruitment involves attracting people to a position, whereas retention is the organisation's ability to hold on to those staff

(Cowin & Jacobsson, 2003). Further, there is almost no point in focusing on recruitment issues if the organisation is not able to retain its current staff. The Australian Government is aware of the nursing shortage and its impact on the Australian population. Advertisements placed in *The Weekend Australian Magazine* (2009, June 6–7) requesting nurses to "Come back to nursing" and the offer of up to \$6,000 to aid in their return, are clear signs of the Australian government's concern. Similarly, the Queensland Government has placed advertising campaigns interstate and overseas, and is increasing student numbers in universities due to the expected shortfall of nurses (Johnstone, Miles, & Lion, 2008).

The aim of this study was to explore literature, investigate methods and analyse models and data to identify areas on which healthcare organisations can refocus strategies to retain nurses in the workforce and hopefully avert a global healthcare crisis. This study has multiple goals. The first goal was to gain a sound understanding of nurse turnover and retention, and in the process to explore aspects that lead to both turnover and retention. This was done maintaining a view that many aspects of retention are also factors impacting on turnover. This dissertation examines factors which precipitate a nurse indicating an intention to leave and actually leaving the organisation. The author then develops a new model of organisational health and climate to show areas that healthcare organisations can address to reduce, if not halt, this turnover and thus retain nurses.

An exploration was done with an Australian magnet hospital to investigate whether magnet accreditation impacts on organisational health, specifically organisational climate and may be useful in enhancing nurse retention. A magnet accredited hospital is an American concept, supported by research, and widely acknowledged as a sound method of attracting and retaining nurses in times of shortage (Morgan, 2007). The concept began in the early 1980s, when the American Academy of Nursing identified hospitals with low staff turnover, high nurse job satisfaction and low nurse vacancy rates (Andrist, Nicholas & Wolf, 2006). The results of research into the magnet process highlight the importance of organisational factors (Andrist et al., 2006). Fourteen forces of magnetism were originally identified.

These forces were

- quality of nursing leadership;
- organizational structure;
- management style;
- personnel policies and programs;
- professional models of care;
- quality of care;
- quality improvement;
- consultation and resources;
- autonomy;
- community and the healthcare organisation;
- nurses as teachers;
- image of nursing;
- interdisciplinary relationships; and
- professional development.

In 2008, the American Nurses Credentialing Center (ANCC) configured the 14 forces of magnetism into 5 model components: (a) transformational leadership; (b) structural empowerment; (c) exemplary professional practice; (d) new knowledge, innovation, and improvements; and (e) empirical quality results (Trinkoff et al., 2010).

The literature review covers the global shortage, ascertains the extent of the nurse shortage and provides an overview of the nursing situation worldwide. While this research does include enrolled nurses (ENs), the majority of the focus will be on registered nurses (RNs). Differences between ENs and RNs are defined in Chapter Two. Solutions for this shortage were explored. Strategies that have been, and are currently, used to address the shortage will be discussed. In this exploration it was shown that most remedies focus on two main goals, that is, recruitment or retention. However, research indicates that no matter how many nurses are recruited, unless they remain employed in nursing, this focus is a waste of time (Cowin & Jacobsson, 2003). Retention, including factors that contribute

4 Maximising retention of nurses

to turnover and how organisations can address these issues to retain staff, was therefore the main focus of this research.

Organisational health, and particularly the climate of the organisation, has been found to be important to employee well-being and production and also very closely linked with employee turnover (Griffin, Hart & Wilson-Evered, 2000). Literature on organisational health, organisational climate, culture, turnover and retention was reviewed.

This dissertation focuses on organisational health aspects, especially organisational climate, with regard to nurse retention. It considers the relationship between organisational climate and factors impacting on turnover to better understand how to retain nurses. Also, it explores the relationship between organisational climate and turnover to determine the most parsimonious model that may point more clearly to possible interventions. This research sought to verify the relationship between turnover and turnover intention to confirm whether turnover intention is a valid predictor of turnover and thus a reliable way to identify variables that need to be addressed to enhance retention. Identifying a conditional relationship among various aspects of organisational climate and individual employee variables, such as psychological distress and morale, allows insight into factors impacting on retention. This modelling provides evidence directly applicable in an Australian setting, with the aim that the results may provide insight into ways to increase the retention of nurses to meet the growing demand within the healthcare industry with an ageing Australia.

There are three phases in this research as indicated in Figure 1.1. Phase One compares the global turnover of nurses in Queensland Health with turnover intention. This comparison was made using turnover statistics obtained from Queensland Health and archival survey data obtained from the Community and Organisational Research and Evaluation Unit (CORE) of the University of Southern Queensland. This phase examines the relationship between turnover and turnover intention.

Phase Two consists of two segments. Firstly data from nurses employed by Queensland Health were analysed and compared with the results obtained by the Organisational Health and Employee Well-being Model proposed by Griffin et

al. (2000) to ensure similarity of fit between models. Then, by using the software package Amos, this phase attempted to develop a more predictive model for organisational health.

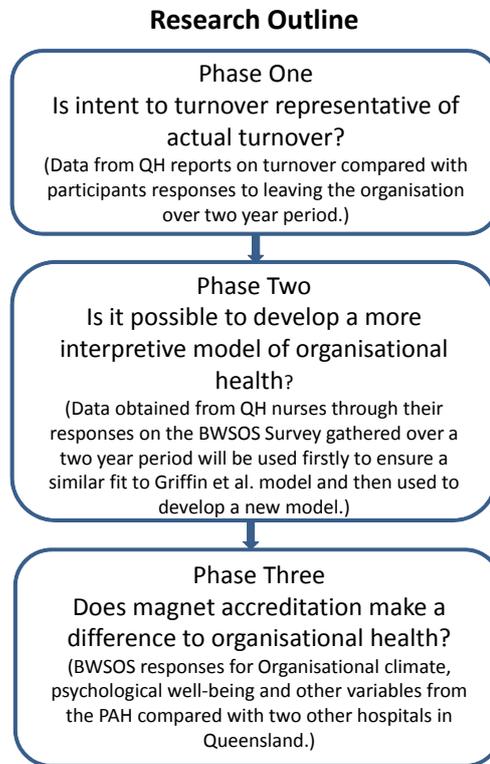


Figure 1.1. Research outline of the dissertation.

Finally, this research compared data collected from participants of an accredited Australian magnet hospital with two other non-magnet Australian hospitals in order to ascertain whether magnet principles may assist in explaining the differences in the key drivers of turnover intentions.

CHAPTER 2 GLOBAL SHORTAGE OF NURSES

Nursing has existed since people have needed care, though the extent, manner and delivery of that care have changed throughout the years (Alexander, Fawcett, & Runciman, 1994; Johnstone, 2007). This chapter explores the situation of nurses around the world with specific focus on the United States, Canada, the United Kingdom, New Zealand and Australia. It reviews literature about nurses and the nursing shortage from a global perspective. This overview highlights the imperative to retain nurses and how important any research which explores nurse retention and turnover is, not only to Australia, but to global healthcare. This chapter defines nursing and provides a global picture of the nursing situation throughout the world, Australia and Queensland. It then considers why the shortage is occurring, exploring areas that impact turnover, retention, recruitment and policy.

Nursing is a profession vital to the health and well-being of all nations and is the backbone of any healthcare system (Ulrich & Zeitzer, 2009). Nurses bear the legal and ethical responsibility of the medications and treatments they administer (Gordon, 2007). Further, nurses are the patient's final defence within the health system, required to protect them from both possible harm and human error. De Vries, Ramrattan, Smorenburg, Gouma, and Boermeester (2008) reviewed literature on adverse events in the United States, Canada, the United Kingdom, Australia and New Zealand and discovered that 9% of all patient admissions suffered from adverse events and 7% of these were lethal. An adverse event is identified as inadvertent injury or complication causing an extended hospital stay, disability or death and is a result of the healthcare management instead of the disease for which the patient was admitted (De Vries et al., 2008). Further, almost half of these adverse events were considered preventable. Nurses, by virtue of their role of direct care providers, have an essential part in error management (Henneman & Gawlinski, 2004). They are the individuals who will most likely detect medication errors which result in costs of \$3.5 billion annually in the US (Rother & Lavizzo-Mourey, 2009) and \$350 million in Australia (Hodgkinson, 2006). This advocates nurse vigilance as a crucial defence against

medical error and adverse incidents. Studies by Aiken, Clarke, Sloane, Sochalski and Silber (2002), Aiken et al. (2010), Harless and Mark (2010), and Needleman, Buerhaus, Mattke, Steward, and Zelevinski (2002) all show a positive relationship between higher nurse staffing levels and improved patient outcomes, especially a reduction in mortality.

Separate to the importance of the role of nurses, Rother and Lavizzo-Mourey (2009) suggest a connection between the adequate supply of nurses and the economic recovery within America. They explain health reform is essential to economic recovery and this reform will not be achieved without an adequate supply of competent and capable healthcare professionals of which nurses are most important. It is nurses who deliver, organise and manage patient care.

2.1 Definition of a nurse

Although it is evident that nurses are an essential component of the healthcare system, the complexity of their role makes it difficult to define who they are and exactly what they do. From 1966 to 2002, the International Council of Nurses (ICN) identified the role of a nurse using the definition created by Henderson (1966, p. 5) as follows:

The unique function of the nurse is to assist the individual, sick, or well, in the performance of those activities contributing to health or its recovery (or to peaceful death) that he [sic] would perform unaided if he [sic] had the necessary strength, will or knowledge. And to do this in such a way as to help him [sic] gain independence as rapidly as possible.

Crisp and Taylor (2009) advise this definition focuses primarily on patient care. Yet, in 2002 the ICN provided a new definition of nursing which centres more on adding the nurses' input into policy (Crisp & Taylor, 2009, p. 2). This definition is as follows:

Nursing encompasses autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well and in all settings. Nursing includes the promotion of health, prevention of illness, and the care of ill, disabled and dying people. Advocacy, promotion of a safe environment, research,

participation in shaping health policy and in patient and health systems management, and education are also key nursing roles.

According to Crisp and Taylor (2009) this new definition aids in understanding today's healthcare system by including: continuums of age (birth to death), health status of patient (health promotion, prevention, and care of illness, disability or death), nursing roles (clinical practice, care for the environment, patient advocacy, research, management, education and policy), and nursing relationships (one-on-one, family care, and collaboration both with other nurses and with other healthcare staff). While this definition is broader, Crisp and Taylor identify that it lacks the "gentle caring sense" of Henderson's definition, as well as the words "strength, will, and knowledge". Crisp and Taylor, editors of the book "Potter and Perry's Fundamentals of Nursing", recommend nurses use parts of both definitions to form their own personal working definition.

2.1.1 Types of nurses

In Australia, there are two main types of nurses: registered nurses (RNs) and enrolled nurses (ENs). ENs most often work alongside RNs and offer basic nursing care and complete less difficult tasks than RNs (AIHW, 2009). ENs are trained from 12 months to 2 years in length. They receive either a certificate or diploma depending on the state in which they train (Enrolled Nurse Professional Association NSW, 2006). Further, they advise that an advanced diploma is being planned to increase consistency in training. Registered nurses complete university education and include registered midwives, direct entry midwives, practice nurses, nurse practitioners, midwife practitioners and Division 1, 3, 4, and 5 nurses in Victoria (AIHW, 2009). While the majority of registered nurses are clinicians, others work as managers, teachers and educators and researchers.

Nurse practitioners are RNs who have undertaken further training at an advanced level to be able competently to do more complex tasks traditionally done by a medical practitioner, such as prescribing medications, ordering diagnostic tests and referring patients (ANPA, 2008). All Australian states and territories have introduced this status of nurse and the necessary legislation to

allow them to perform their duties. In 2007, there were 238 nurse practitioners across Australia (AUSPRAC, 2008).

Practice nurses are different from nurse practitioners. Practice nursing is an important and increasing element of primary healthcare, both internationally and now evolving within Australia (Annells, 2007). A practice nurse is a nurse who works in general medical practices providing a service within the general practice context (Walker, 2006). This term is also used for this role in countries such as New Zealand and the UK (Annells, 2007). In Australia, there are approximately 7,824 nurses employed in general practices and it is estimated that 58% of general practices have at least one practice nurse on staff (Australian General Practice Network, 2008). While nurses have worked in general practice within Australia for many years, recent growth in practice nurse numbers is due to the Australian Government's Nursing in General Practice Initiative that commenced in 2001 (Halcomb, Patterson & Davidson, 2006). This initiative was formed to address shortages of medical practitioners and improve access to integrated quality patient care.

Aged care nurses, while not specifically targeted within this research, are vital for the care of the ageing population. While aged care nurses were once considered low in status when compared to their acute care counterparts (Department of Education, Science and Training [DEST], 2002), gerontology nursing is now acknowledged as a specialised field. Chenoweth, Jeon, Merlyn, and Brodary (2010) advise that the international nurse shortage is most intense within dementia and aged-care nursing workforces. From 2003 to 2007, the proportion of registered nurses in aged care facilities dropped from 21% to 17% (Sargent, Harley, & Allen, 2009).

2.2 Inequality between healthcare systems

The World Health Organisation (WHO, 2008) tells of a changing world where people are living longer than they did 30 years ago. WHO also identified that major progress has been made in improving health worldwide. However, there are a considerable number of countries lagging behind which have resulted in increased inequalities between countries. In this new century we are confronted

with two spectrum extremes in health, large advances in human well-being and extreme deprivation (WHO, 2006a). Individuals in poorer countries have half the life expectancy of those in the richer countries, mostly due to the ravages of Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS). The nature of health problems has changed in a manner only partially expected; yet, at a rate that is completely unexpected (WHO, 2008). Ageing and the impact of poorly managed urbanisation and globalisation are identified as hastening the spread of communicable diseases and raising the problem of chronic and non-communicable disorders. This means that today's patients will present with multifaceted and complicated symptoms and multiple illnesses demanding more detailed and comprehensive case management. Further, health systems themselves are not protected from this transformation which is occurring globally. Economic and political emergencies confront government and hospitals' roles to ensure that access, delivery and resources are available. However, the responses of the health sector to this globalisation thus far have been insufficient (due to inadequate response, for example, too little too late or too much focused in the wrong direction) and naive (in that the failure of a system requires a solution for the system and not a temporary fix). WHO (2006a) considered current health systems as "weak, unresponsive, inequitable and unsafe" (p. xv). WHO (2006a) emphasised the need for countries worldwide to work together, not only to treat and prevent disease, but to promote health. Capable, motivated and well-resourced health workers are crucial to achieving these goals.

2.3 Nurse ratios and quality of care

In a report for the ICN, Buchan and Calman (2005) advised of the large variation in the ratio of nurses to people throughout the globe, with some countries reporting less than 10 nurses per 100,000 people and others more than 1,000 nurses per 100,000 people. Amongst 28 OECD (Organisation for Economic Co-Operation and Development) countries, rates varied from 170 nurses per 100,000 in Turkey to 1,530 nurses per 100,000 in Ireland. At 1,095 nurses per 100,000 population, Australia was higher than the UK at 890, the United States at 790, Canada at 940 and New Zealand at 940 per 100,000 (Segal

& Bolton, 2009). Sub-Saharan Africa and Asia have the lowest ratio of nurses per population. Twenty-five percent of the world's disease burden rests in Africa, however, they have only 3% of the world's health professionals and 1% of the world's resources (Mills et al., 2008).

Kingma (2007) advises that data supports a direct link between positive health outcomes and the number of healthcare professionals. Research by Bigbee (2008) found the more nurses per population, the healthier the community. Nursing is the largest profession within the healthcare system (Johnstone, 2007). Buchan and Calman (2005) advise continually more evidence is being found to indicate how significant the role of the nurse is to the delivery of quality health services, especially in relation to patient health. Aiken and colleagues (2002) suggest when nurses have too many surgical patients for whom to provide care, a patient's risk of dying increases. The report indicated the addition of one extra patient to a nurse's load would increase the risk of death within thirty days by 7%. The risk further increased to 14% for an extra four to six patients, or 31% for an extra seven to eight patients. Aiken, Clarke, Sloane, Lake, and Cheney (2008) found surgical mortality rates were 60% greater in poorly staffed hospitals with a low ratio and quality of care, than in hospitals with superior care environments, greater staffing levels and nurses with higher education levels. In fact, they suggest that if care environments, nurse education levels and staff levels were increased above the current average they would be able to avoid approximately 40,000 patient deaths per year across the United States. Increasing the current level of nurses would definitely improve patient health, however the question remains as to whether this is indicative of a desire for improvement or is there really a shortage of nurses?

2.4 Defining the nurse shortage?

According to Buchan and Calman (2005) there is no universal method of defining a nursing shortage. However, it could be considered that the supply of nurses, in both high and low income countries, is not meeting the demand. Simoens, Villeneuve, and Hurst (2005) advise that it is not easy to decide the appropriate number of nurses for a country. Kingma (2001) notes "demand" is a

term relating to the amount of nursing care that people are willing to purchase at a given price whereas "need" is a subjective term relating to the ideal amount of a service that should be available irrespective of price. Further, Kingma suggests there may not always be a shortage when talking about "demand", but, there may be when considering "need".

Australia, including Queensland, has listed the occupation of registered nurse as an area of skills shortage (Department of Education, Employment, and Workplace Relations [DEEWR], 2011). In its report titled "Skill Shortages Queensland: June 2010" it is written that skill shortages continue for all nursing occupations in Queensland.

2.5 Global impacts of the nurse shortage

The scarcity of health workers, including nurses, is noted as one of the biggest obstacles preventing achievement of the United Nations Millennium Development Goals (WHO, 2006a). These goals were adopted as part of their Millennium Declaration with the intention of significantly improving peoples' lives. The goals specifically relating to health outcomes are: (a) to reduce the mortality of children under five by two-thirds; (b) to reduce maternal mortality by three-quarters; (c) to halt and reverse HIV/AIDS, tuberculosis and malaria epidemics; and (d) to reduce by half those suffering from hunger. Not only are the shortage of nurses and understaffing connected to adverse outcomes such as higher mortality rates and the prevention of achieving the Millennium Development Goals, they are also linked to complications after surgery, elevated violence upon nurses, greater numbers of accidents and patient injuries and higher instances of cross-infection (Buchan & Calman, 2005). In addition to the impact of this global shortage of nurses on the achievement of the WHO goals for life improvement, there is the decrease in health outcomes and the increase in patient mortality.

This nursing shortage has been the longest lasting shortage in over half a century (Buerhaus, Donelan, Ulrich, Norman, & Dittus, 2005). However, in the second half of 2008, a large number of developed countries fell into recession (OECD, 2009a). Initial projections indicated that GDP may fall by 4% and

unemployment was projected to rise to 10% by the end of 2010 (OECD, 2009b). From December 2007 to January 2009, while 2.5 million people lost their jobs because of the recession, the healthcare sector added jobs (Johnson & Evans, 2009). Further, the recession eventually did impact hospitals with organisations cutting costs by freezing salaries and limiting travel and overtime. Buerhaus, Auerbach, and Staiger (2010) advised the recession appeared to ease the nurse shortage, with many nurses returning to nursing due to a decrease in spousal income and for job security. Part time nurses have also increased their hours of work due to the recession. The authors highlighted that this is only temporary and should not distract actions to address longer-term indicators. Buerhaus et al. (2010) are concerned that when the public hears reports that the nursing shortage is ending and nurse positions are more difficult to find, prospective applicants may be less likely to choose to become a nurse during the next decade when they will be most needed due to an ageing population. Further, they advised that an adequate supply of nurses is essential for any healthcare reform which seeks to enhance quality, safety and efficiency of care.

2.6 Shortage or imbalance?

Zurn, Dal Poz, Stilwell, and Adams (2004) discuss an imbalance in the health workforce instead of a shortage. This situation may result in decreased quality and productivity of health services, longer waiting times, hospital ward closures, emergency department patients being diverted, and insufficient or incorrect use of trained personnel (Zurn et al., 2004). An imbalance can be either dynamic or static. If dynamic, for example, within a competitive market, it will resolve itself in a matter of time. However, a static imbalance happens when the supply of nurses does not rise or fall and thereby stability is not achieved. Another characteristic of an imbalance is whether it is qualitative or quantitative. In a rigid labour market, an organisation may not find the perfect candidate but may still hire someone for the position. In this situation, the concern is for the quality of the applicants, rather than the quantity of persons willing and able to do the job (Zurn et al.).

2.6.1 Geographical imbalance

Both developed and developing countries report difficulties in recruiting and retaining healthcare professionals in rural and remote areas with most gravitating towards large urban areas with more opportunities (Buchan & Calman, 2005). The contrasting dilemma of this situation is that developed countries such as Australia, Canada, the United States (US) and the United Kingdom (UK) have difficulty attracting health workers to work in the inner cities where the cost of living, especially in relation to housing, is high (Zurn et al., 2004). Zurn et al. (2004) found most countries suffer from a geographical imbalance of healthcare professionals with a higher concentration of nurses in urban areas than in remote areas. They advocated that this is due to increased opportunities for professional development, employment, education and better family amenities. However, Zurn et al. propose that most severe health problems are found in rural and remote regions. In order to improve the distribution of healthcare professionals, governments have often used combinations of incentives and compulsory service.

2.6.2 Other imbalances

Other imbalances, including gender, professional/speciality, institutional, and public/private health are identified by Zurn et al. (2004). Gender imbalance occurs when women are concentrated in the "lower status" occupations, and the managers and administrators are predominantly men. Professional/speciality imbalances occur when intensive care units and operating rooms suffer a greater shortage than other areas of nursing. An institutional imbalance occurs when staff prefer one hospital over another and the preferred institution has surplus staff while the non-preferred hospital suffers a shortage. Similarly public/private health imbalances occur where private hospitals are the preferred choice and public hospitals generally suffer the shortage (Zurn et al., 2004). In Australia, Dorion et al. (2008), suggest the growth in private hospitals over the last two decades has been caused by a shift of resources towards the fast growing area of private healthcare.

To measure imbalance, Zurn et al. (2004) suggest the use of indicators such as vacancies, workforce growth, employment rate, turnover rate, overtime,

wage rates, or population-based indicators. They put forward that just one of these indicators is insufficient to completely and accurately cover the complexity of the imbalance.

2.7 International recruitment, migration and the shortage of nurses

WHO (2006a) highlighted the unequal divide of approximately 59 million health workers in the world, between and within the borders of countries. These workers are found mostly in the richer socio-economic areas with lower health needs. Overall WHO estimates a shortage of 4.3 million health workers exists. For example, Ghana, a country on Africa's west coast, has a population of 22.1 million with 3,240 physicians (15 physicians per 100,000) and 19,707 nurses (92 nurses per 100,000) to take care of that population (WHO, 2006b). Ghanaians have a less than 59 year lifespan and live in conditions of high poverty, with high infant mortality, poor sanitation and extreme disease (WHO, 2006b). Bump (2006) indicated that approximately 20% of newly trained nurses leave Ghana each year.

Nelson (2004) reports that although the UK issued a ban on poaching nurses from developing countries, these restrictions have done little to stem the tide. In the 2003 financial year, 3,472 nurses from countries on the Department of Health's banned list were registered for work in the UK. Most of these nurses were from Africa.

The UK has a population of 56 million and most healthcare is delivered through the National Health Service (NHS). This service is funded from taxation and delivered without cost at the time it is needed. Buchan and Aiken (2008) report that there are approximately 670,000 nurses and midwives registered and of this number 400,000 are working for the NHS. In 1999, the UK was experiencing a shortage of nurses and classed this shortage as a human resource crisis (Newman, Maylor, & Chansarkar, 2002). Previous methods, such as using agency nurses, national advertising campaigns and overseas recruitment were not found to be sufficient. Adding to this predicament was the attrition of trainee and newly qualified nurses. The cost to train one nurse was estimated at £34,000 (approximately AU\$83,500); however, the United Kingdom was losing 10% of

new nurses within twelve months of qualifying (Audit Commission, 1997). As well as the departure of those newly qualified, one third of the nurses over thirty years of age who were capable of working were also leaving the nursing profession. The government tried new initiatives including (a) a review of the education of the nursing profession, (b) an advertising campaign aimed at both newly trained nurses and qualified nurses who had left the profession, and (c) an increased starting salary. Buchan (2009) advises that during the period between 1997 and 2007, the UK nursing workforce experienced a significant growth of approximately 25% with most of that occurring between 1999 and 2005. While Buchan suggests the increased funding for pre-registration education was a contributing factor; the major reason for the speed and quantity of growth that occurred in the UK was only possible by using active international recruitment. This was adopted as an intentional national policy. Inter-nation recruitment was undertaken by both NHS and the private sector with the Nursing and Midwifery Council as the single authority for processing the registration applications of both applicants from other European Union (EU) countries and from non-EU countries. Foreign nurse numbers peaked at 16,000 in 2002, held relatively stable for three years and then declined to approximately 5,000 in 2008. Migrant nurses came mainly from the Philippines, India, South Africa and Australia. In 2006, the Department of Health in the UK removed nurses from the "shortage" occupations list (Buchan). Spry (2009) advises current figures reveal foreign nurses make up 17% of the nursing profession in the USA. Statistics released by the Australian Institute of Health and Welfare (AIHW; 2009) indicate that 17.6% of registered nurses and 6.9% of enrolled nurses received their initial training overseas.

Canada is projecting a significant RN shortage in the near future with a shortfall of over 100,000 by 2016 (Canadian Nurses Association, 2002). Immigration has been suggested by some as an important policy lever to address that shortage.

Spry (2009) indicates that while the shortage of nurses is no longer the main attention of nursing journals today, the US is still suffering from a severe shortage of nurses. With an anticipated growth of demand for nurses (2-3% each year), estimates indicate nurse vacancies will reach 1.1 million by 2012. Further

compounding this shortage is the US shortage of nurse faculty, highlighted by the colleges turning away approximately 40,000 suitable nursing applicants.

The health sector within Australia was growing (AIHW, 2008a). The number of nurses per 100,000 population increased 7.6% between 2003 and 2007 from 1,017 to 1,095 full-time equivalent nurses (AIHW, 2009). However, results in a recent report show a decrease in supply of 1.3% between 2007 and 2011 from 1095.1 to 1,081.1 full-time equivalent nurses and midwives per 100,000 population (AIHW, 2012a). It should also be noted that supply of nurses ranged across regions with 1,101.6 full-time equivalent nurses per 100,000 population in major cities to 994.7 in outer regional areas to 1,335.5 in very remote areas. The demand for healthcare workers, including nurses, is expected to rise due to the increase in Australia's population and the ageing of this population (ABS, 2005; AIHW, 2008, 2009, 2011). The public hospital system employs more than 220,000 full-time workers of which half are nurses and one-tenth doctors. Over the 2010-11 financial year, the Australian government spent \$38 billion of recurrent funding on public hospital services (AIHW, 2012b).

2.8 Healthcare costs and service distribution

In 1997-98, Australia's healthcare system expended \$47 billion (8.3% of gross domestic product) with 70% of this publicly funded (Department of Education, Science and Training [DEST], 2002). In 2010-11, Australia spent \$130.3 billion (9.3% of gross domestic product) on health (AIHW, 2012b). The distribution of health services presents a major challenge. Australians are spread widely across a country of 7,692,030 km², with half the total area containing only 0.3% of the population and the most populated 1% containing 84% of the population.

In addition to the decrease of nurses in hospitals and the uneven distribution across the area, Australia is also experiencing an explosion in medical knowledge, new medicines, and new therapies as well as advances in prevention and diagnosis. This explosion has created even more need for additional health staff (DEST, 2002).

2.9 Ageing nurses

It was previously mentioned that as the population ages and lives longer there will be a greater demand for nurses. It must also be considered that nurses are part of this ageing population. In the brief titled Nursing and Midwifery Labour Force 2009 (AIHW, 2011), it was identified that between 2005 and 2009, the proportion of nurses aged 50 years or over increased from 35.8% to 36.3%. The average age of nurses increased from 40 years in 1997 to 45 years in 2005 and then decreased to 44 years between 2005 to 2009 (AIHW, 2011). The age profile of Australian nurses has moved towards a more mature age group over recent years. In 1999, the greatest group of nurses fell between 40 and 44 years, however, in 2009, the group aged 50 to 54 years contained the most nurses. The increased ageing of nurses may present challenges if their retention is used as a strategy to solve the nurse shortage by requiring more nurses to provide the same level of nursing (ABS, 2005). To retain the experienced, mature nurses may require an increase in part-time work and the increase of shared positions.

2.10 Loss of new graduates

Research in Nevada with 3,077 RNs who had graduated within the last five years showed that 30% of respondents left the profession within 12 months and 57% within two years (Bowles & Candela, 2005). Van Wyngeeren and Stuart (2011) found that turnover of new nurse graduates could range from 20% to 25% for short-term turnover to as high as 50% to 60% turnover over an eighteen month period. Graduate nurses appear to experience role conflict and stress as they transition from an educational environment into the reality of the hospital workplace (Fink, Krugman, Casey, & Goode 2008). Beecroft, Dorey, and Wenten (2008) discovered generational differences between graduates, noting that the older graduate was more likely to leave if they were not assigned to their ward of choice, whereas the younger graduate was more likely to resign due to the shock of adjusting to their first employment position and not receiving the necessary social support to assist this transition.

2.11 Queensland's future

Between 2011 and 2026 Queensland's population is predicted to increase by 32.1 per cent to a total population of 6.1 million (Queensland Health, 2011). The majority of this growth will happen in south-east and coastal Queensland. Queensland Health predicts the age structure of the population will change over the next 15 years with persons aged 65 years or over to increase by 83 per cent to 1.1 million and individuals aged 85 years or more to increase by 92 per cent to 153,000. While the increase of people over 65 years may be seen to be a sign of the success of the health system, the amount of increase presents a challenge to the health system's sustainability. Additionally, Indigenous people make up 3.5% of Queensland's population with higher birth and death rates than the rest of the state, yet represent only 0.6% of nurses (AIHW, 2011).

Queensland Health anticipates the growth of the workforce will slow because of the ageing population and reduced birth rates. They also estimate most workers will change careers at least seven times during their lives. Queensland Health (2002) recognises the declining workforce growth as one of the greatest challenges, which means that by 2021 there will be fewer nurses to care for more people, chronic conditions will increase, and aged care services will need to be reassessed.

New treatments and technological advances will also likely change the roles of hospitals and their staff. Fifty per cent of procedures are done by day surgery; people expect better healthcare and are less tolerant of errors and waiting lists (Queensland Health, 2002). Costs of healthcare will rise due to medical advances, public expectations and the ageing population. However, Queensland Health (2002) advises the ageing population will not place as much pressure on the health system as technological and medical advances and increased patient demands.

The shortage of nurses has several impacts on the Australian Healthcare system, encompassing (a) a lack of skilled and experienced nurses, (b) increased risk of error resulting in rises in the number of errors and a reduction in patient safety and quality of care, and (c) budget blow-outs as agency nurses are used to

cover roster gaps (Morphet, McKenna, & Considine, 2007). Segal and Bolton (2009) advise that in Australia the healthcare labour market is impacted by a broad range of issues with two sides: demand and supply. On the demand side, levels of income are rising, new technologies are emerging, disease profiles are transforming, priorities for public health are changing and chronic disease prevention is in the spotlight. Affecting the supply side are national policy directions (for example, education funding and training places) and local policies (for example, retention). In the last four years the healthcare profession in Australia has increased more than Australia's overall workforce growth, regardless of the ageing population (Segal & Bolton).

2.12 So why is the nurse shortage occurring?

Since nursing's infancy, finding sufficient properly qualified nurses has always been a struggle (Ledgister, 2003). Buchan (2001a) advises traditionally nurse shortages occur in a cycle. However, this time the situation is more serious. Not only is supply growing more slowly than demand, but countries such as the US, the UK, Ireland, Canada, and Australia have an ageing nurse workforce caring for an ageing population and a reduced number of nurses entering the profession. Erlen (2001) expressed concern that many past solutions may not work with this current shortage.

The shortage of nurses is also attributed to several factors that create unnecessary turnover. Researchers have identified differing causes yet with similar continuous themes. Albion, Fogarty, Machin, and Patrick (2008) discovered that psychological aspects such as mood, stress and fatigue can cause psychological reactions which may result in turnover. Further, their research considered the role of psychological states as it mediated the impact of organisational factors on absenteeism and turnover. Lim, Bogossian, and Ahern (2010) identified stressors on nurses' health and well-being as work overload, role conflicts, and experiences of aggression. Ledgister (2003) found poor working conditions including increased workloads, long and unsociable hours, low wages and poor work environment are several areas within the workplace that impact on nurse turnover. The image of nursing has been disadvantaged and society holds

an erroneous view of the nurse's role and responsibilities (Ledgister). Morris-Thompson, Shepherd, Plata and Marks-Maran (2011) researched the impact of the image of nursing and found the media plays a pivotal role in how the public perceive nurses, and either ignore the healthcare contribution made by nurses, or else represent nursing in an unrealistic or unfavourable light. Further, they found that the nurse's self-image is influenced by the public image of nursing and appears to impact nurse recruitment. Overall, it has been suggested that authorities have never considered or treated the underlying causes of the nurse shortage; rather they have tended symptoms resulting in short-lived or ineffective solutions (Ledgister).

Simoens et al. (2005) suggests that decision-makers and management should focus on education, recruitment, remuneration, and policies on work conditions to ensure sufficient nurse supply. Many valid reasons are presented as to why there is a shortage. All suggestions play some part in this shortage and warrant further investigation.

2.12.1 Nurse turnover

A US study by Peter D. Hart Research Associates (2001) advised that other than retirement, the main reason 56% of nurses leave patient care is to seek a job with less stress and lower physical demand. The study found other reasons for leaving included more regular shifts elsewhere (22%), higher pay (18%), and better opportunity for advancement (14%). Some nurses cited personal reasons including spousal movement or family responsibilities, such as pregnancy or moving to allow children to access better education. While some turnover of current nurses is due to personal reasons and can never be completely avoided, the greatest percentage of nurse turnover is due to the dissatisfaction of the nurses with their work environment.

A survey of Australian nurses undertaken by Forsyth and McKenzie (2006) indicated three themes in nurse discontent: the conflict between the expectations of nurse manager and the nurses themselves, the inability to provide in-depth and high quality nursing care, and nurse disillusionment. Duffield, Roche, Blay, and Stasa (2010) found a negative nursing environment will lead to

disillusionment. High nurse turnover, as well as impacting patient outcomes by reducing continuity of care and being costly to the organisation, causes the remaining nurses extra stress by requiring them to cover vacant shifts, and train and induct new staff (Erenstein & McCaffrey, 2007).

Nurses, too, hold to the perception that the quality of nursing care has declined and 50% surveyed were less happy in their positions (Foley, 2001). Yet, even though the nurses expressed dissatisfaction they continued to put their patients first. Sixty percent indicated they skipped breaks to provide care for patients, 55% felt increased pressure when doing their job, and 44% were pressured to work voluntary overtime. Management's failure to listen or reply to nurses' concerns was one of the main causes of voluntary turnover (Cline, Reilly, & Moore, 2003). Duffield et al. (2010) believes that nurse leaders are vital to maintaining a positive work environment and nurse retention. Upenieks (2003) advises a positive work environment and hospital culture do not naturally occur. A positive work environment needs to be developed and maintained by strong nurse leaders (Cohen, Stuenkel, & Nguyen, 2009).

Lafer (2005) found there are a large number of nurses choosing not to work in the healthcare industry. In the US in 2008, the "National Sample Survey of Registered Nurses" (NSSRN) revealed that 15.2% (466, 564) of nurses licensed to nurse were not actively working in nursing (Human Resources and Service Administration, 2010). In Australia in 2009, 13.8% (44,296) of registered and enrolled nurses were not working in nursing (AIHW, 2010). Duffield and O'Brien-Pallas (2002) argue changes to nurse education, workplace occurrences, and the level of wages nurses receive were impacting on the supply of nurses in Australia. Further, they imply that adding these impacts to the other aspects in healthcare, such as the increased degree of illness experienced by patients, limited resources, technological advances, and the rising expectations of patients has created work environments for nurses that are complex, challenging and emotionally draining.

2.12.2 The ageing of the population and of nurses

Many developed countries, including Australia, are facing an ageing population of "baby boomers". With fewer children being born per couple and the current population living longer with the potential for increased co-morbidity and more prolonged treatments, Neisner and Raymond (2002) identify that these factors will place greater demands on the nurses' time and require increased expertise in the management of chronic illnesses.

Another complicating factor is the increase in the average age of registered nurses. Janiszewski Goodin (2003) suggests the ageing US registered nursing workforce will leave the profession at a very fast rate at a time when the demand for nurses will be high. The average age of a nurse within the next ten years will be 45.4 years, with greater than 40% over 50 years of age.

2.12.3 Education capabilities

The ageing population impacts on the nation's supply of nursing educators with a large portion retiring, leaving fewer educators to train tomorrow's students (Janiszewski Goodin, 2003). Janiszewski Goodin (2003) suggests that unrealistic expectations on educators, uncompetitive salaries, and little support will hinder both recruitment and retention of this group of valuable pedagogists.

The large proliferation of career choices now available to young females (who constitute more than 90% of the nursing workforce) impact on student nurse enrolment numbers (Buchan, 2001a; Janiszewski Goodin, 2003). In Australia, enrolments are increasing but many suitable applicants are being turned away because of insufficient places, due in turn, to the lack of resources and insufficient faculty to teach (DEST, 2002). Kearney and Thomas (2010), in a submission from the Australian Nursing Federation to the Government, highlighted that the nursing shortage experienced in Australia has been exacerbated by insufficient funding. This lack of funding has caused universities to either cap student places or not fill allocated places due to insufficient funding of the clinical component of the degree.

2.12.4 International and internal migration

International recruitment and migration of nurses is increasing significantly and has become a global issue since the late 1990s. Oulton (2004) indicated more than a quarter of the current nursing workforce within Australia, Canada, the UK, and the US is made up of international migrants. Buchan, Kingma, and Lorenzo (2005) express concern nurse migration has the ability to undermine attempts to improve healthcare in some developing countries. Issues encompassing (a) individual rights and choices, (b) attitudes towards career development, (c) individual country's differences in the image and status of nurses, (d) the government's approach to handling the outflow or inflow of nurses, and (e) the intermediary role of recruitment agencies, have combined to make international mobility, recruitment and migration extremely complicated. Additionally, migration is not just flowing in one direction; nurses may migrate to one country and then return home or move on to a third, however, there is currently no common data collection method to track or monitor migration (Buchan et al., 2005).

The standards and qualifications, including language proficiency, required by a nurse to practise in other countries vary and may present a barrier to migration (Buchan et al., 2005). Additional training or supervision may be required before the nurse can work independently, as is the case in the UK and Ireland. Visa restrictions or other regulations may impact on the ease of migration (Buchan et al., 2005).

Buchan, Parkin, and Sochalski (2003) talk about push and pull factors in relation to reasons for nurse migration. The push factors are factors that drive a nurse to want to leave a country and go to another. Sigma Theta Tau International (2005) indicated these factors include: (a) economic factors (low wages), (b) institutional factors (lack of proper work facilities and equipment), (c) professional factors (limited career opportunities, lack of professional development, lack of input into decision-making and lack of supervisor support), and (d) political factors (socio-political instability). In South Africa there are also the additional push factors of increasing crime and violence rates and the

escalation of HIV (Buchan et al., 2003). Pull factors are the attraction that draws a nurse to a different country. These factors include (a) the opportunity to travel or to assist in aid work (Buchan et al.), (b) the opportunity for professional development and further learning, (b) improved quality of life, (c) personal safety, and (d) better wages (Simoens et al., 2005). Spry (2009) claims the attraction for nurses to work in the US is mainly due to higher wages, the prospect of a better quality of life, and the opportunity to send money home to support their families. However, adjusting to the language, culture, technology, and terminology can make fitting in difficult (Spry). In addition, the foreign nurse may experience emotions such as isolation, loneliness and the experience of not being accepted by others. Spry believes of all these, communication is one of the biggest hurdles for overseas-trained nurses.

According to Sigma Theta Tau International (2005) different countries experience different effects from the push-pull of international migration, both positive and negative. For countries with a high supply of nurses, Buchan et al. (2003) suggest this may be used as an economic advantage of remittance income, as a way of dealing with an over-supply of nurses or as a method of promoting the short-term outflow as a way of enhancing the country's skills base in the long-term. Most source countries perceive an outflow as a negative experience, with the "brain drain" of qualified nurses and future teachers (Kline, 2003). In an attempt to reduce this outflow, some countries have employed a policy of "bonding" for a set period after training or seeking a fee from either the nurse or the destination country. These schemes require compliance and there is little evidence of past effectiveness (Buchan et al.). This scheme also fails to address push factors which instigated the desire to leave in the first place and clashes with the idea of the nurse's free choice to leave. Buchan (2001b) suggests importing "ready-made" nurses is only a cheap "quick fix" process undertaken by politicians in the face of political pressure. Further, Buchan deems the actual migration of nurses is a symptom of deeper problems within the country caused by an under-investment in the nursing profession and its structure. However, Brush, Sochalski, and Berger (2004) warn that importing nurses is most likely to

continue as a "viable and lucrative strategy for plugging holes in the US nurse workforce" (p. 78).

The UK has a high level of international recruitment with recruitment agreements existing with the governments in Spain, India and the Philippines. Other source countries used by the UK include South Africa, Australia, India and Zimbabwe.

The US is experiencing a significant shortage of nurses. Previously it has selectively used foreign recruitment to fill gaps in nursing and as yet there is no increase in international recruitment, with most nurses coming from Canada or the Philippines (Buchan et al., 2003). The American Nurses Association (ANA) opposes any easing of the laws allowing foreign educated nurses into the USA. They consider using foreign nurses is only in the hospital's interest and not those of the patient, the home-grown nurse or the foreign nurse, arguing that importing nurses does not address the cause of the instability in nursing (Buchan et al., 2003).

Historically in Australia, registration of nurses was the responsibility of individual states. On 1 July 2010 the National Registration and Accreditation Scheme (NRAS) commenced (Department of Health and Ageing, 2012). This scheme aimed to protect individuals by ensuring that registered practitioners were qualified, allowing the practitioners to work anywhere in Australia and promoting a flexible and sustainable health workforce. To work as a nurse in Australia, international applicants first need to be assessed by the Australian Health Practitioner Regulation Agency (AHPRA; NMBA, 2010). AHPRA is responsible for the assessment of the skills of registered nurses and registered midwives who wish to migrate to Australia through Australia's General Skilled Migration Program. This assessment necessitates applicants meet 5 criteria. Firstly, the applicant must establish their identity (Criterion 1). Once their identity is proven, the applicant must meet the English Language Proficiency requirements for nursing (Criterion 2). Criterion 3 requires that the internationally qualified nurse or midwife meet the educational standard set for Australian qualified registered nurses and midwives (NMBA). To meet Criterion 4 the applicant needs to provide evidence of practising as a registered nurse, or midwife, in the five years

preceding their application. And finally, Criterion 5 entails the applicant demonstrate that they are fit to practise nursing and/or midwifery in Australia. Applicants will not be given registration or provisional registration by the Australian Health Practitioner Regulation Agency, under the guidance of the NMBA, until all criteria are met.

The Nursing and Midwifery Workforce 2011 Report (AIHW, 2012a) revealed that the number of nurses and midwives registered in Australia rose 6.8% from 2007 to 2011, however, nursing and midwifery supply decreased 1.3% during the same period. The Australian Nursing and Midwifery Council (ANMC) acknowledged workforce planning aims to meet Australia's needs while keeping in mind cultural diversity and support for the ICN's guidelines on ethical recruitment (Buchan et al., 2003). The ANMC also supports the individual's choice to migrate and recognises the career benefits to both the individual, and the country, when the nurse returns. However, it condemns recruitment that exploits or misleads, and supports only recruitment that is based on informed decision-making and that which is fair and cost-effective (Buchan et al., 2003). In 2002, the number of Australian nurses working overseas was approximately 4,200 (Duffield & O'Brien-Pallas, 2002), however recent data (AIHW, 2012a) shows that this number has significantly increased to 10,166 nurses in 2011.

2.12.5 Image and public perception of nursing

In the US, the nursing profession topped the Morgan Gallop Poll as the most trusted profession (Conrick et al., 2007). Nurses work to empower consumers - a necessity of their chosen career - which requires displaying their experience and expertise. Conrick et al. (2007) highlights that nurses are front and centre when it comes to integrating the government's policies to accomplish healthy communities and a sustainable health system by encouraging healthier lifestyles.

Nevidjon and Erickson (2001) found the public has a high opinion of the nursing profession, ranking them above doctors and other health staff. They challenge, however, that when the community hear media reports about the staff shortages, excessive workload and distress experienced by nurses, as well as nurse

errors which have injured or killed, this may lead them to perceive hospitals as unsafe and the nursing profession as unstable, unpredictable and a high risk. Seago (2006) found college students believed that a career in nursing had (a) good income potential, (b) offered job security, (c) would be an interesting occupation and (d) may make a difference in somebody's life. However, results also showed that nursing had a negative image in relation to the perception of prestige, and a lesser chance of working autonomously when compared with other occupations. Further, nursing was perceived as having higher on-the-job pressure and a greater risk of injury. Conrick et al. (2007) considers it curious to see how members of parliament depend on nurses to implement and support their health policies and yet fail to develop policies to support nursing and remove regulations that impede the nursing profession. Further, while many countries are changing focus from cure to prevention in an effort to reduce demand for service, health promotion and prevention programs are not free, whereas diseases/illness treatment is without cost to the individual, therein sending a contradictory message regarding healthcare.

2.12.6 Other factors

There are many other factors that impact on the nurses and their work environments. These factors include, but are not limited to, (a) increased workplace litigation, (b) violence in the workplace, (c) work in remote Indigenous communities, (d) the choice to work as a casual and (e) their work-life balance.

Kimball and O'Neill (2002) believe increased patient empowerment has raised awareness of medical errors, leading to a vigilant community that has become involved in their own care. As members of the public gain awareness, they have become more demanding of the latest treatments. The rise in expectations of patients has also led to an increase in legal action when those expectations are not met (DEST, 2002).

Violence is an unfortunate fact in today's nursing environment (Roche, Diers, Duffield, & Catling-Paull, 2010). Roche et al. (2010) found that just the perception of violence was related to adverse patient outcomes. Their survey, conducted in 21 hospitals within two states of Australia, revealed 80% of nurses

perceived the occurrence of emotional abuse over their last five shifts. Further, reports of threats (14%) or actual violence (20%) were lower; however the variation between units was very great with some units reporting rates as high as 65%. Nurses also experience verbal abuse and harassment from other nurses, doctors, patients and their families (Duffield & O'Brien-Pallas, 2003).

In addition to increased patient expectations and workplace violence, Australia has vast rural and remote areas where health professionals are scarce and yet this is where they are desperately needed (Senate Community Affairs Committee, 2001). Two thirds of the Indigenous population of Australia live outside capital cities with one in every five residing in remote areas.

The DEST (2002) report found the way nurses work and the type of work done is changing. The proportion of casual employees increased from 19% in 1988 to 27% in 1998 and other work modes such as seasonal work are also increasing. While this is similar in some ways to part-time workers, casuals are paid at higher rates and are not eligible for benefits such as sick leave. Most casuals are employed through agencies and do only the hours they require. This occurrence affects the hospital's ability to meet the necessary level of healthcare, and needs to be considered separately from part-time employment and part-time employees.

According to DEST (2002) there is an expectation a balance should exist between an individual's work life, and their family and social life. If this balance is not present, it can result in stress and affect the health and safety of both the nurse and their patients.

2.13 Chapter summary

Whether viewed as the backbone of the health care system (Ulrich & Zeitzer, 2009) or the patients' advocate and final defence (Gordon, 2007), nurses are an essential part of healthcare. This chapter has highlighted the worldwide importance of the nurse to the health of the patient, the community and the organisation for which they work. Research has revealed that higher registered nurse numbers result in better patient outcomes and a reduction in adverse events, especially mortality.

The role of the nurse is extremely complex and diverse. To clarify the role of a nurse two definitions were considered; Henderson's 1966 definition and the 2002 definition developed by the ICN. Henderson's definition focused on the nurse assisting the individual to regain health and independence. This definition was primarily dedicated to patient care. While encompassing care of individual, whether sick or well, the ICN's definition included research, policy participation and nurse education. The latter definition, while broader, lacked the personal touch that a nurse provides to patients. Thus, it was recommended that nurses draw from both definitions when characterising their role. While this dissertation acknowledged the different types of nurses, its main focus was on registered nurses.

Today's world is ever-changing, with vast differences between countries. In developed countries there are major advances in well-being and in poorer countries there exists extreme deprivation. Society is changing too. Patients now present with multifaceted and complex symptoms and multiple illnesses which require extensive management. Costs of maintaining health systems have increased. Governments and hospitals are confronted by economic and political urgencies which impact the availability and access of health resources. WHO considers that countries worldwide need to work together, not only to prevent disease, but to promote better health outcomes. Further, the research presented indicated that sufficient numbers of properly trained nurses are crucial to any healthcare reform aimed at improving quality, safety and care.

This chapter explored imbalances that exist within the health workforce. A major concern of any imbalance was applicant quality. This concern emanated from the fear that tight labour markets would force selection of an applicant not right for the position, but the most suitable from the applicant pool in that market. While several imbalances were discussed, the imbalance most applicable to Australia, and especially Queensland, was geographical imbalance. This imbalance was most notable in the difficulty of retaining healthcare professionals in rural and remote areas.

Developed countries such as Canada, the US, the UK and Australia are faced with an ageing population. The life expectancy of an individual has

increased and so also has the demand for nurses. It is important to note that nurses are part of this ageing population and policy needs to address this ageing in any successful retention strategies.

Healthcare costs are increasing. In 1997-98 financial year, the Australian government spent 8.3% of GDP (\$47 billion) on the healthcare system. In 2005-06 financial year, 9.0% of GDP (\$87 billion) was expended on healthcare. Providing health services over such a wide spread country presents a major challenge. Insufficient nurses in hospitals and the uneven spread of services across this country are compounded by the explosion in medical knowledge, new medicines and advances in technology that increase the need for extra nurses. Queensland Health has acknowledged their declining workforce as one of the greatest challenges for the future.

This chapter considered why the nurse workforce had declined and explored factors that contribute to the unnecessary turnover. The public image of nurses was considered unrealistic and unfavourable and impacted on future nurse recruitment. Research revealed that the greatest percentage of nurse turnover was due to dissatisfaction with their working environment. Organisational factors including work overload, role conflict and poor work environment were highlighted as contributing to both absenteeism and turnover. Leadership was also important in nurse retention. Research found that a negative work environment would lead to nurse disillusionment and turnover. It was discovered that nurse leaders are vital in achieving and maintaining a positive work environment.

The shortage of nurse faculty has impacted the nurse shortage by reducing the nation's capability to educate nurses. With a large proportion of educators retiring, there are fewer to train tomorrow's students. Australia is also faced with insufficient university funding, with universities capping student places or not having the sufficient resources for students. The shortage of nurses is also impacting on the availability of clinical placements for students with insufficient nurses available to supervise these placements.

International recruitment has served to support nurse numbers in many developed countries with the US reporting foreign nurses make up 17% of the

profession and Australia indicating that approximately 18% of nurses were foreign trained. International recruitment presents ethical issues such as “brain drain” from developing countries. This chapter considered the push and pull factors for nurse migration. It reflected the impact on foreign nurses from adjusting to culture, language, and technology differences which in some cases lead to experiences of isolation, loneliness and unacceptance. While importing nurses is a quick fix, Buchan (2001b) believed that nurse migration is a sign of deeper problems within a country. However in a nurse shortage, international recruitment will continue as a viable strategy for plugging the leak.

Other factors that impact nurse turnover include the increasing level of violence that nurses experience in their workplace. Research showed that 80% of nurses experienced emotional abuse over their last five shifts. This abuse may come from other nurses, doctors, patients and their families.

Strategies to address the nurse shortage and the factors which impact on recruitment and retention will be discussed in Chapter Three. The impact of stakeholders and policy will also be covered.

CHAPTER 3 PROBLEMS AND SOLUTIONS TO THE NURSE SHORTAGE

Currently, shortages exist within the health workforce worldwide, however these shortages are not spread evenly (National Health Workforce Taskforce [NHWT], 2009). They vary by profession, specialty, jurisdiction and location (for example, urban, rural, and remote). Globally it is estimated that there is an absolute shortage of 2.3 million doctors, nurses and midwives across 57 countries. Both the current and the projected health workforce shortage within Australia are driven by a complex interaction of demographic, socio-cultural, clinical and professional factors influence both the demand for health workers' services, and the supply of these workers (NHWT, 2009). Nurses make up more than 50% of the healthcare workforce and there are few professions other than nursing that are continually responsible for the lives and well-being of others on a daily basis (Cullen, 1995). Norris (2003) suggests that not just one factor (for example, low pay) is responsible for the shortage, but rather it is the existence of a complicated web of dysfunction. Buchan and Aiken (2008) suggest that it may not be a shortage of persons with nursing qualification, but a shortage of nurses prepared to work under the current conditions.

Recently numerous strategies and initiatives have been applied to address the shortages and their effect upon the delivery of healthcare services. The strategies taken thus far have limited focus due to the multifaceted factors behind the shortage and its variability (NHWT, 2009). Buchan and Aiken (2008) suggest the main causes of the shortage involve (a) inadequate workforce planning and allocation controls, (b) resource constrained undersupply of new nurses, (c) ineffective recruitment, retention and return policies, (d) ineffective utilisation of available nursing resources through unsuitable use and skill mix, (e) insufficient and inequitable incentives, and (f) scant career support. The NHWT (2009) believe that a coordinated and multi-dimensional approach is required to address these shortages; an approach that not only increases supply of workers and manages and/or reduces demand, but one that focuses on the workforce's structure, composition and training.

Labour shortages in professions other than nursing are mostly linked to a lack of qualified applicants. Goldfarb, Goldfarb, and Long (2008) believe that nursing differs from other professions. Specifically, shortages within other professions are short-lived with supply catching up with demand when potential applicants receive notification of incentives offered, then equilibrium within the market is achieved. This is not the case for nursing (Aiken, 2007). Nursing schools are turning away potential students due to lack of/limited nurse faculty, placements and resources.

Aiken et al. (2001) maintain nurses in many developed countries are short-staffed, overworked (including working overtime and double shifts) and face increased patient loads resulting in workplace dissatisfaction, low morale and emotional exhaustion. This in turn impacts on patients' quality of care and their final outcome. Consumer polls show the public is also dissatisfied with hospital care. This chapter will clarify these issues and investigate solutions to counteract these contributory factors. It will highlight the importance of retaining nurses which will lead to the focus of this dissertation – to look at organisational health and factors which impact on the climate within healthcare so that organisations are able to address these contributing factors and reduce dysfunctional turnover.

3.1 An exploration of specific factors contributing to the shortage

Fox and Abrahamson (2009) believe multiple factors contribute to the shortage as identified in the previous chapter. The demographic aspect such as the ageing of the population, including nurses as part of that population, has an impact. The demographic factors of the population imbalance of 77 million baby-boomers to 44 million generation X's creates an impact; as baby-boomers age, their demands on the healthcare system increase. Approximately half of the registered nurses in the US were over 50 years by 2010; retirees will not be replaced with sufficient numbers of newly trained younger nurses (Fox & Abrahamson).

The limited ability to educate nurses is a factor of the shortage. In the 2005-06 academic year in the US, 41,683 qualified applicants were turned away with more than 74% of schools citing lack of faculty as the primary reason (Fang,

Wilsey-Wisniewski, & Bednash, 2006). Barnett et al. (2008) identified that any growth in student numbers in Australia was also limited by the number of clinical placements available to students to gain clinical experience. This shortage of placements was due to aspects of the hospital's operating environment such as bed capacity, staffing mix and limited number of experienced clinicians to act as preceptors, clinical teachers, mentors, or role models. These later factors not only limit the number of clinical placements but also impact on the quality and level of educational support that can be provided. This situation is even more profound in rural hospitals where the chance for placements can be also overlooked or used in an ineffective manner (Barnett et al.) A lack of university places for student nurses, limited resources and increased diversity of career options suggests that the current educational system is contributing to the nursing shortage (Fox & Abrahamson, 2009).

Nurse turnover and its antecedents are factors in the nurse shortage. Hospital nurse turnover is costly in relation to the economics and quality of care and adds to the decrease in hospital-based nursing care (Goldfarb et al., 2006). Fox and Abrahamson (2009) advise that nursing is stressful and they could not name another profession that does not sufficiently compensate its members for the stress experienced while carrying out their duties. Elgie (2007) advises nurses who leave the profession blame poor work environment combined with poor compensation as the main motivator for leaving nursing. According to Fox and Abrahamson the impact of shift work on family life and schedules causes many nurses to move from the hospital setting. The constant introduction of new technologies which require restructuring of tasks and the integration into the daily workload add to the stress. Kirchbaum et al. (2007) call this complexity compression – the experience when the nurse is required to assume additional responsibilities while continually maintaining their normal duties within a condensed time frame. As if all this stress is insufficient, the healthcare system within the US has a climate which blames individuals for errors instead of putting the onus on the system or the organisation. Not only do nurses have the stress of their duties, but they are faced with the additional stress that if they make an error, punitive action may be brought against them. Fox and Abrahamson discovered

that the majority of healthcare staff, (including nurses, doctors, and administrators) assigned responsibility of patient safety to nurses. This means that nurses are accountable for the safety of the patient without adequate decision-making authority or equitable wages.

Short-sighted solutions have been continually used to increase nurse numbers; however, these solutions have failed in the long-term. If the shortage is to be addressed, Buchan and Aiken (2008) believe policy makers need to address both supply and demand issues by developing policies that offer long-term and sustainable solutions to this detrimental healthcare shortage.

3.2 Retention difficulties

While there are many suggested areas of focus for the nursing shortage, retention is crucial to resolving the crisis. Concerns regarding the turnover of registered nurses rise during nurse shortages (Jones, 2007). Retaining existing staff: (a) reduces costs (including hiring, training and productivity costs); (b) maintains valuable knowledge (knowledge and training gained by the employee whilst doing their job); (c) avoids the negative impact employee turnover has on other staff, for example, the negative feelings held by others due to staff leaving and extra work carried out by those filling the void; and (d) maintains continuity and quality of patient care. Aiken et al. (2001) found dissatisfaction with their work environment is highly related to a nurse's intention to leave nursing. Further, their study showed that 41% of nurses were presently dissatisfied with their work, 43% received high burnout scores, and separately 22% planned to leave within the next year. Those who chose to leave nursing create turnover, and turnover costs erode efforts to implement organisational efficiency and improve financial health (Jones, 2007). The estimated cost to replace a registered nurse is 1.2 to 1.3 times a nurse's annual salary ranging between \$US40,000 to \$US65,000 (Kovner, Brewer, Greene, & Fairchild, 2009). Contino (2002) advises these costs include separation costs, temporary replacement costs, advertising and recruiting costs and training costs for the new employee. Further Kovner and colleagues (2009) found the average cost to replace a specialty area nurse is significantly more than for a general nurse.

Staff morale is also impacted by high turnover. Decreased productivity and process errors are difficult to estimate. Zurn et al. (2004) consider turnover rates are a challenge for hospitals and can indicate retention difficulties. Retention of professional nursing staff is essential to the delivery of high quality care (Cohen et al., 2009). Force (2005) found retention of competent, qualified nurses is strongly linked to a healthy work environment. Further, an unhealthy work environment causes disillusionment among nurses (Lynn & Redman, 2005). Money was not listed as the main cause of disillusionment, however surveys indicated that higher wages may increase retention (Zurn et al.). Rossman (2011) advises increasing nurses' pay and adding financial incentives will alleviate the nurse shortage. A study conducted in the US by the Institute for Women's Policy Research (Lovell, 2006) indicated that raising nurses' pay directly led to increased demand for nursing positions at the hospitals studied. Further, they believe that nurses' wages are not yet at a sufficient level to promote greater demand for nursing positions and alleviate the shortage. In reviews of research on nurse shortages, retention and turnover, pay is often considered a main factor. In fact, low pay is considered a major source of nurse dissatisfaction (Dockery, 2004; North & Buchan, 2009).

Duffield, O'Brien Pallas, and Aitken (2004) surveyed nurses who work outside nursing, seeking the reasons they chose a nursing career and the reasons they left. They found three main reasons for persons entering nursing: (a) selfless pursuits, such as a yearning to work with and help people, holding that nursing is a good profession and having a passion from childhood to be a nurse; (b) an easy option, for example, they knew nursing positions would be available, job security was assured, and they had the necessary grades to enter university; and (c) as a pathway to something better, the desire to have a job with which they could travel and which may lead to a better position in the future. The authors suggest those who chose nursing based on an altruistic basis were more likely to stay in the career than those who chose nursing as a pathway or secure choice.

Research by Duffield et al. (2004) identified five main themes for nurses leaving nursing: (a) legislative and workplace issues (36% of variance of reasons for leaving); (b) nurses' values and the image they hold of nursing (adding an

additional 6.1% to the variance); (c) the ability to practise work as a professional (an additional 5.7% of variance); (d) work/home life balance (4.4%); and (e) work contract requirements (3.4%). The legislative and workplace issues include factors such as legal responsibility, escalating patient expectations, personal liability, safety at work, working within one's competency level, abuse and torment in the workplace, support for self-development, support for education and training, job security, and interaction and support amongst both work colleagues and management. Nurses' values and the image they hold of nursing involve the negative image of nursing portrayed by the media and held by the greater community, how they are treated by other professionals (especially doctors), their opportunities for promotion, and their salary levels. Their ability to be considered a professional and practise as such incorporates their competency to provide quality care, autonomy, use of skills and unpaid overtime. Childcare expenses, availability of job sharing, double shifts, rotating rosters and shiftwork combine to impact on the balance between work and home life. Work contract requirements comprise restriction to accessing recreation leave, the expectation of faster turnover of patients, restrictions on communication with media and public in general and short-term contracts. Duffield et al. found that when nurses' ability to practise their profession was rated highly, nurses were more likely to stay in nursing longer, and when work/home life balance was not stable, they were more likely to leave earlier.

3.3 Overall solutions/strategies to the nurse shortage

The nurse shortage is complex. Several areas need to be addressed as part of a complete solution. Important areas include policy, government, image, increased nursing faculty, increased nurse enrolments, diverse recruitment, employment of temporary nurses and organisational characteristics, to name just a few. These and others will be addressed in the following sections.

3.3.1 Policy and government

Buchan and Aiken (2008) state that there is no one "magic bullet" to solve a nursing shortage, however, evidence indicates there is a core set of issues that policy writers should address to make the best impact of any intervention on the

shortage. The effectiveness of any human resource policy intervention is based on two key aspects, firstly contingency (the policy must fit the organisation's characteristics, context and priorities where applied) and secondly 'bundles' (groups of linked or coordinated interventions will be more likely to attain sustained improvement than a single or uncoordinated improvement attempt, Buchan & Aiken). According to Buchan (2009) policy makers in the UK focused on five options to increase the supply of nurses, (a) development of their own workforce by increasing funding for nurse education, (b) improvement of retention of the current workforce, (c) draw back qualified nurses not currently working, (d) recruit international nurses, and (e) improve current productivity to reduce the need for extra staff. They found that new entrants to nursing programs displayed an upward trend from the late 1990s; however this was insufficient to meet the required demand. To retain nurses the NHS policy focused on providing flexible hours, improved access to education, a new pay system and career structure, however annual data provides no evidence of any significant improvement in turnover.

Dragon (2009) reported that the Council of Australian Governments (COAG) invested \$64.4 billion into health over four years, with \$1.6 billion to train more nurses and other health professionals with a commitment to subsidise clinical training. They also set aside \$28 million to be focused on training clinical supervisors including 18,000 nurses to support new students. This was reported as the single biggest investment in the healthcare workforce ever made by the Australian Government. Nursing and medical organisations have welcomed this investment. While advising that it was long overdue, they believe it to be only an initial, but crucial step in addressing the nursing shortage. Simoens et al. (2005) suggest that a mixture of policies that initiate innovative approaches to the education of nurses provide robust incentives to nurse recruitment, increase productivity, and offer attractive pay and work conditions will retain nurses. Fox and Abrahamson (2009) suggest that policy places a financial value on the quality of nursing care and policy writers need to consider the measurement and compensation for quality care, the nature of nurse recruitment efforts and the complexity of the work carried out by nurses.

3.3.2 The image or perception of nursing

The role of a nurse has changed radically over the last half century with new technology developments, changing community demographics, and the move to university education. Unfortunately the perception of nursing held by the public has not kept pace with the reality (DEST, 2002). These out-dated images, stereotypes and perceptions all have an impact on recruitment and retention of nurses, not only in Australia, but worldwide. Morris-Thompson et al. (2011) explored the perception that both nurses and the public hold of nursing. Within the nurse responses they found three main themes: diversity, fulfilment and privilege. The diversity displayed nursing as having unique characteristics with a large option of what a nurse could actually do. It was presented that no two days, weeks or careers were ever the same (Morris-Thompson et al.). Privilege was used by nurses to describe how they felt about their job, especially the ability to be present at the happiest and saddest moments of human life. Privilege also included how vital the nurses felt to the provision of healthcare, always present with the patient, and the primary human contact, not only for the patient, but for their family and other clients. Thirdly, the nurses felt fulfilment as a benefit of their position. They derived fulfilment from their jobs conveyed as passion and commitment, autonomy and responsibility and people skills experienced and used each moment, each day and throughout their entire career. However, the image held by the public was vastly different. Morris-Thompson and colleagues discovered that there were large areas of ignorance and misinformation about nursing. The public's perception of nursing was mostly formed on myths and the media. For example, the public was unaware of the reality of nursing in relation to income, the nature of the work, the level of decision-making capability and the opportunities for promotion. Further, the nurses were critically aware of the public's unrealistic image of nursing. Takase, Maude, and Manias (2006) conducted research on the impact of perceived public image of nursing on nurses' performance and turnover and found a strong connection to both work performance and turnover. They highlight the importance of improving both public image and self-image in order to enhance performance and lower turnover.

The research conducted by Seago (2006) found that over 3,250 college students in California perceived nursing as having good income potential, job security interesting work and may make a difference in another's life. However, the students also believed that nursing had a negative image when considering job prestige and a limited opportunity for independent work when compared with other occupations. Noteworthy was the belief that the job of a nurse was high pressured with a relatively strong chance of injury (Seago, 2006). Use of the media should be considered in an effort to attract individuals towards considering nursing as a career. In the US, media campaigns such as the Johnson & Johnson campaign used advertising to enhance nursing in the eyes of both children and adults, thereby improving the status of the nurse in society (Janiszewski Goodin, 2003). While nursing continues to top the list in most countries as the most trusted profession, it appears to have lost its desirability as a profession, especially for younger people (Drury et al., 2009).

More research needs to be conducted to establish what is needed to make nursing a career of choice for students. Nevidjon and Erickson (2001) considered that nursing as a career should be promoted at primary school because children have generally decided what they consider as desirable and non-desirable careers by the time they reach fifth grade. Awareness of the advantages and opportunities of nursing needs to be shared with students at primary schools levels. Early exposure to the facts about a career in nursing will persuade more young people to choose it as their career (Janiszewski Goodin, 2003). Marketing strategies and programs that promote nursing as an attractive career to both males and females need to be employed (Drury et al., 2009). Recruitment campaigns need to include information to re-educate the public about nursing and the advantages of a nursing career (Morris-Thompson et al., 2011). Also, any new efforts to change the community's image of nursing will need to be evaluated for effectiveness. The media is a great instrument of communication. It has the ability to shape the public's perception; however, the task is to promote positive and current images of nursing to those who create the media (DEST, 2002). This will only eventuate if nurses, themselves, champion their profession and take every opportunity to live and speak the image to both media and community.

3.3.3 Recruit nurse faculty

The simplest method of rectifying the nurse shortage is to recruit more nurses. However, research suggests that there are several barriers that need to be addressed. One major barrier to producing more nurses worldwide is the limited availability of educational infrastructure, most importantly, nurse faculty (Duval, & Randell Andrews, 2010). Not only does the scarcity of doctoral level nurses reduce the capacity to educate the new nurses, but it reduces the ability of nursing to generate the scientific knowledge base to improve healthcare, and the leadership to advance health delivery systems (Potempa, Redman, & Landstrom, 2009). Potempa et al. (2009) suggest that both positive and negative forces contribute to the faculty shortage. The positive forces exist because of the increased demand for nurses, therefore the need for larger nurse production, leading to the increased need for nursing faculty. The negative forces are the forces which reduce the desire of nurses to become faculty or cause educated nurses to seek positions outside of nursing faculty. One negative force is the decline in funding and resources for graduate education that occurs in many countries. The rise in the general shortage of nurses has caused a rise in clinical nurse salaries, thus providing an attractive alternative to lower paid educational positions. Hugo (2008) advises that over the next decade universities will face their largest recruitment task. In nursing specifically, 51.3% of Australian nursing faculty are aged 50 or greater. During the 1960s and 1970s, the baby boomers entrance into higher education resulted in rapid expansion of universities. Slower growth since then has resulted in a rapidly ageing academic workforce with a 'missing generation' of younger academics – those under 40 years old. Australian universities face a major recruitment challenge due to the high percentage of faculty who will be retiring over the next 15 years. Further, the challenge to renew academic staff will be fought in the most competitive international labour market for skilled staff that has ever existed. University policies for the next 20 years must focus on retention, recruitment and return, instead of redundancies. A judicious mix of strategies will be needed to survive, including new blood programs, family friendly policies, 'bring them back' projects, joint international

exchanges in teaching and research faculty, incentives to keep the best staff at the university, gradual retirement initiatives for selected staff, and accelerated promotion for key faculty (Hugo). While the largest number of retirements is still a decade away, a considerable amount of lead time will be needed to develop and implement policies and strategies to address this shortage. It is essential that policy makers have a comprehensive knowledge of supply and demand of university faculty within Australia to allow for the development of appropriate, inventive and effective policy interventions.

Potempa and colleagues (2009) recommend nursing (including nursing faculty and nurses in the workforce) emphasise their importance to the quality of care through the media and policy arenas. The public need to be continually updated of the societal health benefits of nurses, nursing research and nursing faculty development. The importance of nurses to the treatment of illness and improvement of health will be seen by the public when nursing becomes more visible. While individual nurses can make nursing more visible by individual approaches to the media, it is more powerful when public statements are presented by a representative of coalitions across several organisations (Potempa et al.).

With increasing economic pressures worldwide, it is unlikely a single source, for example one level of government, can provide all necessary financial support to healthcare and healthcare education (Potempa et al., 2009). While financial support from governments will continue to be essential, this support needs to be supplemented by seeking the support of individual sponsors, foundations and aid agencies. Potempa and colleagues (2009) suggest instead of highlighting nursing's shortages and needs, which may be seen as negative by prospective donors, nurses and nurse educators need to promote the message of why supporting nursing is a truly superior proposition to improve healthcare.

In addition, nursing faculty should consider attracting and including those individuals with training in complementary fields, such as psychology, sociology and public health, to join in interdisciplinary projects and programs. This will increase the capacity of the nursing faculty to educate and grow interdisciplinary research. Attracting staff from other disciplines should not be seen as a short-term

fix, but as a way of combining an interdisciplinary perspective to nursing departments that will improve future advancement (Potempa et al., 2009).

The value of nursing to the public is based on the continual growth and advancement of nursing as a profession in its use of leading knowledge and technology and evidence in practice. Promoting scientific and academic productivity, especially scientific research, will establish an environment for greater advances in nursing and thus better methods to improve patient care (Potempa et al., 2009).

Overseas recruitment is another positive way to increase the nursing faculty. The Australian academic workforce is made up of 40.5% of overseas born academic staff with 45.5% of overseas born staff being of Asian descent (Hugo, 2008).

With the loss of at least one-fifth of university faculty over the next decade, universities will be presented with a great chance for restructuring and changing the balance between courses, subjects and programs without resorting to redundancies. The positive momentum afforded from all of the above suggestions, and an improved public image, are positive steps to attracting students to nursing and further education. If nursing faculty provides clarification on the value of education and research in nursing to both the public and students, this may motivate students to emulate and progress to a faculty role (Potempa et al., 2009). This positive momentum may increase interest in members of the public to contribute funding to nursing education as a way of improving the health of individuals worldwide.

3.3.4 Increase nurse graduates

Increasing intakes and completions for nursing courses is a potential solution to the nursing shortage. Historically nursing students needed to be present at all lectures and study full-time, however, education has become more flexible with students now able to choose methods of study to suit their lifestyle (Drury et al., 2009). Most students are opting for a mixed mode of study, that is, a mixture of on-campus, off-campus, and online course delivery (Ryan, 2001). This mode of studying is attractive to students who are working or have children. The

flexibility allows them the opportunity to participate in education while still undertaking other duties.

Universities Australia reported 2,833 eligible applicants were not offered a place in 2008 (Dragon, 2009). This is equivalent to 20% of course applicants missing out, even though nursing is identified as a national priority area in high demand. In addition to the shortage of nursing faculty (as addressed in the previous section), attempts to increase nursing student enrolments are difficult when universities cannot offer more places due to (a) limited resources/funding, (b) limited clinical placement capabilities, and (c) increased diversity of career options. Inadequate funding is a problem faced by universities. Dragon (2009) identifies nursing is funded at \$9,316 per full-time student compared with \$14,000 for medical students when the resources to teach nursing are the same as those required for medical students.

Preston (2009) believes there are limitations to increasing student numbers, including the difficulty of providing a sufficient number of good quality new places and the ability to recruit a sufficient number of students who have the potential to become highly competent nurses and midwives. Preston highlights that the most pressing problem is obtaining clinical places. While Preston (2009) and Dragon (2009) suggest increased funding is the way to increase placements across all organisations and throughout all states, Barnett et al. (2008) found the capacity for clinical placements can be increased if stakeholder organisations work collaboratively with colleges/universities. They recommended several strategies including (a) introducing clinical calendars in a more coordinated approach to placements, (b) a common set of learning objectives and skills at each year level of education, (c) common orientation programs for staff involved in teaching or preceptoring students, and (d) a virtual on-line orientation program for all students taking part in clinical placement at the organisation. While Barnett et al. admit there are limits to the number of clinical placements which any organisation can take, these strategies can help increase the number of placements over time. A limitation of this research was that it focused on rural health areas and therefore may not apply to large hospitals or hospitals in major cities.

In addition to students being turned away, student attrition is also an area of concern. Australia wide, the number of students who fail to finish their undergraduate studies in nursing is suggested to be as high as 30% (AIHW, 2008). A comparison of Queensland Nursing Council graduates to the tertiary admissions data revealed the average attrition rate for the state of Queensland was 25% ranging from 40% in the regional north to 15-20% in the metropolitan areas (Dragon, 2009). Universities should look specifically at student supports to increase student retention.

Preston (2009) recommends a reasonable increase in the salaries of nurse educators would make a large difference to the number and quality of student places for the future. Dragon (2009) suggests government increase funding for nursing students. Barnett et al. (2008) endorse more collaboration and communication between universities and healthcare organisations to increase the number of clinical placements which is a major barrier to increasing student numbers. Most importantly, if sufficient places can be obtained, it will still be essential to fill these places with students who have the capability of becoming safe and effective professionals with the ability to provide quality care (Preston).

3.3.5 Recruit diversely

Buchan (2006) believes countries should consider broadening the recruitment base from the young female school leaver to include males, mature-age students, students from ethnic minorities, and students who have vocational qualifications or real-life experience to compensate for a lack of conventional academic qualifications. In an Australian situation it is important to include in this recruitment the consideration of Aboriginal and Torres Strait Islander peoples. Research suggests a diverse healthcare workforce is crucial to (a) improving the quality of care, (b) providing culturally competent care, (c) fostering effective care teams, and (d) limiting the inequalities faced by minority ethnic groups. This, in turn, will lead to institutional success (Dreachslin, 2008; Parker & McMillan, 2007).

The need for a more culturally diverse nursing workforce has been perceived by nursing leaders, not only as a way to increase numbers but as the

way to provide culturally competent care. As a commitment to social justice, it is highly recommended that actions be taken to create a nursing workforce which closely parallels the population to whom it provides care (Noone, 2008). In 2004 in the US, minorities represented 30.9% of the population, but only 12.3% of the nursing workforce. However, Seago and Spetz (2005) found attrition rates amongst students of ethnic minorities were greater than non-ethnic students. Barriers including (a) financial barriers, (b) academic barriers, (c) personal isolation, and (d) acts of discrimination, need to be identified and addressed within the university to retain these students (Noone, 2008). To address these barriers financial aid counselling and scholarship assistance need to be provided, including the provision of scholarships for ethnically diverse students. Ethnically diverse nursing students experience isolation from their family, feel different and isolated from their white peers, and experience cultural differences that may exacerbate their experience of isolation. Discrimination may also be experienced, and if so, this would most definitely worsen the sense of isolation (Amaro, Abriam-Yago, & Yoder, 2006). Ways to overcome these barriers include connecting ethnically diverse students with other similar students, and providing mentors from the faculty for these students (Noone, 2008). Nursing faculty should be encouraged to provide patience, approachability, and enthusiasm towards these students (Amaro et al., 2006).

Academic barriers for ethnically diverse students may also be present, especially if English is not the first language of the student (Noone, 2008). For these students tutoring, especially in the English language, as well as assistance in writing assignments, should be considered. In some situations these students may not even be aware of what assistance the university provides and a student liaison, specifically one from the same ethnic background, would provide great support.

Noone (2008) emphasises if cultural diversity and social justice are part of the university's strategic plan, programs would be developed to address diversity. Stakeholders in the community would be sought (for example, local ethnic churches, and community and nursing associations), and partnerships formed to assist with strategies to recruit, prepare and retain students. Faculty would be offered development opportunities to assist in working with ethnically diverse

students. Presentations by representatives from ethnically diverse communities can occur, not only for faculty, but for the larger nursing community including students (Gardner, 2005).

In the US, the Sullivan Commission Report (2004) defined that a diverse healthcare workforce should be demographically reflective of the individuals within the area in which it serves, however, most healthcare workers are not culturally, racially or ethnically similar to their community. This has raised concerns as to whether they will be unable to provide culturally sensitive and patient-centred care. Attempts to solve the gap between registered nurses and the community's diversity by aggressive recruitment of minorities have not been successful (Noone, 2008). McGinnis, Brush, & Moore (2010) identify that there exists much debate as to whether racial/ethnic similarity between healthcare workers and the community they serve lead to cultural competent care, or whether cultural competence is actually a learned behaviour that goes beyond one's own race or ethnic origin. Policy makers and employers need to consider the diversity of Australia's specific population, especially the Indigenous people of this country.

Aboriginal and Torres Strait Islander people make up approximately 2.4% of the Australian population (ABS, 2008). Life expectancy for Indigenous Australians is 20 years less than non-Indigenous Australians. Health issues such as heart disease, stroke and diabetes are the major causes of death for Indigenous people. In Australia, Aboriginal and Torres Strait Islander people are substantially disadvantaged over non-Indigenous Australians in key social areas such as employment, education and income. Indigenous nurses have several significant implications for Australia's healthcare. Firstly a major reason for the poor health of Indigenous Australians is the lack of access to appropriate healthcare services (Ring & Brown, 2002). Even when healthcare services are available, Indigenous people are not accessing them and it is suggested that this reluctance may be due to bad experiences within the healthcare system, racism, and the cultural inappropriateness of the services offered (AIHW, 2008c). Health services provided by Indigenous nurses would offer a better understanding of cultural issues and how they affect the delivery of culturally appropriate

healthcare (Omeri & Ahern, 1999). Further, they could also provide assistance to non-Indigenous nurses in understanding these issues. Lastly, there is an increased likelihood of providing a positive experience for Indigenous people meaning that patients are more likely to return for follow-up treatment (West, Usher, & Foster, 2010). Notwithstanding the significant research that has been conducted and that needs to continue to specifically address these issues, the recruitment of Indigenous nurses opens an area of untapped potential to addressing the nurse shortage. Aboriginal and Torres Strait Islander nurses are under-represented within the current workforce (Goold & Usher, 2006), making those who have completed a nursing course very attractive to employers.

Undergraduate nurse completions parallel health inequalities and lower educational outcomes between Indigenous and non-Indigenous Australians with less than one third of Indigenous students completing a nursing degree (West et al., 2010). A study by Usher et al. (2003) revealed that financial hardship, family issues and inadequate educational preparation impacted significantly on the retention of Indigenous student nurses. Additionally, this research uncovered issues connected with institutional racism that proved barriers to course completion by Indigenous students. Indigenous students advised that academics were unaware of family and kinship commitments and responsibilities, were discriminatory, and failed to understand or support them (Usher et al.). Many universities have undertaken programs to address the under-representation of Indigenous people entering nursing, however the University of Southern Queensland School of Nursing and Midwifery have received higher Indigenous enrolments and completions. This is believed to be related to the delivery of an accelerated nursing course (two years), the inclusion of Indigenous content, employment of Indigenous academics and the design of specific supports for Indigenous nursing students (West et al., 2010). Further, by developing and offering Indigenous nursing curricula which is inclusive and respectful of Indigenous knowledge and providing culturally specific supports, universities will assist in increasing completion rates of Indigenous nurses. And that this increase will aid in correcting any current or future nurse shortage.

Diverse recruitment should also focus on males as nursing is often considered a female profession. The number of men entering nursing has not changed over several decades despite the nurse shortage and research requesting greater diversity (Meadus & Twomey, 2011). The attrition rates of male students exceed those of females (McLaughlin, Muldoon, & Moutray, 2009). Nursing education is focused on a female worldview and this is gender biased and discriminatory, and does not help in the recruitment or retention of male nursing students (Bartfay, Bartfay, Clow and Wu, 2010). Male students described barriers including no male mentorship, lack of male faculty, and very little opportunity to work with male nurses in clinical settings (Keogh & O'Lynn, 2007; O'Lynn, 2004). The reasons men chose nursing as a career included job security, salary, career opportunities and the desire to help others, which are very similar to the reasons women chose nursing (Meadus & Twomey, 2011). Universities need to develop strategies to provide a positive educational experience for males who choose a nursing degree including changes to the curricula to meet the needs of all students. Awareness of sexism and bias, both in the classroom and during placement, needs to be addressed and ensured. Universities need to stress to all that nursing is a gender-neutral profession, with all materials promoting courses depicting both men and women as nursing students. Both male and female students should be used to promote nursing as a career to high school students and at any public recruitment presentations (Meadus & Twomey, 2011). Nursing faculty need to work with high school guidance and career counsellors to ensure accurate information about nursing as a profession is provided to students.

The age of graduate nurses is another area of diversity. Drury et al. (2009) question where all the young nursing students have gone. Historically, older nurses who retired were replaced by younger workers; however, today nursing seems to have lost its desirability as a profession. Bowles and Candela (2005) suggest that previously women had limited career choices, whereas the dynamics have now changed. Malhotra, Sizoo, and Chorvat (2002) stress concern that a greater number of mature-aged nursing graduates, in conjunction with an ageing nurse workforce, have the capability to increase the imbalance within the nursing shortage in the future. Meachin and Webb (1996) argue that the benefit of

mature-age students widens the recruitment base and value adds to the working environment by the additional experiences that they bring. Further, they note that mature-age students are more motivated and committed, and report lower turnover and sick leave, and greater maturity and academic performance than their traditional counterparts. This author acknowledges that the demographics of university students are changing with increases in the percentage of mature-age students becoming a normal occurrence in university enrolments. Individuals of all ages should be welcomed into nursing.

Overall, universities need to ensure that the right diversity strategies are in place, key stakeholders have been involved in the development of these strategies, and the faculty and student support units have been trained in providing culturally sensitive support (Noone, 2008). Students need to be made aware of what supports are available for them to access should they need assistance during their studies.

3.3.6 Overseas recruitment

Ohr, Parker, Jeong, and Joyce (2010) advise that migration of overseas nurses has been an important part of addressing the healthcare workforce shortage, in addition to meeting Australia's demographic, political and socioeconomic health agenda. Immigration has greatly increased Australia's cultural diversity, not including the cultural diversity already present from Australia's Indigenous population (Omeri & Raymond, 2009). Our country currently has one of the largest proportions of immigrant populations in the world with approximately 24% of our population (4.96 million) born overseas and with more than half of these individuals born in a non-English speaking country (Australian Bureau of Statistics [ABS], 2009). The migration of nurses into the Australian nursing workforce significantly increases the number of nurses and the ability to provide healthcare to the multicultural community within this country (Ohr et al., 2010). Migration of 7,000 overseas nurses to Australia in the year 2006-07 has aided nurse numbers in the Australian healthcare system. The benefit of overseas nurses is not only in the increase of nurse numbers, but also the increased ability to provide culturally competent care through their cultural

knowledge and language skills. These nurses assist patients and are able to transfer this knowledge to other nurses (Ohr et al.).

However, this migration has not been without challenges. Migrant nurses have faced issues encompassing difficulties adjusting to a new work environment within a new country, registration, language and communication difficulties, and differences in the practice and role of nursing (Konno, 2008; Ohr et al., 2010). Racial intolerance and discrimination have caused some overseas nurses to return home (Cummins, 2009). There are also difficulties in the relationships between overseas nurses and those trained within the host country (Jeon & Chenoweth, 2007). These difficulties can lead to dissatisfaction within the workplace and turnover, as well as impacting on the workplace safety and quality of care (Omeri, 2006; Xu, Gutierrez, & Kim, 2008). Further, these factors can impact on the well-being of the individual nurse in the manner of frustration, confusion, loss of self-confidence and self-esteem. In the worst cases, the discrimination and poor work relationships cause depression and psychological breakdown (Konno, 2008; Omeri & Atkins, 2002).

Buchan et al. (2005) warns that while international recruiting resolves staff shortages as a quick fix, efficiency and ethical issues in recruitment must be considered. Ohr et al. (2010) caution regarding the social and ethical issues of seeking nurses from developing countries that are already undergoing a shortage, terming this migration of nurses a 'brain drain'. Others argue that migration is a personal choice (ICN, 2007) and the freedom of movement from one country to the other is a human right (Gostin, 2008). Overall policy makers must consider whether international migration is a cost-effective method of dealing with the shortage, and if this external recruitment is sustainable or permanent. It is important to assess whether international recruitment is more effective and efficient than recruitment from within the destination country, implementing new retention strategies, and instigating incentives for those not currently practising nursing (Buchan et al.). Due to the nurse shortage and a growing, as well as ageing, population, most destination countries will continue to support the inflow of overseas nurses (Buchan, 2002).

3.3.7 Temporary nurses

Temporary nurses have been used by hospitals as a "quick fix" for the shortage of nursing staff. The awareness of the connection between nurse staffing and patient outcomes has led to greater focus on the importance of nurse staffing decisions (Duffield, Roche, O'Brien-Pallas, & Catling-Paull, 2009). However, due to the constant shortage of nurses, it is extremely difficult to supply the appropriate mix and number of staff to provide safe patient care. This, combined with an ageing workforce and an increasing desire by nurses for work-life balance, impacts on the accessibility of staff and has compelled hospitals to use non-permanent employees, such as agency nurses (labour hire), hospital pool staff, travellers on work visas and part-time employees, for example, permanent employees who work less than 38 hours per week. Duffield and colleagues (2009) believe that this has the possibility of causing instability in staffing. The safety of the patient and the continuity of care are reliant on consistency of the staff providing that care (Jones, 2004; 2007).

The use of supplementary staff, such as agency nurses, was considered more expensive and less attractive than hiring a new full-time nurse, as the use of agency nurses have been associated with errors, poor morale, and burnout (Hall, Propper, & Van Reenen, 2008; Hayes et al., 2006). Benson (2011) suggests agency nurses were usually less experienced and unfamiliar with hospital protocols and procedures, and their greater pay (even after adjusting for benefits) could harm morale amongst permanent staff. Hall et al. (2008) found when local labour markets were strong this worsened hospital outcomes in relation to productivity and quality. Further, they discovered part of this effect impacted on hospitals in high outside wage areas having to rely more on temporary "agency staff" because they were not able to increase wages (set by the government) in order to entice permanent employees.

Duffield et al. (2009) felt that when nurses working within a ward remain the same over time, they are more apt to be knowledgeable of each other's skills, proficiency, strengths and weaknesses, and additionally require less supervision. The patients also benefit from continuity of care, with research showing those

benefits as heightened satisfaction, less hospitalisations and emergency department visits, lowered rate of mortality, enhanced quality of life, and greater cost effectiveness (Duffield et al.). The use of temporary/agency staff also increases the workload of the nurse manager, creating difficulty with work schedules, staff guidance, performance management, and training activities. The use of temporary/agency staff can damage work relationships (Jasper, 2007), lower the standard of care (Adams & Bond, 2003), increase nurse turnover (Coomber & Barriball, 2006), and result in permanent nurses having to work the unwanted shifts which impacts their quality of work-life (Creegan, Duffield & Forrester, 2003).

There are also costs in loss of staff productivity with 6.7 weeks being the time estimated for a new nurse to reach 90% productivity (O'Brien-Pallas, Duffield, & Hayes, 2006). Based on an average salary of \$AUS41,132, the estimated cost of lost productivity per ward would be \$AUS100,515 and this does not include the impact to the productivity of existing nurses who work with the new staff (Jones, 2005). In the current global economy, having a stable workforce would provide a competitive edge (Kreisman, 2002).

Research by Bae, Mark, and Fried (2010) exploring nurse and patient safety in relation to the use of temporary nurses reported that temporary nurses can provide both benefit and harm depending on the level of use. Their survey received responses from 4,954 nurses in 142 hospitals and discovered that nurses working in units with a high level of temporary staff (more than 15%) were more likely to report back injuries and patient falls than those who worked in units without temporary nurses (Bae et al., 2010). Conversely, they also discovered that moderate levels of temporary staff (5 to 15%) reported less medication errors than those without temporary staff. Bae et al. recommend that hospitals maintain temporary nurse levels at approximately 15% to ensure both nurse and patient safety.

Aiken, Xue, Clarke, & Sloane (2007) believe that negative perceptions of temporary nurses may be baseless. They question the evidence that the use of temporary nurses has led to adverse consequences, such as infections, medication errors, and needle stick injuries. Aiken et al. (2007) suggest that the limitation of

previous research was their failure to consider other reasons for the associations identified, for example, hospitals that use large numbers of temporary nurses are prone to other complications that would explain the adverse outcomes. For patients to be worse off the temporary nurse would have to be (a) less qualified than the permanent nurse, (b) inadequately oriented regarding procedures, and (c) badly briefed about their patients. Aiken et al. consider that continuity of care by one nurse is not ideal, even with all permanent nurses working within a unit because the nurse must take time off between shifts and the communication errors linked with shift changes and handovers are common. Their research found that a large number of temporary nurses work in critical care units as their full time job. Temporary nurses were more likely to hold a higher degree, and were as experienced, if not more so, than the permanent nurses. Hospitals with low staffing and inadequate resources were more likely to bring in a greater number of temporary nurses to compensate for shortfalls in permanent nurse numbers. Greater numbers of temporary staff were connected with lower levels of adverse events, suggesting the adequacy of resources is the underlying problem and the use of temporary nurses compensate for nurse staffing deficiencies.

The use of temporary/agency nurses may be unavoidable due to the increased casualisation of the nursing workforce (non-permanent and part-time nurses) in many countries including the UK, Canada, New Zealand, the US, and Australia (Duffield et al., 2009). The study conducted by Aiken et al. (2007) indicates that the use of temporary nurses does not have a negative impact on quality of permanent nurses' work life or quality of patient care. To the contrary, the results show across time and across countries greater numbers of registered nurses in direct patient care (whether permanent or non-permanent) are related to lower rates of adverse events. This should provide executives and managers with the knowledge that the use of temporary nurses is one strategy in a multifaceted approach to the nursing shortage. This is based on the condition that temporary staff do not exceed more than 15% of all staff at any one time.

3.3.8 Recruit nurses no longer in nursing

Buchan (2006) suggests another strategy for addressing the nurse shortage is to recruit potential 'returners' or 'inactive nurses' back to the profession.

Returners or inactive nurses are defined as individuals trained as nurses and registered to work in the profession, but who are not presently working in nursing. Alameddine, Bauman, Onate, and Deber (2011) suggest that many educated and experienced nurses are unemployed or not working in their trained profession. Most countries have relatively large numbers of former registered nurses who may be available to re-enter nursing, however, attention needs to focus on why they originally left nursing and what would need to change to entice them back to the profession (Buchan). Encouraging experienced nurses who are not currently nursing to return to their profession is a strategy that enriches and complements healthcare human resources planning (Alameddine et al., 2011). While there is a lack of research examining these inactive nurses' likelihood of returning to nursing, this group of workers has the potential to provide speedy relief to the current shortage.

The research undertaken by Alameddine and colleagues (2011) suggests policy writers recognise that even nurses explicitly stating a disinterest in returning to nursing may be persuaded to return to nursing if their life circumstances change or suitable opportunities arise. This would be especially relevant if the position offered was made more flexible to assist in maintaining a work-life balance. Their research also discovered that inactive nurses actively looking for a nursing position may become discouraged and permanently leave nursing if they fail to find a suitable job in a timely fashion.

Government investments in creating nursing positions are vital, but are currently not sufficient for inactive nurses to return to nursing (Alameddine et al., 2011). Suggested strategies to assist in their return include: (a) re-writing policies requiring full-time employment, especially since most inactive nurses may prefer part-time and flexible job arrangements (Langan, Tadych & Kao, 2007); (b) the provision of low or no-cost refresher training to assist inactive nurses return to the active workforce (Myers & Bushnell, 2007); (c) improving the work environment

(Cohen et al., 2009); and (d) a sufficient salary and benefit package to entice inactive nurses to return (Langan et al., 2007). Even if nurses state they are not considering a return to nursing at one point in time, many (especially young nurses), may still be enticed back to nursing if life circumstances change or appealing employment opportunities arise (Alameddine et al., 2011). This inference was made based on the analysis which showed the ability of attracting active nurses back into nursing decreased with age. Policy makers should focus on opening opportunities for new graduates to increase their professional lifespan and develop focused recruitment strategies to return these nurses who are no longer nursing, back to the nursing profession.

3.3.9 The use of nurse practitioners and general practice nurses

The creation of nurse practitioners and general practice nurses are attempts to address healthcare issues by a focus of added patient assistance and prevention, respectively. A nurse practitioner is a registered nurse who works in a specialist or generalist capacity within a multidisciplinary team (Allnutt et al., 2010). Their role involves autonomous assessment and management of the patient, including (a) the prescription of designated medications, (b) the ability to order diagnostic procedures, and (c) the ability to refer patients to other healthcare professionals. Nurse practitioners operate across a variety of healthcare contexts in the provision of care and clinical leadership (Tuaoi, Cashin, Hutchinson, & Graham, 2011). The education of a nurse practitioner in Australia involves a Masters level qualification to enable entry into practice (Tuaoi et al.). The creation of nurse practitioners is a small step in an effort to tackle healthcare differently. Della (2007) evaluated nurse practitioner services in Western Australia to show: (a) a decrease in emergency department waiting time; (b) timely interventions in clinical specialties; and (c) an overall increase in patient satisfaction, patient information and staff satisfaction. Further, throughout the evaluation there was evidence of a reduction in the fragmentation of care; with more patient involvement in both education and decision-making relating to their options. Higher education of nurse practitioners is not meant to substitute for doctors, but to provide credible leaders and strategic thinkers who can advocate for healthcare

reform and build a healthcare system to address the evolving healthcare needs of today's societies (Burman et al., 2009).

Australia's fastest growing and most influential group of nurses is the general practice nurse (Phillips et al., 2009). Between 2003 and 2007, the numbers of general practice nurses grew by almost 100% to 7,824. The Australian Government has provided funding for the work of practice nurses through Medicare. The position of a general practice nurse has been put forward as a solution to the health workforce shortage and a way of improving the quality of healthcare by health promotion and prevention of disease, thus reducing the number of patients who would present at hospitals. The extension of these roles or work settings of registered nurses is a qualitative improvement sought not only to improve health promotion and prevent illness, but also to provide better patient care, increase nurse satisfaction with their work and career, and overall, provide cost effectiveness (Preston, 2009). These qualitative improvements, while they may be effective and efficient in providing quality healthcare and alleviating the shortage of medical practitioners, may exacerbate the shortage of RNs, at least in the short term, by reducing the number of nurses available to work in hospital wards.

3.3.10 Retaining new graduates

New graduates are the key to the future of nursing, firstly as replacements for an ageing workforce, and more importantly, to ensure the survival of the nursing profession (Winfield, Melo, & Myrick, 2009). Fink et al. (2008) identified that graduate nurses experience role conflict and stress upon entering a highly complex and under-staffed work environment where they are expected to become competent in a very short space of time. Transition from an educational program into a professional practice setting involves stress, role adjustment and reality shock. Research revealed that the new graduate experiences fear, lack of confidence, and concerns of harming patients throughout the first year of practice (Fink et al.). An increase in mature-age students has also created another student group with different views. For example, the older graduate was more likely to leave if they were not allowed to work in their chosen ward (Becroft et al.,

2008). A formal mentoring program and support to integrate into the unit and team culture, in addition to the visibility and support of the nurse manager, educators, or resident facilitators were key findings in the research to retain new graduates (Fink et al.).

3.3.11 Retaining older nurses

The ageing population is a major concern to the Australian Government due to the increased costs involved with income support, the requirement of health and disability services, and family and community care (ABS, 2005). Zurn et al. (2004) affirm that as the ageing population increases, so too will the need for healthcare and nurses.

There is concern for the increasing health needs of an ageing population; it must also be considered that nurses are part of that ageing population. In Australia, registered nurses 50 years and older increased from 35.8% in 2005 to 36.3% in 2009 (AIHW, 2011). There are two issues arising from this: many will soon reach an age where they can retire, and as nurses age they are more likely to have different needs and attitudes towards nursing (Buchan, 1999). As nurses move towards retirement, many choose to work part-time, which then requires more nurses to maintain the same level of nursing (ABS, 2005). Fox and Abrahamson (2009) also highlight the strain of shift work and the impact it has on the nurses' longevity in their profession. As nurses get older, they experience the physical, cognitive and emotional challenges, while the job of the nurse demands more. Difficulties experienced with ageing include physical fatigue and orthopaedic difficulties, for example, difficulties with back, feet, knees, and wrists. The oncoming loss of all those nurses who are nearing retirement will greatly increase the impact of the nurse shortage. Over the next decade, Australia's nurse shortage will worsen with the loss of the most qualified and experienced nurses through retirement (O'Brien-Pallas, Duffield, & Alknis, 2004).

O'Brien-Pallas et al. (2004) explored the consequences and benefits of postponing the retirement of nurses who were willing to continue working and believe any strategies to retain these nurses should be focused on the specific needs of this cohort. To some nurses the continuation of nursing may enhance

their quality of life and overall well-being. In summation, O'Brien-Pallas et al. recommended management seriously consider and compare the options of losing the experience and knowledge with the expense of retaining these older nurses.

3.3.12 Nurse to patient ratios, staffing and models, and skill mix

In the World Health Report 2000, WHO noted that choosing and attaining the correct mix of healthcare personnel are important challenges for both healthcare organisations and systems. Twigg et al. (2010) found robust evidence, both nationally and internationally, to connect nurse staffing to patient outcomes. A reduction of 3% to 12% in adverse outcomes and 16% in risk of mortality was evident with more registered nursing staff. Further, while the facts indicate that improvements in nurse staffing is an effective investment for organisations, this evidence is not fully valued by health policy advisors.

Since 2001, legislation specifying minimum nurse-to-patient ratios has been enacted in large public hospitals throughout Victoria (Gerdtz & Nelson, 2007). This legislation required a minimum of 5 nurses to 20 patients in acute medical and surgical wards. Combined with this minimum mandate is the use of a Patient Dependency System to anticipate short-term resource needs. While on the surface this minimum ratio seems to address the problem, mandating nurse numbers in an environment with limited nurses places pressure on current staff to work overtime, perhaps to the point of exhaustion (Fox & Abrahamson, 2009).

Most nurses working in hospitals are allocated based on staffing models. Staffing models for nursing can be broken into three broad groups (a) models that rely on professional judgement and expertise, (b) models that use norms and calculate statistical relationships between independent variables, and (c) models which measure the timing of nurse interventions or tasks to class patient dependency (Hurst, 2003).

It is necessary to consider how best to allocate staff to patients, especially as the nursing shortages continue and staffing moves towards the use of fewer registered nurses. Stokowski (2009) presented research findings that approximately 27% of all health related infections could be eliminated if nurse to patient ratios were kept at acceptable levels. However, research by Duffield,

Roche, Diers, Catling-Paull, and Blay (2010) found no one nursing model, nurse to patient ratio or staffing mix will fit every ward and, even more essential, are that they may vary from shift to shift. Duffield et al. (2010) suggest it is important that a method of pairing patient needs to staff skills is conducted on the basis of data and evidence. Further, their research proposes that nurses currently adapt their care each day or each shift based on patients' needs, skill mix and each ward's environment.

More than 40 years of research and development has been focused on building and perfecting staffing models. While Duffield et al. (2010) support the use of staffing models, Flynn and McKeown (2009) question their use and relevance based on the fact that no one model has been able to account for all the variables which impact on nursing work, nor have they been causally linked to patient, nurse or organisational outcomes. In fact, the collection of data required to make most models work can impact severely to increase nurse workloads. Flynn and McKeown debate whether staffing models are effective at all or if they have just gained credibility and assumed utility through convention and repetition.

Skill mix is defined as the combination of activities or skills required for each nursing position within the organisation (Buchan & Dal Poz, 2002). Twigg and Duffield (2009) state that determining a sufficient number and mix of nurses to ensure patient safety is essential and basic assessments are made by nurse managers at all organisational levels. This has been highlighted recently with several research studies determining the impact that nurse staffing has on patient outcomes, especially mortality and morbidity (Aiken et al., 2002; Estabrooks, Midodzi, Cummings, Ricker, & Giovannetti, 2005; Needleman et al., 2002; Rafferty et al., 2007).

3.3.13 Salary/wage levels impact on nurse retention

In a Health Working Paper for the OECD, Simoens et al. (2005) advise that both pay and work conditions sway nurse flows in and out of nursing. Pay also affects entry into nursing degrees, participation of registered nurses in the workforce, and nurse retention and turnover. Simoens et al. also report, as part of

any policy to address the nursing shortage, making nurses' pay sufficiently attractive will work to retain nurses of all ages.

Drury and colleagues (2009) reported the graduate salary of a Registered Nurse in Australia was \$AUD37,149 which is considerably less than graduate salaries in other disciplines such as teaching (\$AUD48,425) or policing (\$AUD48,462). A check of the Queensland Government recruitment websites identifies the graduate base salary of a registered nurse in Queensland as at July 2011 is \$AUS52,450 per year compared with teaching (\$AUD56,011) or policing (\$AUD49,938 plus an operational shift allowance of 21%). While it is visible that the differences in salaries have narrowed over the last few years, which is positive in relation to attracting perspective nurses and retaining those currently working, there still remains a gap which needs to be addressed.

3.3.14 Shiftwork, double shifts, overtime, increased workload and inability to access leave

Nurses are exposed to a high risk of work-life pressures due to a mix of factors including the highly feminised workforce with non-standardised work schedules and nurse shortages (Skinner, Van Dijk, Elton, & Auer, 2011). The majority of working women still are required to undertake the primary responsibility for unpaid care and domestic work (ABS, 2009). Participants in a study of Australian middle-aged nurses identified the difficulties of juggling many different and frequently conflicting life aspects such as shiftwork, family, community and personal activities. West, Boughton, and Byrnes (2009) believe these complications lead to a lack of social life.

Green (2004) argued that over past decades the intensity of nursing work has been increasing due to trends such as downsizing, 'just in time' service delivery, reduced union power and the increased use of agency/temporary workers. In a study by Skinner et al. (2011), nurses noted the increased workload occurring from the treatment of sicker patients, and the continual improvement of medical equipment and technology (the operation and use of which needed to be learned as quickly as possible). Further, participants claimed they were working more intensely, for longer hours and frequently skipping breaks. Nurse managers advised Skinner et al. that nurses were doing two or three double shifts in a row,

which they acknowledged as overstepping lines, but believed it was better than having no nurses present.

Shiftwork impacts on the safety and health of nurses and patients (Burch et al., 2009). Today's world relies on individuals who work irregular schedules. The consequences of shiftwork, especially for night workers, include poor sleep, fatigue, daytime sleepiness, reduced alertness, impaired job performance, and reduced mental and physical well-being (Costa, 2003). Shiftwork can also lead to occupational stress, burnout, absenteeism, and turnover (Edwards & Bernard, 2003). Nurses working shiftwork need to be aware of coping and adaptation strategies, for example, adequate sleep (timing and duration), exercise and optimal health. Hospital policies that provide predictable work hours and schedules, supportive climates, and appropriate patient loads will assist in retaining nurses and are also likely to have better quality of patient care (Stordeur, D'Hoore, & the NEXT-Study Group, 2007).

Taking regular breaks, both during work time and between shifts, is vital to maintaining nurse health and well-being. Research showed participants reported difficulty in accessing any type of leave due to workloads and staff shortages (Skinner et al., 2011). Zurn et al. (2004) believes that restrictions should be placed on hours that nurses are allowed to work and overtime should be an emergent resort. Skinner et al. (2011) advise that organisational policies of work-life balance were welcomed, however participants experienced a large gap between the policy and what was actually practised in Australian hospitals.

3.3.15 Safety in the work environment

Geiger-Brown and Lipscomb (2011) state that nurses' work conditions are intricately entwined to the quality of care patients receive and patient safety. In the US, the Joint Commission on Accreditation of Healthcare Organisations (JCAHO; 2002) highlighted nurses are exposed every day to health and safety risks such as chronic fatigue, exposure to HIV/AIDS and hepatitis, and work injuries including needle-stick injuries, back injuries and physical assaults. While distinguishable by size and demographics, the healthcare workforce is also characterised by the excessive hazards, injuries and illnesses that staff confront

(Geiger-Brown & Lipscomb). Buchan et al. (2005) consider nurses three times more likely than any other health personnel to experience violence, whether physical, non-physical, or a combination. Geiger-Brown and Lipscomb advise that overexertion injuries, falls and workplace violence are 65% to 260% greater in healthcare organisations than in private industry. Hospital environments, more so than any other healthcare environment, include higher levels of hazards and greater exposure risks due to the patient populations higher degree and complexity of sicknesses/injuries that they present with, the increasing use of technology and the more physical and emotional demands that are placed on caregivers.

Front-line service professions, for example policing, nursing, and teaching, are frequently targets for violence (Roche et al., 2010). Violence can present in numerous forms, for example verbal and emotional abuse, physical assault, threats of physical violence, unwanted sexual advances and harassment. Violence is a fact of life for nurses. Nurses can experience violence from patients, patients' families, visitors, or colleagues. Roche and colleagues (2010) undertook research across two states of Australia and found approximately 80% of nurses perceived emotional abuse over the previous week, 14% reported threats and 20% actual violence. The perception of violence increased as ward environments became less stable, for example fewer registered nurses, higher workload, unexpected changes in patient needs, decreased leadership, lower autonomy, and poor relationships with medical practitioners. Conversely, higher skill mix (greater number of registered nurses or nurses with post graduate qualifications) was connected to fewer reported perceptions of violence at ward levels. Overall violence in the workplace is related to deficiencies in nursing practice and poor patient outcomes. Roche et al. (2010) believe that with training and a better educated workforce, violence does not have to be accepted as just part of the nursing conditions, but can actually be managed.

3.3.16 Magnet hospitals and their impact on nursing

During the last twenty years the concept of 'magnet hospitals' has arisen as a powerful intervention for addressing the nursing shortage at both systemic and institutional levels (Sanders & Davey, 2010). Magnet designation is known as the

"gold standard" acknowledging excellence in nursing care and patient outcomes (Walker et al., 2011). The designation is awarded on the basis of empirical evidence from 88 criteria across four model components: transformational leadership, structural empowerment, exemplary professional practice, and new knowledge, innovations and improvement. Walker and colleagues (2011) investigated the results of a survey undertaken by perioperative nurses from the St Vincent's Private Hospital in Sydney, New South Wales. This hospital is the third hospital within Australia to achieve magnet designation. Their research showed high levels of staff engagement and satisfaction comparable with magnet designated hospitals in the United States.

The magnet idea has been strongly promoted by the nursing profession, undertaken by leading organisations and progressed by significant empirical research in relation to its effectiveness (Sanders & Davey, 2010). The 'magnet' concept, originating in the US, is a distinctive set of organisational practices applied by a health organisation to improve retention of nursing staff and gain preferential hiring from the nurse labour market. Not only do these hospitals have better recruiting and retention, they have significantly lower mortality rates and better patient outcomes (Aiken et al., 2002).

Sanders and Davey (2010) examined the magnet concept's beneficial adoption and application in the healthcare industry from the perspective of organisational behaviour. They believe there is an undeniable need for organisational researchers with passion to explore magnet organisations. Thus far, the majority of research published on magnet principles in general, and magnet hospitals in particular, has been undertaken by nursing researchers. While their work overall should be applauded, their primary focus started with patient and nurse outcomes and then moved to explore organisational phenomena (Sanders & Davey). The Princess Alexandra Hospital (PAH) in Brisbane was the first hospital in Australia to receive magnet designation and has recently received re-accreditation of this award. Armstrong (2005) noted the success of the magnet hospital concept through a reduction in staff turnover, from 25% in 1999 to 10% in 2002. Further achievements are (a) the increase in the satisfaction of patients, (b) a rise in staff morale and (c) the creation of a more positive work environment.

Armstrong strongly recommends that by undertaking magnet principles, hospitals will minimise, if not eliminate, their shortage of nurses.

3.3.17 The healthcare system

Performance of healthcare systems varies between countries with some performing well, while others do poorly. These differences in performance are not based solely on the money that the country holds or the amount expended on its healthcare system, for health performance varies in countries with similar levels of investment in healthcare (WHO, 2000). The design, management and finance of a health system impacts on the lives and livelihoods of the country's population and the difference between well-performing and poor systems can be seen in the levels of mortality, disability, poverty, shame and despair. WHO (2000) concludes that the ultimate responsibility for the performance of a country's health system rests with the government of that country and state that at the heart of good government is the cautious and responsible management of the population's well-being.

The limitation of this chapter's solutions is that their primary focus is on nursing as the problem; they believe that by manipulating nurse supply, the shortage will end (Buchan, 2006). These solutions are frequently instigated in a disjointed fashion. In reality, nursing shortages are frequently a symptom of a broader health system or societal problem. Around the world nursing continues to be undervalued and under-resourced, therefore any long-term sustainable solution must focus on the demand for nurses (Buchan, 2006). It must be realised that healthcare is labour intensive and resources must be used effectively, because shortage is not just about the number of nurses, but how the health system functions to allow nurses to use their skills effectively. Nursing shortages are a health system problem, which destabilises the system's effectiveness and needs 'health system' solutions. Until policy makers, organisations and government understand this information, the sequence of inadequate, uncoordinated and inappropriate policy responses will be repeated (Buchan, 2006).

3.4 Chapter summary

Nurse shortages have made providing good healthcare difficult. Low staffing levels threaten quality of patient care, the safety and well-being of nurses and greatly increase hospital costs. Overall research recommends positively promoting nursing as a profession and creating more flexibility and support for the balance between work and home life. However, no matter what changes are made there will always be those who will leave nursing for various reasons and leaders need to focus on retaining those nurses who are leaving for dysfunctional reasons. Dysfunctional turnover and retention of nurses, especially in relation to the organisation's climate, will be addressed by this dissertation.

In a complete approach to addressing nurse turnover and retention (a) all of the above remedies need to be considered, (b) all stakeholders involved, and (c) a multi-faceted approach assumed. Short-term solutions, such as sign-on bonuses, international recruitment, and use of temporary agency employees are expensive and also contribute to the increase in health costs. More resources need to be put towards finding longer-term solutions if the shortage is ever to be corrected. This includes (a) filling vacancies, (b) retention of current nurses, and (c) changing the work environment. This dissertation will consider aspects of the work environment and demonstrate a way to identify within the organisation those factors that most contribute to the nurses' intention to leave.

Management must work together with nurses to improve the nursing environment, keeping in mind the success of "magnet principles". This dissertation will compare an accredited magnet hospital with two other hospitals to evaluate whether the organisational climate between magnet and non-magnet hospitals displays any differences.

Key stakeholders, such as governments and policy makers also need to come to the negotiation table. All nurses must focus on the perceptions held on the profession of nursing and act to promote a positive image, not only within the nursing environment, but also among possible future nursing graduates and the community as a whole (Sand-Jecklin & Schaffer, 2006). With all stakeholders contributing to the solutions, it is more likely that these solutions will come to

fruition and achieve successful numbers of highly skilled nurses allocated wisely to provide for the health needs of future populations.

CHAPTER 4 TURNOVER AND RETENTION OF NURSES IN NURSING

Concerns regarding turnover of nurses continue to challenge healthcare leaders and organisational researchers (Hayes et al., 2011). The causes of the nurses' shortage are recognised as complex and multifaceted (Jones, 2008; LeVasseur, Wang, Mathews & Boland, 2009). Two main areas that need to be addressed are recruitment and retention (Buchan, 2008). However, it is pointless to focus on recruitment if the organisation cannot retain those it recruits (Cowin and Jacobsson, 2003).

This chapter explores turnover and retention. It looks at models of both and the similarity of their variables. While turnover and retention are not exact opposites, both must be considered if a complete picture of staff movement is to be considered. Also intention to turnover was considered as a substitute measure for turnover. This was explored further with data from Queensland Health as a research question of this dissertation.

4.1 Nursing in Australia

The AIHW (2011) believe nurses are vital to achieving positive health outcomes for all Australians. Most nurses provide patient care, treatment, problem identification and guidance. According to the AIHW, there were estimated to be 320,982 nurses in Australia in 2009, however, a total of 22,178 registered nurses in Australia were not in the nursing labour force. This presents a large number of possible returners given the right circumstances.

In 2009 the total number of registered nurses within Queensland was 47,754, of these 2,229 nurses were not seeking work in nursing (AIHW, 2011). The labour force report provided data of full-time equivalent (FTE) nurses for each state because raw counts did not provide accurate information. The FTE was calculated in line with the ABS based on a 38 hour week. In 2009, the Australia-wide average was 1,105 FTE nurses per 100,000 population. This was an increase of 6.2% between 2005 and 2009, and was due mostly to both a 13.3% increase in the number of nurses working in nursing, and a 0.9% increase in the average hours they worked over this time. In 2009, females held the majority of nursing

positions, with 90.4% of employed nurses being female. The average age of an employed nurse in Australia was 44.3 years. The age profile of nurses has increased, where once the majority of nurses fell in the 40-44 years age group, in 2009 the majority of nurses fell between 50-54 years.

The projected demand for nurses is expected to rise along with Australia's ageing population (Access Economics, 2004). Twigg et al. (2010) advise workforce projections suggest that by 2012 there will be a shortfall of 61,000 registered nurses in Australia. Access Economics (2004) project that an increase will require 5,800 additional nurses on average per year. The proportion of nurses expected to retire each year is approximately 6,600.

4.1.1 Nurses within Queensland Health

Davies (2005) conducted a commission of inquiry into Queensland Health. Problems identified included (a) insufficient funding, (b) lack of staff participation in decision making, (c) a failure to record and sufficiently investigate any complaints, and (d) the manager's suppression of any criticisms. The inquiry concluded that Queensland Health should receive higher federal funding than the national average because Queensland (a) was the most "decentralised" state in Australia, with 20% more usage of outpatient services than Australia's average, (b) has fewer doctors per population than the rest of the country, and (c) has the highest growth of population, specifically ageing population. The Productivity Commission (2005) advise that persons over 65 years of age incur four times the cost for healthcare than those under 65 years, with this expected to rise from six to nine times for those over 75. Forster (2005) found Queensland Health, when compared with the rest of the world, provides a good service, however, the service was experiencing heavy demands and, as a result, showed signs of strain. The greater demand was due to (a) the increasing population, (b) technological advances, (c) critical shortages of employees, (d) lack of infrastructure and (e) limited capacity to service fields such as Indigenous and mental health. Forster identified that Queensland Health faced extra challenges due to high attrition rates in nursing (40%), and the inability to finance and recruit in line with demand. In response to the findings of the inquiry and review, the Queensland Government

(2005) increased funding to a record high of \$6.367 billion over five years. It promised to raise the number of doctors and nurses, as well as looking at new and better ways to provide healthcare. Queensland Health stated it would show staff they are valued by imparting caring leadership, integrity, respect and commitment.

Statistics obtained from Queensland Health indicated 1,785 nurses separated from this organisation during the period September 2007 to September 2008 (HR Informatics Unit, 2007; 2008). The average years of service for those who separated in September 2007 was 6.11 years. The total number of nurses employed within Queensland Health in September 2008 was 27,745 (HR Informatics Unit, 2008). Statistics indicate that even though there was high turnover, a greater number of nurses were recruited.

4.2 Turnover

Wisotzkey (2011) believes predicting turnover will allow interventions to be conducted that will enhance retention, offer management the time to control departures, and afford it the opportunity to implement countermeasures. All hospitals, including Queensland Health, need health staff, especially nurses, to function. Nurse turnover presents critical challenges to all areas of healthcare (Hayes et al., 2011). When nurses leave, this has numerous effects on the healthcare organisation, the work team, the patient, and the community as a whole (Jones, 2008). Turnover costs wear down attempts to implement efficiency and increase revenue (Jones, 2008). Costs to replace an employee are between 45% and 200% of their salary/wage (Contino, 2002). A high rate of turnover is connected to poor morale, decreased production, and mistakes which impact hospital bottom lines (Zurn et al., 2004). Mobley (1982) defines turnover as "the cessation of membership in an organisation by an individual who received monetary compensation from the organisation" (p. 10). Further he believes ceasing membership of an organisation is different from temporary withdrawal or internal movements. Morrell, Loan-Clarke, and Wilkinson (2001) advocate clarifying whether turnover is voluntary or involuntary. Involuntary turnover may happen because of situations independent of the leaver, for example, restructuring, cost-cutting or downsizing. If these cases were included in a study of those who

leave it would confuse the relationship between their leaving and a personal characteristic or variable (Morrell et al., 2001). Voluntary turnover on the other hand represents the leaver's choice and is a result of a decision process.

It is accepted there are limits to the ability to classify staff turnover as voluntary or involuntary (Campion, 1991; Morrell et al., 2001). Exit interviewers may not wish to press too hard when questioning an employee for fear of recording negative details against the organisation or employee (Campion, 1991). Employees, themselves, may not provide accurate data for fear of receiving an unfavourable reference (Morrell et al., 2001). These situations add to the confusion of any distinction between involuntary and voluntary turnover.

Abelson (1987) suggests consideration be given to the extent to which the voluntary turnover may be classed as avoidable or unavoidable (see Figure 4.1). Dalton, Krackhardt, and Porter (1981) suggested distinguishing avoidable leavers from unavoidable leavers should help the understanding of how the decision to leave is made.

Abelson's (1987) research confirmed Dalton and colleagues' (1981) theory that there was no significant difference between unavoidable leavers and stayers; however both groups were significantly different from voluntary, avoidable leavers. These differences occurred on levels of satisfaction within the workplace, commitment to the organisation, tension in the job and thoughts of withdrawal. By excluding unavoidable leavers Abelson was able to account for over 50% more of the turnover variance.

Griffeth and Hom (2001) go one step further than Abelson (1987), asserting not only can voluntary turnover be classed as either avoidable or unavoidable, but it can also be classified into either functional or dysfunctional turnover (see Figure 4.2). When substandard performers leave, this is considered functional turnover. Dysfunctional turnover is the leaving of "highly skilled or trained" nurses (those who perform effectively) who will be difficult to replace (Griffeth & Hom). Stovel and Bontis (2002) advise that while functional turnover can assist in reducing sub-optimal performance, high turnover can be harmful to productivity. High turnover can cause loss of business patronage and

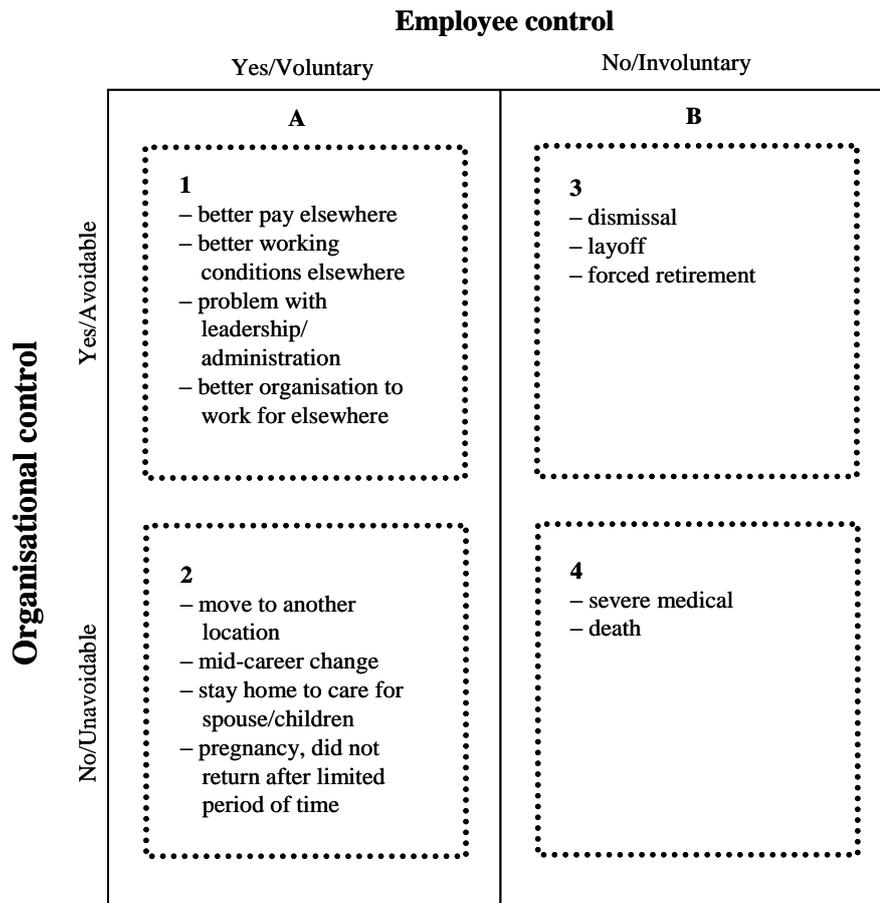


Figure 4.1. Expanded avoidability taxonomy. Adapted from "Examination of avoidable and unavoidable turnover," by M. A. Abelson, 1987, *Journal of Applied Psychology*, 72, p. 383.

relationships, as well as endanger the achievement of organisational goals. Conversely, Abassi and Hollman (2000) maintain that dysfunctional turnover (for example, high performers leave and low performers remain) harms the organisation by (a) decreasing innovation, (b) delaying services, (c) impacting the implementation of new programs, and (d) reducing productivity. This impacts the organisation's ability to effectively function in today's competitive economy, thus rendering ambitious organisations unable to succeed because of their lack of ability to retain the right employees (Stovel & Bontis).

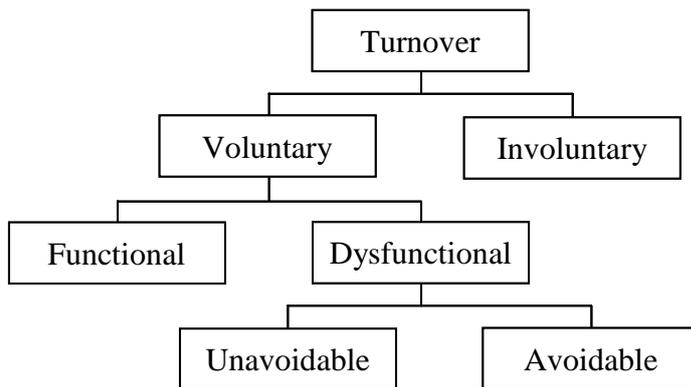


Figure 4.2. Defining undesirable turnover. Adapted from R. W. Griffeth & P. W. Hom, 2001, *Retaining valued employees*. Thousand Oaks, California: Sage Publications, p. 4.

Further, Griffeth and Hom (2001) counsel that only dysfunctional turnover is a disadvantage to employers. Champion (1991) suggests the use of individual records or speaking with direct supervisors can reveal whether a turnover is functional or dysfunctional. Griffeth and Hom consider that by removing functional turnover numbers from the total number of voluntary turnover, this may show turnover is not as severe as originally thought. They recommend employers discount turnover that is unavoidable and cannot be truly controlled, and focus on turnover that is voluntary, avoidable and dysfunctional.

Morrell et al. (2001) advise where there is voluntary, dysfunctional, and avoidable turnover, there is the potential for intervention. Both Davies (2005) and Forster (2005) decided employee turnover was an important issue and warranted attention, especially from the negative effect that it may have on the viability of the services provided by Queensland Health and the well-being, satisfaction and prosperity of the nurses. Focusing the above information on turnover onto the situation in Queensland Health, while some turnover may be involuntary, some functional and some unavoidable, there is a proportion of turnover that is voluntary, dysfunctional and avoidable. Stemming this turnover would assist in "plugging the leak" referred to by Cowin and Jacobsson (2003) and thereby increase the nursing population to deal with anticipated future challenges.

4.2.1 Use of intention to leave

An issue often discussed with regard to the construct of turnover is the use of intent to leave as a substitute measure (Griffeth & Hom, 2001). Many researchers, including Hom, Griffeth, and Sellaro (1984), Mobley (1977), Steers and Mowday (1981), and Steel and Ovalle (1984), have used intention to leave as the most immediate and accurate predictor of actual turnover. The assumption behind this use has been explained in the theory of reasoned action (Fishbein & Ajzen, 1975) and the theory of planned behaviour (Ajzen, 1985; 1991). The theory of planned behaviour contains three 'basic' predictors of behavioural intentions, (a) the attitude towards the act, (b) the subjective norm, and (c) the perceived behavioural control. Ajzen (2001, p. 44) asserts that there is adequate support for the theory and that 'little can be gained at this point by further demonstrations of the theory's applicability to particular domains'. Research has continually demonstrated that an employee's thoughts and behavioural intentions to leave the organisation are strong predictors of turnover (Cotton & Tuttle, 1986; Steel & Ovalle, 1984). Steel and Ovalle's meta-analysis of behavioural intentions and turnover provided a weighted average correlation of .5 between behavioural intentions and turnover which exceeded those for relationships between turnover and overall workplace satisfaction ($r = .28$), satisfaction with work ($r = .31$) and commitment to the organisation ($r = .38$). The intention to turnover is proven as the single best substitute measure for turnover available and most often is used by researchers when access to those employees who have left the organisation is not possible (Griffeth & Hom, 2001; Steel & Ovalle; van Breukelen, van der Vlist, & Steensma, 2004). The relationship between turnover and turnover intention will be explored in Chapter Seven of this dissertation.

4.2.2 Models explaining turnover

The discussion thus far has highlighted the importance and elusiveness of such key concepts as voluntariness, avoidability, and functionality. Each of these is central in considering the effective management of turnover, yet measurement of these comprises epistemological and logistical problems which seem to threaten the possibility of any comprehensive account of turnover. Modelling

turnover is a well-established tradition for the research and dissemination of theory within schools of psychology, organisational behaviour and economics (Morrell et al., 2001). There is a large body of research that routinely use models. Even when there are questions as to the validity of a particular description of turnover, the underlying methodology is rarely challenged; instead recommendations are focused on research and are often directed toward enhancing or clarifying relationships between established constructs.

Holtom, Mitchell, Lee, and Eberley (2008) describe how today's turnover models have expanded both horizontally and vertically from the earliest models which had the basic belief that dissatisfaction caused turnover. Most of today's theoretical and empirical research on turnover is built on the foundation established in 1958 by March and Simon (1993). March and Simon proposed two paths in the process of turnover; namely the certainty that it is desirable to leave and the belief as to how easy this departure would be. The desirability of movement hinges on work-related attitudes, and internal opportunities, while the ease of movement relies on external aspects such as availability of alternative jobs and the current level of unemployment (Tanova & Holtom, 2008). This model has limitations in that its simplicity does not allow an attempt to capture or code such a complex process as turnover (Morrell et al., 2001). Further, Lee and Mitchell (1994) suggest that the notoriety of this model may have impeded research with the decision to participate in turnover overly influencing subsequent turnover models.

Morrell et al. (2001) consider turnover models as being from two schools of thought – either the psychological school or the labour market school. The labour market school of thought advocates that employees are rational, homogeneous, and uniformly influenced by external factors. This suggests a deterministic focus based on the belief that external influences determine actions (Morrell, Loan-Clarke, & Wilkinson, 2004). Turnover variables focused on by labour market models include job search, labour market flexibility, job mobility and wage mobility, unemployment level, and person-job match (Tanova & Holtom, 2008). While the labour market approach does have some potential in modelling turnover, allowing for conceptualisation of numerous situations based

on variation of labour demand, supply and volume of work, its inability to acknowledge imperfect awareness and heterogeneity, in addition to difficulties in defining scope, and the part played by non-monetary determinants makes its use problematic (Morrell et al., 2001).

The psychological models consider factors that explain or predict the behaviour of those who voluntarily leave (Morrell et al., 2004). Factors which are included in psychological models of turnover encompass individual characteristics, stress, burnout, emotional exhaustion, personality, job satisfaction, organisation commitment, and job involvement (Hom & Kinicki, 2001). Further, a general withdrawal construct was put forward indicating that employees display signs of withdrawal such as lateness, absenteeism, and reduced performance as an indication that they are going to leave the organisation (Tanova & Holtom, 2008).

Porter and Steers (1973) developed the "Met Expectation Model" and argued employees believed in certain individual job expectations and if the organisation did not meet these expectations the likelihood of dissatisfaction, withdrawal and turnover was extremely high. Griffeth and Hom (1995) challenge this suggestion regarding withdrawal, advising that not everyone withdraws when their expectations are not met.

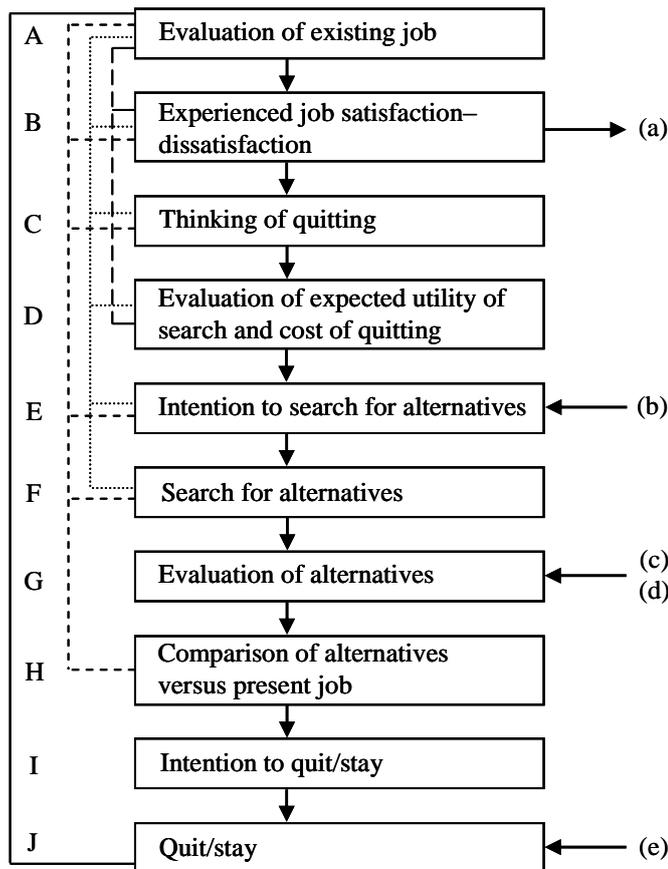
Mobley (1977) developed a turnover model adapted from Porter and Steer's met expectation model. Mobley's model focused on the employee's evaluation of their current job (either satisfaction or dissatisfaction) to turnover (see Figure 4.3). In Mobley's model dissatisfaction in the employee's current position would lead to thoughts of resigning, which arouses the desire to search for another job (intention to search) and then may lead to the behaviour of searching. This model presented a more comprehensive withdrawal process and highlighted the steps employees go through before leaving (Holtom et al., 2008). Griffeth and Hom (2001) advise this approach advanced the research on turnover theory by including additional areas frequently omitted in other research. However, not all employees have another position or have even searched for another position prior to quitting the organisation.

Price and Mueller (1981) developed the Causal Model of Turnover (see Figure 4.4). They suggested four factors determined voluntary turnover: (a) intent to stay, (b) opportunity, (c) training, and (d) job satisfaction.

Turnover research can be considered as two streams: studies that consider turnover as the dependent variable, and studies that treat turnover as part of overall phenomenon or one of several variables (Price & Mueller, 1981). The weakness with this research is that it does not encompass all variables, for example, variables thought important in one study do not appear in another.

Price's self-revision of the structural model came about because of feedback from other researchers in an attempt to explain as much as possible about the variation in turnover (Price & Mueller, 1981). Testing of the model revealed it explained only 18% of the variance, which was much lower than anticipated. Price and Mueller (1981) emphasise individual variation needs to be considered when searching for the factors that determine turnover. Price and Mueller's model was a step in the refinement of turnover models, however support for it was weak, and the causal claims of their model were weakened by significant relationships proven on null pathways and no causal connection in relation to employee absence (Hom & Griffeth. 1995).

Griffeth and Hom (1995) integrated Price and Mueller's model with Mobley's model and produced a heuristic model (see Figure 4.5). This model was a combination of Price and Mueller's organisational and work environment determinants with Mobley's cognitive and evaluative variables. This model was stronger with many significant pathways (Griffeth & Hom).



(a) Alternative forms of withdrawal, e.g. absenteeism, passive job behaviour.

(b) Non-job related factors, e.g. transfer of spouse, may stimulate intention to search.

(c) Unsolicited or highly visible alternatives may stimulate evaluation.

(d) One alternative may be withdrawal from labour market.

(e) Impulsive behaviour.

Figure 4.3. The employee turnover decision process. From "Immediate linkages in the relationship between job satisfaction and employee turnover," by W. H. Mobley, 1977, *Journal of Applied Psychology*, 62(2), p. 238.

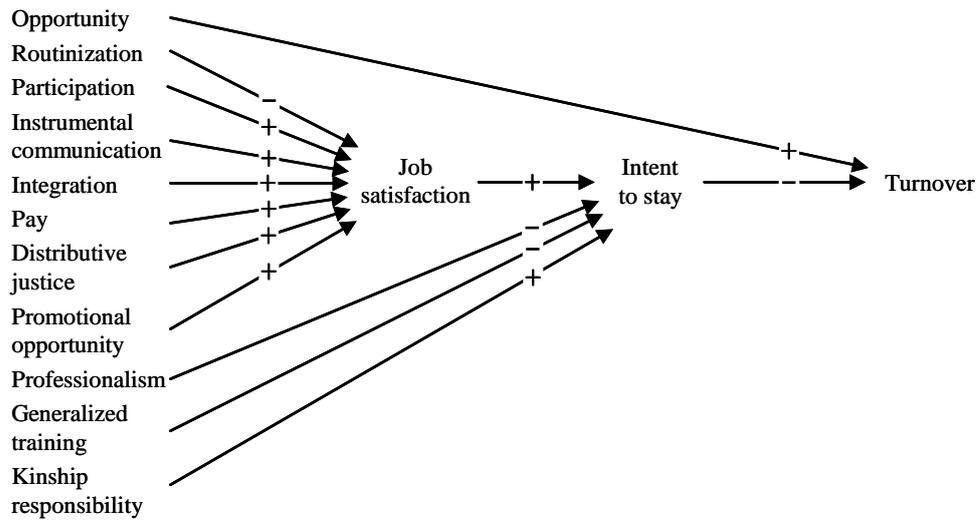


Figure 4.4. The causal model of turnover. From "A causal model of turnover for nurses," by J. L. Price and C. W. Mueller, 1981, *Academy of Management Journal*, 24(3), p. 547.

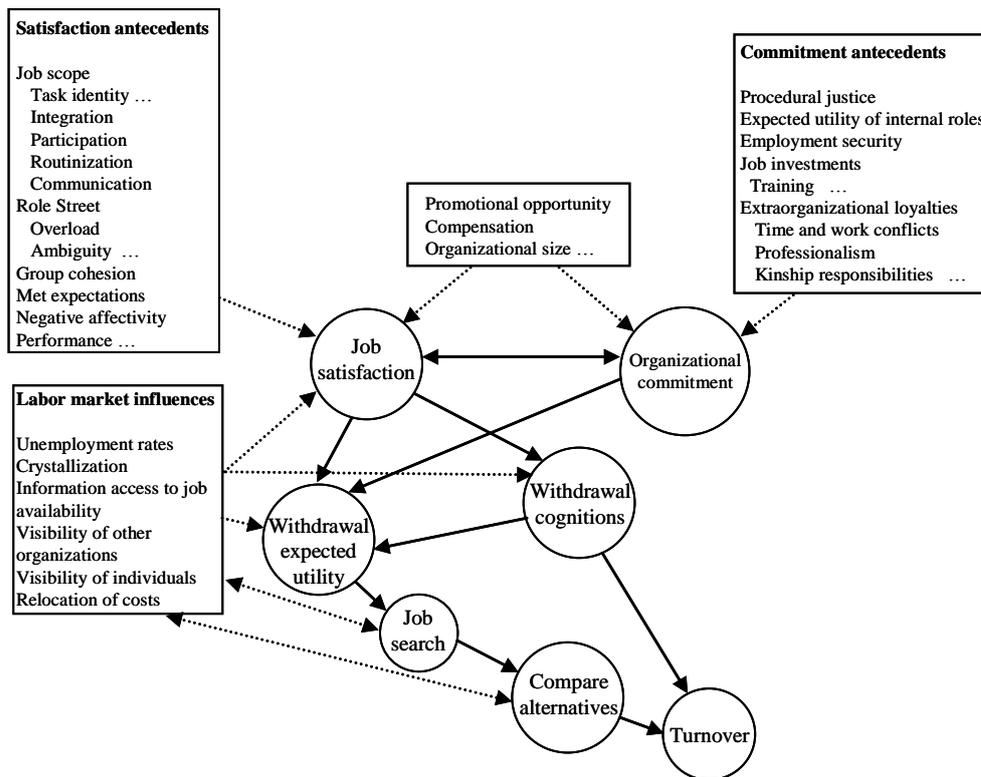


Figure 4.5. Heuristic model integrating performance into the turnover process. From "The employee turnover process," by R. W. Griffeth & P. W. Hom, 1995, *Research in Personnel and Human Resources Management*, 13, p. 278.

There are numerous theories on turnover and many models that have been used to explain turnover. However, major weaknesses of most models include (a) their lack of inclusiveness, (b) variables emphasised are different for each model, and (c) what one model deems important is quite often not mentioned in another (Price and Mueller, 1981). Griffeth and Hom (2001) suggest there is always room for refining turnover theories and modelling. Determining turnover may be refined if models of how employees adapt to stress within their work environment were considered. Maertz and Campion (2004) requested that researchers focus on developing process models that explore the motivations for employee turnover. Griffeth and Hom encourage researchers to continue researching as further exploration will benefit in explaining and understanding turnover. Waldman, Hood, Smith, and Arora (2004) argue that although considerable data is available, a turnover model that is both reliable and predictive has yet to be found.

4.2.3 Retention models

Boyle, Bott, Hansen, Woods, and Tauntan (1999) put forward the conceptual model of intent to stay, including manager characteristics and found that manager characteristics were significant at each stage of the model (see Figure 4.6). Manager characteristics (power, influence and leadership style), organisational characteristics (the nature of the job, opportunity for promotion, autonomy, unit characteristics and workload), nurse characteristics (job opportunities, work priorities, age, education, tenure and years of experience), work characteristics (autonomy, communication, work group cohesion, routinisation) were all variables in this model. While previous models of intent to stay explained 28% to 32% of the variance, Boyle et al.'s model explained 52% of the variance in intention to stay. Boyle et al. suggest that their model's ability to explain more variance than previous models was due to the inclusion of manager characteristics, with two of the variables (power and influence of work coordination) significantly and directly related to intent to stay. In commenting about the limitations of their research they advise that other relevant variables may have been omitted.

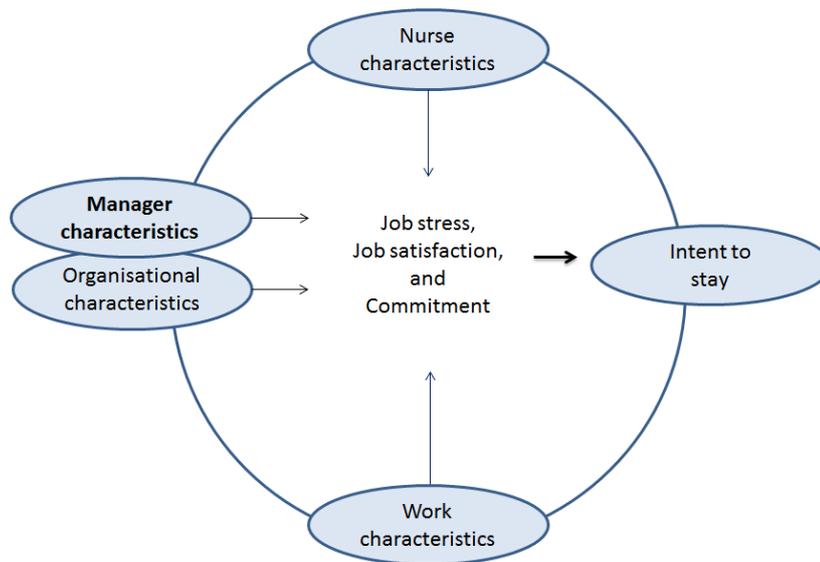


Figure 4.6. Conceptual model of intent to stay. Adapted from "Managers' leadership and critical care nurses' intent to stay", by D. K. Boyle, M. J. Bott, H. E. Hansen, C.Q. Woods, & R.L. Taunton, 1999, *American Journal of Critical Care*, 8, p. 363.

Tourangeau and Cranley (2006) explored minimising turnover through the implementation of strategies which discourage voluntary separation, however developing retention strategies requires a knowledge and understanding of determinants that influence nurses to remain employed. They also considered the acquisition of knowledge about this intention to stay and methods to strengthen it. Intention to stay is an employee's perceived likelihood of remaining with an organisation and is directly and positively related to retention (Boyle et al., 1999). Aspects that impact on intention to stay included satisfaction with their work, organisational commitment, leadership skills and leader support, burnout, work group cohesion and collaboration, and personal characteristics (Tourangeau & Cranley). Direct positive relationships have been discovered between nurses' satisfaction with their work and overall work environment and intention to remain employed (Aiken et al., 2002; Larrabee et al., 2003; Shields & Ward, 2001; Sourdif, 2004). Positive cooperation between nurses and doctors and high levels of work group cohesion were found to be strongly connected to nurses' intention to remain employed (Larrabee et al., 2003; Shader et al., 2001). Personal characteristics such as age and years of experience as a nurse (Chan & Morrison,

2000) are related to intention to remain employed. Nurses who were older, more specialised, and with more years of experience were more likely to remain employed (Tourangeau & Cranley). Their suggestions to employers included moral employment practices, clear communication systems, increasing employee participation in decision making, promoting praise and recognition for a good job, and establishing a joint vision and shared goals (Tourangeau & Cranley). Further, research showed the most consistent predictor of retention is nurses' satisfaction with their work. Shields and Ward (2001) reported that nurses who are dissatisfied with their job are 65% more likely to leave than are satisfied nurses. Tourangeau and Cranley's retention model is displayed in Figure 4.7.

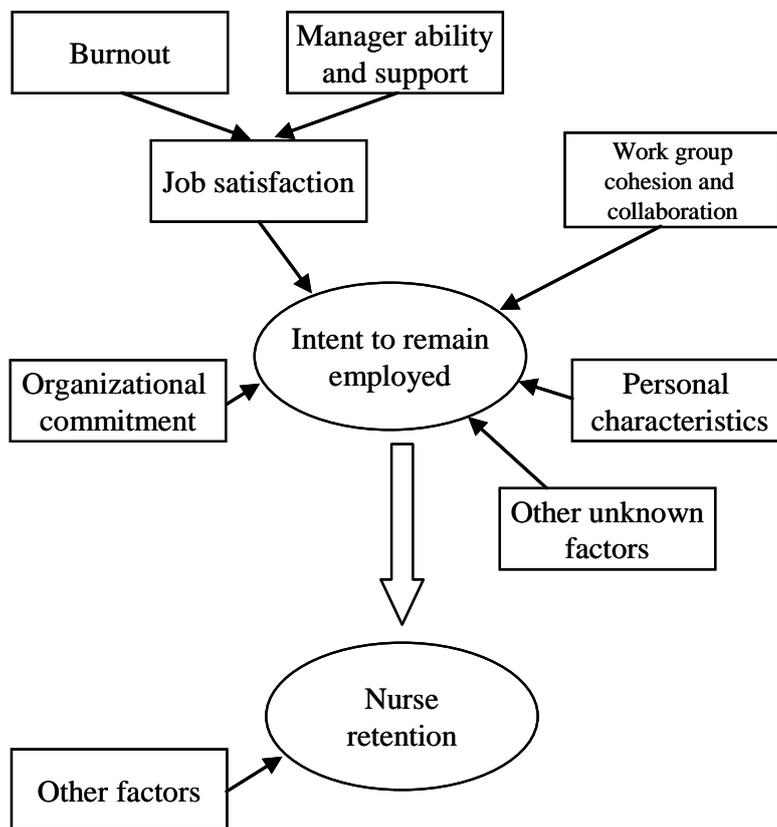


Figure 4.7. Revised model: determinants of nurse intention to remain employed. From "Nurse intention to remain employed: understanding and strengthening determinants" by A. E. Tourangeau & L. A. Cranley, 2006, *Journal of Advanced Nursing*, 55(4), p. 506.

Ellenbecker (2004) proposed a model which identified the antecedents to job satisfaction, including intrinsic and extrinsic job aspects (see Figure 4.8). This model links job satisfaction both directly and indirectly to retention. Individual characteristics as well as intrinsic and extrinsic characteristics are indirectly associated with retention through job satisfaction.

The retention model of Ellenbecker (2004) bears strong resemblance to Price and Mueller's causal model of turnover (Figure 4.8). In general, turnover and retention models share strong similarities, especially in relation to satisfaction within the work environment and intention to stay/leave. There are also similarities in the antecedents of both, including autonomy, group cohesion, stress, work satisfaction, commitment and supportive leadership.

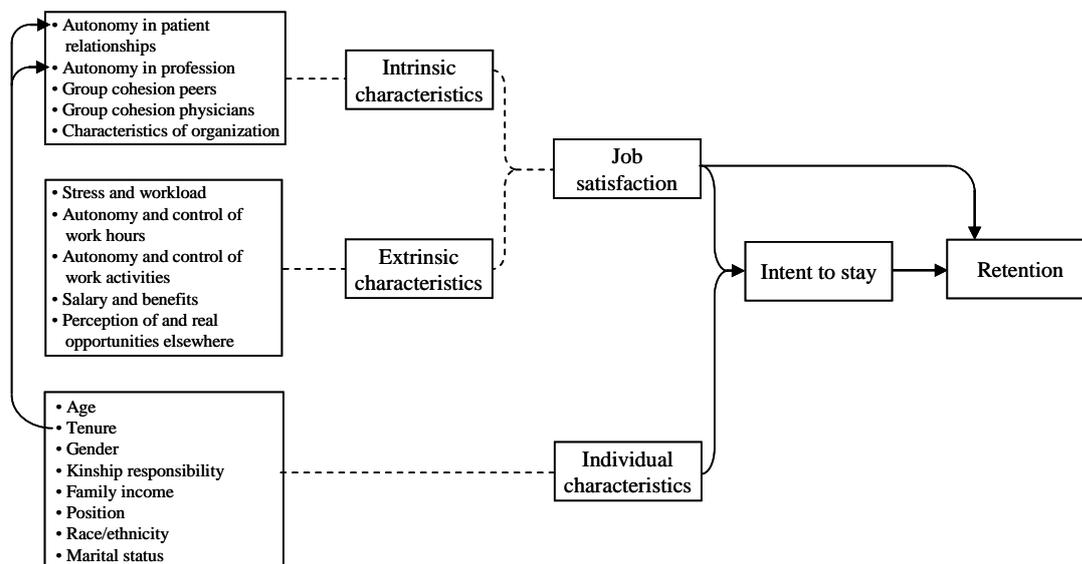


Figure 4.8. Theoretical model of job retention for home healthcare nurses. From "A theoretic model of job retention for home healthcare nurses" by C. H. Ellenbecker, 2004, *Journal of Advanced Nursing*, 47(3), p. 305.

Morrell et al. (2001) reiterate that modelling is challenged by the very complexity of the concepts of turnover and retention, making modelling anything but straightforward. The importance, yet elusiveness, of key aspects such as voluntariness, avoidability, and functionality in turnover threaten the possibility of any model containing a fully inclusive story of either turnover or retention. The inability for any model to 'perfectly fit' empirical data on turnover or retention

may be due to the complexity of social phenomena which would create difficulties for any global perspective of turnover or retention.

4.2.4 Retention versus turnover or a combination of both

Waldman et al. (2004) suggests why people remain with an organisation may not be the opposite of why they leave, thus researching causes of turnover to increase retention may be of little use. However, Hayes et al. (2011) advise that turnover is closely aligned to the concept of retention. Further effective retention strategies are part of the solution to employee turnover.

Flowers and Hughes (1973) believe why people remain employed is as important as why they leave. They liken retention and turnover to opposite sides of a coin. The turnover and retention models addressed within this chapter highlight the many similar impacting factors between turnover and retention. Both turnover and retention must be considered to achieve a complete picture of how to retain nurses in nursing.

The focus of this dissertation was on retention through the reduction of turnover antecedents with the aim of reducing turnover itself. The data analysed has come from staff who at the time were still employed by Queensland Health. This research was mindful of issues impacting on turnover as the other side of a two-sided coin, in an effort to avoid or reduce voluntary, dysfunctional and avoidable leaving.

4.2.5 Psychological antecedents

In a commissioned report, the Australian Centre for Industrial Relations Research and Training (ACIRRT; 1999) undertook a review on turnover and retention. In this review they criticised research for not sufficiently covering the complex psychological processes involved in employees' decisions to leave or stay with an organisation. Hemmingway and Smith (1999) advise occupational stress is partly responsible for workplace turnover. Heim (1991) noted the US National Institute for Occupational Safety puts nursing in the top forty occupations with a high rate of stress-related disorders. Hemmingway and Smith found research showing heavy workload and patient death are the greatest sources of stress for nurses. Albion, Fogarty, Machin and Patrick (2008) indicated there is

an abundance of research showing links between psychological variables and turnover. Further, they believe continued exposure to stressful work conditions raises "neurophysiological activity" creating a "psychophysiological imbalance" which, when continued over an extended period, leads to health difficulties, and for that reason, greater levels of sick leave and staff turnover.

Griffin et al. (2000) maintain to have a productive organisation with happy, satisfied staff, management need to focus on strategies to improve organisational health. In turn, they feel this will lower workplace stress. Hart and Wearing's (1999) Dynamic Equilibrium Theory of Stress proposes that stress is a result of interaction between employees and their workplace. It involves numerous variables encompassing characteristics of personality, workplace environmental aspects, both negative and positive experiences within the work environment, and job satisfaction. Griffin et al. believe the crucial gauge for organisational health is organisational climate.

4.3 Organisational climate

Job satisfaction has consistently been linked to the employee's perception of organisational climate (Schulte, Ostroff, & Kinicki, 2006). Further, Schulte et al. (2006, p. 645) state "an individual's perceptions of climate accounted for a large percentage of the variance in their satisfaction".

Reichers and Schneider (1990) define organisational climate as shared awareness of policies, practices and procedures. Organisational climate is the way that things are done in a working environment. For the purpose of this research the word "climate" will not be interchanged with "culture". Climate differs from culture in that it can be measured and changed, whereas culture is both difficult to measure and hard to change (Cotton, 2004). More in-depth distinctions will be undertaken within Chapter Five.

Organisational climate is deemed important because research shows it has many impacts, including an impact on individual well-being, absenteeism and turnover (Cotton, 2004). Climate is important because the way an employee views one's employer and work environment influences how one feels and behaves when working. This is then linked to the overall performance of the

organisation (Knights, 2006). Overall organisational climate is the key to organisational health and a healthy organisation is noted by high employee retention.

4.4 Other factors impacting retention and turnover

While not widely acknowledged there are several factors which impact retention and turnover that need to be considered. These encompass the wider environment, the psychological contract between the employer and employee, the nurses' primary goal – to care for others and organisational change. These will be discussed within this section.

4.4.1 The wider environment

Environmental pressures, created by government and management, and cost reduction initiatives impact heavily on nurses (Bolton, 2004). Changes such as target setting, performance indicators, and quality audits will be seen as control tactics to weaken autonomy and further increase the nurse's workload (Keenan, 1999). It is suggested nurses will see these initiatives as hype, especially when there are insufficient financial resources to carry out these schemes (Bolton). Aiken et al. (2002) and Chan, McBey, Bassett, O'Donnell, and Winter (2004) believe these changes will cause frustration, heighten job dissatisfaction, lower work commitment and morale and increase the risk of industrial action. Chan et al. advise this will also impact on the psychological contract between nurses and management.

4.4.2 The psychological contract

Chan et al. (2004) suggest management consider the increased dissatisfaction of nurses through the idea of the psychological contract and the belief by nursing staff that a violation has occurred. The psychological contract is the employee's subjective perceptions of the mutual obligations between the individual and the organisation (Rousseau & Ho, 2000). Further, because it is subjective it reflects an incomplete, selective and sometimes inaccurate picture of the relationship; however this contract is seen as the foundation of the employment relationship. Van de Ven (2004) suggests the function of a psychological contract is to reduce the employee's insecurity. This contract has

five dimensions for organisation promises which are: (a) career progression; (b) job content, for example, the inclusion of challenging tasks; (c) a pleasant work environment; (d) appropriate pay; and (e) a balance between work and private life.

Chan et al. (2004) suggest the psychological contract is equivalent to "No Gaps" and fills any spaces in the individual's written employment contract and moulds their behaviour. A negative result may occur if the individual perceives a contract violation, for example, dissatisfaction, resentment, anger, distrust, reduced commitment, absenteeism, sabotage and turnover.

4.4.3 Nurses' primary goal – the desire to care

In research conducted by Duffield and colleagues (2004), respondents identified altruistic reasons as the most important reasons for becoming a nurse. Wolf (2001) advises the majority of nurses enter nursing because they care about helping others. If nurses enter nursing to care, then retention strategies should address issues that inhibit nurses from providing that care (Eley, Eley, & Rogers-Clark, 2010). Wolf maintains the present global environment pressures hospitals to focus on productivity and costs which can frustrate nurses who gain satisfaction from helping and interacting with patients. Paperwork, administrative tasks and regulation/legislation compliance take time away from the "human side" of nursing (Wolf). Retention and recruitment strategies would benefit by focusing on the altruistic reasons that attract nurses to nursing.

4.4.4 Organisational change

Organisational change has been constant during the last decade or more (Laschinger, Shamian, & Thomson, 2001). Restructuring, with the goal of creating better patient care, involved downsizing of both programs and staff. This restructuring has resulted not only in uncertainty within the work area, but the nurses' belief and faith in management diminished (Laschinger et al., 2001). Cameron, Freeman, and Mishra (1993) reported that downsizing in itself resulted in decreased communication (not only among employees, but also between employees and managers), diminished productivity, increased conflict, more centralised decisions being made, and lower employee morale and loyalty. Laschinger et al. (2001) highlight the irony in this situation, that trust within the

workplace is at its lowest at a time when it is crucial for the success of the restructuring.

Contino (2002) believes in order to reduce turnover, two-way communication must be created within the hospital culture. Employees must be clear on what is expected from them and managers must listen to nurses. Contino also highlights the importance of selecting the best applicant for the position because incorrect selection only causes conflict in the workplace and additional staff turnover. JCAHO (2002) suggest management receive training and resources to allow it to implement a culture of retention.

There are small changes that management can make which may have a huge impact on the workload of the nurse. PricewaterhouseCoopers ([PwC]; 2001) reported that paperwork may take thirty minutes to one hour for every hour of patient care. PwC recommends changes to the regulatory paperwork to reduce the amount of time nurses spend dealing with this issue. Government and nursing administration should work together to reduce the burden of nurses.

4.5 Retention strategies

Buchan and Aiken (2008) argue that the nurse shortage is not necessarily a lack of individuals with the necessary qualifications to nurse, but a scarcity of nurses prepared to work under the present conditions. The reason for the nurse shortage is complex and there exists no one measure of its extent and nature, however increasing evidence points towards the impact of limited nurses on the delivery of healthcare and patient outcomes (Buchan). Further inadequate workforce planning and allocation processes, limited supply of new staff, poor retention policies and ineffective use of current nurse resources cause nursing shortages. Ongori (2007) recommends organisations focus on the following human capital management areas: (a) effectively engage their employees through well designed jobs, efficient use of employees' time, and display commitment and support to motivate and retain these valuable human assets; (b) ensure a collaboration of knowledge and ideas are spread to all employees (information sharing would lead to strong performance and enhanced organisational culture); (c) optimising the workplace by providing good working conditions, establishing

accountability and developing essential processes for completing tasks, and hiring high performing staff; (d) involving the individual employee with their work to allow them to identify psychologically with their job, for example, internalising values about the importance of their tasks; and (e) empowering employees with managers involving them in decisions, mentoring/coaching and problem solving. The use of a retention model or turnover model and delivery through an employee survey would allow staff to highlight areas that need specific management attention. Management can then focus its attention on areas of need through area specific strategies. Management should be mindful that no retention strategy or group of strategies will be completely successful. Morrell et al. (2001) advise that turnover will occur and it does not always have to be negative, for example, when there is a mismatch between the organisation and the employee. Tourangeau and Cranley (2006) advise throughout the multitude of research on staff retention, satisfaction within the work environment was the most consistent way to predict whether the nurse was going to remain with the organisation.

Queensland Health has expended considerable human, financial and physical resources to put in place retention strategies (professional support and development activities and programs) for all their staff (Belbin, 2011). The retention strategies include mentor programs, leadership development activities, work/life balance agreements, mature-age retention programs, workplace culture surveys, employee assistance schemes and study assistance schemes. The major obstacle to participating in these strategies reported by participants was a lack of knowledge of which strategies were being offered and this was mainly due to limited promotion of these strategies. Belbin (2011) found the preferred strategies were strategies which firstly provided a monetary advantage, and secondly the opportunity for professional development.

4.5.1 Realistic job previews

Griffeth and Hom (2001) found "realistic job previews" were successful in reducing turnover in new employees. A realistic job preview is a balanced realistic picture providing all the positive and negative aspects of a job to the applicant (Griffeth & Hom). Providing new employees with this preview prevents

them from going through "reality shock" and provides preparation for the frustrating aspects of the job. Research in private industry undertaken by Wanous (1992) indicated realistic job previews afforded an 8% increase in retention rates. Research supports that employees provided with realistic previews are more likely to enjoy their job in the long term (Griffeth & Hom).

Meglino and DeNisi (1987) discuss aspects that affect the success of realistic previews. These include: (a) high levels of unemployment (in this situation employees are reluctant to leave); (b) attractive positions as opposed to positions with poor working conditions (realistic job previews are successful in jobs that are perceived as attractive); (c) high levels of job acceptance (a combination of economic conditions and job attractiveness in which if employee accepts they will more likely be bound); (d) contractual obligations (employees sign contracts agreeing to work for certain amount of time which would get them through the critical period); and (e) psychological contracts (the investment of time and effort by companies aimed at creating an unwritten obligation). Hom, Griffeth, Palich and Bracker (1999, p. 109) advised that the previews used in nursing "comforted new nurses". Hom et al. (1999) also suggest realistic job previews assist an individual to develop coping skills for the negative aspects of the job. These previews provide the best impact for highly committed individuals and therefore reduce turnover and raise satisfaction.

4.6 Chapter summary

This chapter explored nurse numbers, both Australia-wide and in Queensland, including numbers of nurses working outside nursing or not working at all. Turnover was specifically defined and types of turnover identified and discussed. Not all turnover is bad; and not all turnover can be avoided. Organisations needed to address turnover that is voluntary, avoidable and dysfunctional. If this specific turnover is not addressed it will negatively affect the viability of health services and the well-being of nurses.

The goal of management is to retain staff and thus minimise turnover (Ongori, 2007). To achieve this goal, management must have a precise diagnosis of the problem. Turnover and retention models can be used as research tools in

this regard. However, all models have weaknesses comprising (a) lack of inclusiveness, (b) differing variables, and (c) factors considered important in one model are missing from others (Price & Mueller, 1981). Both turnover and retention models share similarity in variables, especially in relation to the impact of the working environment. Turnover and retention may be opposite sides of the same coin; however the variables that impact both retention and turnover are highly connected.

Cowin and Jacobsson (2003) assert that if nursing organisations do not address the reasons nurses are leaving; then there is a great danger of losing even more nurses. Further, workplace reforms should be the goal of strategies to retain nurses. Needleman et al. (2002) advise policy makers to work on improving the overall relationship between hospitals and nurses. Additionally, they recommend the focus be on providing financial assistance to hasten these improvements in the workplace, hire necessary staff, raise salaries and any other actions required to strengthen this relationship. Queensland Health has taken the first steps by increasing funding, improving salaries, creating a culture against bullying and improving working conditions (Queensland Government, 2005), however higher than necessary turnover still continues. Attention needs to be focused on reversing or altering issues/aspects that cause nurses dissatisfaction within the workplace and improving the working environment. Magnet principles have shown to be successful internationally, and this dissertation will explore these principles within Chapter Nine. By creating better work environments and promoting employee well-being, Queensland Health can build stronger relationships between the hospitals and nurses. These relationships are critical in improving quality of care and assuring the safety of patients both now and in the future.

In summation, this chapter has identified that any attempt to increase retention must consider both factors of retention and turnover to provide a complete picture. Many factors influence turnover and retention, however, the most noted area of concern in numerous studies were the workplace and the overall working environment. Employee retention is closely aligned to

organisational health. If an organisation is healthy, employee well-being will be a priority.

CHAPTER 5 ORGANISATIONAL HEALTH AND ORGANISATIONAL CLIMATE AND THEIR IMPORTANCE TO BOTH TURNOVER AND RETENTION

Previous chapters identified the shortage of nurses as a global challenge. This shortage combined with an ageing population and advancing technology, requires priority attention. Chapter Three explored the solutions/strategies recommended to address the shortage. Of all the suggestions considered, the most poignant was retention. Chapter Four considered the retention of nurses and precursors of both turnover and retention that need to be identified and addressed to keep nurses in nursing. This chapter will consider organisational health and organisational climate, define these constructs and establish their importance in relation to well-being (especially mental health), performance and staff retention. This chapter will also detail the assessment tool, the Better Workplaces Staff Opinion Survey (BWSOS) which was used by Queensland Health to gain information from staff on areas that are positive and areas where there are challenges which need to be addressed. Data collected from the BWSOS were used to compare responses from staff at a magnet hospital with those of staff at two non-magnet hospitals to identify whether magnet accreditation makes a difference to nurses working in these hospitals.

Increased employee retention (low employee turnover), high employee performance and organisational profitability are strongly connected to organisational health (Page & Vella-Brodrick, 2008). Lindstrom, Schrey, Ahonen, and Kaleva (2000) believe the optimisation of effectiveness, ability to cope with change, and employee well-being are all centred within organisational health. How does an organisation create better work environments and employee well-being? DeJoy and Wilson (2003) argue efforts to improve employee well-being must start with improving the organisation itself. When employees feel valued and motivated they are productive, loyal and experience lower stress (Page & Vella-Brodrick, 2008). DeJoy and Wilson advise not only do healthy organisations benefit from greater productivity and retention, but they also

experience lowered costs linked to absenteeism, recruitment and healthcare, and most importantly, a competitive edge in an increasingly competitive marketplace.

5.1 Organisational health

Cooper and Cartwright (1994) define a healthy organisation as an organisation that is profitable, has a physically and psychologically healthy workforce, and is able to preserve a healthy and satisfying workplace and culture for the long term, even during turbulent times. Further, they identify the work environment within a healthy organisation as having the following attributes: (a) low in stress; (b) high in commitment and job satisfaction; (c) low in levels of sick time, absenteeism and turnover; (d) good industrial relations; (e) good safety records; and (f) lack of legal action (for example, negligence, workers compensation claims).

Adkins, Quick, and Moe (2000) emphasise the importance of organisational health in relation to individual health and well-being and recommend considering the following individual health principles to achieve a complete definition for organisational health. Firstly they suggest health is more than just the opposite of being sick: health moves on a continuum from fullness of life through sickness, and on to death. In an organisation, the goal is to aim for top-class performance and "abundant" health instead of just minimising distress and dysfunction within the organisation or complete organisational closure. Adkins et al. (2000) note this requires detecting the many stages and indicators along the continuum.

The second principle is to recognise that health is an involved, dynamic (not static) process (Adkins et al., 2000). To attain top health requires constant effort and consideration and once achieved, maintenance and reassessment must continue to stay on top of future change. Monitoring must occur on many levels due to the complexity of the health process. Adkins and colleagues (2000) warn no matter how much monitoring, data collection or assessment occurs, unless those in charge of the health process show awareness and communicate hazards; the health of the organisation will be at risk.

Thirdly, Adkins et al. (2000) infer that the health of an organisation is systemic. While being anthropomorphic, it may be considered if one part of the organisation is sick or diseased, this will then impact on the entire organisation. This impact will either limit the organisation's capability, or raise the workload in other areas to cover for the area that is sick. This then opens the possibility of complete contamination, or raised vulnerability. To create immunity to possible threats, areas in which the organisation is vulnerable need to be identified and steps taken to strengthen these areas perceived as deficient. Risk assessment can be conducted by comparing areas of vulnerability with potential threats.

The fourth and final principle of organisational health recommends in order for an organisation to attain and maintain health, positive collaborative relationships are necessary (Adkins et al., 2000). In relation to individual health, instead of one person healing all ills, teams of healthcare professionals take part in providing advice to patients who then participate in any decisions that affect their health. The same can be applied to organisations, wherein they progress when positive relationships with employees, customers and suppliers are cultivated. The relationships may change during the evolution of the organisation; however, it is necessary and important to the well-being of all to continue to invest in these relationships through these changes (Adkins et al., 2000). To achieve this goal, leaders should identify both individual and team strengths and weaknesses, and work within these parameters. Further, they highlight that those in charge cannot "mend" the organisation, in the same way that a doctor cannot stop a patient from undertaking high-risk behaviours. The manager can only initiate or modify action through the use of relationships and communication. Adkins and colleagues (2000) recommend that managers use a collaborative position to network and consult with others to increase their knowledge and skill base.

Adkins et al. (2000) define organisational health as a "dynamic, systemic process dependent on relationships both internal and external to operations" (p. 111). Further, they imply that maintenance of health needs continual monitoring and measuring of possible threats, whether to health, assets, immunity or areas susceptible to threats, as well as signs of healthiness. Strategies of health promotion, prevention and intervention rely heavily on data collected from

surveillance and risk assessments. Use of these data will achieve the organisation's goal of excellent performance.

Jaffe (1995) defines organisational health at several levels. In relation to the organisation as a whole, the organisation can be healthy by increasing efficiency, being adaptable and clear. The organisation can be healthy for shareholders by raising the value of its shares. In relation to employees, the organisation can afford to staff a healthy work environment as well as promoting their growing needs for meaning and participation to the highest level. This health can also be applied at the consumer level by offering quality products and services. The final level that Jaffe includes is that of the community, where the organisation can be healthy for the community by having concern for its viability and the environment. Jaffe also adds that a balance must be maintained of all levels to ensure success.

While the latter definition describes who benefits and the overall idea of health, it does not clearly outline what parts of the workplace interact to produce well-being. Williams (1994) outlines four parts of organisational health as environmental aspects, and physical, mental and social health. Yet, Shoaf, Genaidy, Karwowski, and Huang (2004) believe it is short-sighted of Williams to equate the health of the individual to that of the organisation, and that other aspects such as physical and mental demands of the job, demands of the physical environment and individual characteristics must be thought about at the same time. Further, they advise that there is minimal research devoted to organisational health with the majority of these efforts focused at optimising performance instead of the quality of the work life of the employees. Cooper and Cartwright (1994) advise that a healthy organisation is identified by strong congruence of written values and rules and the reflection of these rules in the daily organisational environment.

Sauter, Lim, and Murphy (1996) considered health from a health and safety viewpoint believing that not only is a healthy organisation productive and lucrative, but one that focuses on lowering stress, sickness, and injury, in addition to promoting well-being. Sauter et al. (1996) mention that in previous years, employee well-being and organisational interests were believed in conflict with

organisations focusing on their profit and production without employee well-being a consideration, however, the emergence of organisational health has challenged this belief. A healthy workplace is any organisation that increases the assimilation of employee objectives for well-being and company aims for performance and efficiency. Not only are organisational performance and employee well-being congruent, they are also "mutually reinforcing". Griffin et al. (2000) also agree that one of the main ways of improving organisational health is the alignment of well-being and organisational effectiveness. They recognise the fact that contented employees are of minimal value if they are not performing efficiently and productively. The reverse is also true: that productivity is of small worth if achieved at the cost of the individual's well-being. In stating this, Griffin et al. (2000) also add, not much is currently known about achieving these goals simultaneously.

Griffin et al. (2000) advised both employee well-being and performance are determined by a combination of individual and organisational factors. Sauter et al. (1996) identified both effectiveness and employee well-being are highly influenced by organisational climate. Additionally, Lim and Murphy (1997) found evidence organisational climate was a pathway leading to organisational health and Machin and Goh (2007) believe healthy organisations have a good organisational climate and this in turn leads to increased productivity and competition.

5.2 Employee well-being

Over the last 50 years, mental health has become an imperative concern for researchers and practitioners who work in clinical and health areas (Page & Vella-Brodrick, 2009). Mental health, for the purpose of this dissertation, is defined as the existence of well-being rather than the lack of illness. The positive mental health movement is now at home within the work environment. In relation to why employee well-being should be a vital focus for organisations, Page and Vella-Brodrick (2009) propose that promoting and maintaining employee mental health results in increased employee performance and retention.

5.3 Stress/distress

Employee well-being is greatly impacted by the levels of stress, or rather distress, that an employee experiences (Hart, Griffin, Wearing, & Cooper, 1996). Hart et al. (1996) define stress as a state of disequilibrium occurring in the organisations variables. Within their research on occupational stress, Hart and Cooper (2001) identify how the constantly changing work environment has placed an extraordinary mandate on employees and raised concerns about the impact this has on the individual's overall health and well-being.

Hart and Cooper (2001) suggest employers adopt an organisational health framework and this framework recommends a combined focus on well-being and performance. Griffin et al. (2000) argue well-being and performance are related to a mixture of individual attributes including personality and coping mechanisms and organisational factors such as organisational climate and on-the-job experiences. Further, they suggest that one example of a theory, consistent with current stress literature, is that of the Dynamic Equilibrium Theory. According to this theory, stress is caused by a wide classification of variables including personality and organisational aspects, coping methods, positive and negative work experiences and facets of psychological well-being.

Lazarus (1990) also acknowledged that stress would not be found in any one particular variable and that measurement should be theory related. Lazarus believed that stress refers to a certain type of relationship between the individual and the environment, one by which the individual's resources to cope are exceeded by the demand placed on them.

In dynamic equilibrium theory, Hart and Wearing (1995) and Headey and Wearing (1992) focus on aspects that establish vulnerability to strain through several factors including individual traits, behaviours, resources or organisational factors. In this theory, stress is not seen as a response, but as a state of disequilibrium occurring when something changes that impacts the individual's normal levels of psychological distress and well-being. Hart and Wearing suggest stable personality aspects and the interaction between employees coping and day-to-day experiences explain differences in the amount of psychological distress and

well-being experienced. Further, they showed that distress and morale are separate dimensions and impact independently on quality of work life; for example positive work experiences influence morale and negative ones influence psychological distress. Griffin et al. (2000) believe that while the focus on stability and change highlight the difference between dynamic equilibrium theory and other perspectives, the theory is consistent with other theories and realises that stress occurs from the dynamic interaction between employees and work environments (see Figure 5.1).

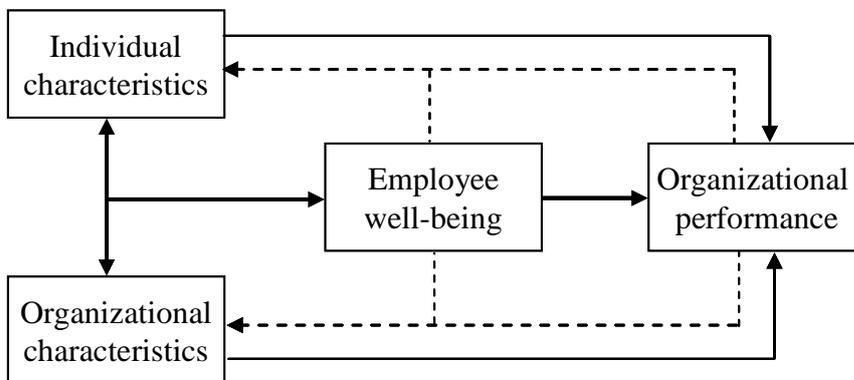


Figure 5.1. Organisational health flow diagram. From "Using Employee Opinion Surveys to Improve Organizational Health," by M. Griffin, P. M. Hart, & E. Wilson-Evered, 2000, in *Healthy and Productive Work: An International Perspective* (p. 16), edited by L. R. Murphy & C. L. Cooper, London: CRC Press.

Headey and Wearing (1992) discovered that teachers and police experienced stress from the organisational context in which they worked rather than the nature of their work. Research within an Australian policing organisation found police reported organisational experiences as more important than operational experiences (Hart & Cotton, 2002). This study found that a 10% improvement in organisational climate would equate to: (a) a decrease in distress (−3.6%); (b) increase in morale (4.9%); (c) better quality of work life (5.4%); and (d) a reduction in withdrawal behaviours including turnover, sick leave, and workers' compensation claims (−3.2%). Issues impacting employee well-being are similar no matter what the occupation, whether in policing or other

organisations, and any methods focused at improving organisational climate and well-being should be globally relevant. Kenny and McIntyre (2004) believe the above research implies that any intervention should be focused on creating a positive and supportive organisational climate instead of trying to change the nature of the work. Griffin et al. (2000) insist that a positive organisational climate is a critical gauge of the health of the organisation.

5.4 What is organisational climate?

Sleutel (2000) noted that organisational climate was first discussed in the latter part of the 1930s, however the majority of research on climate began in the 1960s, specifically research exploring links between organisational climate and productivity and motivation. In 1939, Lewin found a relationship between leadership styles and climate (Reichers & Schneider, 1990). Lewin believed leaders create climates, not only within organisations, but on a national scale (Schneider, Bowen, Ehrhart, & Holcombe, 2000). Leadership has a supported link to climate and will be discussed later in this chapter. Lewin put forward the concept of "life space" which Krech and Crutchfield (1974) define as the individual's complete concept of the world he lives in including what he knows, believes, and remembers in conjunction with his view of the past, present, and future. It is not the same as physical or social environments identified by an external individual, but is what exists subjectively for the individual. While the person's life space may align in a small way with the actual outside environment, it also remarkably deviates from the life spaces of others. Lewin's (1951) idea on climate focused on the relationship between the person and their social environment and how this relationship was structured. Lewin stated this relationship in the form of an equation $B = f(P.E.)$ where behaviour (B) is a function of the person (P) and their environment (E).

Davidson (2000) believes that Lewin's equation indicates that idea of climate is psychological in nature and the individual, in conjunction with the understanding of their thoughts and behaviour, is central to the concept. Davidson considers Lewin's theory of climate is the basis of most climate research. After Lewin, Rensis Likert, best known for the Likert scale which measures attitudes,

used his scale to capture a snapshot of an organisation's climate at one point in time by the administration of a survey (Schneider et al., 2000). These surveys were used through the 1960s and 1970s to gauge the social processes within organisations. In the early 1980s the focus changed from climate to organisational culture.

There are issues of inconsistency in the definition of climate which have caused difficulties for cumulative knowledge. In 1968, Litwin and Stringer defined organisational climate as "a set of measurable properties of the work environment, perceived directly or indirectly by the people who live and work in this environment and assumed to influence their motivation and behaviour" (p. 1). They identified that the concept emerged when they attempted to apply a motivational theory as a way to explain employee behaviour within organisations and the impact that organisational life and the organisation itself has on the employee's motivation. Litwin and Stringer believed that while climate greatly impacted motivation, management has a strong influence on climate. Tagiuri (1968) defined climate as a "relatively enduring quality of the internal environment of an organisation that (a) is experienced by its members, (b) influences their behaviour, and (c) can be described in terms of the values of a particular set of characteristics (or attributes) or the organisation" (p. 27). Katz and Kahn (1978) highlight that organisational climate is developed by the organisation and reflects the struggles (both internal and external), the type of people in the organisation, the work processes, the way they communicate and the way authority is used within the organisation. They believe that it is easy to detect differences in organisational climate, but it is difficult to identify the distinct dimensions. Shadur, Kienzle, and Rodwell (1999) advise that organisational climate assists in establishing the "tone" of the organisation and can either facilitate, or impede, employee involvement. This involvement comprises participation in decision making, teamwork and communications. Griffin et al. (2000) indicated that organisational climate is the combination of total processes and occurrences within an organisation as "perceived" by the employees. Also, both these activities, and the employee's perceptions of these activities, govern the climate of the organisation. While this denotes that climate is subjective in nature,

they also highlight that organisational climate has a part that is "shared" by all workers. Climate is a two level concept: an organisational level and an individual level (Griffin et al.).

Schneider, Gunnarson, and Niles-Jolly (1994, p. 18) referred to climate as the "feeling in the air" one gets when moving around an organisation. For Schneider (1990), the routines and behaviours which define the psychology of an organisation also define the climate. What management does, rather than what it says, creates the climate. This encompasses the practices, procedures and rewards that management delivers (Schneider et al., 1994). Organisational climate is a multidimensional construct encompassing a broad range of individual evaluations of the workplace (James & James, 1989). Carey (1998) states organisational climate as the vision employees have of the manner in which the organisation instigates policies and procedures which regulate the way employees are to achieve the organisation's objectives. Carey compares organisational climate with that of meteorological climate: the individual gauges the environment by the level of heat and humidity and how comfortable one feels in the particular surroundings. Similarly in an organisation it is measured by how comfortable persons feel in the work environment and also their levels of aspects such as happiness, freedom, and power. Where meteorological climate is gauged by an individual's discernment of its physical attributes, organisational climate is calculated on the person's awareness of its psychological properties. According to Carey, like reading temperature and humidity measures to confirm the sensation of the climate; confirmation of organisational climate is undertaken by using surveys to measuring readings of an individual's view of the organisation. While not as precise as the measures of temperature and humidity, they do reveal the individual's level of comfort within their working environment. In addition to the numerous definitions of climate, Denison (1996) believes the new organisational culture studies are very similar to those of organisational climate and suggests it is becoming harder to differentiate between recent studies conducted on these two paradigms. The connection between culture and climate will be discussed in detail within section 5.5 of this chapter. Schneider et al. (2000) believe climate is

the shared subjective experiences of organisational members that have important consequences for organisational functioning and effectiveness.

Climate definitions all seem to indicate an impact on employee behaviour. Ashforth (1985) suggests climate has the capability to assist in making a factual and completely integrative science of behaviour within organisations. Davidson (2000) advises climate is vital in any attempt to implement change, especially major change. Schneider, Brief, and Guzzo (1996) contend for change to be lasting, both climate and culture need to be transformed.

Davidson (2000) found the difficulty in defining climate was due to its complexity. All of the above definitions are slightly different, however, Schneider et al. (1994) advise that even though establishing one overall definition is difficult, it does not make organisational climate any less real. Further, Schneider et al. warn employee perceptions are based on how management behaves, and the acts they choose to reward, not what is said in any newsletter or annual report.

Boulding (1956) warned that the more science separates into sub-groups and communication between these subgroups slows, the more the likelihood that knowledge growth will also slow. Disagreement as to terminology is confounding climate knowledge growth. As climate researchers continue to use the same terminology to mean different things, there is concern climate research may well "grind to a stop in an assemblage of walled-in hermits, each mumbling to himself words in a private language that only he can understand" (Boulding, p. 198).

Organisational climate has already been identified as being complex and difficult to define. Further to this, there are several terms linked with climate that need to be separated and defined to further clarify the understanding of organisational climate. One of these terms is psychological climate.

5.4.1 Psychological climate

Psychological climate is a concept originally conceived by Lawrence James (Glisson & James, 2002). This concept is studied at the level of the individual. Psychological climate is the individual employee's perceived picture of the organisational body (Fink & Chen, 1995). This picture, held by the

individual, is made up of attitudes and beliefs of the values, norms and expectations of their workplace. It is built on a factual basis from information that the workplace emphasises to their employees (Fink & Chen, 1995).

Organisational climate, however, is the collectively held attitudes and beliefs shared by workers of the organisation globally. While these two climates are conceptually different, in practice, there is a large amount of overlap (Koys & DeCotiis, 1991).

Knights (2006) advises if individual worker perceptions are similar, those surveying employees are allowed to aggregate psychological climate data, and term them a measure of organisational climate. Glick (1985) suggests that researchers regard survey participants as informants detailing organisational traits, instead of individuals describing their exclusive experiences. This research will focus on organisational climate and not psychological climate.

5.4.2 Other climates

Schneider and Reichers (1983) advise that any discussion about organisational climate should refer to a specific type of climate, for without this they imply that the concept has no meaning. Schneider and Reichers suggest people interpret the varied events, practices, and procedures that they encounter in organisational life as related sets of perceptions. This means workers experience a number of different climates which are focused around a particular aspect of the organisation. Literature lists climates such as safety (Zohar, 1980), service (Schneider, Parkington, & Buxton, 1980) achievement (Litwin & Stringer, 1968), innovation (West, 1990), emotional (Hartel, Gough, & Hartel, 2008), ethical (Olson, 2002) and leadership climate (Carr, Schmidt, Ford, & DeShon, 2003). Carr et al. (2003) suggest these specific climates (for example, safety climate) are predictive of particular results (such as safe behaviour within the organisation). Further, they believe defining the difference between the overall organisational climate and specific climate constructs is vital because they focus on different research goals, specifically they vary in bandwidth, that is, instead of measuring broadly, they focus on only a narrow proportion of the overall work climate.

Researchers who are interested in predicting and understanding one specific area within climate should measure perceptions related to that area alone.

5.4.3 Organisational climate and job satisfaction

Al-Shammari (1992) believes there is a great amount of debate among researchers about the relationship between organisational climate and job satisfaction and their similarities and differences. Guion (1973) indicates if organisational climate is considered an attribute of the individual, then it may simply be another name for job satisfaction or employee attitudes. However, Lafollette and Sims (1975) considered whether organisational climate was made redundant by job satisfaction and found that climate related to performance differently than satisfaction related to performance, hence negating the redundancy hypothesis. Lafollette and Sims found support for climate causing satisfaction.

Schneider and Snyder (1975, p. 318) argued that there is a "logical and empirical distinction" between organisational climate and job satisfaction if both were properly conceptualised and each assessed appropriately. While there is a relationship, job satisfaction and climate are not the same construct. This dissertation will focus clearly on Organisational Climate and not job satisfaction.

5.4.4 Organisational climate and leadership

Al-Shammari (1992) suggests it has been argued that because a leader establishes the "tone" of an organisation, the leader's manner of leading might be considered the same as organisational climate. According to Buchanan and Huczynski (2004) a leader has functions encompassing motivating and inspiring, producing outcomes, establishing direction and aligning people by communicating vision. Leadership can be evaluated by questionnaires in which employees describe the characteristics possessed by the leader (Buchanan & Huczynski). Ekvall (1996) advises that leadership style in past research shows substantial correlations with climate dimensions. McGregor (1960) states climate is more important than the leader's style of leadership. Further, he believes that no matter what the leader's style, their characteristics are not as important as the numerous aspects to which employees respond. Rousseau (1988) felt gathering

climate data when compared with collecting leadership measures presented the advantage of "summary quality", that is, climate measures supply general descriptions on numerous areas which are most sought by researchers. Climate data provide a description of the characteristics of the work setting, whereas studies of leadership only describe the characteristics of the leader. There are major theoretical and methodological differences between leadership style and organisational climate, however Al-Shammari (1992) identifies an overlap between them with leadership perceived as one of many constructs of organisational climate. Litwin and Stringer (1968) conducted a simulated study of the influence of leadership on organisational climate. A principal conclusion was that differing leadership styles create distinct organisational climates, which can form quickly, and be remarkably stable. According to Kozlowski and Doherty (1989), the integrated nature of climate and leadership has been implicit in climate research since its inception. Hart et al. (1996) has addressed this association with supportive leadership being the sole exogenous subscale of organisational climate within the Queensland Public Agency Staff Survey (QPASS; contained within the BWSOS).

5.5 Climate versus culture

Moran and Volkwein (1992) state while culture and climate are conceptually distinct, they are linked because of the influence that the organisation's culture exerts over its climate. Verbeke, Volgering, and Hessels (1998) suggest both climate and culture have a relatively steady core of constructs over time, of which some expand and others move to the forefront. Their research put forward two main ideas: firstly, climate reflects employee perception and description of the aspects of the employee's environment, and secondly, culture mirrors the way things are carried out in a work environment. They further specify that climate describes that workplace setting in which the employee works and an important aspect of the culture is the values and beliefs shared by the organisation's employees.

Many feel that climate has no depth of meaning (Glick, 1985) with some failing to believe that climate can progress until its meaning is clear (Moran &

Volkwein, 1992). While culture and climate are separate constructs, they are connected by the impact that culture can create on climate's formation (Moran & Volkwein, 1992). Climate and culture are incredibly powerful concepts and Mumby (1988) and Smircich (1985) recommend amalgamating research to allow clear comprehension of all human facets of the workplace and their impact on determining organisational life. The similarities and dissimilarities between culture and climate are important to organisational behaviour research (Ashkanasy, 2003; Denison, 1996; Reichers & Schneider, 1990).

Glick (1985) differentiates between climate and culture on the ways they are analysed. Organisational climate is mostly nomothetic and measured quantitatively; on the other hand, culture generally is idiographic and measured qualitatively. Schein (1992) sees climate as a manifestation of culture.

Shadur et al. (1999) suggest that even though research has outlined that culture and climate are different, many authors still use the word culture when, based on their method of research, it would be more correct to use the word climate. Al-Shammari (1992) indicates that many writers use climate and culture interchangeably, although if one closely examines the theory and research on climate and culture, numerous distinctions can be identified.

Schneider (1990) notes where climate is a concept that seemed to grow from a desire to identify the effect of the work environment on employee motivation and behaviour, culture is deeper, more difficult to describe and more closely aligned to the field of anthropology than psychology. Trice and Beyer (1993) found that many variables have been included under the banner of climate because of the appeal of the climate construct which appeared to allow a combination of wide-ranging variables to be included into "a single omnibus concept that would simplify the process of characterising and comparing the psychological environments" (p. 20). Denison (1996) argued it was not certain that culture and climate were examining distinct organisation phenomena, however, culture is deeply seated in organisational structure and reliant upon employee values, beliefs and assumptions. Climate, on the other hand, represents work environments in reasonably static terms and is gauged by a wide range of

dimensions, as well as being temporary and subject to a variety of controls (Davidson, 2000).

Table 5.1 contrasts culture and climate with Denison (1996, p. 621) further identifying researchers focusing on culture were "more concerned with the evolution of social systems over time... whereas climate researchers were generally less concerned with evolution but more concerned with the impact that organisational systems have on groups and individuals". Also Denison felt those researching culture placed great importance on "deep underlying assumptions" whereas climate researchers were more focused on employees' perceptions of visible practices and procedures and analyses of these perceptions that he termed as being "closer to the surface".

Table 5.1

Contrasting organisational culture and organisational climate research perspectives

Research perspective	Culture literature	Climate literature
Epistemology	Contextualized and idiographic	Comparative and nomothetic
Point of view	Emic (native point of view)	Etic (researcher's point of view)
Methodology	Qualitative field observation	Quantitative survey data
Level of analysis	Underlying values and assumptions	Surface-level manifestations
Temporal orientation	Historical evolution	Ahistorial snapshot
Theoretical foundations	Social construction; critical theory	Lewinian field theory
Discipline	Sociology, anthropology	Psychology

Note. From "What is the difference between organizational culture and organizational climate? A native's point of view on a decade of paradigm wars," by D. R. Denison, 1996, *Academy of Management Review*, 21(3), pp. 619–654.

Schein (1992) identified one important aspect of culture: the belief that groups share things and have points of view in common. Schein states that the most productive way to consider culture is to look at it as the combined shared learning of a particular work group, including behaviours, emotions and cognitions of the employee group's total psychological functioning. Past history of shared experience and long-standing membership are necessary for shared learning to occur. Schein formally defines culture as an arrangement of shared basic assumptions that the work group learned as it resolved its difficulties of adapting to external elements and integrating those elements that are internal. Further, these assumptions have succeeded sufficiently to be thought of as relevant and therefore used to train new employees as to the accurate way to perceive, think and feel in relation to those difficulties. In summary, climate is not culture and culture is not climate, although there is a connection in that a long-term change in climate is perceived as the one way in which to influence a change in culture.

5.6 Why is organisational climate important?

Carr et al. (2003) believe that perceptions of organisational climate determine employee behaviour; in fact climate mediates the relationship between work environment characteristics and employee responses, for example, an employee's perception of one's workplace impacts on how the employee behaves. Griffin et al. (2000) state that climate is the combination of the organisation's processes and activities as they are perceived by the employees. This implies that climate is largely subjective; however, it also has an aspect that is shared by all employees making it both an individual and organisational construct.

Cotton and Hart (2003) identify that performance is interconnected with individual well-being and therefore it is crucial that organisations accept and respond to the connection between these parameters and climate characteristics. The literature contains many studies of such relationships (for example, Gelade & Gilbert, 2003; Machin, Fogarty, & Albion, 2004; Patterson, Warr, & West, 2004; Patterson et al., 2005), including those conducted in healthcare settings (such as Aarons & Sawitzky, 2006; Hart, 2005; Keuter, Byrne, Voell, & Larson, 2000).

5.7 Organisational health and organisational climate within Queensland Health

Queensland Health first considered organisational health as a way to ascertain "pathology" issues such as absenteeism, grievances, work incidents and conflict (Douglas, 2001). Additionally, organisational health reveals measures of well-being to identify the ability of an organisation to withstand stress and deliver successful outcomes. Investigating organisational health allowed the opportunity for diagnosis of the organisation, including targeting interventions and their subsequent evaluations. Successful management of staff can occur by measuring elements such as climate and linking them to the pathology and outcomes. The Queensland Government thought differently based on the belief that stress is caused by both individual and environmental factors. Work environmental aspects: (a) are more open to change than individual aspects, such as personality traits; and (b) are more susceptible to successful interventions carried out by management. In 1998, the attention changed from the pathology course, and was refocused on the relationship of (a) organisational climate, (b) the use of human resources benchmark measures for absenteeism, turnover and compensation claims, and (c) the creation of improvement strategies aligned to performance outcomes (Douglas, 2001).

The Office of the Public Service created a strategy for managing people by promoting a performance atmosphere joined to the attainment of business goals (Douglas, 2001). This was developed as a framework to assist departments to identify what the vital workforce management elements were and to decide on possible answers to particular work concerns. It was a change from traditional management to management that sees its human resources as an asset essential to the organisation's success. This strategy offered the opportunity to (a) diagnosis problems, (b) focus interventions, and (c) evaluate these interventions across different groups. By measuring climate and comparing the results to pathology factors such as absenteeism and turnover, as well as to organisational objectives, the focus can change from the traditional production focused organisations to organisations that acknowledge the importance of their human resources.

There is clear indication that climate, including workplace morale and distress, can predict costs and performance of an organisation (Douglas, 2001). This is due to gathering information from numerous databases and using it to highlight problems and concerns. This information can then be used to develop strategies to remedy the identified issues. The major findings show that the health of an organisation directly impacts on an employee's health. Consequently, through the use of these measures it is possible to create and improve on current human resource practices, and to link these practices to productivity and costs. The most vital features of creating positive organisational change is the ability to decipher the responses gathered from a survey into precise strategies for improvement (Machin & Goh, 2007).

5.8 Employee opinion surveys

Improving organisational health requires employee involvement in a thorough assessment of their current work practices (Griffin et al., 2000). This assessment can then be connected to improvement programs or intervention strategies. The best way to conduct this assessment is via an "employee opinion survey".

Employee opinion surveys have the capability to enrich and enhance employee outcomes in the workplace (Cotton, 2005). Laughlin (2002) advises employee opinion surveys are an essential instrument to enable an organisation to stay on top of workplace concerns. Amid the constant change and advancement of today's world, there is a need for good quality, cost-effective, timely, and efficient collection of data. Many modern employee opinion surveys suffer two vices (Cotton, 2005). The first is an issue of significant redundancy, for example, questions that add no value and when deleted do not change the results at all. The second difficulty is from unstable or overlapping indicators, for example, the items written to measure a particular indicator that actually measures aspects of two different indicators. These inaccuracies and inconsistencies impact on how accurately change initiatives can be focused and how much transformation actually occurs. Organisations also experience difficulty in recognising connections from the results of surveys to real organisational outcomes. This

causes organisations to doubt the value of surveys due to the absence of these connections. It is important that only relevant factors should be measured and this measurement carried out with precision.

To ensure quality of an employee opinion survey, Cotton (2005) list four key characteristics. Firstly, the range of indicators assessed must be (a) relevant, (b) sufficient to cover all people–management concerns, and (c) explain a major proportion of the variance. Secondly, the survey must be comprised of sound psychometric properties indicated by strong reliability and validity that can be statistically demonstrated. The third key requirement is a recognised, evidence-based, organisational behaviour model able to identify the interaction of factors and their impact on workplace outcomes that can significantly improve employee-based outcomes. Finally, a survey must have credibility with the individuals being surveyed. If the questions do not appear relevant or meaningful, this will undermine the whole process.

Cotton (2005, p. 3) states surveys can be used to "identify emerging 'hot spots'; reduce adverse reactions associated with organisational change processes; improve the management of absenteeism; prevent harassment, bullying and workers compensation claims; and accurately identify work environment psychosocial risk factors". Carlson (2005) found (a) suspicion regarding the anonymity of their responses, (b) no action taken on prior surveys, and (c) an atmosphere of punishment towards views opposing management would cause survey failure. To be successful, employee opinion surveys need a clear objective commitment from the top and timely feedback of results to employees. It is also essential the survey be connected to the procedures of the organisation (for example, planning, human resources, performance) and additionally to any method of review and decision-making throughout the organisation (Griffin et al., 2000). Gray (1995) warns employee opinion surveys raise employee expectations, but if conducted sincerely with commitment from the top and the intention to act upon what is found, this measure can be a powerful and positive instrument.

5.9 The Better Workplaces Staff Opinion Survey

Queensland Health's employee opinion survey, the BWSOS, was designed subsequent to an independent inquiry (Forster, 2005) into several critical incidents in Queensland hospitals. In response to the review, Queensland Health created the Workplace Culture and Leadership Centre. The BWSOS was an initiative by the Centre and integrated into a detailed program to develop leadership and improve culture within the workplace (Jury et al., 2009). This survey was designed to provide information which enables the monitoring of change initiatives.

The BWSOS encompasses organisational climate and psychological outcome scales from the QPASS, in addition to several new groups concentrating on leadership practices, workplace health and safety, harmful behaviours, change readiness, teamwork, and clinical work (Knights, 2006). Principal components analysis of BWSOS items revealed "a substantial underlying (and replicable) structure" (Knights, 2006, p. 1) placing it in line with existing QPASS research and interpretability. Jury et al. (2009), advises that in the first survey measures showed reliabilities ranging from an estimated Cronbach's alpha of 0.65 to 0.96, however subsequent refinement revealed the following datasets were above the acceptable level of 0.7 (Nunnally, 1978) ranging from .79 to .96. The BWSOS has nine components and these were stable with mostly high reliabilities. Inter-item correlations were larger than required. Knights (2006) determined the BWSOS extensively addressed the climate construct; however, the parameters of workplace health and safety were not sufficiently inclusive. The emergent structure did not contain harmful behaviours (issues like bullying) and management practices and these should be interpreted as individual items. Knights recommends data be combined at the group level to allow for clear and direct targeting strategies for issues identified by the survey.

Details are included of all the organisational climate scales within the BWSOS. These are scales originally from QPASS and contain 70 items. Tables 5.2 and 5.3 provide definitions of the organisational climate and psychological outcomes scales of the QPASS respectively. Knights (2006) advised that the

entire BWSOS was interpretable, with all components stable and reliabilities high. QPASS climate dimensions have been successfully developed for and tested within the Queensland Public Service (Hart et al., 1996).

The QPASS has been used for measuring organisational climate and psychological outcomes within the Queensland Public Service and has been demonstrated as a reliable measure of these scales. Definitions of organisational climate and psychological outcome subscales from QPASS are provided (see Table 5.2). Examples of QPASS content and reliabilities are detailed in Table 5.3 and the additional new measures contained within the BWSOS are included in Table 5.4. The remainder of the BWSOS comprises 84 new items, formed into nine groups (see Table 5.5).

Table 5.2

Subscales of organisational climate and psychological outcomes from QPASS

Organisation climate subscale	Definition
Workplace morale	Staff take pride in their tasks and gain energy from team activities. High scores indicate a favourable work environment.
Workplace distress	Depression and frustration is how staff feel about their job and its activities. High scores on this scale indicate an unfavourable working environment.
Supportive leadership	This is a measure of supportive and approachable management that openly communicate with staff.
Participative decision making	This is a measure of the extent to which staff are included in decisions which impact on them and their work and given opportunities to express their views on important work matters.
Role clarity	This subscale measures whether expectations, work objectives and responsibilities are clearly defined.
Professional interaction	This subscale measures the amount of acceptance and support from others, with involvement, sharing and help when needed.
Appraisal and recognition	This subscale measures the quality and regularity of recognition on work performance and whether constructive feedback is provided.
Professional growth	This subscale indicates the amount of interest in and encouragement and opportunity for training.
Goal congruence	This subscale measures the degree to which personal goals are in agreement with the organisation's goals.
Excessive work demands	Similar to workplace distress, this subscale measures a negative perception of the workplace considering the extent to which staff are overloaded and constantly pressured to continue working without breaks.

Psychological outcome subscale	Definition
Quality of work life	Conditions of life at work are great, affording everything desired in a position.
Individual morale	Feeling positive, enthusiastic, proud, cheerful, and energised at work.
Individual psychological distress	Feeling tense, afraid, unhappy, anxious, negative and depressed at work.

Note. Adapted from *Manual for the QPASS Survey*, by P. M. Hart, M. Griffin, A. J. Wearing, & C. L. Cooper, 1996, Brisbane: Organisational Climate and Performance Project, Office of the Public Service.

Table 5.3

Content of QPASS scales retained in BWSOS and their reliabilities

<i>Subscale</i>	<i>Items</i>	<i>Example items</i>	<i>Reliability</i>
Psychological outcomes scale			
Quality of work life	6	"I am satisfied with my life at work."	.91
Individual morale	7	"Feeling positive at work."	.92
Psychological distress	7	"Feeling anxious at work."	.88
Organisational climate scale			
Workplace morale	5	"There is a good team spirit in this work area."	.84
Workplace distress	5	"Staff in this work area experience a lot of stress."	.83
Supportive leadership	5	"There is support from the supervisors in this work area."	.84
Participative-decision making	4	"I am happy with the decision-making processes used in this work area."	.78
Role clarity	4	"I am always clear about what others expect of me."	.75
Professional interaction/peer support	7	"There is good communication among staff in this work area."	.83
Appraisal and recognition	6	"I am encouraged in my work by praise, thanks or other recognition."	.88
Professional growth	5	"I am encouraged to pursue further training and development."	.79
Goal congruence	5	"The staff are committed to the work place's goals and values."	.73
Excessive work demands	4	"There is too much expected of staff in this work area."	.79

Note. From *Manual for the QPASS Survey*, by P. M. Hart, M. Griffin, A. J. Wearing, & C. L. Cooper, 1996, Brisbane: Organisational Climate and Performance Project, Office of the Public Service.

Table 5.4

Content of new item groups in the BWSOS

Item groups	Items	Example items
Teamwork	8	"In my work team, the team members are friendly and respectful towards each other."
Workplace health and safety	5	"There is genuine commitment by management to staff safety in my work area."
Changes in your workplace	2	"Staff are willing and ready to change."
Management practices	10	"Problems are managed in a timely and appropriate manner."
Your supervisor	12	"My supervisor treats people with care and respect."
Senior management	12	"Senior manager/s make fair, transparent and consistent decisions."
District executive	6	"District executive genuinely listens and is responsive to issues raised by staff."
Harmful behaviours	7	"In the past 6 months I have experienced harmful behaviours in my work area."
Managing others	5	"I am confident that I have appropriate skills for managing staff performance."
Clinical work	17	"In general, the sharing of clinical information is efficient and timely."

Note. From *Psychometric Evaluation of Queensland Health's Better Workplaces Staff Opinion Survey*, by K. Knights, (2006). University of Southern Queensland: Unpublished thesis.

Table 5.5 outlines the internal consistency and reliability for the BWSOS components and item set. All polytomous item groupings are Likert-type (bipolar scaling), typically with the option for five responses, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). For the Individual Morale and Individual (Psychological) Distress subscales, the choices span from 1 (*not at all*) to 7 (*all the time*), while alternatives for the Quality of Work Life subscale range from 1 (*strongly disagree*) to 7 (*strongly agree*). There are three dichotomous items (*yes* or *no*): two in the Harmful Behaviours group, and one in the Management Practices group. Several groups of items are only applicable to relevant

participants: (a) Teamwork, (b) Managing Others, (c) Clinical Group, and (d) Senior Management (Knights, 2006).

Another section (*What Needs to Improve Most in Your Workplace?*) lists fifteen aspects of QH operations (e.g., leadership and supervisory practices, openness of communication, and fair treatment of staff), and asks the respondent to indicate the five most important things that need to improve within their workplace (Knights, 2006). It also asks the respondent to list the three best things about their workplace (from the previous fifteen aspects), and other realistic suggestions are requested in the form of free text. As these items are not polytomous, responses are not amenable to statistical analysis. A final section, entitled *Background Information*, covers demographic data, including gender, age, length of service, position, and highest educational level (Knights).

Table 5.5

Internal consistency/reliability data for BWSOS components and item sets

Item grouping	M^a	Cronbach's α	n
Component			
1. Org. responsiveness	.51 (.50, .52)	.93 (.93, .93)	4376 (97.2%)
2. Individual morale	.67 (.66, .68)	.93 (.93, .94)	4388 (97.4%)
3. Workplace stress	.50 (.49, .52)	.90 (.90, .91)	4398 (97.7%)
4. Peer support	.45 (.44, .47)	.93 (.92, .93)	4304 (95.6%)
5. Psychological distress	.58 (.57, .59)	.91 (.90, .91)	4402 (97.8%)
6. Supportive leadership	.59 (.58, .60)	.96 (.96, .96)	4368 (97.0%)
7. Workplace health & safety	.33 (.32, .34)	.75 (.73, .76)	4398 (97.7%)
8. Role clarity	.38 (.37, .39)	.79 (.78, .79)	4379 (97.2%)
9. Quality of work life	.66 (.65, .67)	.92 (.92, .93)	4412 (98.0%)
BWSOS group of items			
Teamwork	.54 (.53, .55)	.90 (.90, .91)	4175 (99.1%)
Clinical work	.32 (.31, .33)	.89 (.88, .89)	2751 (93.8%)
Managing others	.17 (.15, .19)	.51 (.46, .55)	1421 (96.3%)
Senior management (profess.)	.77 (.76, .78)	.95 (.95, .96)	2999 (86.1%)
Senior management (clinical)	.78 (.77, .79)	.96 (.95, .96)	2963 (99.3%)
District executive	.73 (.72, .74)	.94 (.94, .95)	3878 (99.3%)
Harmful behaviours	.33 (.32, .35)	.72 (.70, .73)	4349 (96.6%)
Management practices	.44 (.43, .46)	.88 (.87, .88)	4403 (97.8%)

Note. M^a = mean inter-item correlation. Data in parentheses (other than sample percentages) are 95% confidence intervals. Adapted from *Psychometric Evaluation of Queensland Health's Better Workplaces Staff Opinion Survey*, by K. Knights, (2006). University of Southern Queensland: Unpublished thesis.

The subscales of the QPASS fit the model developed by Griffin et al. (2000) for organisational health and data collected from nurses at Queensland Health from 2006 to 2008 and were used in this dissertation (see Figure 5.2). The reliabilities for the BWSOS subscales range from $\alpha = .79$ to $.96$ (Knights, 2006).

This model most appropriately reflects the QPASS survey data as developed by Hart (1999).

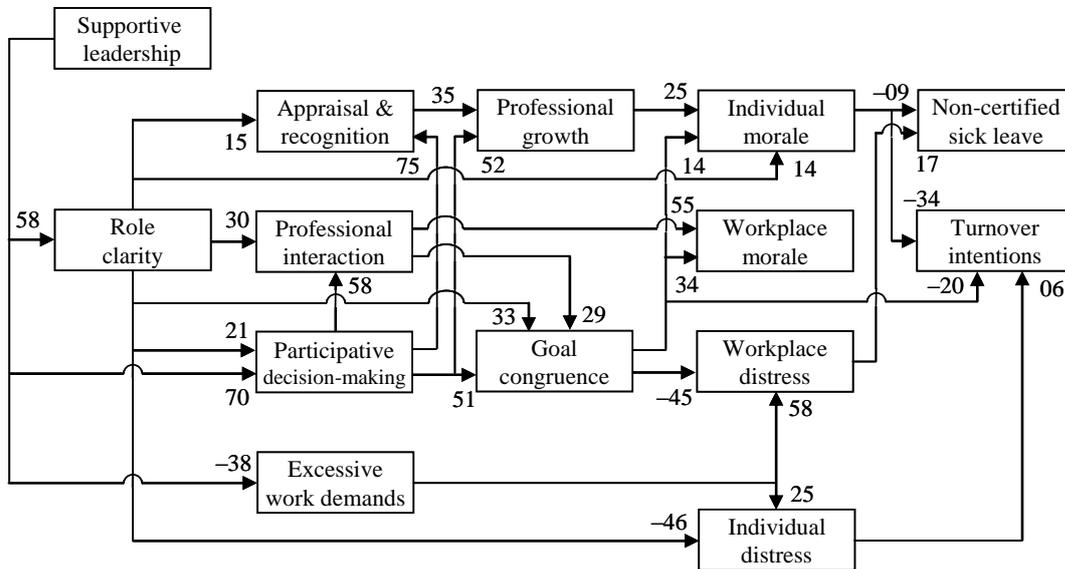


Figure 5.2. Mathematical model linking climate dimensions, well-being indicators, and outcomes. From "Using Employee Opinion Surveys to Improve Organizational Health," by M. Griffin, P. M. Hart, & E. Wilson-Evered, 2000, in *Healthy and Productive Work: An International Perspective* (p. 26), edited by L. R. Murphy & C. L. Cooper, London: CRC Press.

5.10 Chapter summary

This chapter has defined organisational health and organisational climate and identified that organisational climate can impact the health of the organisation. Consideration has also been given to what climate is not. Climate is not leadership, job satisfaction or culture. In fact, the only way to change an organisation's culture is by changing its climate. By conducting regular employee opinion surveys researchers can gauge where the organisation stands and which specific areas need to be addressed.

While it is important to identify what organisational climate is, it is also important to understand its use within the health industry as a possible tool to improve effectiveness and service quality. Organisational climate is important in its ability to explain employee behaviour. Ashforth (1985) believes climate has the ability to aid in making a really unified science of organisational behaviour.

Climate is the employees' perception of the ambience created within the workplace by the organisation's policies, procedures and rewards. Workers consider what is occurring around them, deduce the organisation's priorities, and from that, develop their own priorities (Schneider et al., 1994). Organisational change is only sustainable when both climate and culture change. Research has shown that climate has substantial bearing on the effectiveness of the organisation (Schneider et al., 1996; Schneider et al., 1994; Campion, Medsker & Higgs, 1993; James & James, 1989).

The following chapters focus on confirming turnover is represented by intention to turnover. This is done so that attention can be returned to organisational health, especially organisational climate. Then an alternate model and information on how to use this model to achieve retention are explored. Organisational climate has been shown to be significant in relation to both employee well-being and employee retention. Prior to the end of the dissertation the author explores the organisational climate in an accredited magnet hospital and compares this to two other hospitals evaluated at the same time to ascertain if magnet principles improve organisational health.

CHAPTER 6 METHODOLOGY

All data used for this project were archival data. This data included survey results obtained by the Community and Organisational Research and Evaluation (CORE) Unit of the University of Southern Queensland on surveys conducted with Queensland Health staff and data obtained from the HR Informatics Unit in Queensland Health.

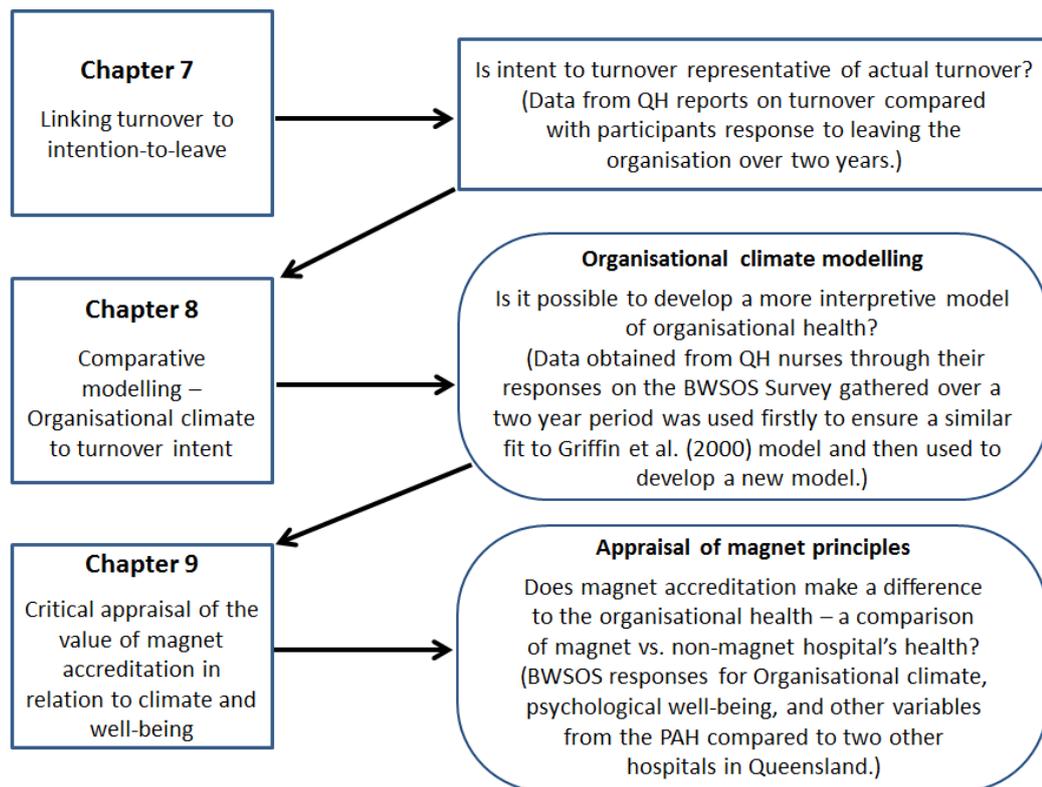


Figure 6.1. Plan of the dissertation and research.

6.1 Chapter Seven – Linking turnover to intention to leave

Chapter Seven explores the connection between turnover and intention to turnover. The aim of this research was to identify if there is a relationship between intention to turnover and turnover and whether intention to turnover can be reliably used as a substitute for turnover. When nurses indicate that they are going to leave, do they actually leave? This question will be addressed within Chapter Seven.

6.1.1 Participants

All nurses working throughout Queensland Health were asked to participate in the BWSOS (see Appendix A) conducted by a consultancy team from the CORE Unit. Surveys have been collected from Queensland Health staff since April 2006 on a six monthly basis. Due to the logistical requirements for surveying a large health organisation, Queensland Health nominated to survey the whole organisation over a period of four rounds virtually splitting the department into quarters to be surveyed. Surveys were mailed or distributed by hand to all nurses in participating hospitals. Nurses with access to the Internet were also offered the opportunity to complete the survey on-line. To ensure confidentiality, those completed on-line were done through the CORE, USQ website. The surveys returned by mail were sent directly to USQ. Both on-line and hard copies were identical. At no time were completed surveys seen by Queensland Health personnel. Surveys were collected over a three week period for each round. For the research in Chapter Seven, data were taken from the surveys conducted with Queensland Health nurses in April 2007 ($n = 1785$), September 2007 ($n = 2197$), April 2008 ($n = 2471$) and September 2008 ($n = 2172$). Separation numbers were separately obtained from HR Informatics Unit, Queensland Health, for these periods. This information was obtained from personal communications with David Hingston (personal communication December 13, 2006; personal communication, May 14, 2009) and the supply of four reports. No ethical clearance was required for this data as it was publicly available information which was provided subject to normal vetting procedures. The separation numbers obtained from Queensland Health referred to nurses who ended work due to resignation (no specific reasons were stated), death, transfer (out of Queensland Health), dismissal, retirement or cessation of contract, and was an overall total of nurse turnover. From the information contained within the Queensland Health reports, the numbers of nurses who separated from Queensland Health were matched to the four time periods above. The aim of this analysis is to confirm intention to leave is representative of turnover.

6.1.2 Measure

Only one question drawn from Queensland Health's employee opinion survey, the BWSOS, captured the intention to leave. This question was "As soon as I can find another job I will leave this Health Service District/Division". This was the only question used to link to actual turnover figures. This question was dichotomous and required nurses to provide a yes/no response. The aggregate separations data was derived from separation statistics at four sequential times: April and September 2007 and April and September 2008. The data from the question selected from the BWSOS, which was approved by Queensland Health, was chosen by the author as most closely related to the intention to leave/turnover. This data was correlated to turnover figures for Queensland Health.

6.2 Chapter Eight – Comparative Modelling

The aim of Chapter Eight is to explore whether it is possible to develop a more interpretive model of organisational health. In this chapter, the results from the BWSOS survey will be used to confirm a current model of organisational health and then attempt to develop a more interpretable model.

6.2.1 Participants

The data used for Chapter Eight were obtained from 8,628 nurses from all Queensland Health districts. The response rate of those who participated was 31.1%. Gender and age data are summarised in Table 6.1. There were a high proportion of female respondents (89%). The age group with the most participants was 41 to 50 years (36%).

6.2.2 Measures

Results were extracted from 70 items of the original two core QPASS scales contained in the BWSOS survey. These scales are organisational climate and psychological outcomes. The organisational climate scale contains the variables (a) supportive leadership, (b) participative decision-making, (c) role clarity, (d) peer support, (e) appraisal and recognition, (f) professional growth, (g) goal congruence, (h) excessive work demands, (i) workplace morale, and (j) workplace distress. Research by Griffen et al. (2000) indicates that these factors are vital to employee well-being and organisational results. The psychological

outcomes scale includes (a) quality of work life, (b) individual distress, and (c) individual morale. As outlined in Chapter Five, Table 5.3, reliabilities for the psychological outcomes scale ranges from .88 to .92 and for the organisational climate scale the range is from .73 to .88.

One additional item was used for turnover intention: "As soon as I can find another job I will leave this Health Service District/Division ", with a dichotomous response of either yes or no. These data were gathered from four phases over a two year period (April 2007 to September 2008).

Table 6.1

Summary of demographic characteristics of participants

<i>Demographic</i>	<i>Number</i>	<i>%</i>
Gender		
Female	7653	88.7
Male	881	10.2
Age		
< 21 years old	36	0.4
21–30 years old	978	11.3
31–40 years old	1983	23.0
41–50 years old	3067	35.5
51–60 years old	2106	24.4
> 60 years old	403	4.7

Note. $n = 8,628$. Figures do not add up to 100% due to missing data.

PV – Print version

All polytomous item groupings are Likert-type (bipolar scaling), typically with five available responses, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). For the "Individual morale" and "Individual (psychological) distress" subscales, the choices span from 1 (*not at all*) to 7 (*all the time*). The responses provided by the nurses from Queensland Health over this period were used to firstly confirm that the results fit the current model and then these results were used to develop a new model.

6.3 Chapter Nine – Critical appraisal of the value of magnet accreditation

Chapter Nine explores whether magnet accreditation makes a difference to organisational climate. It will compare data obtained from the BWSOS from the nurses at the PAH with nurses from two other hospitals surveyed in September 2007 to identify if there are any significant differences between these hospitals and the only Queensland hospital with magnet accreditation (the PAH).

6.3.1 Sample

Data from all staff within the September 2007 selected round of Queensland Health were accessed, however only data from nurses working within three health district hospitals (PAH = 547 responses, Hospital B = 269 responses, and Hospital C = 298 responses) were selected for this analysis.

6.3.2 Measure

The measure used for this analysis was the BWSOS. Jury et al. (2009), advise that in the first survey measures showed reliabilities ranging from an estimated Cronbach's alpha of 0.65 to 0.96, however subsequent refinement reveals the following datasets are above the acceptable level of 0.7 (Nunnally, 1978) ranging from = .79 to .96. The components of the BWSOS used included organisational climate scales and psychological outcome scales from the QPASS, and scales for teamwork, workplace health and safety, career intentions (including intention to leave) and clinical work. These data were analysed through the software package IBM SPSS (version 18). Normal data testing and analyses of variance was conducted.

6.4 Chapter summary

This chapter has outlined the methodology of all three research questions. The details of the analytic process will be explained further in each of the following chapters. The chapters are written as stand-alone chapters that briefly review the literature, and then focus on specific research directly relevant to the question posed, the results discovered and a discussion of what has been found.

CHAPTER 7 LINKING TURNOVER TO INTENTION TO LEAVE

Before this dissertation could explore interventions that would assist in the retention of nurses, it needed to consider the relationship between turnover and intention to leave; intention to leave would then be used within a model of organisational health. The capability to account for why employees choose to turnover is somewhat inadequate (Allen, Weeks, & Moffitt, 2005). Occasionally employees leave an organisation due to dissatisfaction and alternative job options, however sometimes they do not. Allen et al. (2005) maintains most individuals who intend to resign do not actually carry through. While intentions to turnover are reportedly the most direct antecedent to actual turnover, their real relationship varies between studies (Vandenberg & Barnes Nelson, 1999).

Hospitals are the biggest sector of expenditure for healthcare. Nurses constitute the single largest labour expense for hospitals (Carruth & Carruth, 2005; Tillett & Senger, 2011). The salaries of nurses use more than half of the hospital's operating budget (Pappas, 2009). In Queensland Health, nurses form 65% of the clinical stream employees and 40% of all staff (HR Informatics Unit, 2008). Staff turnover has many impacts on the organisation, the work unit, the individual and the wider community (Mobley, 1982). This chapter will look at turnover and turnover intention and relate this to nurses within Queensland Health.

7.1 Costs of turnover

Turnover has a major impact on human resource development (HRD). Human resource management practices affect production, performance and most importantly turnover (Huselid, 1995). Turnover costs reduce efficiency and financial health (Contino, 2002). Estimates of nurse replacement costs range from \$US22,000 to over \$US64,000 and include costs such as separation costs, advertising and recruiting costs, and training and development costs (Jones & Gates, 2007). The variation in costs is due to definitions of turnover categories and methodological differences in studies and samples. While turnover costs have been estimated at 1.3 times the salary of the nurse who is leaving (Jones, 2005), they may vary depending on the human capital (the experience and education of

the nurse who left), the time period in which the nurse leaves (costs would be higher in a nurse shortage), and other demographic factors such as location (rural or urban) and environmental aspects such as the local labour market (Jones & Gates, 2007). Hospitals with high turnover experience lower staff morale, decreased productivity and increased errors (Zurn et al., 2004). Winterton (2004) advises whilst the costs of recruiting and selecting staff are high, they are not as large as the cost involved in training and development. Both retention of skills and retention of competency are at stake when turnover occurs, specifically the transfer of skills and knowledge, both formal and informal, from the employee who is leaving, to other members of his team. To effectively form a competent skill level in the first place the employee must remain with the organisation long enough for the organisation to have a return on the money placed into HRD (Winterton). Further, as a result of high turnover, leaders question investment in HRD due to the perception of little return, yet the very lack of investment increases turnover.

As identified in Chapter Four, turnover is the ending of membership in an organisation by an employee, yet turnover does not include temporary withdrawal or movements within the organisation (Mobley, 1982). Morrell et al. (2001) recommend identifying whether turnover is voluntary (chosen by the employee) or involuntary (a choice made independent of the employee). Winterton (2004) suggests three reasons employees leave their employer as retirement, dismissal or voluntary resignation. The first two are decided by the organisation whereas the latter is an individual choice. If cases involving dismissal or redundancy were included in a study of those who leave, it would confuse the relationship between their leaving and a personal characteristic or variable (Morrell et al.). Voluntary turnover, on the other hand, represents the leaver's choice and is a result of a decision process (Winterton).

The difficulties with exit interviews are many; infrequencies exist in the way the interviews are managed and who actually conducts the interview and whether they hold knowledge regarding interview techniques (Flint & Webster, 2011). Conducting interviews is costly and the information gleaned may not be analysed or reported on in a timely fashion, or in some cases may even be ignored.

Reviewing classifications of turnover from Chapter Four revealed that Abelson (1987) identified that turnover is either avoidable or unavoidable. Excluding unavoidable leavers allowed Abelson to account for greater than half of the unaccounted variance in turnover. Departure of substandard performers is considered functional turnover, while the loss of highly skilled nurses is dysfunctional turnover and is a disadvantage to the organisation (Griffeth & Hom, 2001). It is dysfunctional avoidable turnover that needs to be better targeted by management.

As mentioned in Chapter Four, both Davies (2005) and Forster (2005) decided that employee turnover was an important issue and warranted attention, especially from the negative impact it has on services provided by Queensland Health and the well-being of the nurses. Stemming voluntary, dysfunctional, and avoidable turnover would assist in "plugging the leak" referred to by Cowin and Jacobssen (2003) and thereby increasing the professional nurse population to deal with future challenges.

7.2 Models explaining turnover

Models of turnover and retention were addressed in Chapter Four. In summary, initial models considered two factors for turnover – the idea that it is advantageous to leave, and the degree of simplicity involved in this action (March & Simon, 1993). Chan et al. (2004) suggest work aspects that cause dissatisfaction create the desire to leave the organisation. This then results in actual turnover when the person believes it is relatively simple to find attractive job offers elsewhere. Employees hold job expectations and if these expectations were not met, dissatisfaction, withdrawal and turnover may occur. Griffeth and Hom (2001) found numerous theories on turnover with room for further investigation and refinement. Comparisons between studies are virtually impossible due to the wide selection of different variables chosen by researchers.

7.3 Intention to leave

Whilst many researchers use "intention to leave" as a substitute for "turnover", the intention–behaviour relationship differs across research (Vandenberg & Barnes Nelson, 1999). Allen (2004) explored why some

employees do not follow through with intention to leave. He believes the risk involved and the uncertainty that the individual experiences partially explains why some do not leave.

Leaving a job involves significant consequences as well as uncertainty regarding the outcomes. This is especially so if the person is not immediately transitioning to another job. Unknown factors such as new relationships with managers, colleagues and the work environment are all undecided. Aspects that create a risky situation are the chance of losing or gaining, and the probabilities of these chances occurring. Whether the individual finds an alternative position, whether that position is desirable, and the inability to control elements as to whether or not they attain their potential outcomes are vital considerations for those intending to leave (Allen, 2004).

The decision to leave the organisation involves both positive and negative potential outcomes and whichever appears to be more economical to the individual will impact on the decision as to whether or not to leave (Allen, 2004). March and Simon (1993) deemed that if the individual was dissatisfied, the decision to leave would be based on an estimation of the likelihood of attaining alternate employment. If the labour market is tight and the alternatives are perceived as less desirable, the individual would be unlikely to quit (Allen, 2004). Research shows turnover is likely to take place within an individual's frame of reference. This frame of reference includes (a) evaluations of the current position, (b) an individual's previous experience of changing jobs, (c) beliefs regarding the current economic situation, (d) the impact on one's perception of the current position, and (e) the alternatives (Hulin, Roznowski, & Hachiya, 1985).

Allen (2004) suggests that individuals develop habits as to their response in certain turnover situations. For example, if they have changed jobs in the past, they are more likely to leave, however if they have chosen to stay, then they are more likely to stay when faced with a turnover decision. He termed this event "risk inertia". Further, individuals involved in hiring need to be conscious that an applicant who has worked in many positions is more likely to quit than an individual who has been relatively stable in one or two positions.

Another reason put forward was individual personality and its impact on both intention and turnover (Allen, 2004). While research has been conducted on personality as a variable, very little research is available on personality as a moderator. Whether an individual is consistent between intention to leave and the behaviour of leaving is impacted by individual differences. An individual may be inclined to carry out their intentions, or otherwise, based on certain aspects of personality. Barrick and Mount (1991) discovered traits of conscientiousness, agreeableness and openness to experience were related to turnover. However, Hom and Griffeth (1995) found the connection between personality and turnover was inconclusive.

Three personality factors which identified whether individuals would carry out their intentions include self-monitoring, locus of control, and proactive personality (Allen, 2004). These factors identify consistency between intentions and behaviour. Self-monitoring is seen as a moderating variable between intentions and turnover, for example, the connection is stronger for low self-monitors than for high. Individuals vary in their locus of control, some believing they are able to control events or attribute success and failures to either internal or external sources (Allen, 2004). Research considers those individuals with an internal locus of control will show higher achievement, motivation and performance and demonstrate lower levels of turnover. Those with an internal locus of control are more likely to believe they will be successful in obtaining other employment and therefore more likely to act on their turnover intentions, whereas those with an external locus are more likely to stay in their position even if they were dissatisfied (Spector, 1982). Allen (2004) suggested that locus of control may moderate the relationship between intention and turnover, with the relationship stronger for internal locus of control. Bateman and Crant (1993) indicate proactive individuals will seize the opportunity and act to achieve their goals, whereas reactive employees are more likely to let things happen and then adjust to the changes. The proactive employee will problem solve, pursue opportunities to advance their career and possibly be more likely to turnover in general. With regard to their relationship to intention to leave and turnover, the proactive individual is more likely to act on the intention to leave. The

relationship, therefore, between turnover and intention, as borne out by research, is more strongly impacted by the proactive individual.

Another impact of the research on turnover and the intention to turnover can be examined through how it converts into behaviour. Azjen's (1991) theory of planned behaviour proposes that intention to execute a behaviour is the most direct antecedent to the actual behaviour. The researchers who develop turnover models have realised the importance of intention to turnover in forecasting turnover actions (Allen, 2004). To date, research on turnover has often excluded the opinions of notable other persons (for example, spouses, family members) in relation to turnover. Opinions of colleagues, the organisation, the individual's profession, their family and friends may all be crucial to the turnover decision.

The intention to leave may only result in departure if the employee believes they have power over the choice to resign (Allen, 2004). Becker (1960) maintains it is difficult to resign when an employee has become invested in a workplace. Employees may sense they have less control due to family restrictions. Allen (2004) considers behavioural control moderates the relationship between the intention to leave and turnover; for example a strong relationship occurs when control is high. Previous experience in an action (for example, quitting a job) has an impact with intentions and behaviour. If an employee has resigned previously, they will be more likely to do so in the future. Hulin et al. (1985) suggest some people are not compelled to constant work and are only pulled in to the job market when there are surplus positions available. These employees are more likely to turnover often. The relationship between intention to leave and leaving should be stronger for employees with actual experience in quitting than those who have not quit. Finally, Allen (2004) advises emotional arousal in conjunction with negative affect leads to increased risky behaviours. Therefore, when a negative effect, like dissatisfaction at work, is combined with an emotionally arousing incident, an individual is more likely to impulsively quit without seeking an alternative position. Research by Lee and Mitchell (1994) supports Allen's statement that turnover may often be instigated by a shocking or traumatic event. To enable retention strategies to be accurately

focused on managing turnover, the connections between intention to leave and turnover need to be more clearly outlined.

Vandenberg and Barnes Nelson (1999) imply that motives for stating an intention to leave provides details as to when the intention will result in actual turnover. Further, they advise that these motives need to be examined more closely. The individual's intention to leave has long been epitomised as the strongest predictor of actual turnover behaviour, but its relationship to turnover has received varied results. Swider, Boswell, and Zimmerman (2011) found job searching activity was another antecedent to turnover also used by researchers. Further, they found the job search-turnover relationship was stronger when staff had low levels of job embeddedness and job satisfaction and a high number of job alternatives. While Kopelman, Rovenpor, and Millsap (1992) thought job search explained more variance than intention, Hom and Griffeth (1995) deemed the relationship between job search and turnover to be an inverse relationship and job search not to be a direct antecedent. Swider et al. (2011) suggest that employees become involved in job search behaviours for many different reasons including networking, applying leverage to improve their employment conditions, and comparing their current position with an external one to make sure their position is more appealing than the other. Lee and Mitchell (1994) suggest this action supports the presence of a "push" process, replicating the level of dissatisfaction occurring in the individual's current work environment that merits the consideration of alternatives. The research indicated a stronger relationship between search and motivation than search and turnover, thus declaring that job search was at best only weakly associated with turnover (Bretz et al., 1994; Kopelman et al., 1992).

While turnover intention is a much stronger predictor of turnover than other variables (for example, job satisfaction, commitment), studies indicated the strength of the relationship differs across the research (Vandenberg & Barnes Nelson, 1999). Steel et al. (1990) advise variance estimates span from 28% to 75%. One reason for the inconsistency in the relationship between turnover intention and turnover is that the employee may not be able to leave due to a lack of alternative employment opportunities (Mobley, 1982). Vandenberg and Barnes

Nelson (1999) recommend basing the variability on perceived lack of employment opportunities is too simplistic because: (a) people do not state that they will leave unless there are opportunities available; (b) it does not account for the psychological differences between employees, especially in relation to locus of control; and (c) research places serious doubt that employment opportunities have any importance in turnover process with correlations between employment opportunities and turnover accounting for barely 3% of variance within any investigation (Steel & Griffeth, 1989).

Individuals possess varied objectives for indicating an intention to leave. Vanderberg and Barnes Nelson (1999) identify employee motives may be connected to something in particular (for example, problems with their line manager), while others may be more universal (for example, a pessimistic sentiment towards the organisation as a whole). Those who have a particular grievance may indicate a high intent to leave. However, the person does not truly desire to depart, but does want the problem resolved. If the issue was resolved this individual's level of turnover intention would decrease.

Individuals with a global issue, conversely, actually intend to leave because of conflict with the organisation's goals and values. Little can be done to halt this departure because the goals and values are derived from the organisation's culture and culture is difficult to change (Schein, 1987). Rarely is an organisation likely to change culture to oblige a minority of disgruntled members. These individuals are experiencing a lack of fit with the organisation's values.

Mowday, Porter, and Steers (1982) censured researchers who advise that turnover intention directly leads to turnover. The example of the employee experiencing difficulties with a supervisor may have this issue resolved and be prepared to remain. Mowday et al. warn against assuming high intention leads to definite turnover and that once stated this high intention cannot be lowered. If the cause of dissention can be addressed through reasonable change then the turnover intention will decrease and the drive to leave will be neutralised. It was acknowledged there would be occasions where an organisation will be unable to change in the manner required by the employee.

To increase the knowledge of turnover intentions, Mowday et al. (1982) suggest future surveys seek the reasons the individual has a high intention to leave the organisation. Hom and Kinicki (2001) advise that mechanisms to convert the intention to resign into actual departure from the organisation are ambiguous and require further research. Further, Mowday et al. challenge future studies to consider if the reason an individual remains is the same as the reason that they leave.

7.4 Intention to leave for nurses

Hom and Griffeth (1995) developed their theory from the investigation of nursing turnover. Lee, Mitchell, Wise and Fireman (1996) sought to advise that withdrawal from nursing is different from other occupations because nurses frequently resign without having an alternative job lined up. Lee et al. (1996) found nurses generally suspend their work due to pregnancy or spousal transfer. They have the luxury of exceptional job prospects and can re-pursue work whenever they choose. While nurses who transition from work to unemployment follow the withdrawal cognitions – the "quit path" of Hom and Griffeth, their turnover process does not fit with other occupations and is considered unusual (Mobley, 1977). Individuals from other occupations tend to have alternative positions acquired prior to departing their current work position. Lee et al. indicate the "why" and "how" of nurse turnover is vastly different from the turnover of other occupations.

Some research suggests as age, experience and tenure of a nurse rises, the aspiration to leave lowers (Battersby, Hemmings, Kermode, Sutherland & Cox, 1990), while other research indicates older nurses are more inclined to depart their positions (Gardner, 1992). Chan and Morrison (2000) identified that those who left nursing were either certificate or graduate diploma students who worked outside of intensive care wards and were registered nurses for two to four years. Those nurses who chose to stay were more likely to hold a specialised qualification, work in ICU and have either less than two years' experience, or between two and six years' experience as a registered nurse. Further, their research investigated the factors that influenced the nurses' decisions to stay and

leave. Chan and Morrison found the major factors relevant for more than 70% of leavers were akin to the aspects which made nurses more inclined to remain. These included aspects of nursing itself, for example, whether they liked their position, had good work relationships, were able to practise skilled nursing, and were recognised for their abilities, as well as organisational issues such as staffing, salary and welfare. Not only did Chan and Morrison identify common aspects of turnover and retention, they also found that most causes were based around administrative control.

Nursing turnover is different in another aspect. Some nurses leave one hospital to work in another and while this creates a perception of a shortage due to the time lag in filling the vacant position, it does not reduce the number of nurses available to nursing (Parry, 2008). However, a large proportion of nurses leave nursing, not for another nursing position, but instead choosing an occupation or profession where they do not use their nursing qualifications. These qualifications and skills are not transferred as occurs within general occupational turnover; instead they are lost to the nursing workforce. Parry (2008) advises nurses leaving the profession are in fact contributing to the global shortage of nurses.

7.5 Unemployment as a moderator

Hom and Kinicki (2001) discovered that unemployment moderated with the Hom–Griffeth Model, specifically a decline in employment opportunities, diminished several intervening connections in the job search sequence. Essentially, in times of economic downturn, employees become negative about resigning due to the limited opportunities to find other jobs. Those individuals intending to turnover will seriously re-think the benefits of leaving. Inevitably, in times of recession, turnover will decrease (Hom et al., 1999). This is evidenced by the recent surge in nurse employment after the global financial crisis as noted by Buerhaus et al. (2010).

Intention to leave is frequently substituted as a measure for turnover (Griffeth & Hom, 2001). Griffeth, Hom, and Gaertner (2000) suggest that intentions to quit normally only explain 10% to 15% of the variance. However research has shown an employee's thoughts and their behavioural intentions to

leave the organisation are the strongest predictors of turnover (Steel & Ovalle, 1984; Cotton & Tuttle, 1986). Steel and Ovalle's (1984) research returned a weighted average correlation of .5 between behavioural intentions (the intention to leave) and turnover, which exceeded those for other relationships. Kirschenbaum and Weisberg (1990) indicate intent to leave was never meant to be a perfect predictor of organisational departure, only the most effective predictor. Turnover intention is taken as the best available measure for turnover and is frequently used by researchers when access to those employees who have left the organisation is not possible (Griffeth & Hom, 2001; Steel & Ovalle, 1984).

7.6 Is there a relationship between turnover and intention to leave for nurses within Queensland Health?

This research looked at turnover intention and global turnover data to explore the existence of a link between nurse turnover and intention to leave. Simply put, when nurses say that they are going to leave, do they actually leave? While there are differences highlighted in the research between nursing and other occupations, this analysis would either confirm or disprove the link between turnover intention and turnover within Queensland Health.

7.7 Results

Spearman Rho correlation was run on the turnover data and the response data from the question pertaining to intention to leave for four separate occasions over a two year period. Spearman Rho was used due to non-parametric reasons as the data for the question indicating intention to leave/turnover was dichotomous (yes/no). The correlation between nurses' intention to leave and actual separation during the same period was high ($\rho = .81$). The positive outcome of this result is that the association was apparent over a two year period on a large representative sample of nurses. The weakness of the statistic is that the intention to leave and separations are only matched at four sequential points in time (April and September 2007, and April and September 2008). Nevertheless, this size of association would suggest that even allowing for margin of error, the association is reasonably strong. Based on Cohen's (1994) research into statistical power analysis and effect size, the result of this relationship is strong, explaining 66% of

the variance ($r^2 = .66$), hence intention to leave does constitute a very good marker of actual turnover for nurses within Queensland Health.

7.8 Discussion

The comparison between global turnover data and the turnover intention as from a large sample of nurses from Queensland Health showed a high correlation ($\rho = .81$) between turnover intention and turnover, explaining greater than 66% of the variance. While nurses may be considered differently from most other occupations due to their ability to easily access alternate employment whenever they choose (Lee et al., 1996), they still fit the general profile of employees departing from the workplace. Not surprisingly, Chan and Morrison (2000) revealed that administrative and workplace issues were at the root of most nursing departures. An analysis by Yin and Yang (2002) indicated that stress, staff shortages, leadership, supervisory relations, opportunities for promotion, and inflexible organisational policies were heavily connected to turnover. In an internal survey conducted by Queensland Health the three main reasons staff cited for leaving were lack of recognition, lack of satisfaction in their work and unhappiness with management.

It is suggested that nursing turnover is similar to Vanderberg and Barnes Nelson's (1999) universal motive involving a negative appraisal of an organisation overall. In this situation there appears to be an overall conflict with the organisation's goals and values and those of the nurse. These nurses truly intend to leave because of this conflict and little can halt this departure because the goals and values are derived from the organisation's culture and culture is difficult to change (Schein, 1987), however the number of nurses departing constitutes more than a minority. Culture can be changed through the organisation-wide promotion of changes to the dimensions of organisational climate.

Further, some nurses may be experiencing the presence of a "push" process (Lee & Mitchell, 1994; Buchan et al., 2003) indicating dissatisfaction with the current work environment to the extent that warrants departing the job and/or seeking alternate positions.

7.8.1 Limitations

Due to the limited time period for collection of data this research could only be produced over four time periods. With continual data collection, this research will be able to be extended as further years' results are accumulated.

Voluntary turnover data were not available and therefore gross turnover data were used. This will mean the results may indicate a weaker (through dilution) correlation than is actually the case. This research also did not account for turnover base rates which may have the impact of biasing results (Steel, Shane, & Griffeth, 1990). Turnover numbers were the total number of turnovers and hence included avoidable and unavoidable, voluntary and involuntary, and functional and dysfunctional turnover. The removal of turnover that was unavoidable, involuntary and functional would reduce turnover numbers and may even provide a greater relationship between voluntary, avoidable and dysfunctional turnover and intention to leave.

7.8.2 Further research

As mentioned above, data needs to be collected on a quarterly basis to allow a detailed and comprehensive analysis over a greater time period. At least one additional question should be included within the BWSOS survey to further clarify turnover intent, namely seeking the main reason(s) that staff intend to leave the organisation. Further studies whereby participants can be identified by code and then followed up need to be included in future research.

Future research should consider offsetting time periods between staff surveys and actual turnover figures to attempt to capture a lag period between the nurses advising that they intend to leave and when they actually leave. At present there is uncertainty in how to model this occurrence and what should be the appropriate length of a time lag for consideration.

Turnover statistics maintained by Queensland Health need to identify the breakdown of gross turnover into specific groupings, especially in relation to voluntary turnover. This breakdown will provide further clarification on the relationship between turnover and intention to leave.

7.9 Chapter summary

This chapter has shown that there exists a correlation between turnover and turnover intention, and this is mirrored within the subject organisation, Queensland Health. This may support Lee et al.'s (1996) suggestion that nurses experience differences from other occupations in relation to turnover intention and turnover, and that turnover intention is still a valid criterion to measure turnover for this sample. Intention to leave/turnover intention is used in the following chapter as part of the modelling of organisational health which focuses on organisational climate, psychological well-being and intention to leave. Firstly data are matched to Griffin et al.'s (2000) mathematical model of organisational health. Then the author attempts to develop a more predictive model of organisational health.

CHAPTER 8 COMPARATIVE MODELLING OF THE RELATIONSHIP BETWEEN ORGANISATIONAL CLIMATE AND TURNOVER INTENTION TO ENABLE ACTION TO INCREASE RETENTION

The previous chapter confirmed the link between turnover intention and turnover to allow the use of intention to turnover within this research of the Organisational Health Framework for this dissertation. This chapter explores the link between organisational climate and turnover intention within an organisational health framework to indicate areas that can be improved so that retention may be enhanced.

Organisational interventions that seek to improve the health of the organisation directly focus on the alignment of worker well-being and organisational effectiveness as a method of attaining improved health (Griffin et al., 2000). This view is bi-directional. Firstly, it focuses both on the employees' and the organisation's performance, because one without the other is of little value. Griffin et al. (2000) advise that having satisfied workers is of no use if the organisation is not performing to a satisfactory level, and having a high production level is not effective if workers are suffering as a result.

Secondly, health is determined by a combination of organisational and individual factors, and positive organisational climate is critical to a healthy organisation (Griffin et al., 2000). Climate is a combination of factors within a work environment as perceived by the workers that are employed in that environment. In Griffin et al.'s opinion, what the organisation does, and how the employees perceive this, determines the climate. While this indicates that climate is subjective, it is a concept held both at the individual, and the organisational, level (Schneider et al., 1994).

Griffin et al. (2000) revealed employees are capable of making clear and telling conclusions about the attributes of their workplace. Employees are able to correctly identify the differing aspects of organisational climate with numerous staff reaching a high level of agreement on these conclusions.

Ten fundamental features are identified by Griffin et al. (2000) within an organisational climate that are relevant to all organisations: (a) leadership quality

(supportive leadership), (b) the decision-making methods that are employed in the organisation (participative decision-making), (c) how clear employees are regarding their duties (role clarity), (d) the support that occurs between employees within the workplace (peer support), (e) the degree to which staff receive evaluation and acknowledgement for their work (appraisal and recognition), (f) the opportunity staff receive to develop their skills and allow them to grow and progress (professional growth), (g) the degree of agreement between the goals of the employee and those of the organisation (goal congruence), (h) the amount of work expected to be completed by the employee (excessive work demands), (i) well-being based on a degree of confidence, usefulness, purpose, discipline, and willingness within the workplace (workplace morale), and (j) the overall degree of anxiety, distress and conflict that occurs within the work environment (workplace distress). Further, they advise that these climate factors are applicable across industry and occupation. Their extensive research, including many consulting undertakings, indicates these factors are vital to employee well-being and "bottom-line" organisational results including retention, performance, absenteeism, service and organisational reputation.

While the actual work of every employee differs across occupations, the organisational characteristics of the majority of jobs have a tendency to be similar, for example, most positions have leaders, most work involves appraisal and recognition, and each occupation needs a clear position description (Griffin et al., 2000). In addition, research has shown the organisational requirements of a profession are more likely to be stressful than the operational components of a job (Hart, Wearing, & Headey, 1995).

8.1 Employee opinion surveys

As mentioned in Chapter Five, employee opinion surveys are the best way to evaluate a workplace (Cotton, 2005; Griffeth & Hom, 2001), and are a critical tool in enabling an organisation to stay abreast of work concerns (Laughlin, 2002). Surveys vary widely in the standard of accuracy and consistency of psychometric characteristics and this has impact on the accuracy of change initiatives and the level of transformation that occurs. A quality survey has

relevant indicators, explains most of the variance, has strong reliability and validity and asks questions that are credible to those participating (Cotton, 2005).

There are numerous climate surveys available, some even appearing to ask the right questions. The right questions are those that allow employees to provide accurate answers so that retention strategies may be focused on the appropriate areas. Griffin et al. (2000) believe however, that this is not an adequate test of validity, especially if the organisation is searching for information to design and instigate effective and useful strategies for intervention. If the climate survey has good reliability and validity, it can be used for either benchmarking (to gauge the level of health within the organisation) or for modelling to assess the main determinants of organisational health (Griffin et al.). It is the latter which will guide the direction that the organisation should follow to improve its health. The model proposed by Griffin et al. in Figure 5.2 will now be reintroduced for further discussion.

Griffin et al. (2000) indicate this model provides a detailed explanation of how climate impacts well-being and turnover, with arrows identifying direct relationships between factors. Further, Griffin and colleagues advise where there is no direct relationship, there may still be a way that one or more factors could influence, or be influenced, indirectly. Griffin et al. recommend the indirect links are noteworthy because they identify how a variable actually works to increase well-being. For example, there is no direct link between appraisal and recognition and individual morale, however, there is an indirect path through professional growth. Griffin et al. recommend careful analysis of the model to gain information on how climate impacts on workplace outcomes. Griffin et al. provide a table identifying in rank order the aspects that impact on workplace morale and distress and on turnover intentions and sick leave (Table 8.1).

Griffin et al. (2000) advise a critical discovery of their model was the importance of the impact of leadership. This variable greatly influenced the employee's view of their workplace and their intention to remain. The importance of leadership may be connected to appraisal and recognition, however, this connection runs indirectly through role clarity and participative decision-making. This finding suggests that leaders can have a positive influence on employees if

Table 8.1

Strongest influences from climate model on four outcomes

<i>Outcomes</i>	<i>Influence</i>
Workplace morale	Leadership Professional interaction/peer support Participative decision-making
Workplace distress	Excessive work demands Leadership Goal congruence
Turnover	Leadership Role clarity Goal congruence
Sick leave	Workplace distress Leadership Excessive work demands

Note. From "Using Employee Opinion Surveys to Improve Organizational Health," by M. Griffin, P. M. Hart, & E. Wilson-Evered, 2000, in *Healthy and Productive Work: An International Perspective* (p. 26), edited by L. R. Murphy & C. L. Cooper, London: CRC Press.

they PV – Print version

increase the employee's engagement in defining their roles and include employees in workplace decisions that impact them. Griffin et al. maintain that their model identified a prominent distinction between individual distress and morale and workplace distress and morale, insisting that the individual measures had different precursors and effects on workplace results. When designing strategies to improve health, a wide range of outcomes should be contemplated. The final finding made by Griffin and colleagues was that both distress and morale variables (the negative and positive) influence the very foundation of organisational health. In the past, attempts to improve health were focused on the negative factors of well-being, excluding individual and workplace morale. Griffin et al.'s research reveals concentrating exclusively on the negative would result in a limited view of an organisation's health. Individual and workplace morale have a distinct and separate impact on both turnover and health, and all

described variables must be considered if true health is to be achieved. Overall, Griffin et al. identified no single or easy solution exists for improving health; instead a multitude of climate aspects are vital and need to be addressed to improve well-being.

This chapter's research used structural equation modelling to input the data from Queensland Health nurses into Griffin et al.'s (2000) model to see if this model was a reasonable fit. Further analysis was then conducted to investigate if an alternative model would provide more interpretability and predictability.

8.2 Structural equation modelling – the benefits and limits

Structural equation modelling (SEM) is an in-depth statistical path to testing hypotheses about connections between observed and latent variables (Hoyle, 1995). Essentially, a model is a statistical statement about variable relationships. In fact, no analysis can occur within SEM until a model of the relationships between variables has been specified.

Whilst the simplest way to gauge relationships between variables is by using a correlation matrix, correlation coefficients supply information on direction and strength of a relationship between two variables (Hart & Wearing, 1999). They do not, however, tell us how the system of variables works as a complete entity; for example, the relationship of two variables may be due to their joint dependence on another variable or variables.

The measurement model used in structural equation analysis relates items on the survey to latent constructs which the items are thought to approximate (Hart & Wearing, 1999). Further, these items contain varying degrees of error and unique variance. A benefit of SEM is its ability to control this error and variance. While this will not assist with ill-defined concepts or inferior measurement, it does allow for a truer reflection of the impact of one variable on another (Hart & Wearing). This is vital when seeking variables on which to focus intervention strategies and also allows for better prediction of the impacts of change in these variables.

Hoyle (1995) identifies the most difficult and least comprehended issue with interpreting SEM results as not the size or direction of relations between

variable, but the nature of those relations. Researchers are too swift at implying causality from significant relations in SEM, while in truth SEM does nothing more than test variable relationships as they were assessed. It cannot override limits connected to non-experimental data collected at a single time.

While SEM has no great advantage when compared with other methods in relation to association, it is more flexible and detailed than analysis of variance and multiple regression by being able to control confounding variables and measurement error (Hoyle, 1995). Where Hoyle (1995) believes SEM is most often misunderstood is in the area of directionality, with directional arrows (relationships) in path diagrams incorrectly interpreted as showing directionality. In fact, SEM, just like other methods, cannot test the hypothesis of directionality (causality). Directionality should be determined by either logic, theory or more powerfully by research design.

Overall, SEM is different from other analyses in three areas: (a) SEM needs a model to be officially specified, estimated and tested; (b) SEM has an ability to estimate and test relationships between latent variables; and (c) the ambiguity linked with SEM is not apparent in other statistical approaches (Hoyle, 1995). SEM allows a way of testing very complex and specific hypotheses that cannot be tested otherwise. It is more detailed and flexible with regard to research design and data analysis than any other model in use by researchers in social and behavioural sciences.

8.3 Results

8.3.1 Data checking and missing data

Data checking was undertaken. Of the items contained within organisational climate and psychological outcomes, no more than 2.1% of the data were missing from any one item. Despite this low occurrence, missing data were imputed (using the expectation maximisation algorithms built into SPSS) to allow utilisation of output and modification indices within the Analysis of Moment Structures (AMOS) and SEM. AMOS is a Statistical Package for the Social Sciences (SPSS) software package (version 17.0) designed to undertake SEM, also known as causal modelling or analysis of covariance structures (Arbuckle,

2005). Access to non-certified sick leave was not available and the model will not include this variable.

8.3.2 Analysis

The supplied data were used in SEM aligning the data to the model proposed by Griffin et al. (2000) through AMOS. This first analysis was to establish a point of comparison, ensuring the data is equivalent to previous government organisational samples attained and confirming that the data fitted the "Mathematical model linking climate dimensions, well-being indicators, and outcomes" (Griffin et al., 2000). Results from the BWSOS survey administered to Queensland Health staff were accessed through the CORE Unit at the University of Southern Queensland. Data from 8,628 nurses working within Queensland Health was inputted through the model. While the model developed by Griffin et al. was not an absolute fit ($\chi^2 = 43453.433, df = 1865, p. = .000$), this significant

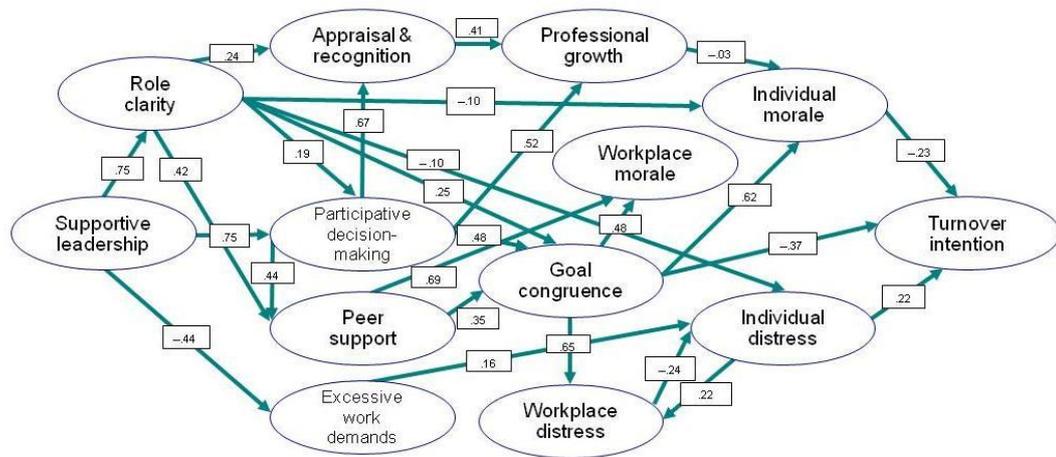


Figure 8.1. Mathematical model (including weights) linking climate dimensions, well-being indicators, and outcomes. Adapted from "Using Employee Opinion Surveys to Improve Organizational Health," by M. Griffin, P. M. Hart, & E. Wilson-Evered, 2000, in *Healthy and Productive Work: An International Perspective* (p. 26), edited by L. R. Murphy & C. L. Cooper, London: CRC Press.

Table 8.2

Relative model fit statistics applied to Griffin et al.'s (2000) model

CMIN					
Model	NPAR	CMIN	df	P	CMIN/df
Default	151	43453.433	1865	.000	23.299
Saturated	2016	.000	0		
Independence	63	372440.662	1953	.000	190.702
RMR, GFI					
Model	RMR	GFI	AGFI	PGFI	
Default	.093	.832	.819	.770	
Saturated	.000	1.000			
Independence	.539	.095	.066	.092	
Baseline comparisons					
Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default	.883	.878	.888	.882	.888
Saturated	1.000		1.000		1.000
Independence	.000	.000	.000	.000	.000
Parsimony-adjusted measures					
Model	PRATIO	RNFI	PCFI		
Default	.955	.844	.848		
Saturated	.000	.000	.000		
Independence	1.000	.000	.000		
NCP					
Model	NCP	LO 90	HI 90		
Default	41588.433	40913.266	42269.972		
Saturated	.000	.000	.000		
Independence	370487.662	368485.800	372495.810		
FMIN					
Model	FMIN	F0	LO 90	HI 90	
Default	5.037	4.821	4.742	4.900	
Saturated	.000	.000	.000	.000	
Independence	43.172	42.945	42.713	43.178	
RMSEA					
Model	RMSEA	LO 90	HI 90	PCLOSE	
Default	.051	.050	.051	.000	
Independence	.148	.148	.149	.000	
AIC					
Model	AIC	BCC	BIC	CAIC	
Default	43755.433	43757.690	44821.911	44972.911	
Saturated	4032.000	4062.135	18270.540	20286.540	
Independence	372566.662	372567.604	373011.616	373074.616	
ECVI					
Model	ECVI	LO 90	HI 90	MECVI	
Default	5.072	4.994	5.151	5.072	
Saturated	.467	.467	.467	.471	
Independence	43.186	42.954	43.419	43.186	
HOELTER					
Model					
Default	.05	.01			
Default	391	400			
Independence	48	49			

result was inevitable given the large sample size. Indeed, the Root Mean Square Error of Approximation (RMSEA) indicates that there is reasonable fit, though this was not less than .05 (see Table 8.2 overleaf). The standardised weights are provided in Griffin et al.'s model (Figure 8.1).

McDonald and Ho (2002) stress that for the majority of multivariate data sets there will be more than one acceptable model. The second part of this analysis attempted to use the data to develop a more predictive and interpretable model that better explains the variance in nurses' well-being (see Table 8.3).

Through the use of AMOS a simpler and more predictable model was designed. The nature of the relationships between various components of organisational climate were assumed to be unimportant to the optimal prediction of intention to leave, so all the components of organisational climate were drawn to indicate a simple direct relationship with intention to leave. Individual psychological factors (individual morale and individual distress) were assumed to mediate all the direct relationships between components of organisational climate and intention to leave (Figure 8.3). Here again, the model was not a perfect or absolute fit ($\chi^2 = 37576.828$, $df = 1814$, $p. = .000$), but the same caveat applied as to the previous model; that a significant result here is more an artefact of the size of the sample than anything else. Comparisons between a range of key fit indices offer a better indication of the relative merits of the two models.

The RMSEA (<.05) indicates that there was somewhat less error in the new model (Figure 8.2) when compared with the first model (Figure 8.1). Likewise, the Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), and the Parsimony Goodness of Fit Index (PGFI) were all marginally better (higher) in the second model when compared with the first model. Indeed the results indicate that the second model could not reasonably be improved given the Normed Fit Index (NFI) was .90. The same could not be said of the first model. Further, the second model is likely to generalise well outside the current sample (PCLOSE < .05). Finally, the various Information Theoretic measures (AIC) indicated the second model is both simpler and has a better fit than the first model

Table 8.3

Relative model fit statistics for the new model

CMIN					
Model	NPAR	CMIN	df	P	CMIN/df
Default	202	37576.828	1814	.000	20.715
Saturated	2016	.000	0		
Independence	63	372440.662	1953	.000	190.702
RMR, GFI					
Model	RMR	GFI	AGFI	PGFI	
Default	.063	.855	.839	.769	
Saturated	.000	1.000			
Independence	.539	.095	.066	.092	
Baseline comparisons					
Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default	.899	.891	.904	.896	.903
Saturated	1.000		1.000		1.000
Independence	.000	.000	.000	.000	.000
Parsimony-adjusted measures					
Model	PRATIO	RNFI	PCFI		
Default	.929	.835	.839		
Saturated	.000	.000	.000		
Independence	1.000	.000	.000		
NCP					
Model	NCP	LO 90	HI 90		
Default	35762.828	35136.066	36395.973		
Saturated	.000	.000	.000		
Independence	370487.662	368485.800	372495.810		
FMIN					
Model	FMIN	F0	LO 90	HI 90	
Default	4.356	4.145	4.073	4.219	
Saturated	.000	.000	.000	.000	
Independence	43.172	42.945	42.713	43.178	
RMSEA					
Model	RMSEA	LO 90	HI 90	PCLOSE	
Default	.048	.047	.048	.000	
Independence	.148	.148	.149	.000	
AIC					
Model	AIC	BCC	BIC	CAIC	
Default	37980.828	37983.847	39407.507	39609.507	
Saturated	4032.000	4062.135	18270.540	20286.540	
Independence	372566.662	372567.604	373011.616	373074.616	
ECVI					
Model	ECVI	LO 90	HI 90	MECVI	
Default	4.403	4.330	4.476	4.403	
Saturated	.467	.467	.467	.471	
Independence	43.186	42.954	43.419	43.186	
HOELTER					
Model					
Default	.05	.01			
Default	440	450			
Independence	48	49			

given that all these indices were markedly lower for the new model. The new model and its standardised weighting are detailed in Figure 8.2.

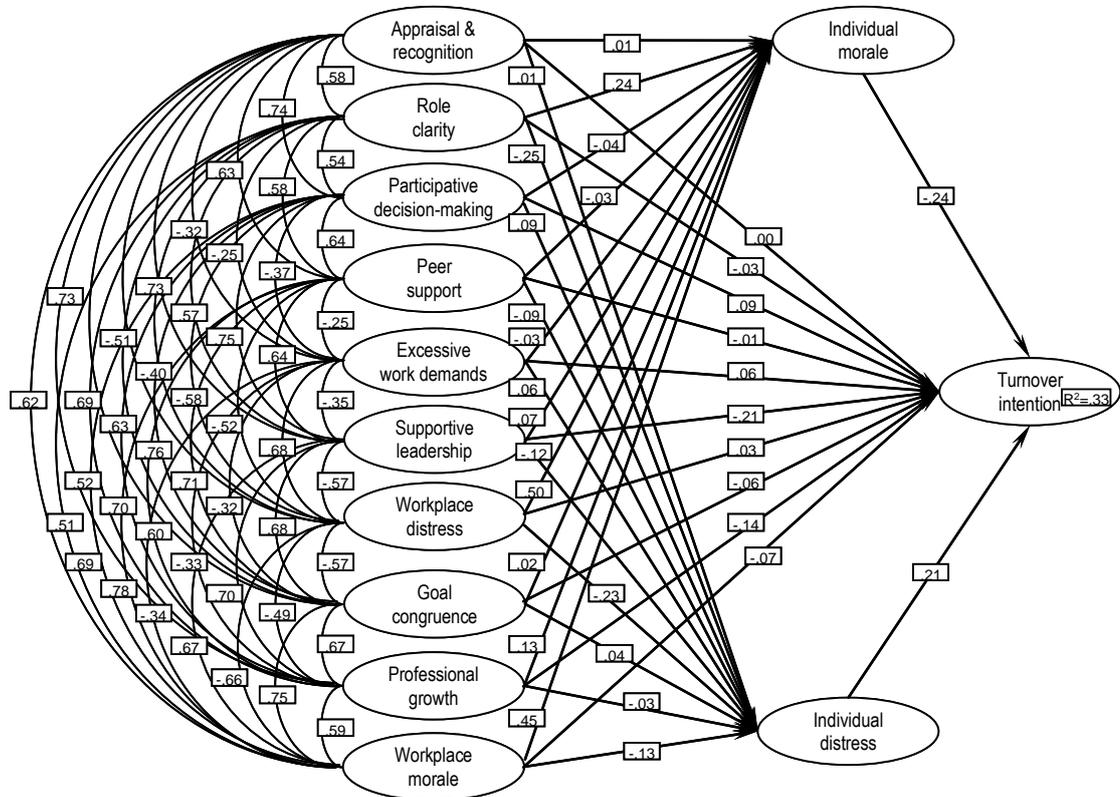


Figure 8.2. A revised mathematical model (including weights) linking climate dimensions, well-being indicators, and outcomes.

As may be reasonably assumed, given the additional direct predictors of intention to leave in the second model, the second model did indeed predict more of the variability in intention to leave than the first model (R^2 was .30 for the first model and .33 for the second model). The adjusted R^2 for each equation (*epsilon*) was the same as R^2 in both cases, indicating that both solutions would likely generalise well outside the current sample, at least in terms of variance explained. Figure 8.2 also illustrates an important distinction between the two models. Griffin et al.'s (2000) model emphasised the direct impact of individual morale, individual distress and goal congruence, yet when all components of organisational climate were available to optimally predict turnover intention, goal

congruence was not nearly as important as the degree of supportive leadership and opportunities for professional growth.

What does this model indicate? The standardised weights for the new model were relatively high in relation to individual morale, individual distress and role conflict (through individual distress) and the impact that these variables have on intention to turnover. While it might seem intuitively true that workplace climate and intention to leave are highly interrelated, a somewhat chaotic highly mediated model (as suggested by Griffin et al., 2000) is not the most parsimonious explanation of these interrelationships. A better empirically supported model does indicate a high degree of correlation between facets of organisational climate, but the relationship between climate and intention to leave appears to be more direct than previously thought. So rather than attempting to improve individual aspects of organisational climate in some sequential fashion that would optimise the precedence suggested by the Griffin et al. (2000) model, working on all aspects of organisational climate is clearly optimal. If Griffin et al. had been superior in their modelling, this would have implied that working on 'goal congruence' before one had worked on 'peer support', and before that 'role clarity', and before that 'supportive leadership' would have been futile as one depended on the preceding one in a complex sequence. While the relationship between organisational climate and intention to leave is (not surprisingly) mediated by individual factors, the value of working on any and all aspects of organisational climate at any time (in the improved model) points to a reduction in intention to leave to the degree of the effectiveness of the intervention. Put simply, work on whatever aspect of organisational climate you can, as often as you can, and as effectively as you can, and this will ultimately lead to reductions in intention to leave.

8.4 Discussion

These analyses have modelled the data obtained from Queensland Health and found the model developed by Griffin et al. (2000) is a reasonable fit for the data and the data for the model. This model was then reduced to a simpler model that would be more easily interpreted.

The results from the new model indicate that while the fit is reasonable, the new model is marginally more predictive than the model developed by Griffin et al. (2000). The advantage of this new model while only slightly more predictive, is that it better aids interpretability. The simplicity of the new model is the key factor in this interpretability. The changes in the model were based on the idea that individual distress and individual morale are mediating variables between organisational climate and turnover intention. For any climate variable to make an impact, it must be first perceived by the individual. The model developed by Griffin et al. was based on certain aspects of climate impacting more on other variables. By looking at the results on the new model it can be determined by the end correlations as to which climate variable requires the organisation's focus for any interventions or improvement in organisational health and employee well-being. The two most important areas based on the new model were the degree of supportive leadership nurses received and the opportunities they had for professional growth. However, any healthcare organisation that conducts effective interventions to address all climate variables (that is, focuses on addressing climate variables as a whole), has the value of working on any and all aspects of organisational climate at any time (in the improved model), points to a reduction in intention to leave based on the degree of the effectiveness of the intervention.

8.4.1 Limitations

While the new model (Figure 8.2) is recommended as a more interpretable model, there are limitations that are associated with any structural modelling, in that directionality cannot be defined. There is also the limitation that this is one of many plausible structural models that may reasonably fit as a model of organisational health and employee well-being.

8.4.2 Further research

While the analysis presented in this chapter represents some of the most complex structural modelling undertaken in this area of research, any new modelling, no matter how refined, is limited to the exogenous and endogenous variables contained in the model. The ever increasing complexity of such

modelling clearly reflects a growing ability to capture more and more aspects of the true complexity of the workplace. It may be that future theorists want to test even more complex models than have been presented here, but for now, such theoretical development will have to wait for analytic software such as AMOS to be able to incorporate more variables than were present in this research. For now, there is a technical roadblock, albeit a temporary one. Nonetheless, future research could already begin to develop the theoretical reasoning and undertake the exploratory work that may lead to increasingly realistic and therefore complex modelling.

8.5 Chapter summary

This chapter has followed on from the previous chapter, identifying the importance of organisational climate in relation, not only to retention and turnover, but to the overall health and well-being of the organisation and its employees. The next chapter will look at how "magnetic forces" are employed and whether they impact on organisational climate and organisational health.

CHAPTER 9 CRITICAL APPRAISAL OF THE VALUE OF "MAGNET" ACCREDITATION ON RETENTION AND PERFORMANCE WITHIN NURSING

In an effort to survive, hospitals around the world are undergoing major restructuring and redesign: some with disastrous repercussions and others as positive examples of quality care and outstanding nursing environments (Havens & Aiken, 1999). The latter hospitals have been described as "cultures of excellence", "measures of goodness" and the "gold standard" (Kramer & Schmalenberg, 1988a; 1988b; Turkel, 2004). These are "magnet" hospitals: hospitals renowned for their ability to attract and retain staff.

Originally magnet hospitals were identified as sharing three criteria: (a) the knowledge that they were a good place to work, (b) the ability to recruit and retain professional nurses even in times of shortage and (c) the fact that they were located in areas where other hospitals were competing to hire nursing staff (Kramer & Schmalenberg, 2005). Today, magnet accreditation assesses the quality of nursing care as a gauge of the "goodness" of the healthcare organisation. Magnet accreditation provides a greater understanding of what nursing is all about (Kramer & Schmalenberg, 1993). This chapter defines the "magnet" status, review the research, consider the positives and negatives of magnet accreditation, and lastly, compare one Australian hospital that has attained magnet accreditation with two non-magnet hospitals. DeJoy and Wilson (2003) and Cooper and Cartwright (1994) have detailed the connection between organisational health, employee performance and organisational climate indicating that a healthy organisation with a good organisational climate will have healthy and productive employees. The aim of this comparison was to explore whether the magnet designation makes a difference to the hospital's organisational climate (which, as shown, is closely related to the well-being and performance of the nurse), and the nurse's intention to remain within the healthcare organisation.

9.1 Nursing in general

Nursing is the main responsibility of hospitals – the very foundation of the organisation (McClure, 2005). Nurses are also the single major labour expense for a healthcare organisation (Carruth & Carruth, 2005; Tillett & Senger, 2011).

Gordon (2007) advises the role of a nurse is extremely complex and poorly comprehended by the general population. In summation of previous chapters, there is specific evidence confirming the significance of a nurse's role in delivery of quality health services, particularly in relation to patient health (Buchan & Calman, 2005). Aiken et al. (2002) found when the nurse has too many patients to care for, a patient's risk of mortality rises.

Retaining nurses is a major challenge for healthcare organisations. How an organisation deals with this challenge affects its financial status, the quality of care offered and the satisfaction of both employees and patients (Victorian Healthcare Association [VHA], 2007). The supply of nurses, in both high and low income countries, is not meeting the demand (Buchan & Calman, 2005). The demand for nursing workers in Australia will rise due to the increase and ageing of the Australian population (ABS, 2005). Segal and Bolton (2009) argue that population ageing in Australia is impacting on the supply of nurses as the nurse workforce ages, and at the same time increasing the need for healthcare services and healthcare professionals. Australia – like the UK, the US, and Canada – will lose a large number of nurses through retirement. Van Wyngaeren and Stuart (2011) found that turnover of new nurse graduates could range from 20% to 25% for short-term turnover to as high as 50% to 60% turnover over an eighteen month period. A comparison of Queensland Nursing Council graduates to the tertiary admissions data revealed the average attrition rate for nursing students in the state of Queensland was 25%; ranging from 40% in the regional north to 15% to 20% in the metropolitan areas (Dragon, 2009). Additionally there is a lack of nurse faculty and resources for training future nurses. Consequently, universities are turning away potential nurse graduates. Universities Australia reported that 2,833 eligible applicants were not offered a place in 2008 (Dragon, 2009). These losses have resulted in the shortage of nurses being classed as a human resource crisis (Newman, Maylor, & Chansarkar, 2002). Previously successful methods of filling nursing vacancies are proving inadequate in today's job market. Queensland Health is also facing a shortage of nurses. Despite using advertising campaigns, both interstate and overseas, and increasing student numbers in

universities, the Queensland Government was forecasting a shortage of approximately 1,100 nurses in 2008 (Johnstone et al., 2008).

9.2 Problems within the healthcare system

There are several problems within the healthcare system. Gordon (2007) noted a number of difficulties, one being the complexity of care provided by nurses being poorly understood by both the organisation and the community, thereby not providing nurses with the professional image they deserve. Furthermore, changes to hospital staffing levels during any reorganisation process may mean nurses no longer find satisfaction in their job. The shortage of nurses causes problems for those nurses trying to provide care in a reduced staff situation. Nurses may experience stress from unrealistic demands, which in turn leads to frustration and anger from not being able to provide the desired level of care. Consequently, this frustration and anger impacts on performance and has a detrimental impact on the level of support provided to patients and their families (Gordon). Chapter Two has addressed why these shortages are occurring globally.

Fagin (2001) advised that concerns regarding hospital care have risen dramatically over the past few years, not only from the nurses themselves, but from the patients and their families. Results from American Hospital Association (AHA; 2001) patient surveys indicate a belief by patients and their families that there problems with the basic function of nursing, specifically the discontinuity of care and absence of both emotional support and patient re-education.

Changes to hospitalisation procedures were also a cause of diminishing access to continuity of care for both nurses and patients (Fagin, 2001). These changes appear from several directions. Advances in knowledge and medical techniques have resulted in higher numbers of seriously ill and injured persons surviving. Separately within the private healthcare system, insurers are pushing for shorter stays in hospital, which means most patients are discharged early into nursing homes or private homes. Whereas a hospital's main purpose was acute care, many are now providing full outpatient and community services. Today, patients entering hospital are going through the most acute, nurse-intensive stage

of their illnesses. These acute intensive stays place a huge burden of care on nurses. For these situations, there is no continuity of patient care (Fagin, 2001). The growing number of ill individuals and the ageing population are increasing the demands on hospital care.

Patients are worried about the (a) lack of information provided, (b) costs involved, (c) discontinuity of care given, and (d) trouble they experience in finding someone to whom they can voice these concerns (Fagin, 2001). They are concerned about the reduction of nurses and believe the quality of nursing care is decreasing because organisations are desirous of improving profits and cutting costs.

9.3 Review of organisational health and organisational climate

As covered in Chapter Five, employees, the organisation and its profitability are linked to organisational health (Page & Vella-Brodrick, 2008). Organisational health is central to the effectiveness of the organisation, its ability to cope with change, and employee well-being (Lindstrom et al., 2000). Employees feel productive, loyal and content when they are valued by the employer (Page & Vella-Brodrick, 2008). A healthy organisation retains employees (DeJoy & Wilson, 2003).

Cooper and Cartwright (1994) found that a healthy organisation is profitable, has a physically and psychologically healthy workforce, and is able to preserve a healthy and satisfying workplace and culture for the long term, even during turbulent times. Further, they identify the work environment within a healthy organisation as having the following attributes: (a) low in stress; (b) high in commitment and job satisfaction; (c) low in levels of sick time, absenteeism and turnover; (d) good industrial relations; (e) good safety records; and (f) lack of legal action (for example, negligence, workers compensation claims).

Good organisational climate is a sign of a healthy organisation (Machin & Goh, 2007). Employee well-being is linked to organisational climate (Sauter et al., 1996). Vast amounts of research support the relationship between an organisation's health and its climate. Most importantly, Lim and Murphy (1997) define organisational climate as the pathway to organisational health.

9.4 Magnet hospitals

In the 1980s the American Academy of Nursing studied hospitals that were able to retain and recruit nurses during times of shortage (McClure, Poulin, Sovie, & Wandelt, 2002). This research examined the organisational features and administrative aspects of these hospitals to distinguish characteristics responsible for the ability to attract and retain nursing staff. Initially, the American Nurses Association (ANA) pronounced 41 hospitals to be "magnet hospitals". Havens and Aiken (1999) advised these hospitals shared the following characteristics (a) the head nurse was a member of the highest decision-making group in the hospital, (b) the organisation was relatively flat with few hierarchical levels, (c) decisions regarding staffing and care of patients were made at the unit level by staff nurses, (d) the management upheld the nurses' choices in relation to patient care, and (e) nurses and doctors communicated well.

More than twenty years after the initial magnet studies, a body of research has been collected to justify continuing support for the restructuring of systems of care. Evidence from the US and the UK show magnet hospitals have lower patient–nurse ratios, autonomy, control over actual nursing, highly educated and competent nurses, strong nurse leaders, and support for improved outcomes for patients (Lash & Munroe, 2005). In turn, these healthcare organisations displayed superior patient outcomes including fewer complications and greater satisfaction of patients.

Magnet hospitals work towards changing the work environment of nurses and increasing job satisfaction. They are successful in both recruitment and retention and all share similar characteristics, including strong, supportive leadership which leads to an overall supportive work environment, lower levels of burnout and a higher intent to stay (Laschinger et al., 2001; Upenieks, 2003). Other characteristics encompass involvement of nurses in decision making, and commitment to the professional development of nurses. Not only do these hospitals have better recruitment and retention rates, but significantly lower mortality rates (Aiken et al., 2002).

Turkel (2004) advises during the 1990s, when the focus was on achieving best practice, benchmarking and attaining quality assurance, a need arose to set up a process where hospitals could obtain recognition for their excellence in nursing. The ANA has established a subsidiary, the American Nurses Credentialing Center (ANCC). The ANCC is tasked with certifying hospitals for magnet status, evaluating voluntary applications on a merit basis (Gordon, 2005). The ANCC acknowledges excellence in four facets: (a) management, philosophy and practice in nursing; (b) abidance with the nation's standards of raising the quality of patient care; (c) sustaining the professional practice and continued expertise of nurses; and (d) understanding and respecting the diverse backgrounds of patients, their families and healthcare providers (Burke, 2005). The ANCC assesses applications on their ability to meet fourteen standards of nursing care they call "forces of magnetism". These forces are characteristics that exemplify excellence in nursing: (1) quality of leadership, (2) organisational structure, (3) management style, (4) personnel policy and programs, (5) professional models of care, (6) quality of care, (7) quality improvement, (8) consultation and resources, (9) autonomy, (10) community and the healthcare organisation, (11) nurses as teachers, (12) image of nursing, (13) interdisciplinary relationships, and (14) professional development (Turkel).

These forces are addressed individually. The magnet evaluation process, evaluating these fourteen forces, occurs in stages involving documentation and on-site inspections by ANCC assessors (Gordon, 2005). Once the magnet designation is attained, hospitals can then apply to be known as organisations that provide nursing excellence.

9.5 Forces of magnetism

9.5.1 Force 1: Quality of nursing leadership

Quality of nursing leadership requires that the chief nurse executive has sound credentials and participates in nursing bodies to provide knowledge and strength to their position (Kramer & Schmalenberg, 2005). In fact, Morgan (2007) goes one step further suggesting nurse leaders pursue a clear, tactical, far-sighted and creative philosophy in their daily lives. The chief nurse executive will

convey the values and beliefs of nursing in their everyday duties within nursing. The nursing leader should strongly champion and encourage all nurses within the organisation, also advocating and giving support on behalf of the patient. Nurse leaders should continually source input from nurses at all levels of the organisation. The outcome of this force will be visible in the quality of nursing provided to patients (PAH, 2009a). Kramer and Schmalenberg (1988a) identified that hospitals that provided excellent nursing care had nurse leaders that were extremely competent in promoting and guarding values. These values were carried farther than their position description required. By doing this, they changed a neutral work environment into a feasible dynamic healthcare institution and also changed staff from neutral non-specific units, into involved, focused and committed employees.

9.5.2 Force 2: Organisational structure

The structure of the organisation should be relatively flat (that is, it should have fewer levels of management), with decision-making originating from within the unit (Turkel, 2004). However, the structure should be flexible and open to modification (PAH, 2009a). Nursing representation is present at all executive gatherings and nurse leaders are members of the executive themselves. In place should be a reporting structure that allows the chief nurse executive to report directly to the chief executive officer (Turkel, 2004). The healthcare organisation with this force will have an operating and industrious system of shared decision-making (PAH, 2008).

9.5.3 Force 3: Management style

The management style force recommends administrators actively engage in participative management, and access and encourage feedback from all staff, whether a junior nurse or an executive. Management needs to assure its employees that their responses are valued. Nurse leaders will be visible, approachable and dedicated to communicating with staff (Turkel, 2004).

9.5.4 Force 4: Personnel policies and programs

The fourth force of personnel policies and programs is critical to the idea that staff salaries and benefits are competitive (Turkel, 2004). Staffing models

should be flexible and innovative and support workplace health and safety (PAH, 2008). Rotation of shifts should be minimised. All personnel policies are developed with staff consultation and input. Promotional opportunities should be available in both administrative and clinical areas (Kramer & Schmalenberg, 2005). These policies and programs must support professional practice, work-personal life balance, and the provision of quality care (PAH, 2009a).

9.5.5 Force 5: Professional models of care

Professional models of care are used in the organisation to provide nurses with the responsibility and authority to provide direct patient care (Turkel, 2004). Drenkard (2005) advises three ways of evidencing this force, namely (a) methods of regulation, (b) manner of care delivery, and (c) staffing methods. The models (that is, primary nursing, case management, family, region and holistically-focused) offer continuity of care across the board.

9.5.6 Force 6: Quality of care

The sixth force, quality of care, promotes an environment where quality care is a priority (Kramer & Schmalenberg, 2005). In a magnet hospital, nurses believe they provide this high level of care. The chief nurse executive is in a position to instigate any necessary workplace changes to ensure quality care is capable of being provided (Turkel, 2004). In fact, Morgan (2007) recommends "quality" be the driving force for both nurses and the organisation as a whole. Drenkard (2005) suggests this force involves many factors within the nursing environment and the practice of nursing as well. These factors include: (a) quality infrastructure (the organisational committees and decision-making bodies that impact client care); (b) high quality processes in place at work; and (c) ethical and evidence-based practice which, in turn, will lead to greater patient and staff safety. This force opens the door to research in nursing by establishing, monitoring and evaluating practice standards and patient care policies at the unit and organisational levels.

9.5.7 Force 7: Quality improvement

Turkel (2004) nominates this force to be an educational force. Staff who become involved in quality improvement activities increase the quality of care

that they provide. Drenkard (2005) recommends staff work in multidisciplinary teams to gather together both evidence-based data and literature on best practices. Collated results can be used to educate nurses throughout the organisation, allowing them to upgrade knowledge and promote safety for patients and staff. Continued monitoring and evaluation will show whether this process has improved the level of care.

9.5.8 Force 8: Consultation and resources

Turkel (2004) describes this force as the provision of sufficient consultation and human resources. Further, knowledgeable persons should be available and for staff to regularly take advantage of this knowledge. This force recommends strong peer support: nurses supporting nurses both within and outside their sections. The PAH (2008) recommends and supports nurse involvement in professional organisations.

9.5.9 Force 9: Autonomy

Nurses within a magnet environment are allowed and, in fact, expected to practise autonomously within their workplace (Drenkard, 2005). This autonomous practise should be based on their professional standards and their judgement for patient care. It should be kept in mind that this autonomy is to be used within the context of a multidisciplinary approach to patient care (Turkel, 2004). Autonomy is more focused when the nurse holds a high level of knowledge and expertise. Morgan (2007) advises this force is based on competency, professional expertise, and knowledge, for without these a nurse cannot work autonomously.

9.5.10 Force 10: Community and the hospital

This force of "community and hospital" involves the hospital establishing a strong, positive and productive presence in the community through continuous involvement in outreach projects (Turkel, 2004). A visible presence within the community will assist in the retention and recruitment of nurses, and can be established by interaction between staff and the community. Staff need to be involved in local events and establishing relationships with schools and colleges. Relationships should be established among all healthcare and community groups,

promoting and developing partnerships to enhance the greater communities' health (Morgan, 2007). Bliss-Holtz, Winter, and Scherer (2004) suggest that the overall focus of this force is based on the hospital's ability to become a proactive citizen within their local community.

9.5.11 Force 11: Nurses as teachers

In all areas of their professional lives, nurses are required to teach, whether teaching other staff, educating a patient, or being involved in providing information to the greater community (Turkel, 2004). Drenkard (2005) advises this teaching, from orienting new staff to assessing their own learning needs, provides a high degree of professional satisfaction to the nurse. Both patient and family education should be provided at all stages of healthcare (Morgan, 2007). The PAH (2008) has instigated a staff preceptor program. This program trains and develops nurses to place them in positions to mentor students, new graduates and fully qualified nurses. They modified their nursing education structure from clinical divisions to one section known as the Nursing Practice Development Unit (NPDU). The NPDU supplies (a) mandatory training to maintain skills, (b) guidance to assist safe practice, and (c) focuses on continual staff improvement by implementing evidence and capacity building for research to enhance overall practice (PAH, 2009a).

9.5.12 Force 12: Image of nursing

Nurses are seen as vital to the organisation's ability to deliver quality patient care (Turkel, 2004). Members of the healthcare organisation, other than nurses, need to consider the work carried out by nurses as essential to quality patient care. Morgan (2007) recommends that nurses have a strong involvement in shaping changes to, and development of, any system-wide procedures. It is important for nurses to command respect as significant contributing members of their healthcare team (Drenkard, 2005). It is also critical the Executive Director of Nursing Services is involved in all planning and processes at the top level. Undertaking accreditation on this force allows internal analysis of the image of nursing held by all who work within the hospital. This is crucial to the hospital's operation and success.

9.5.13 Force 13: Interdisciplinary relationships

The goal of interdisciplinary relationships is mutual respect between all healthcare professionals (Turkel, 2004). This will lead to positive working relationships. Morgan (2007) advises this respect is built on the belief all healthcare team members make important and significant contributions to achievement of quality patient outcomes. Drenkard (2005) advises the standards should address the necessary infrastructure and supports required to ensure trust and collaboration between healthcare disciplines. This is to ensure patients experience a positive multidisciplinary effort in their care. Internal committees and task forces have a multidisciplinary membership and use interdisciplinary decision-making (PAH, 2009a). Policies, standards and guidelines are produced in collaboration and mechanisms are in place to quickly and constructively deal with any conflict that arises.

9.5.14 Force 14: Professional development

All development, including personal and professional growth, is highly valued in a magnet organisation (Turkel, 2004). All levels of an organisation as well as management should support the drive towards excellence through increased capability and competence (PAH, 2009a). Orientation and in-service training (covered in Force 11), continuing and formal education and career development are the main areas of focus in this force. It is essential to ensure there are firstly, opportunities, and secondly, adequate resources, to allow for competency-based clinical advancement and leadership or management development. These resources should encompass both human and fiscal resources. Morgan (2007) advises if this support is provided, a continuous learning environment will be evident.

Recently these forces have been refined and grouped within five components for Magnet accreditation (Trinkoff et al., 2010). The components are: (a) transformational leadership; (b) structural empowerment; (c) exemplary professional practice; (d) new knowledge, innovation and improvement; and (e) empirical quality results.

9.6 Do the benefits outweigh the costs?

While the return on investment in employees and the benefits from educating the community are outlined in research, the costs involved may cause an organisation to think twice about pursuing the magnet program (Pinkerton, 2005). Magnet hospitals show numerous positive outcomes both for nurses and patients, however Tuazon (2007) believes there is a need to construct a business rationale in favour of the magnet journey. The journey to achieving magnet accreditation takes time, patience, planning and most importantly, financial resources. Initial charges for magnet designation of a 545-bed hospital range from \$US168,375 to \$US229,875 and redesignation fees are estimated to be half of the initial fees (Fergus, 2004). To build a business rationale, the impact that low staff retention has on the organisation's financial position, as well as the quality of care it provides, needs to be understood.

Westendorf (2007) advises an organisation's ability to retain staff determines its financial success. Jones (2007) recommends investing in employees as a way to increase the organisation's competitiveness in today's world. Inability to retain staff causes high vacancy rates. High vacancy rates in turn result in (a) emergency department overcrowding, (b) patient diversion to other hospitals, (c) increased surgery wait times, and (d) cancelled surgeries (VHA, 2007).

Havens and Johnston (2004) add that magnet application fees and accreditation costs are nowhere near the cost that is created by attempts to recruit and retain staff. Estimates of costs to replace one nurse range from \$US22,000 to over \$US64,000 and include costs such as separation costs, advertising and recruiting costs, and training and development costs (Jones & Gates, 2007). According to Curtin (2003), hospitals with high turnover suffer increased patient length of stay, complication rates, higher incidence of falls and increased infections. Costs-per-discharge are higher: hospitals with greater than 20% turnover experience a 36% cost rise compared with those with lower turnover (Pinkerton, 2002; VHA, 2007). High nurse turnover also causes a lessened return on assets – hospitals with a 20% or greater turnover rate have a 17% return on

assets as opposed to hospitals with turnover of less than 12% with a 23% return (VHA, 2007). While these costs are focused on the private health system, the public health system experiences internal costs and is impacted by these costs.

In addition, high turnover rates also add to mortality (Aiken et al., 2002) and severity-adjusted length of stays. Hospitals, where turnover is high, experience an increase in patient complications and length of patient stays (Curtin, 2003). Individually too, nurses express concern regarding inconsistent quality of care that patients receive.

For private hospitals, poor service and the loss of patients to other hospitals, result not only in the short-term loss of revenue, but in the possible future loss of those patients that may establish relationships with other hospitals (Chan et al., 2004). Organisations need to be aware of the direct correlation between nurses who are satisfied with both their role and their workplace, and an increase in revenue growth. While the returns for magnet accreditation have been listed as improved retention, higher satisfaction for both staff and patients, greater quality care, improved safety and an increased attraction level for consumers (Desilets & Pinkerton, 2005), they also involve superior business outcomes (Pinkerton, 2002). Research undertaken by Pinkerton showed magnet accreditation created a 12% increase in operating margin.

9.6.1 Criticisms of magnet accreditation

While there are many positive stories about magnet designated hospitals, Fagin, Maraldo, and Mason (2008) advise of magnet program critics, especially in its implementation. These critics, who include the California Nurses Association and the Massachusetts Nurses Association, feel the program is used as a hospital marketing tool establishing questionable relationships between the ANCC and hospital management. Further they assert there is little evidence that nurses working in magnet hospitals are any happier than nurses at non-magnet hospitals (Fagin et al., 2008).

Middleton, Griffiths, Fernandez, and Smith (2008) advise that undertaking magnet accreditation is a costly and resource intensive process for hospitals. They highlight that because of the latter; accreditation should not be undertaken without

a realistic opportunity to succeed. In their study, they used a modified version of the Practice Environment Scale to compare reported means of an Australian hospital with standardised means of both magnet and non-magnet hospitals in the US. Results found that the mean score of Nurse Participation in Hospital Affairs was 2.71, which was comparable with scores of magnet hospitals, yet significantly higher than non-magnet hospitals. Their sample mean score of 2.94 for Nurse Unit Manager Ability, Leadership and Support of Nurses was equivalent to magnet hospitals and significantly higher than mean score for non-magnet hospitals. Nursing Foundations for Quality of Care was higher than non-magnet and lower than magnet. Their samples score for Collegial Nurse-Doctor Relations was similar to non-magnet hospitals, yet significantly lower than the magnet hospital's mean score. This was similar to the composite subscale which was about the same for the non-magnet hospitals and significantly lower than the magnet hospital mean. The mean score for the subscale of Staffing and Resources Adequacy was significantly lower than both magnet and non-magnet facilities. Middleton et al. (2008) were encouraged by their results being equivalent to magnet hospitals on two aspects of the Practice Environment Scale. Instead of focusing on criticising magnet accreditation, they suggested that this survey could be the baseline measure of where the organisation stood in relation to accreditation and identify areas of performance that require addressing.

Trinkoff et al. (2010) set out to establish if working conditions (including work schedule, job demands, and practice environment) were better in magnet hospitals. Using responses to the Nurse Worklife and Health Study from 837 nurses working in 171 hospitals (14 magnet and 157 non-magnet hospitals), they revealed that nurses working in magnet hospitals were less likely to report compulsory overtime or on-call, yet overall hours worked were no different. Further, they found no significant differences between nursing practice environment and perceived patient safety and little difference between working conditions in magnet and non-magnet hospitals. Gordon (2005) regards the magnet program as a valuable endeavour, but questions whether it is actually working, proposing its non-compulsory requirements may present only an illusion of nurse empowerment. Fagin et al. (2008) have received reports of hospitals,

while loudly broadcasting their magnet designation, not following some of the key "magnet principles". Further, they suggest magnet principles have a part to play in nursing, but compliance needs to be more closely monitored. If these principles are indeed a way of identifying excellence within the healthcare environment, then more research is needed to explore the principles and to what degree they impact on the work environment.

9.6.2 Research

Research in nursing is under-developed in several areas with insufficient data to notify practice when a difficulty arises or when questions are asked regarding the procedures followed by nurses (Newhouse, 2007). Nurses want any research into nursing practice settings to be applicable to their workplace (Karkos & Peters, 2006). Chau, Lopez, and Thompson (2008) explored the barriers to the use of research in private and primary healthcare settings in Hong Kong. Their results revealed characteristics of the organisation were the greatest barriers including inadequate facilities, lack of authority to change practice, limited time and lack of cooperation from medical practitioners. Karkos and Peters (2006) advise of numerous studies in America and Europe regarding barriers to research in nurses' work environments. These barriers included limited time, lack of authority to instigate change, little support for any recommended change, minimal knowledge of research and ability to interpret statistics. Chau et al. (2008) found three facilitators to the use of research were (a) manager support, (b) support from other nurses, and (c) education. Magnet hospitals encourage and realise the importance of nursing research (Turkel, 2004). If best practice is to be adopted by nurses, then nurses must understand organisational and cultural perspectives of research and detect the opportunity and challenges for research use. A study by Karkos and Peters (2006) in a magnet community hospital revealed nurses in that hospital perceived three barriers (although rated as small to medium barriers) (a) not having sufficient time to read research literature, (b) not feeling like they have sufficient authority to alter procedures for patient care, and (c) not enough time on the job to put into practice research findings. Larrabee, Sions, and Fanning (2007) suggest support from senior management and the establishment of a systemic

process of change will result in positive change in nurses' attitudes towards research and increase their participation in research-related activities. Their study found two interesting results: increased support services were linked to higher attitude scores on research and its use, and those nurses who were involved in research-related activities were more positive towards research than those who were not involved. Larabee et al. (2007) suggested nurses may constructively approach and be more involved in research if the support for such research is endorsed and promoted within the workplace by nurse leaders.

9.6.3 Sustainability of magnet principles

Andrist et al. (2006) believe the sustainability of any professional nursing model relies on the political and economic climate of the health market. They suggest the shortage of nurses has provided the necessary political leverage for those with a stake in nursing to implement models of change. They fear that as labour tensions in nursing ease or are surpassed by other organisational priorities for which the remedy would be to hold or reduce human costs; an organisation is more likely to reverse its priority for professional nursing. Andrist et al. (2006) hold to the point that nurses should focus on increasing the level of professional expertise contained within the nursing workforce, which may then result in a greater focus on nursing as a whole. Following a professional model will provide organisational focus, in turn increasing the education and expertise of nurses to balance with the advancing technology and the greater complexity in nursing. The continued evolution of information collection, both on and for nurses and nursing, will hopefully add support to the realisation that nurses are professionals and require participation in the decisions made within an organisation that impact on their work and work environment. Andrist et al. affirm that professionalism is a powerful motivator for nursing change, from Florence Nightingale's innovations to the current nurse shortage. Further, they assert that professionalism added greatly to the achievement of this restructuring which benefited the organisation and the nurses. Questions remain as to whether this magnet model can be maintained in the face of economic uncertainty, and whether control of hospitals

can be provided to nurses without a rebellion of the resources and service configuration of the hospital.

9.6.4 The Princess Alexandra Hospital

The Princess Alexandra Hospital (PAH) is a large 740 bed hospital providing services in all adult specialties except obstetrics (PAH, 2008). In March 2008, the PAH had a total nursing staff of 2,462. The PAH is located four kilometres south of Brisbane City and has access to all major services and facilities. In 2004, the PAH in Brisbane became the first hospital in the Southern Hemisphere to receive the magnet designation for excellence in nursing care (Queensland Health, 2006). Two thousand nurses went through a demanding and thorough evaluation process into nursing services. Queensland Health is proud of this achievement as this recognition acknowledges the (a) importance of its nurses, (b) high level of care nurses provide, (c) support nurses receive, (d) opportunities open to its nurses, and (e) nurses' commitment and spirit towards their unit. Nurses have the autonomy to examine, evaluate and initiate workplace changes (Queensland Health, 2006). Patient outcomes are also monitored within the team to provide performance indicators and allow nurses to conduct their own analyses. In 2008, the PAH achieved redesignation and Veronica Casey, Executive Director, Nursing Services, advises there is a great sense of excitement and achievement as they move towards their second Magnet Re-designation in 2013 (PAH, 2011). Further, Ms Casey advises the magnet culture is well embedded within the organisation at all levels. The PAH (2011) is proud of having mentored St Vincent's Private Hospital, New South Wales, in its quest for Magnet designation. St Vincent's Private Hospital subsequently gained magnet accreditation in May 2011. Ninety-seven per cent of patients were satisfied with the treatment they received at the PAH and only a few sections had nurse vacancies (2009).

Armstrong (2005) advises the success of the magnet hospital concept is shown by the reduction in staff turnover, from 25% in 1999 to 10% in 2002. Further achievements included the increase in the satisfaction of patients, a rise in staff morale and the creation of a more positive work environment. Since 2000,

the PAH has reduced its risk of losing nurses from 54% in 2000 to 30% in 2006 (PAH, 2008). In 2005, the PAH had a waiting list of nurses wishing to join its staff, and all of its graduate positions were filled. Armstrong strongly believes by undertaking magnet principles, hospitals will minimise, if not eliminate, their shortage of nurses.

Nevertheless, the question remains as to whether magnet principles work in an Australian setting. Are the climate and outcomes at the PAH better than other comparable hospitals? Jury et al. (2009) specify that due to the size of Queensland Health, staff were divided into four rounds to be surveyed over a period of two years. They imply that by surveying in quarters allows for the appropriate provision of resources for respondents. Surveys are conducted in April and September of each year. This research uses data collected as part of a survey round that involved nurses from the PAH and two other hospitals (Hospital B – an outer metropolitan hospital with 365 beds and Hospital C – a regional hospital with 486 beds) to answer this question. Hospitals B and C were chosen as being closest in size and organisational complexity from all hospitals surveyed at the same time. The hypothesis of this research is that the PAH (the magnet hospital) will display better organisational health indicators and individual and clinical outcomes than non-magnet hospitals.

9.7 Results

Responses from 1,114 nurses were analysed including (PAH [$n = 547$], Hospital B [$n = 269$], and Hospital C [$n = 298$]). Normal data checking procedures were conducted (Tabachnick & Fidell, 2006). No pair-wise exclusion was utilised. Thirty-two cases were excluded list-wise for missing data. No pattern was evident, as the missing data appeared randomly spread across all variables, and only 2 cases had more than one missing variable. Frequencies were run to check for outliers and none were found. Missing data did not exceed 3% therefore list-wise exclusion did not undermine either the power or the representativeness of the sample. While homogeneity was significant on 15 of the 32 dependent variables, in each case the PAH displayed only slightly less variability than the other comparative hospitals. While these were consistent differences, the

magnitude of the differences was only small in each case: this nevertheless could slightly inflate Type 1 Error. The decision to persist with inferential analyses was considered sound as long as appropriate adjustments are made to correct for the inflated Type 1 Error.

A one-way analysis of variance was conducted to explore the relationship between the levels of organisational climate, individual outcomes, career intentions - intention to leave and clinical management practice of the three hospitals (the magnet hospital – the PAH and the two non-magnet hospitals – Hospital B and Hospital C). Standard deviation and means are included in Table 9.1. Thirty-two separate indicators were tested for possible differences between the same three hospitals. Holm's adjustment was used to correct for inflated Type 1 Error. While the Holm's procedure is less common than the Bonferroni adjustment, it is considered superior (Holland & DiPonzio Coperhaver, 1988). The Holm procedure supports only those equations that have a combined probability of Type 1 Error lower than the conventional α level ($p < .05$). Only those equations that met these collective criteria are presented here. Significant differences ($p < .05$) were found between the three hospitals on 22 organisational climate indices (Table 9.2). Post hoc analyses (Tukey's HSD) revealed it was the PAH that had significantly better scores than the other two hospitals for every organisational climate indicator. The question remains as to what is associated with this clearly superior organisational climate at the PAH. The analysis also revealed the PAH had significantly better scores on three individual outcomes indices, three clinical management practice indices, and three of four career intentions indices (Table 9.3).

The organisational climate of an organisation has a large impact on individual outcomes such as an individual's quality of work life, their morale, and their distress. Research has shown that individual morale and individual distress are directly linked to an individual's intention to leave.

Table 9.1

Mean, standard deviation and number of nurses for Princess Alexandra Hospital, Hospital B and Hospital C

Indicators and outcomes	Hospital	Mean	Standard deviation	<i>n</i>
Individual outcome and organisational climate indicators (possible range: 0 - 100)				
Quality of work life	PAH	53.30	23.89	543
	Hosp B	42.66	25.10	266
	Hosp C	41.95	25.67	292
Individual morale	PAH	58.53	19.53	534
	Hosp B	53.46	22.00	262
	Hosp C	52.70	21.13	288
Individual distress	PAH	31.16	19.27	535
	Hosp B	35.61	22.27	262
	Hosp C	37.28	21.91	288
Workplace morale	PAH	56.99	20.40	537
	Hosp B	47.92	21.41	264
	Hosp C	44.30	21.94	293
Supervisor support	PAH	58.85	22.63	537
	Hosp B	51.92	24.33	264
	Hosp C	47.62	23.31	293
Participative decision making	PAH	51.21	21.42	536
	Hosp B	41.42	22.76	263
	Hosp C	41.66	21.55	290
Role clarity	PAH	66.60	15.11	536
	Hosp B	63.00	16.48	264
	Hosp C	61.34	14.85	292
Peer support	PAH	64.95	16.08	533
	Hosp B	63.10	16.52	263
	Hosp C	58.11	17.70	292
Appreciation and recognition	PAH	53.26	20.89	533
	Hosp B	48.54	21.60	260
	Hosp C	45.56	21.62	288

Indicators and outcomes	Hospital	Mean	Standard deviation	<i>n</i>
Professional growth	PAH	58.62	18.64	538
	Hosp B	48.75	20.87	265
	Hosp C	47.67	21.67	292
Goal congruence	PAH	60.46	17.50	537
	Hosp B	50.99	19.13	263
	Hosp C	50.74	17.84	291
Workplace distress	PAH	52.76	20.43	538
	Hosp B	64.49	22.16	263
	Hosp C	65.42	21.34	289
Excessive work demands	PAH	54.48	21.60	537
	Hosp B	69.80	23.39	261
	Hosp C	65.84	22.15	290
Organisational management practice measures (possible range: 0 - 100)				
Workplace health and safety	PAH	72.34	14.46	540
	Hosp B	66.40	17.08	267
	Hosp C	64.53	16.74	295
Work area management practices	PAH	60.26	17.79	530
	Hosp B	49.36	19.14	264
	Hosp C	44.35	19.82	295
Trust in leadership indicators (possible range: 0 - 100)				
Trust in immediate supervisor	PAH	64.32	21.62	541
	Hosp B	60.94	22.60	265
	Hosp C	55.60	24.99	292
Trust in senior manager	PAH	57.40	22.06	534
	Hosp B	45.38	23.09	266
	Hosp C	43.42	23.84	293
Trust in district executive	PAH	51.34	18.42	533
	Hosp B	33.83	19.43	262
	Hosp C	38.44	20.31	294
Code of Conduct principles (possible range: 0 - 100)				
1. Respect for people	PAH	59.87	21.85	535
	Hosp B	55.86	22.50	263
	Hosp C	51.81	24.47	297

Indicators and outcomes	Hospital	Mean	Standard deviation	<i>n</i>
2. Integrity	PAH	60.26	18.50	536
	Hosp B	53.28	18.85	264
	Hosp C	46.71	21.23	295
3. Respect for law and government	PAH	68.32	14.76	531
	Hosp B	61.72	16.66	264
	Hosp C	59.80	15.62	293
4. Diligence	PAH	71.85	15.04	535
	Hosp B	64.14	17.28	263
	Hosp C	61.47	18.15	296
5. Economy and efficiency	PAH	64.72	15.81	535
	Hosp B	56.43	17.17	265
	Hosp C	53.48	17.75	293
Team work indicators (possible range: 0 - 100)				
Presence of team characteristics	PAH	60.74	21.10	534
	Hosp B	56.94	23.33	254
	Hosp C	54.22	22.82	286
Trust among team members	PAH	66.50	17.86	535
	Hosp B	64.50	19.41	255
	Hosp C	58.36	22.36	289
Clinical communication	PAH	62.63	17.73	505
	Hosp B	57.31	19.49	253
	Hosp C	55.68	19.87	279
Clinical management practices	PAH	57.37	16.32	503
	Hosp B	49.46	16.79	251
	Hosp C	45.29	17.43	276
Multidisciplinary team support	PAH	68.97	17.31	503
	Hosp B	60.23	18.35	503
	Hosp C	63.70	18.85	251
Career Intentions (Intention to leave) (possible range: 1-5)				
Often think of leaving district	PAH	2.82	1.29	542
	Hosp B	3.11	1.27	266
	Hosp C	3.21	1.33	294

Indicators and outcomes	Hospital	Mean	Standard deviation	n
Looking for new job in new org	PAH	2.67	1.25	540
	Hosp B	2.73	1.17	266
	Hosp C	2.86	1.20	296
When new job found will leave	PAH	2.42	1.15	540
	Hosp B	2.63	1.10	266
	Hosp C	2.72	1.19	295
If I leave job, would stay in QH	PAH	3.55	1.02	541
	Hosp B	3.47	1.01	267
	Hosp C	3.31	1.06	294

Table 9.2

Analysis of variance for organisational climate indicators of magnet to non-magnet hospital health

Source	<i>df</i>	<i>F</i>	η^2	<i>p</i>
Workplace morale	2	39.17	.07	.000
Supervisor support	2	23.73	.04	.000
Participative decision making	2	26.80	.05	.000
Role clarity	2	12.34	.02	.000
Peer support	2	16.15	.03	.000
Appreciation and recognition	2	13.16	.02	.000
Professional growth	2	37.28	.06	.000
Goal congruence	2	38.81	.07	.000
Workplace distress	2	45.89	.08	.000
Excessive work demands	2	50.59	.09	.000
Workplace health and safety	2	27.60	.05	.000
Work area management practices	2	76.44	.12	.000
Trust in immediate supervisor	2	13.89	.02	.000
Trust in senior manager	2	88.04	.08	.000
Trust in district executive	2	45.24	.14	.000
Code of conduct – Respect for people	2	12.23	.02	.000
COC – Integrity	2	47.88	.08	.000
COC – Respect for law & government	2	34.01	.06	.000
COC – Diligence	2	43.74	.07	.000
COC – Economy and efficiency	2	49.66	.08	.000
Teamwork – presence of team characteristics	2	8.58	.02	.000
Teamwork – trust amongst team members	2	16.48	.03	.000

Table 9.3

Analysis of variance for indicators of outcomes of magnet hospital health compared with non-magnet hospitals

Source	<i>df</i>	<i>F</i>	η^2	<i>p</i>
<i>Individual outcomes</i>				
Quality of work life	2	27.47	.05	.000
Individual morale	2	9.63	.02	.000
Individual distress	2	9.34	.02	.000
<i>Clinical outcomes</i>				
Clinical communication	2	14.54	.03	.000
Clinical management practices	2	50.88	.09	.000
Multidisciplinary team support	2	21.52	.04	.000
<i>Career intentions</i>				
Often think of leaving this health district	2	9.58	.02	.000
Looking for new job at a new organisation	2	2.46	.004	.086
As soon as new job found will leave	2	7.28	.01	.001
If I leave job, I would stay in Queensland Health	2	5.57	.01	.004

9.7.1 Not a size effect

To ensure the extremely positive response was not an effect created because the participant sample from the PAH was larger than the other two hospitals, organisational climate and outcome data obtained from nurses at the Hospital X ($n = 640$) was compared with data from nurses at the Hospital Y ($n = 201$). These hospitals were two totally different hospitals to Hospital A and B. The results are displayed in Tables 9.4 and 9.5. After Type 1 Error correction (Holm) only eight of the same 28 climate factors were significantly different comparing Hospital X and Hospital Y. In every case it was the smaller hospital (Hospital Y) that had the marginally better climate scores therefore the superiority of the PAH results over smaller comparable hospitals cannot be attributed to a simple size of institution effect.

9.8 Discussion

The results support the organisational health hypothesis that magnet hospitals appear better than hospitals not following these strategies. This difference is evident across the majority of indicators and outcomes. While the magnet principles are the most likely reason for the significant differences between magnet and non-magnet hospitals, further in-depth and extensive data collection and analysis is required to prove causality. Overall, the findings of this research support the application and relevance of magnet principles in an Australian setting, however further research is necessary to confirm this result.

One or more of the fourteen forces of magnetism may impact or not impact on increased workplace satisfaction and morale. Other forces may be irrelevant or useful only to a small degree. Without more detailed data collection and analyses it can only be suggested as to which forces best assist in retaining nurses.

Patient satisfaction is also higher according to the annual report released by the PAH district (Queensland Health, 2008). The survey indicated a 97% patient satisfaction rate which the senior management classed as "impressive". These are extremely positive signs for healthcare organisations in Australia.

Table 9.4

Analysis of variance for organisational climate indicators of Hospital X compared with Hospital Y

Source	<i>df</i>	<i>F</i>	η^2	<i>p</i>
Workplace morale	1	5.345	.01	.021
Supervisor support	1	1.63	–	.202
Participative decision making	1	6.06	.01	.014
Role clarity	1	5.31	.01	.021
Peer support	1	2.87	–	.091
Appreciation and recognition	1	4.98	.01	.026
Professional growth	1	0.47	–	.50
Goal congruence	1	6.15	.01	.013
Workplace distress	1	18.12	.02	.000
Excessive work demands	1	14.88	.02	.000
Workplace health and safety	1	13.80	.02	.000
Work area management practices	1	6.98	.01	.008
Trust in immediate supervisor	1	5.182	.01	.023
Trust in senior manager	1	.002	–	.969
Trust in district executive	1	.892	–	.345
Code of Conduct – Respect for people	1	.017	–	.897
COC – Integrity	1	8.015	.01	.005
COC – Respect for law & government	1	8.28	.01	.004
COC – Diligence	1	4.29	.01	.039
COC – Economy and efficiency	1	.098	.0	.754
Teamwork – presence of team characteristics	1	.027	–	.870
Teamwork – trust amongst team members	1	5.89	.01	.015

Table 9.5

Analysis of variance for indicators of outcomes of Hospital X compared with Hospital Y

Source	<i>df</i>	<i>F</i>	η^2	<i>p</i>
<i>Individual outcomes</i>				
Quality of work life	1	1.035	–	.309
Individual morale	1	2.06	–	.152
Individual distress	1	0.115	–	.735
<i>Clinical outcomes</i>				
Clinical communication	1	0.021	–	.885
Clinical management practices	1	2.048	–	.153
Multidisciplinary team support	1	0.070	–	.791

The magnet designation appears to show: (a) a decrease in distress, (b) an enhancement in nurse satisfaction and morale, (c) better organisational climate and hospital outcomes, and (d) a reduction in intention to leave. Even though the results of the magnet hospital are significantly better than the other non-magnet hospitals, there is still room for improvement. Organisational climate and individual and clinical outcomes can still increase and by doing so, improve the climate and health of the organisation. In an increasingly turbulent global financial situation, magnet principles appear to be one step in the right direction in improving nurse retention.

As Broom and Tilbury (2007) highlight, achieving magnet accreditation is just one step in the magnet journey, a journey that focuses on a continual quest for excellence. Although Steinbinder (2005) admits that excellence is never quite attained. The very implementation of programs that are innovative assist in attracting and retaining the best and brightest staff. The magnet hospital must be more than reactive. It must be proactive and ground-breaking in its focus.

9.8.1 Limitations

This survey presented a snapshot of organisational climate, and individual and clinical outcomes at one particular point in time (September, 2007). In fact, this survey was undertaken four years after the PAH attained accreditation. Further and regular data collection is needed to confirm and monitor progress.

While there are major positive signs the magnet principles appear to be making a difference, the PAH still comes under the ambit of public sector and, as such, is subject to government policies and procedures. These policies and procedures may limit the extent to which the hospital can be completely autonomous and wholly "magnetic".

9.8.2 Further research

Staff commencing at the PAH, and several other hospitals (to allow for group comparisons), should undertake pre-employment interviews or surveys. This would provide a baseline. Questions should focus on their perception of hospital environments and their knowledge or beliefs regarding magnet accreditation. Six months after commencement, staff should be re-interviewed or surveyed to discover whether their perceptions were unchanged and whether working in this magnet environment was an improvement on previous environments. It should also question what they believe are the advantages or disadvantages.

Alternatively, the administration of a pre and post survey would also assist revealing magnet differences. This would be done by the development of a survey designed to measure every magnet principle (an ideal pilot study) with two versions. The first version would be a pre-employment version which would assess anticipated levels, and secondly importance placed on each aspect of magnetism. Then a second version should be conducted at six-months or twelve months, presenting the same aspects but asking employees to rate the degree to which each is evident in the workplace and again (separately) the importance they place on each.

It is recommended all staff are surveyed annually to monitor the evolution of the magnet process. This survey would provide a baseline or measure of staff

perceptions of improvements to both climate and outcomes. The PAH is currently undergoing a yearly survey. This survey should encourage staff to provide input into any areas that need improvement and provide feedback of what they believe the organisation is doing correctly. This will help the organisation with its magnet evaluation by providing awareness of areas that need change or methods that need altering.

9.9 Chapter summary

The Australian Government is aware of the issues in health and has provided support for the initial magnet accreditation process. The Australian Nursing Federation (2007) has also taken a position of support for magnet hospital principles. It is also obvious from a review of the magnet literature that achieving magnet status is not the end of the road but the commencement of a continuing journey (Sanders & Davey, 2010). Magnet organisations must endure and adapt magnet practices in order to face the continuing challenges within a constantly evolving environment. While magnet accreditation is not the "be all and end all", it appears to go a long way in improving the work environment of nurses and may be a solution to the nurse shortage. Continued research within this area will assist in better understanding the behaviour of magnetism and harnessing it to advance the delivery of healthcare in the future.

CHAPTER 10 DISCUSSION, IMPLICATIONS AND FUTURE DIRECTIONS

As has been made evident in this dissertation, many countries are currently experiencing a nurse shortage. There appears to be no quick fix to this shortage. In 2005 when this dissertation was originally conceived a nursing shortage existed, however the global financial crisis has eased this shortage in some developed countries. Researchers warn employers and policymakers to avoid complacency as the RN labour supply will evaporate as the economy improves (Staiger, Auerbach & Buerhaus, 2012). Though the nurse shortage has received in-depth research, attempted change initiatives have seen minimal progress. This dissertation has offered an extensive review of the current nurse workforce situation and issues impacting retention.

This author believes that retention is the most crucial of all remedies to the shortage. Using an analogy to consider the current nursing situation may be important. By considering the organisation as a bath, the staff are the water, recruitment is the effort of filling the bath, and retention is the dislodged plug at the bottom – would it not make more sense to focus more effort on correctly replacing the plug than increasing filling attempts? The majority of staff used to fill the bath are continuing to run out the bottom unless the plug (retention) is properly fitted. As mentioned in Chapter Three, retaining existing staff (a) reduces selection, development, and production costs, (b) maintains valuable knowledge and skills, (c) avoids the negative spiral which other employees experience when a colleague leaves, and (d) maintains continuous patient care (Jones, 2007). The first four chapters clarify the substantial impact that a nurse shortage has on healthcare in general and the lives of individuals, remedies that may assist, retention issues and the importance of organisational climate in relation to organisational health.

Nurses perform a twenty-four hour monitoring system which proactively detects and rapidly intercedes on behalf of all those who are unwell under their watch (Aiken et al., 2001). How effectively this system works is influenced by the number of nurses working within each healthcare unit. It is credible that when nurse ratios are low there is an increase in adverse health outcomes. The fact that

this is a global issue, with the majority of developed nations suffering its impact, highlights the significance of this shortage. Australia, too, is not immune to this shortage, especially with the expected ageing population. Over the next two decades, the AHWI (2008) reports that 15% of Australia's nurses will be retiring every five years. This will create a cumulative exodus of 90,000 nurses by 2026. Further, new graduates exiting from tertiary programs will not replace these nurses and current future planning is not considering these implications or the implications of future needs, especially the projected increased need for services. While using migration and agency nurses can help in the short-term, longer-term solutions are required. It is vital to stem voluntary, dysfunctional and avoidable turnover. This turnover causes low morale, decreased productivity and increased errors (Zurn et al., 2004). Preventing this turnover would assist in retaining nurses and thereby increasing the nurse population to deal with anticipated future challenges.

This chapter presents a summary of the findings from the three studies: (a) a study comparing nurse intention to leave/turnover intention with actual turnover; (b) a study using the current mathematical model of organisational health by Griffin et al. (2000) to confirm data fit and then the development of a new model in an attempt to better explain the connection between organisational climate and turnover; and (c) a study using the organisational climate and individual outcomes of three hospitals, one of which is "magnet", to evaluate whether magnet principles make a difference in an Australian setting. Implications for healthcare providers, organisations and future research will be discussed. In concluding, a summary of the original and significant contributions made by this dissertation to retaining nurses in this global crisis will be provided.

10.1 Findings

10.1.1 Analysis One: Linking intention to leave to turnover

There are advantages and disadvantages to leaving any organisation and the most economical solution will be chosen by the individual. The degree of risk and the availability of an alternative position have great influence on an employee's decision (Allen, 2004). Employees are less likely to leave in times of

economic turbulence (Allen, 2004). Judging whether or not to resign occurs within an individual's schema. This schema involves (a) assessing the individual's present position, (b) remembering what it felt like the last time they moved jobs, (c) weighing up the current fiscal environment, and (d) verifying their options (Hulin et al., 1985).

The relationship between turnover intention and turnover has borne varied results. Turnover intention is more robust than other variables, including job satisfaction and commitment and job search. Studies have received varying results for strength of the turnover intention and turnover relationship with estimates spanning from 28% to 75% (Steel et al., 1990). Turnover intentions may be related either to a specific problem or a global conflict with the organisation's goals.

Lee et al. (1996) consider nursing vastly different from other occupations due to their ability to resign without having an alternative at hand and then return to nursing when they choose due to the high availability of job prospects. Parry (2008) thought it vital to note that nurses transferring between hospitals do not deplete Australia's core nursing strength; however the skills and knowledge of nurses leaving nursing are lost to healthcare and contribute to the global nurse shortage.

This study explored the link between turnover intention and turnover. Turnover intention is frequently used as a substitute guide to turnover when precise turnover data is not available (Vandenberg & Barnes Nelson, 1999). Survey results from nurses at Queensland Health for 2007 and 2008 were compared with separation data obtained from Queensland Health (HR Informatics Unit, 2007; 2008). Separation referred to nurses who ended work due to resignation, death, transfer (out of Queensland Health), dismissal, retirement or cessation of contract.

This analysis verified a robust connection between aggregated turnover intention and actual turnover. The connection was sound and the relationship was strong, thus confirming an association between nurse turnover intention and actual turnover. The large size of this sample provided a strong representation of nurses working within Queensland Health and the strength of relationship confirms that

turnover intention is a good measure of actual turnover. Although Lee et al. (1996) indicated there may be dissimilarity between nursing and other occupations due to the ease of access to a job, nurses still fit the general profile of employee turnover.

Further, it is suggested nursing turnover may be due to a negative appraisal of the current work climate, a conflict with an organisation's goals and values. This conflict causes turnover and the only way to halt this turnover is to change the culture of the organisation. Culture, while it has been noted that it does not change easily, can be modified through long-term climate transformation. While Lee et al. (1996) noted climate rarely changes for a minority, the number of nurses involved in turnover is relatively large, and therefore this change is perceived as achievable.

10.1.2 Analysis Two: Comparative modelling of the relationship between organisational climate and nursing retention

Both employee well-being and organisational effectiveness are necessary to achieve organisational health. To attain this achievement an organisation needs the individuals' well-being and the organisation's performance to be aligned (Griffin et al., 2000). Organisational health is determined by a combination of organisational and individual factors, most importantly organisational climate and individual distress and morale. Organisational climate is a durable feature of the internal environment of organisation that is (a) sensed by its workers, (b) impacts on their behaviour, and (c) may be discussed as a group of qualities (or attributes) of the organisation (Tagiuri, 1968). Sauter et al. (1996) also believe climate is the pathway to health. An employee opinion survey was deemed the best way to assess an organisation's climate to achieve a picture of overall health. The two QPASS scales from within the BWSOS were used in the second analysis.

Analysis of data used structural equation modelling (SEM). SEM is a way of testing links between observed and latent variables (Hoyle, 1995). It specifies how a collection of variables work as a whole. Griffin et al.'s model connects survey items to latent concepts (Hart & Wearing). Item error and unique variance are addressed by SEM, allowing for a truer reflection of the effect of one variable on another. This aids in choosing intervention strategies for implementation.

Difficulties in the use of SEM arise when causality is implied from significant relationships (Hoyle, 1995). While SEM cannot test the hypothesis of directionality, it does allow a method of verifying very intricate and detailed hypotheses.

Griffin et al. (2000) offered a mathematical model of organisational health informing how organisational climate impacts on well-being and turnover, with arrows identifying direct relationships between factors. Data collected from Queensland Health were processed through Griffin et al.'s model to obtain relative fit and ensure comparable data. These data were then used to develop and test a new model.

Griffin et al. (2000) recommend careful analysis of their model to gain information on how climate impacts on workplace outcomes. Their model showed supportive leadership key to the employees' awareness of the work environment. Distress and morale variables influenced the very foundation of organisational health with a distinct and separate impact on both turnover and health. Overall, Griffin et al. identified a variety of climate aspects that need to be addressed to attain health.

The data from nurses within Queensland Health were utilised in Griffin et al.'s model to see if the model was a reasonable fit. While Griffin et al.'s model was not an absolute fit, the Root Mean Square Error of Approximation (RMSEA) indicated there was reasonable fit (though this was not less than .05). Evidently the model designed for all professions is applicable to nurses. Nevertheless, this result did not preclude a better-fitting more nurse-applicable model. McDonald and Ho (2002) caution that most data groups will have more than one possible model that fits.

The second part of this study created a more predictive and interpretable model to explain the variation in nurses' turnover intention. Ordered associations amongst organisational climate constructs were assumed to be of minimal use in forecasting turnover intention, so all constructs were joined to turnover intention to show a simple direct relationship. Individual psychological factors (individual morale and individual distress) were believed to potentially mediate all the direct relationships between components of organisational climate and intention to

leave. By considering the standardised loadings of turnover from the new model it can be detected which climate variable needs intervention strategies (see Figure 8.2).

While the new model was not a perfect fit, it was a significant fit. Fit indices offered information as to the quality of each model. The RMSEA showed somewhat less error in the new model. The Goodness of Fit Index, Adjusted Goodness of Fit Index, and the Parsimony Goodness of Fit Index were all slightly better for the new model with overall results indicating that the new model could not reasonably be improved. Additionally, the new model is more likely to generalise better with other populations. Overall, the new model is simpler and demonstrates better fit than the model developed by Griffin et al. (2000).

One of the distinctions between the two models concerned the direct impact of individual morale, individual distress and goal congruence. In the new model when all components of organisational climate were available to optimally predict turnover intention, goal congruence was not nearly as important as the degree of supportive leadership and opportunities for professional growth. The importance of individual morale and individual distress was evident in both models.

10.1.3 Analysis Three: Critical appraisal of the value of "magnet" accreditation in retention and performance within nursing

There exist hospitals that are affirmative examples of quality care and outstanding nursing environments (Havens & Aiken, 1999). These hospitals have been described as the "gold standard" (Turkel, 2004) sharing three criteria: (a) the knowledge that they were a good place to work, (b) the ability to recruit and retain nurses in times of shortage and (c) located in areas where other hospitals were competing to hire nursing staff (Kramer & Schmalenberg, 2005).

In the 1980s the American Academy of Nursing identified 41 hospitals as "magnet hospitals". Thirty years of research has provided evidence magnet hospitals provide (a) lower patient-nurse ratios, (b) more autonomy, (c) greater control over actual nursing, (d) more highly educated and competent nurses, (e) strong nurse leaders, and (f) support for improved patient outcomes (Lash &

Munroe, 2005). Patients entering these hospitals experience superior outcomes and greater satisfaction.

Applications for magnet status are evaluated on a merit basis (Gordon, 2005), and are assessed on their ability to meet the 14 forces of magnetism (Turkel, 2004). There are costs involved in becoming accredited that may result in an organisation's hesitation to pursue magnet status (Pinkerton, 2005). Magnet accreditation not only involves significant costs, it also takes time, patience and planning (Fergus, 2004). However, there are many positive outcomes, both for nurses and patients (Tuazon, 2007). Magnet accreditation provides (a) improved retention, (b) higher satisfaction for staff and patients, (c) greater quality care, (d) improved safety, and (e) an increased attraction level for consumers (Desilets & Pinkerton, 2005). Also, Pinkerton (2002) believes magnet accreditation offers superior business outcomes.

There are critics of the program who advise that designation is just a marketing tool, creating an improper relationship in the USA between the ANCC and hospital management (Fagin et al., 2008). Further, they maintain that compliance needs to be more closely monitored. Others believe the sustainability of any magnet hospitals is reliant on the political and economic climate (Andrist et al., 2006). However, most research reports support for magnet principles and their impact on nurse retention and patient outcomes (Aiken et al. 2001; Havens & Aiken, 1999; Kramer & Schmalenberg, 2005; Lash & Munroe, 2005; Tuazon, 2007; Turkel, 2004).

In 2004, the first hospital in the southern hemisphere to receive the magnet designation for excellence in nursing care was the Princess Alexandra Hospital (Queensland Health, 2006). Nurses are given the autonomy to examine, evaluate and initiate workplace changes. Armstrong (2005) reported a 15% reduction in turnover between 1999 and 2002. Increased patient satisfaction, higher employee morale and a positive work environment are signs of magnet success. With word of their success growing, the PAH has a waiting list of qualified nurse applicants and limited graduate vacancies. Armstrong affirms magnet principles will minimise, if not eliminate, the nurse shortage.

This study considered whether magnet principles were relevant in an Australian setting. It was hypothesised comparing organisational health at the PAH against two other non-magnet hospitals ('Hospital B' and 'Hospital C') would reveal whether magnet designation made a difference. These other hospitals were chosen because, although slightly smaller, they were the most similar in size and organisational complexity from all other hospitals surveyed in that round.

The organisational health of the PAH was significantly better than the other non-magnet hospitals. While homogeneity was significant on 15 of the 32 dependent variables, in each case the PAH displayed only slightly less variability than the other comparative hospitals. The results of this study support the hypothesis that magnet principles appear to have a positive influence on organisational health. This is apparent across all major indicators and outcomes, including a substantial reduction in turnover intent.

There may be some concern that the current economic conditions may modify results, however the author does not believe this to be the case. While these results were obtained prior to the global financial crisis (GFC), research indicates that the crisis has only caused a temporary easing of the nurse shortage (Staiger et al., 2012). This is mainly due to nurses returning to nursing because of a decrease in spousal income or for job security. Buerhaus et al. (2010) highlight that this is only temporary and should not distract attention from any action to reduce the nurse shortage. Further, they fear that when early reports to the end of the nurse shortage are released, prospective applicants may choose not to select nursing as a career during the next decade when they will be most needed due to the increase in the ageing population.

Further, reports released by Queensland Health after the commencement of the GFC indicate positive outcomes from magnet accreditation. The PAH Annual Report (Queensland Health, 2008) noted that the PAH achieved 97% patient satisfaction. This achievement was termed as "impressive" by senior management. The PAH is also mentoring other hospitals in their quest for magnet accreditation.

While magnet designation decreases distress, enhances nurse satisfaction and morale, improves organisational climate and hospital outcomes and reduces

intention to leave, further improvement can still be attained. Magnet hospitals must focus on being more than reactive. They must be proactive and ground-breaking. In an increasingly turbulent global situation, applying magnet principles is certainly one large step towards the right direction for nurse retention.

10.2 Implications for future research

Originally Queensland Health was providing turnover statistics in six monthly periods, now they are presenting these results quarterly. At present, turnover intention is available in six monthly segments and it is recommended, if possible, the BWSOS also be conducted quarterly so that all staff would be surveyed within a one year period. Once data are available for four or more years on a quarterly basis, the correlation between turnover and intention to leave among nurses could be more soundly confirmed. Turnover, then, should be calculated as a rolling average (covariate), ideally across the current quarter and three preceding quarters to offer a full year rolling average which could take account of a full annual seasonal cycle. This rolling average would constitute a base rate of turnover from which to distinguish the direct link between intention to leave and turnover. Multiple regression analysis should be conducted where the effect of rolling average of turnover is controlled, leaving the effect for intention to leave much clearer. In short, controlling for the impact of rolling average turnover on the quarterly turnover figures would make the association between intention to leave and actually leaving uninflated, and thus much clearer.

Further research into magnet accreditation and its benefits in an Australian environment is required. New staff should complete individual surveys prior to commencement of duties and then at six monthly intervals. As mentioned above, the entire organisation should be surveyed annually to monitor the magnet process (districts divided into four groups with each group surveyed quarterly).

While magnet results appear exceptional, the question remains as to what is associated with these clearly superior organisational climate, individual, clinical management practice, and career intention outcomes at the PAH. While the magnet principles are most likely the reason for the significant differences

between magnet and non-magnet hospitals, further in-depth data collection and analysis is required to establish causality. In addition, each of the magnet forces needs to be considered separately. Each hospital implements forces in its own way, so each hospital must consider how it has implemented each force and then determine how to measure this implementation in the best way to discover which magnet forces are the most important in relation to improving organisational climate and health. It is recommended a quasi-experimental design be established with two equivalent hospitals – one to go "magnet" and the other to be used as a control. These hospitals should partake in surveys prior to, during, and after accreditation (even though one will not undergo the process). While this may not be easily transferrable to real world situations, the opportunity for this testing would prove insightful. This would better inform all stakeholders which forces have the most influence in increasing organisational health and better allow hospitals to adjust their climates and ultimately their impact on culture.

Research into SEM needs to be extended. There are limitations associated with any structural modelling, in that directionality cannot be defined. There is also the limitation any model developed may be one of many acceptable models that may fit as a model of organisational health. Any new modelling, no matter how refined, is limited to the exogenous and endogenous variables contained in the model. The ever increasing complexity of such modelling clearly reflects a growing ability to capture more and more aspects of the true complexity of the workplace. It may be that future theorists want to test even more complex models than have been presented here, but for now such theoretical development will have to wait for analytic software such as AMOS to be able to incorporate more variables than were present in this research. It is recommended that as the software advances and these restrictions disappear, more advanced modelling be conducted.

In future, the nature of most relationships, or at least some, may be either curvilinear or moderated which would point to a non-linear model. Software designers are needed to increase the capacity of modelling software to deal with much more complex models and enable the analyses of tetrachoric correlation matrixes. According to Butler, Burkhauser, Mitchell and Pincus (1987) the

tetrachoric correlation coefficient is the most efficient estimator of the correlation coefficient between two joint normally distributed random variables observed dichotomously. Tetrachoric correlation is preferred for binary data because it estimates the correlation as if the data were based on a continuous scale. As an extension to this, and given the ready availability of dichotomous data, software programs also need to advance to better account for and manipulate these data (most likely utilising tetrachoric correlations rather than Pearson correlations which are designed for continuous measurement scales and biased with regard to binary variables).

10.3 Implications for healthcare providers

While training and educating new nurses is important, healthcare organisations must place a higher priority on stemming the flow of nurses. Funding must be directed to retention strategies as a first priority. Health organisations need to realise by resolving these strategic and operational issues with nursing turnover they lay out a road map to do similar things with other health professions and ultimately improve the quality of healthcare. It is important for healthcare providers to realise nurses do not "talk" for very long: they just "walk". When an intention to leave is made known there is very little time before turnover occurs, so speedy and effective intervention strategies are essential.

Administrators must realise nurses who leave to take up other nursing positions are not leaving for better rosters or pay because rosters and pay are generally equivalent to their current position. These nurses leave for a range of factors that are created broadly by aspects of organisational climate. Improving organisational climate (specifically supportive leadership and professional development) and a real focus by organisations to comprehend the causes of core morale and heightened distress is therefore one of the best strategies to decrease turnover.

The magnet principles have been operationally established for some time in several western hospitals. At this time it is clear empirical evidence is mounting that adherence to these principles offers a positive and proactive way

forward for hospitals struggling with nurse turnover. These changes do not occur overnight and their operational application is different for each hospital. But the application does help health providers improve the staffing situation. Adopting magnet principles has an up-front cost which is later compensated by savings associated with decreased turnover. It is recommended that up-front funding be made available to initiate and implement magnet accreditation.

Overall the findings of this research support the relevance of magnet principles in an Australian setting. Even though the results of the magnet hospital appear both powerful and positive, there is still room for improvement. Organisational climate and individual and clinical outcomes can still increase, thus reducing turnover. In an increasingly turbulent global financial situation, magnet principles appear to be one step in the right direction in improving nurse retention.

10.4 Summary

So what was the original and significant contribution of this doctoral research? The study linking turnover intention and turnover was important to turnover research, because it verified the connection between turnover intention and actual turnover among a large representative sample of nurses when other research with smaller samples across all occupational groups is showing mixed results. Not only was the connection sound, the data collection took place during a period of acute nurse shortage which has not always historically existed. Also important was the fact this research was conducted at a whole-of-organisation level for the entire nursing body of Queensland Health, a large public health organisation. The total sample of nurses involved was 8,625, constituting a very strong sample size.

The advantage of the new model developed in Chapter Eight is that while it may be slightly more predictive, it is much more interpretable. The changes in the model were based on the idea that individual distress and individual morale are mediating variables between organisational climate and turnover intention. For example, individual morale and distress colour employees' perception (for better or worse) of the organisation's climate. For any climate variable to make an

impact it must be first perceived by the individual. The model developed by Griffin et al. was based on certain aspects of climate impacting more on others. By looking at the results on the new model (see Figure 8.2), one can determine by the standardised loadings on intention to leave which climate variable requires the organisation's priority for any improvement strategies.

The study which tested and then developed an improved model of organisational health (Chapter Eight), established there are far more interpretable and useful ways of understanding organisational health, specifically how organisational climate impacts on turnover intention. This modelling identified that at the time of the survey, management within Queensland Health needed to focus interventions on supportive leadership and professional development. However, interventions addressing any or all organisational climate variables will benefit both the organisation and employees. This new model may lead to both improved theoretical understanding and certainly does lead to a clearer indication of which climate factors are more important for the focus of organisational intervention strategies.

Given all the issues that impact on the turnover intention, it is astonishing that one can predict greater than one quarter of the variance. It should be noted that these analyses have been carried out on one of the largest and most representative samples of Australian nurses ever utilised for a study of this nature. Further, many of these aspects are the very aspects that magnet principles identify.

Lastly, the study comparing a magnet hospital with two equivalent non-magnet hospitals establishes that adoption of magnet status will pay significant dividends in terms of nurse retention. This study had a very large and representative nursing sample, providing currently dated information. This applied research offers a practical and clearly effective way forward for health organisations struggling to retain their nursing workforce.

10.5 Recommendations

It is recommended that the new Model (see Figure 8.2) be used to determine what aspects of organisational climate the organisation needs to focus their attention on to improve the work environment. By surveying and entering

data into the model and running the analysis, the hospital or health system can determine the variables that are impacting most on nurses' intention to leave and focus change strategies on these variables.

Further research is suggested on the forces of magnetism and their impact on organisational climate and overall organisational health. It is also recommended that hospitals take steps, if not to initiate magnet accreditation, to set in place goals of meeting at least some of the principles that magnet accreditation offers.

10.6 Conclusion

This dissertation has researched the nursing shortage on global, Australian, and State levels. It has considered previous research linking turnover intention and turnover and supported a sound correlation between nurse turnover intention and turnover. This research has also developed a new model of organisational health which is slightly more predictive and more interpretable than a presently adopted model. Comparing organisational health results from the Princess Alexandra Hospital (the first hospital to achieve magnet status in the southern hemisphere) with two other non-magnet hospitals revealed very encouraging results. The current research needs to continue because of its potential value to policy and decision makers in helping reduce turnover, and helping improve positive consequences for health care systems in the future.

REFERENCES

- Aarons, G. A., & Sawitzky, A. C. (2006). Organizational climate partially mediates the effect of culture on work attitudes and turnover. *Administration and Policy in Mental Health and Mental Health Services Research*, 33(3), 289–301.
- Abbasi, S. M., & Hollman, K. W. (2000). Turnover: The real bottom line, *Public Personnel Management* 29(3), 333-342.
- Abelson, M. A. (1987). Examination of avoidable and unavoidable turnover. *Journal of Applied Psychology*, 72(3). 382–386.
- Access Economics. (2004). *Employment demand in nursing occupations*. Report for Commonwealth Department of Health and Ageing. Retrieved from [http://www.health.gov.au/internet/wcms/publishing.nsf/Content/-C07BC470B2C4A915CA256F1900101D48/\\$File/employment_demand.pdf](http://www.health.gov.au/internet/wcms/publishing.nsf/Content/-C07BC470B2C4A915CA256F1900101D48/$File/employment_demand.pdf)
- Adams, A., & Bond, S. (2003). Staffing in acute hospital wards: part 1. The relationship between number of nurses and ward organizational environment. *Journal of Nursing Management*, 11(5), 287-92.
- Adkins, J., Quick, J., & Moe, K. (2000). Building world-class performance in changing times. In L. Murphy & C. Cooper (Eds.), *Healthy and Productive Work: An International Perspective* (pp. 107–131). London: Taylor & Francis.
- Aiken, L. H. (2007). U.S. labor market dynamics are key to global nurse sufficiency. *Health Services Research*, 42(3), 1299–1320.
- Aiken, L. H., Clarke, S. P., Sloane, D. M., Lake, E. T., & Cheney, T. (2008). Effects of hospital care environment on patient mortality and nurse outcomes. *Journal of Nursing Administration*, 38(5), 223-9.
- Aiken, L. H., Clarke, S. P., Sloane, D. M., Sochalski, J. & Silber, J. H. (2002). Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction. *Journal of American Medical Association*, 288(16), 1987–1993.
- Aiken, L. H., Clarke, S. P., Sloane, D. M., Sochalski, J. A., Busse, R., Clarke, H., Giovannetti, P., Hunt, J., Rafferty, A. M., & Shamian, J. (2001). Nurses' reports on hospital care in five countries. *Health Affairs*, 20(3). 43–52.
- Aiken, L. H., Sloane, D. M., Cimiotti, J. P., Clarke, S. P., Flynn, L., Seago, J. A. et al. (2010). Implications of the California nurse staffing mandate for other states. *Health Services Research*, Retrieved from <http://www.nursing.upenn.edu/chopr/Documents/Aiken.2010.-CaliforniaStaffingRatios.pdf>

- Aiken, L. H., Xue, Y., Clarke, S. P., & Sloane, D. M. (2007). Supplemental nurse staffing in hospitals and quality of care. *Journal of Nursing Administration*, 37(7-8), 335-342.
- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckman (Eds.), *Action-control: From cognition to behavior* (pp. 11-39). Heidelberg, Germany: Springer.
- Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behavior and Human Decision Processes*, 50, 179-211.
- Ajzen, I. (2001). Nature and operation of attitudes. *Annual Review of Psychology*, 52, 27-58.
- Alameddine, M., Baumann, A., Onate, K., & Deber, R. (2011). Career transitions of inactive nurses: A registration database analysis (1993-2006). *International Journal of Nursing Studies*, 48, 184-192. doi:10.1016/j.ijnurstu.2010.06.009
- Albion, M. J., Fogarty, G. J., Machin, M. A., & Patrick, J. (2008). Predicting absenteeism and turnover intentions in the health professions. *Australian Health Review*, 32 (2), 271-281.
- Alexander, M. F., Fawcett, J. N., & Runciman, P. J., (1994). *Nursing Practice Hospital and Home: The Adult*. Singapore: Churchill Livingstone.
- Allen, D. G. ((2004). Explaining the link between turnover intentions and turnover: The roles of risk, personality and intentions-behavior linkages. In R. Griffeth & P. Hom, *Innovative theory and empirical research on employee turnover*. (pp. 35-54). Greenwich, CT: Information Age Publishing.
- Allen, D. G., Weeks, K. P., & Moffitt, K. R. (2005). Turnover intentions and voluntary turnover: The moderating roles of self-monitoring, locus of control, proactive personality, and risk aversion. *Journal of Applied Psychology*, 90(5), 980-990.
- Allnut, J., Allnut, N., McMaster, R., Hillege, S., O'Connell, J., Della, P., ... Middleton, S. (2010). Clients' understanding of the role of nurse practitioners. *Australian Health Review*, 34(1). pp. 59-65. Retrieved from <http://eprints.qut.edu.au/38807/1/c38807.pdf>
- Al-Shammari, M. M. (1992). Organizational Climate. *Leadership & Organizational Development Journal*, 13(6), 30-32.
- Amaro, D. J., Abriam-Yago, K. & Yoder, M. (2006). Perceived barriers for ethnically diverse students in nursing programs. *Journal of Nursing Education*, 45(7), 247-254.

- American Hospital Association. (2001, June). *AHA Special Workforce Survey Report*. Retrieved from <http://www.ashp.org/images/onnpr/breaking/5b-News-fig-2.pdf>
- Andrist, L. C., Nicholas, P. K., & Wolf, K. (2006). *A history of nursing ideas*. Sudbury, MA: Jones and Bartlett.
- Annells, M. (2007). Where does practice nursing fit in primary health care? *Contemporary Nurse*, 26, 15-26.
- Arbuckle, J. L. (2005). *Amos 6.0 user's guide*. Chicago, Ill. Amos Development Corporation.
- Armstrong, F. (2005). Magnet hospitals: What's the attraction? *Australian Nursing Journal*, 12(8), 14–17.
- Ashforth, B. E. (1985). Climate formation: Issues and extensions. *Academy of Management Review*, 10(4), 837–847.
- Ashkanasy, N. M. (2003). Organizational culture: Mapping the terrain. *Personnel Psychology*, 56(1), 254–257.
- Audit Commission. (1997). *Retiring nature: Early retirement in local government*. London: Audit Commission.
- Australian Bureau of Statistics (ABS). (2005). *Nursing workers. 4102.0 Australian social trends, 2005*. Retrieved from <http://www.abs.gov.au/-ausstats/abs@.nsf/2f762f95845417aeca25706c00834efa/-8a87ef112b5bcf8bca25703b0080ccd9!OpenDocument>
- Australian Bureau of Statistics (ABS). (2008). Maps and census profiles. Australian Indigenous geographical classification 2006. Canberra: ABS.
- Australian Bureau of Statistics (ABS). (2009). *Australian social trends*, March 2009. Cat. no. 4102.0. Canberra: ABS.
- Australian Centre for Industrial Relations Research and Training (ACIRRT; 1999). *Australia at work*. Sydney: Prentice-Hall.
- Australian Divisions of General Practice. (2006). *National Practice Nurse Workforce Survey Report*, April 2006, ADGP, Manuka.
- Australian General Practice Network. (2008). *National practice nurse workforce survey report 2007*. Canberra: AGPN.
- Australian Health Workforce Advisory Committee. (2004). *Nursing workforce planning in Australia – A guide to the process and methods used by the Australian Health Workforce Advisory Committee, AHWAC Report 2004.1*, Sydney.

- Australian Institute of Health and Welfare (AIHW). (2008a). *Australia's health 2008: The eleventh biennial health report of the Australian Institute of Health and Welfare*. Cat. No. AUS 99, Retrieved from <http://www.aihw.gov.au/publications/aus/ah08/ah08.pdf>
- Australian Institute of Health and Welfare (AIHW). (2008b). *Indicators for chronic diseases and their determinants*. Canberra: Australian Institute of Health and Welfare.
- Australian Institute of Health and Welfare (AIHW). (2008c). *The health of Australia's Aboriginal and Torres Strait Islander Peoples 2008*. Canberra: AIHW.
- Australian Institute of Health and Welfare (AIHW). (2011). *Nursing and midwifery labour force 2009*. AIHW bulletin no. 90. Cat. no. AUS 139. Canberra: AIHW. Retrieved from <http://www.aihw.gov.au/publication-detail/?id=10737419682>.
- Australian Institute of Health and Welfare (AIHW). (2012a). *Nursing and midwifery labour force 2011*. National health workforce series no. 2. Cat. no. HWL 48. Canberra: AIHW. Retrieved from <http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=10737422164>
- Australian Institute of Health and Welfare (AIHW). (2012b). *Health expenditure Australia 2010-2011*. Health and welfare expenditure series no. 47. Cat. no. HWL 56. Canberra: AIHW. Retrieved from <http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=10737423003>
- Australian Nurse Practitioner Association (ANPA). (2008). *Tasmania: Conference Design Pty.Ltd*. Viewed 1 June 2009, <http://www.cdesign.com.au/anpa2008>.
- Australian Nursing Federation. (2007). *ANF position statement: Magnet hospitals*. Retrieved from http://www.anf.org.au/anf_pdf/PS_Magnet_hospitals.pdf
- Bae, S., Mark, B., & Fried, B. (2010). Use of temporary nurses and nurse and patient safety outcomes in acute care hospital units. *Health Care Management Review, 35*(4), 333–344. doi: 10.1097/HMR.0b013e3181-dac01c
- Barnett, T., Cross, M., Jacob, E., Shahwan-Akl, L., Welch, A., Caldwell, A., et al. (2008). Building capacity for the clinical placement of nursing students. *Collegian, 15*, 55–61. doi:10.1016/j.colegn.2008.02.002
- Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology, 44*, 1–26.
- Bartfay, W. J., Bartfay, E., Clow, K. A., & Wu, T. (2010). Attitudes and perceptions towards men in nursing education. *The Internet Journal of Allied Health Sciences and Practice, 8*(2). Retrieved from

<http://ijahsp.nova.edu/articles/Vol8Num2/pdf/Bartfay-gnehrenz@live.com,Guy-PC.pdf>

- Bateman, T. S., & Crant, J. M. (1992). The proactive component of organizational behavior: A measure and correlates. *Journal of Organizational Behavior*, *14*, 103–118.
- Battersby, D., Hemmings, L., Kermode, S., Sutherland, S., & Cox, J. (1990). *Factors influencing the turnover and retention of registered nurses in New South Wales Hospitals*. Sydney: NSW College of Nursing.
- Becker, H. S. (1960). Notes on the concept of commitment. *American Journal of Sociology*, *66*, 32.42.
- Beecroft, P.C., Dorey, F., & Wenten, N. M. (2008). Turnover intention in new graduate nurses: a multivariate analysis. *Journal of Advanced Nursing* *62*(1), 41–52.
- Belbin, C. (2011). *Employee perceptions of workforce retention strategies in a health system*. Unpublished doctoral dissertation, University of Southern Queensland, Toowoomba, Australia.
- Benson, A. (2011). *The (new) economics of staffing registered nurses*. Draft for comment. Retrieved from <http://ssrn.com/abstract=1798619>
- Bigbee, J. (2008). *The relationship between nurse to population ratio and state health ranking*. Nursing Faculty Publications and Presentations. Boise State University: ScholarWorks.
- Bliss-Holtz, J., Winter, N., & Scherer, E. M. (2004). An invitation to magnet accreditation, *Nursing Management*, *35*(9), 36–43.
- Bolton, S. C. (2004). A simple matter of control? NHS hospital nurses and new management. *Journal of Management Studies*, *41*(2), 317–333.
- Boulding, K. E. (1956). General systems theory – the skeleton of science, *Management Science*, *2*(3), 197–208.
- Bowles, C., & Candela, L. (2005). First job experiences of recent RN graduates: Improving the work environment. *Journal of Nursing Administration*, *35*(3), 130-137.
- Boyle, D. K., Bott, M. J., Hansen, H. E., Woods, C. Q. & Tauntan, R. L. (1999). Managers' leadership and critical care nurses' intent to stay, *American Journal of Critical Care*, *8*(6), 361–371.
- Bretz, R. D., Boudreau, J. W., & Judge, T. A. (1994). Job search behaviour of employed managers. *Personnel Psychology*, *47*, 275–301.
- Broom, C. & Tilbury, M. S. (2007). Magnet status: A journey, not a destination. *Journal of Nursing Care Quality*, *22*(2), 113–118.

- Brush, B. L., Sochalski, J., & Berger, A. M. (2004). Improved care: Recruiting foreign nurses to U.S. health care facilities, *Health Affairs*, 23(3), 78–87.
- Buchan, J. & Calman, L. (2005). *The global shortage of registered nurses: An overview of issues and actions*. Geneva, Switzerland: International Council of Nurses. Retrieved from <http://www.icn.ch/global/shortage.pdf>
- Buchan, J. (1999). Still attractive after all these years? Magnet hospitals in a changing health care environment. *Journal of Advanced Nursing*, 30(1), 100–108.
- Buchan, J. (2001a). Nurses moving across borders: "brain drain" or freedom of movement. *International Nursing Review*, 48(2), 65.
- Buchan, J. (2001b). Nurse migration and international recruitment. *Nursing Inquiry*. 8(4). 203–204.
- Buchan, J. (2002). Global Nursing Shortages. *British Medical Journal*, 324. 751–752.
- Buchan, J. (2006). Evidence of nursing shortages or a shortage of evidence? *Journal of Advanced Nursing*, 56(5), 457–458.
- Buchan, J. (2009). Achieving workforce growth in UK nursing: Policy options and implications, *Collegian: Journal of the Royal College of Nursing Australia*, 16(1), 3–9.
- Buchan, J., & Aiken, L. (2008). Solving nursing shortages: a common priority. *Journal of Clinical Nursing*, 17, 3262–3268. doi:10.1111/j.13652702.2008.02636.x
- Buchan, J., Kingma, M. & Lorenzo, F. M. (2005). *International migration of nurses: trends and policy implications*. Issue paper 5. Geneva, Switzerland: International Council of Nurses. Retrieved from <http://www.icn.ch/global/-Issue5migration.pdf>
- Buchan, J., Parkin, T. & Sochalski, J. (2003). *International Nurse Mobility: Trends and Policy Implications*. Report funded by the World Health Organisation, International Council of Nurses and Royal College of Nursing. Retrieved from <http://www.rcn.org.uk/downloads/-InternationalNurseMobility-April162003.doc>
- Buchanan, D. & Huczynski, A. (2004). *Organizational Behaviour: An Introductory Text*, (5th ed.), Harlow: Prentice Hall.
- Buerhaus, P. I. (2008). The potential imposition of wage controls on nurses: a threat to nurses, patients, and hospitals. *Nursing Economics*, 26(4), 276–279.

- Buerhaus, P. I., Auerbach, D. I., & Staiger, D. O. (2009). The recent surge in nurse employment: Causes and Implications, *Health Affairs*, 28(4), w657–w668.
- Buerhaus, P. I., Donelan, K., Ulrich, B. T., Norman, L., & Dittus, R. (2005). Is the shortage of hospital registered nurses getting better or worse?: Findings from two recent national surveys of RNs, *Nursing Economics*, 23(2), 61–71, 96.
- Bump, M. (2006). *Ghana: Searching for opportunities at home and abroad*. Washington, DC: Institute for the Study of International Migration, Georgetown University. Retrieved from <http://www.migrationinformation.org/Profiles/display.cfm?ID=381>
- Burch, J. B., Tom, J., Zhai, Y., Criswell, L., Leo, E., & Ogooussan, K. (2009). Shiftwork impacts and adaptation among health care worker. *Occupational Medicine*, 59(3), 159–166.
- Burke, R. L. (2005). When bad things happen to good organizations: A focused approach to recovery using the essentials of magnetism. *Nursing Administration Quarterly*, 29(3), 228–240.
- Burman, M. E., Hart, A. M., Conley, V., Brown, J., Sherard, P. & Clarke, P. N. (2009). Reconceptualizing the core of nurse practitioner education and practice. *Journal of the American Academy of Nurse Practitioners*, 21(1), 11–17.
- Butler, J. S., Burkhauser, R. V., Mitchell, J. M., Pincus, T. P. (1987). Measurement error in self-reported health variables, *The Review of Economics and Statistics*, 69(4), 644–650.
- Cameron, K., Freeman, S., and Mishra, A., (1993), Downsizing and Redesigning Organizations. In G. Huber & W Glick (Eds.), *Organizational Change and Redesign* (pp. 19–65). New York: Oxford University Press.
- Campion, M. A. (1991). Meaning and measurement of turnover: Comparison of alternative measures and recommendations of research. *Journal of Applied Psychology*, 76(2), 199–212.
- Campion, M. A., Medsker, G. J. & Higgs, A. C. (1993). Relations between workgroup characteristics and effectiveness: Implications for designing effective work groups. *Personnel Psychology*, 46, 823–850.
- Canadian Nurses Association. (2002). *Planning for the Future: Nursing Human Resources Projections*. Ottawa: Canadian Nurses Association.
- Carey, P. (1998). *Measuring organisational climate: Employee surveys as a springboard to organisational improvement*. Warriewood, Australia: Business and Professional Publishing.

- Carlson, L. (2005). Tactics for improving employee opinion surveys. *Employee Benefit News* (March).
- Carr, J. Z., Schmidt, A. M., Ford, J. K., & DeShon, R. P. (2003). Climate perceptions matter: A meta-analytic path analysis relating molar climate, cognitive and affective states, and individual level work outcomes. *Journal of Applied Psychology*, 88(4), 605–619.
- Carruth, P. J., & Carruth, A. K. (2005). Healthcare cost containment: A survey of healthcare financial managers, *Journal of Business & Economics Research*, 3(12), 41–46.
- Chan, C. C. A., McBey, K., Basset, M., O'Donnell, M., & Winter, R. (2005). Nursing crisis: Retention strategies for hospital administrators. *Research and Practice in Human Resource Management*, 12(2), 31-56.
- Chan, E. & Morrison, P. (2000). Factors influencing the retention and turnover intentions of registered nurses in a Singapore hospital. *Nursing and Health Sciences*, 2, 113–121.
- Chau, J. P. C., Lopez, V., & Thompson, D. R. (2008). A survey of Hong Kong nurses' perceptions of barriers to and facilitators of research utilization, *Research in Nursing & Health*, 31(6), 640–649. doi:10.1002/nur.20289
- Chenoweth, L., Jeon, Y., Merlyn, T., & Brodaty, H. (2010). A systematic review of what factors attract and retain nurses in aged and dementia care, *Journal of Clinical Nursing*, 19, 156–167.
- Cline, D., Reilly, C., & Moore, J. F. (2003). What's behind RN turnover? *Nursing Management*, 34(10), 50-53.
- Cohen, J. (1994). The earth is round ($p < .05$), *American Psychologist*, 49(12), 997–1003. Retrieved from http://www.ics.uci.edu/~sternh/courses/210/-cohen94_pval.pdf
- Cohen, J., Stuenkel, D., & Nguyen, Q. (2009). Providing a healthy work environment for nurses: the influence on retention. *Journal of Nursing Care Quality*, 24(4), 308–315.
- Conrick, M., Wright, G., Radenovic, A., Hovenga, E., Cho, I., & Kashiwagi, K. (2007). Healthcare in the year 2020 – Practice and policy. In P. J. Murray (Ed.). *Nursing informatics 2020: Towards defining our own future*. Amsterdam, Netherlands: IOS Press.
- Contino, D. (2002). How to slash costly turnover: Enhance retention efforts to help lower the hefty price tag of staff turnover. *Nursing Management*, 33(2), 10–13.
- Coomber, B., & Barriball, K. L. (2006). Impact of job satisfaction components on intent to leave and turnover for hospital-based nurses: a review of the research literature. *International Journal of Nursing*, 44, 297-314.

- Cooper, C.L., & Cartwright, S. (1994). Healthy mind; healthy organization – A proactive approach to occupational stress, *Human Relations*, 47(4), 455–471.
- Costa, G. (2003). Factors influencing health of workers and tolerance to shift work, *Theoretical Issues in Ergonomics Science*, 4, 263–288.
- Cotton, J. L. & Tuttle, J. M. (1986). Employee turnover: A meta-analysis and review with implications for research. *Academy of Management Review*, 11(1), 55–70.
- Cotton, P. (2004, March 17–18). *Developing an optimal organisational climate*. Paper presented at the Towards Australia's Safest Workplaces II (Comcare Conference), Canberra, ACT.
- Cotton, P. (2005). *Using employee opinion surveys to improve people outcomes*. Retrieved from http://www.comcare.gov.au/__data/assets/pdf_file/714/PUB53.pdf
- Cotton, P., & Hart, P. M. (2003). Occupational wellbeing and performance: A review of organisational health research. *Australian Psychologist*, 38(2), 118-127.
- Cowin, L., & Jacobsson, D. (2003). The nursing shortage: Part way down the slippery slope. *Collegian*, 10(3), 31–35.
- Creagan, R., Duffield, C., & Forrester, K. (2003). Casualisation of the nursing workforce in Australia: driving forces and implications. *Australian Health Review*, 26(1), 201-208.
- Crisp, J. & Taylor, C. (Eds; 2009). *Potter & Perry's fundamentals of nursing* (3rd ed.). Chatswood, NSW: Elsevier Australia.
- Cullen, A. (1995). Burnout: Why do we blame the nurse? *American Journal of Nursing*, 95(11), 23-28.
- Cummins, T. (2009). Migrant nurses' perceptions and attitudes of integration into the perioperative setting. *Journal of Advanced Nursing*, 65(8), 1611-1616.
- Curtin, L. (2003). An integrated analysis of nurse staffing and related variables: Effects on patient outcomes, *Online Journal of Issues in Nursing*, 8(3). Retrieved from www.nursingworld.org/MainMenuCategories/-ANAMarketplace/ANAPeriodicals/OJIN/KeynotesofNote/Staffingand-VariablesAnalysis.aspx
- Dalton, D. R., Krackhardt, D. M., & Porter, L. W. (1981). Functional turnover: An empirical assessment. *Journal of Applied Psychology*, 66, 716–721.
- Davidson, M. C. G. (2000). Organisational climate and its influence on performance: A study of Australian hotels in South East Queensland. Unpublished doctoral dissertation, Griffith University, Brisbane.

- Davies, G. (2005). *Queensland Public Hospitals Commission of Inquiry Report*. Retrieved from Queensland Government, Queensland Public Hospitals Commission of Inquiry Web site: <http://www.qphci.qld.gov.au/>
- De Vries, E. N., Ramrattan, M. A., Smorenburg, S. M., Gouma, D. J., & Boormeester, M. A. (2008). The incidence and nature of in-hospital adverse events: A systematic review. *Quality and Safety in Health Care, 17*, 216–223.
- DeJoy, D. M. & Wilson, M. G. (2003). Organizational Health Promotion: Broadening the horizon of workplace health promotion. *American Journal of Health Promotion, 17*(5), 337–341.
- Della, P. (2007). The nurse practitioner journey: what has been achieved and what is next. *The Nurse Practitioner Series (2) (1)*: 8-12 (1).
- Denison, D. R. (1996). What is the difference between organizational culture and organizational climate? A native's point of view on a decade of paradigm wars. *Academy of Management Review, 21*(3), 619–654.
- Department of Education Science and Training (DEST) 2002. *National review of nursing education: Our duty of care*. Canberra: DEST
- Department of Education, Employment, and Workplace Relations. (2011). *Skills shortages Queensland: June 2010*. Retrieved from http://www.deewr.gov.au/Employment/LMI/SkillShortages/Documents/-SSL_QLD.pdf
- Department of Health. (2006). *Nursing in Western Australia: Frequently asked question*. Retrieved from <http://www.nursing.health.wa.gov.au/faqs/-index.cfm>
- Department of Health. (1992). *Employment*, HMSO: London.
- Department of Health and Ageing. (2012). *Health practitioners*. Retrieved from <http://www.health.gov.au/internet/main/publishing.nsf/Content/work-nras>
- Desilets, L., & Pinkerton, S. E. (2005). The Financial Return on Magnet Recognition. *The Journal of Continuing Education in Nursing, 36*(2), 51–52.
- Dockery, A. M. (2004). Workforce experience and retention in nursing in Australia. *Australian Bulletin of Labour, 30*(2), 74-100.
- Dorion, D., Hall, J., & Jones, G. (2008). Is there a crisis in nursing retention in New South Wales, *Australia and New Zealand Health Policy, 5*(19). Retrieved from <http://www.anzhealthpolicy.com/content/5/1/19>.
- Douglas, M. (2001). *Queensland Public Sector – Occupational Stress Intervention Experience: A Case Study*, NOHSC Symposium on the OHS implications of Stress, December 2001. Retrieved from <http://www.ascc.gov.au/NR/>

rdonlyres/561C3AD4-A243-41E2-936F-9374DAC3694B/0/-
StressSymposiumBriefingMaterial.pdf

- Dragon, N. (2009). Nurse education: our students and our future. *Australian Nursing Journal* 16(7), 22–25.
- Dreachslin, J. (2008). Racial and ethnic disparities: why diversity leadership matters. *Journal of Healthcare Management* 53(1), 8–13.
- Drenkard, K. N. (2005). Sustaining magnet: Keeping the forces alive. *Nursing Administration Quarterly*, 29(3), 214–222.
- Drury, V., Francis, K., & Chapman, Y. (2008). Where have all the young ones gone: Implications for the nursing workforce. *The Online Journal of Issues in Nursing*, 14(1). Retrieved from <http://gm6.nursingworld.org/-MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/-TableofContents/Vol142009/No1Jan09/ArticlePreviousTopic/-YoungOnesandNursingWorkforce.html>
- Duffield, C., O'Brien-Pallas, L. & Aitken, L. M. (2004). Nurses who work outside nursing. *Journal of Advanced Nursing*, 47(6), 664 – 671.
- Duffield, C., Roche, M., Blay, N., & Stasa, H. (2010). Nursing unit managers, staff retention and the work environment. *Journal of Clinical Nursing*, 20(1-2), 23-33.
- Duffield, C., Roche, M., Diers, D., Catling-Paull, C., and Blay, N. (2010). Staffing, skill mix and the model of care. *Journal of Clinical Nursing*, 19, 2242–2251. doi:10.1111/j.1365-2702.2010.03225.x
- Duffield, C., Roche, M., O'Brien-Pallas, L., & Catling-Paull, C. (2009). The implications of staff 'churn' for nurse managers, staff, and patients. *Nursing Economics*, 27(2), 103–110.
- Duffield, C., & O'Brien-Pallas, L. (2002). The nursing workforce in Canada and Australia: two sides of the same coin. *Australian Health Review*, 25(2), 136–144.
- Duffield, C., & O'Brien-Pallas, L. (2003). The causes and consequences of nursing shortages: a helicopter view of the research. *Australian Health Review*, 26(1), 186-193
- Duval, J., & Randall Andrews, D. (2010). Using a structured review of the literature to identify key factors associated with the current nursing shortage. *Journal of Professional Nursing*, 26(5), 309-317.
- Edwards, D., & Burnard, P. (2003). A systematic review of stress and stress management interventions for mental health nurses. *Journal of Advanced Nursing*, 42, 169–200.

- Ekvall, G. (1996). Organizational climate for creativity and innovation, *European Journal of Work and Organizational Psychology*, 5(1), 105–123.
- Eley, R., Eley, D., & Rogers-Clark, C. (2010). Reasons for entering and leaving nursing: An Australian regional study, *Australian Journal of Advanced Nursing*, 28(1), 6–13.
- Elgie, R. (2007). Politics, economics, and nursing shortages: A critical look at United States Government Policies. *Nursing Economics*, 25(5), 285–292.
- Ellenbecker, C. H. (2004). A theoretic model of job retention for home health care nurses. *Journal of Advanced Nursing*, 47(3), 305.
- Enrolled Nurse Professional Association NSW. (2006). *Lighting the way for enrolled nurses*, Retrieved from <http://www.enpansw.org.au/become.html>
- Erenstein, C. F., & McCaffrey, R. (2007). How healthcare work environments influence nurse retention, *Holistic Nursing Practice*, 21, 303–307.
- Erlen, J. A. (2001). The nursing shortage, patient care, and ethics. *Orthopaedic Nursing*. 20(6). 61–65.
- Estabrooks, C., Midodzi, W., Cummings, G., Ricker, K., & Giovannetti, P.B. (2005). The impact of hospital nursing characteristics on 30-day mortality. *Nursing Research*, 54(2), 74–84.
- Fagin, C. (2001). *When care becomes a burden: Diminishing access to adequate nursing*. Retrieved from <http://www.milbank.org/010216fagin.html>
- Fagin, C., Maraldo, P. & Mason, D. (2008). *What is Magnet status and how's that whole thing going?* Retrieved from <http://www.nursingadvocacy.org/faq/-magnet.html#suggestions.html>
- Fang, D., Wilsey-Wisniewski, S. J., & Bednash, G. D. (2006). *2005-2006 enrollment and graduations in baccalaureate and graduate programs in nursing*. Washington, DC: American Association of Colleges of Nursing.
- Fergus, J. (2004). Journey to magnet status: An inside look at the experience of one MNA bargaining unit. *Massachusetts Nurse*, 75(8), 10–11.
- Fink, E. L. & Chen, S. (1995). A Galileo analysis of organizational climate. *Human Communication Research*, 21(4), 494–521.
- Fink, R., Krugman, M., Casey, K., & Goode, C. (2008). The graduate nurse experience: Qualitative residency program outcomes. *Journal of Nursing Administration*, 38, 341-348.
- Fischer, R. (2008). Multi-level approaches in organizational settings: Opportunities, challenges and implications for cross-cultural research. In F. J. R. van de Vijver, D. A. van Hemert & Y. Poortinga (Eds.), *Individuals and cultures in multi-level analysis* (pp. 173–96). Mahwah, NJ: Erlbaum.

- Fishbein M. & Ajzen I. (1975). *Belief, Attitude, Intervention and Behaviour*. Addison Wesley, Reading, MA.
- Flint, A., & Webster, J. (2011). The use of the exit interview to reduce turnover amongst healthcare professionals. *Cochrane Database of Systematic Reviews, 1*. doi: 10.1002/14651858.CD006620.pub2.
- Flowers, V. S., & Hughes, C. L. (1973). Why employees stay. *Harvard Business Review, 51*, 49–60.
- Flynn, M., & McKeown, M. (2009). Nurse staffing levels revisited: a consideration of key issues in nurse staffing levels and skill mix research. *Journal of Nursing Management, 17*, 759–766. doi: 10.1111/j.1365-2834.2009.01023.x
- Fogarty, G. J., Machin, M. A., & Albion, M. J. (2004). (Example) *Report of QPASS survey*. Retrieved from University of Southern Queensland, Psychology Department Web site: <http://www.usq.edu.au/course/material/PSY8030/index.htm>.
- Foley, M. (2001). *American Nurses Association Staff Survey*. Press conference. Retrieved from <http://www.nursingworld.org/FunctionalMenuCategories/-MediaResources/PressReleases/2001/StaffingSurveyPress.aspx>
- Force, M. V. (2005). The relationship between effective nurse managers and nursing retention. *Journal of Nursing Administration, 35*(7/8), 336–341.
- Forster, P. (2005). *Queensland Health systems review: Final report*. Retrieved from http://www.health.qld.gov.au/health_sys_review/final/qhsr_final_report.pdf
- Forsyth, S. & McKenzie, H. (2006). A comparative analysis of contemporary nurses' discontents. *Journal of Advanced Nursing, 56*(2), 209–216.
- Fox, R., & Abrahamson, K. (2009). A critical examination of the U.S. nursing shortage: contributing factors, public policy implications. *Nursing Forum, 44*(4), 235–244. doi:10.1111/j.1744-6198.2009.00149.x
- Gardner, D. L. (1992). Career commitment in nursing. *Journal of Professional Nursing, 8*, 155–160.
- Gardner, J. (2005). Barriers influencing the success of racial and ethnic minority students in nursing programs. *Journal of Transcultural Nursing, 16*(2), 155–162. doi: 10.1177/1043659604273546
- Geiger-Brown, J., & Lipscomb, J. (2011). Chapter 8. The healthcare work environment and adverse health and safety consequences for nurses. In Kasper, C (Ed). *Annual Review of Nursing Research, 29*, 195-237.

- Gelade, G., & Gilbert, P. (2003). Work climate and organizational effectiveness: The application of data envelopment analysis in organizational research. *Organizational Research Methods*, 6(4), 482–501.
- Gerdtz, M. F., & Nelson, S. (2007). 5-20: A model of minimum nurse-to-patient ratios in Victoria, Australia. *Journal of Nursing Management*, 15(1), 64-71. doi: 10.1111/j.1365-2934.2006.00657.x
- Glick, W. H. (1985). Conceptualizing and measuring organizational and psychological climate: Pitfalls in multilevel research. *Academy of Management Review*, 10(3), 601–616.
- Glisson, C., & James, L. R. (2002). The cross-level effects of culture and climate in human service teams. *Journal of Organizational Behavior*, 23, 767–794.
- Goldfarb, M. G., Goldfarb, R. S., & Long, M. C. (2008). Making sense of competing nursing shortage concepts. *Policy, Politics & Nursing Practice*, 9(3), 192–202.
- Goold, S., & Usher, K. (2006). Meeting the health needs of Indigenous people: How is nursing education meeting the challenge: *Contemporary Nurse*, 22(2), 288-295.
- Gordon, S. (2005). Nursing against the odds: How health care cost-cutting, media stereotypes, and medical hubris undermine nursing and patient care. Ithaca, New York: Cornell University Press.
- Gordon, S. (2007). *Life support: Three nurses on the front lines*. (2nd ed.). Ithaca, New York: ILR Press.
- Gostin, L. (2008). The international migration and recruitment of nurses: human rights and global justice. *Journal of the American Medical Association*, 299(15), 1827–1829.
- Gray, T. R. (1995). A hospital takes action on employee survey. *Personnel Journal*, 74(3), 74–76.
- Green, F. (2004). Why has work effort become more intense? *Industrial Relations*, 43, 709–41.
- Griffeth, R. W., & Hom, P. W. (1995). The employee turnover process. *Research in Personnel and Human Resources Management*, 13, p. 278.
- Griffeth, R. W., & Hom, P. W. (2001). *Retaining valued employees*. Thousand Oaks: Sage.
- Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium. *Journal of Management*, 26(3), 463–488.

- Griffin, M., Hart, P. M., & Wilson-Evered, E. (2000). Using employee opinion surveys to improve organizational health. In L. R. Murphy & C. L. Cooper (Eds.), *Healthy and Productive Work: An International Perspective* (pp. 15–36). London: CRC Press.
- Guion, R. M. (1973). A note on organizational climate. *Organizational Behavior and Human Performance*, 9(1), 120–125.
- Halcomb, E. J., Patterson, E., & Davidson, P. M. (2006). Evolution of practice nursing in Australia. *Journal of Advanced Nursing*, 55(3), 376–388.
- Hall, E., Propper, C., & Van Reenen, J. (2008). Can pay regulation kill? Panel data evidence on the effect of labor markets on hospital performance. NBER Working Paper No. W13776.
- Harless, D. W., & Mark, B. A. (2010). Nurse staffing and quality of care with direct measurement of inpatient staffing, *Medical Care*, 48(7), 659–663.
- Hart, P. M., & Cooper, C. L. (2001). Occupational stress: Toward a more integrated framework. In N. Anderson, D. S. Ones, H. K. Sinangil, & C. Viswesvaran (Eds.), *Handbook of industrial, work and organizational psychology* (Vol 2, pp. 93–114). London: Sage.
- Hart, P. M., & Wearing, A. J. (1995). Occupational stress and well-being: a systematic approach to research, policy and practice. In P. Cotton (Ed.), *Psychological health in the workplace* (pp. 185–216). Melbourne, Victoria: Australian Psychological Society Press.
- Hart, P. M., & Wearing, A. J. (1999). Using employee opinion surveys to identify control mechanisms in organisation. In W.J. and A. Grob (eds) *Control of Human Behaviour, Mental Processes and Consciousness*, Mahwah, NJ: Lawrence Erlbaum.
- Hart, P. M., Griffin, M., Wearing, A. J., & Cooper, C. L. (1996). *Manual for the QPASS survey*. Brisbane: Organisational climate and performance project, Office of the Public Service.
- Hart, P. M., Wearing, A. J., & Headey, B. (1995). Police stress and well-being: Integrating personality, coping and daily work experiences. *Journal of Occupational and Organizational Psychology*, 68, 133–156.
- Hart, P. M., & Cotton, P. (2002). Conventional wisdom is often misleading: police stress within an organizational health framework. In M.F. Dollard, A.H. Winefield and H.R. Winefield (Eds.), *Occupational Stress in the Service Professions* (pp. 103–142). London: Taylor & Francis.
- Hart, S. E. (2005). Hospital ethical climates and registered nurses' turnover intentions. *Journal of Nursing Scholarship*, 37(2), 173–177.

- Hartel, C. E. J., Gough, H., & Hartel, G. F. (2008). Work–group emotional climate, emotion management skills, and service attitudes and performance. *Asia Pacific Journal of Human Resources*, 46(1), 21–37.
- Havens, D. S., & Johnston, M. A. (2004). Achieving magnet hospital recognition: Chief nurse executives and magnet coordinators tell their stories. *Journal of Nursing Administration*, 34(12), 579–588.
- Havens, D., & Aiken, L. (1999). Shaping systems to promote desired outcomes: The Magnet hospital model. *Journal of Nursing Administration*, 29(2), 14–20.
- Hayes, L. J., O'Brien-Pallas, L., Duffield, C., Shamian, J., Buchan, J., Hughes, F., et al. (2011). Nurse turnover: A literature review – An update. *International Journal of Nursing Studies*, Article in Press. doi:10.1016/j.ijnurstu. - 2011.10.001
- Headey, B. & Wearing, A. J. (1992). *Understanding happiness: A theory of subjective well-being*. South Melbourne: Longman Cheshire.
- Heim, E. (1991). Job stressors and coping in health professions. 18th European Conference on Psychosomatic Research (1990, Helsinki, Finland). *Psychotherapy and Psychosomatics*, 55, 90–99.
- Hemingway, M. A.; & Smith, C. S. (1999). Organizational climate and occupational stressors as predictors of withdrawal behaviours and injuries in nurses, *Journal of Occupational and Organizational Psychology*, 72(3), 285–299. doi: 10.1348/096317999166680
- Henderson, V. (1966). *The Nature of Nursing*, New York: Macmillan Publishing.
- Henneman, E. A., & Gawlinski, A. (2004). A "near-miss" model for describing the nurse's role in the recovery of medical errors, *Journal of Professional Nursing*, 20, 196–201.
- Hodgkinson, B. (2006). Strategies to reduce medication errors with reference to older adults, *International Journal of Evidence-Based Healthcare*, 4(1), 2–41.
- Holland, B. S., & DiPonzio Copenhaver, M. (1988). Improved Bonferroni-type multiple testing procedures. *Psychological Bulletin*, 104(1), 145–149.
- Holtom, B. C., Mitchell, T. R., Lee, T. W., & Eberly, M. B. (2008). Turnover and retention research: A glance at the past, a closer review of the present, and a venture into the future. *The Academy of Management Annals*, 2(1), 231–274. doi: 10.1080/19416520802211552
- Hom, P. W., & Kinicki, A. J. (2001). Toward a greater understanding of how dissatisfaction drives employee turnover. *Academy of Management Journal*, 44, 975–987.

- Hom, P. W., Griffeth, R. W., Palich, L. E., & Bracker, J. S. (1999). Revisiting met expectations as a reason why realistic job previews work. *Personnel Psychology, 52*(1), 97–112.
- Hom, P., & Griffeth, R. W. (1995). *Employee turnover*. Cincinnati, OH: Southwestern.
- Hom, P., Griffeth, R. W., & Sellaro, C. L. (1984). The validity of Mobley's (1977) model of employee turnover. *Organizational Behavior and Human Performance, 34*(2), 141-174.
- Hoyle, R. (1995). *Structural equation modelling: Concepts, issues and applications*. Thousand Oaks, CA: Sage Publications.
- HR Informatics Unit Data Reporting and Analysis Centre. (2007). *Nursing stream separations*. Brisbane: Queensland Health.
- HR Informatics Unit. (2007). Queensland Health total: Human resources quality and performance management framework report. Brisbane, Australia: Queensland Government.
- HR Informatics Unit. (2008). *Queensland Health total: Human resources quality and performance management framework report*. Brisbane, Australia: Queensland Government. H.S.E. (Health and Safety Executive). (2002). *Survey of Use of Occupational Health Support*. London: Health and Safety Executive Books.
- Hugo, G. (2008). *The demographic outlook for Australian universities' academic staff: Occasional paper. No. 6*. Council for Humanities, Arts and Social Sciences. Retrieved from <http://www.chass.org.au/papers/pdf/PAP2008-1101GH.pdf>
- Hulin, C. L., Roznowski, M., & Hachiya, D. (1985). Alternative opportunities and withdrawal decisions: Empirical and theoretical discrepancies and an integration. *Psychological Bulletin, 97*(2), 233–250.
- Human Resources Service Administration, 2010. *The registered nurse population: initial findings from the 2008 national sample survey of registered nurses*. U.S. Department of Health and Human Services, Health Resource and Services Administration.
- Hurst, K. (2003). Selecting and applying methods for estimating the size and mix of nursing teams: A systematic review of the literature commissioned by the Department of Health. Leeds, UK: Nuffield Institute for Health.
- Huselid, M. A. (1995). The impact of human resource management practices on turnover, productivity and corporate financial performance. *Academy of Management Journal, 38*, 635–672.

- International Council of Nurses. (2001). Nurses and overtime. *Nursing Matters [Electronic version]*. Retrieved from http://www.icn.ch/matters_overtime.htm
- International Council of Nurses. (2007). *Position statement on ethical nurse recruitment*, International Council of Nurses: Geneva. Retrieved from http://www.icn.ch/images/stories/documents/publications/position_statements/C03_Ethical_Nurse_Recruitment.pdf
- Jaffe, D. T. (1995). The healthy company: Research paradigms for personal and organizational health. In S. L. Sauter & L. R. Murphy (Eds.), *Organizational risk factors for job stress* (pp. 13–40). Washington, DC: American Psychological Association.
- James, L. A., & James, L. R. (1989). Integrating work environment perceptions: Explorations into the measurement of meaning. *Journal of Applied Psychology*, 74(5), 739–751.
- Janiszewski Goodin, H. (2003). The nursing shortage in the United States of America: an integrative review of the literature. *Journal of Advanced Nursing*, 43(4). Retrieved from http://www.blackwell-synergy.com/doi/pdf/10.1046/j.1365-2648.2003.02722_1.x#search=%22H%20Goodin%20nursing%20shortage%22
- Jasper, M. (2007). Life at work – modernizing nursing careers. *Journal of Nursing Management*, 15, 1-3.
- Jeon, Y. H., & Chenoweth, L. (2007). Working with a culturally and linguistically diverse (CALD) group of nurses. *Collegian*, 14(1), 16-22.
- Johnson, A., & Evans, K. (2009). Recession now hits jobs in health care, *Wall Street Journal*, 16 April 2009.
- Johnstone, C., Miles, J., & Lion, P. (2008, September 1). Queensland health system short of 1000 nurses. *Courier-Mail*. Retrieved from <http://www.news.com.au/couriermail/story/0,,24271534-3102,00.html>
- Johnstone, M. (2007). Nurse recruitment and retention: Imperatives of imagining the future and taking a proactive stance, *Contemporary Nurse*, 24(2), iii–v.
- Joint Commission on Accreditation of Healthcare Organizations (JCAHO). (2002). *Healthcare at the crossroads: Strategies for addressing the evolving nursing crisis*. Retrieved from http://www.jointcommission.org/assets/1/18/health_care_at_the_crossroads.pdf
- Jones, C. B. (2007). The costs and benefits of nurse turnover: a business case for nurse retention. *The Online Journal of Issues in Nursing*, 12(3). Retrieved from http://www.medscape.com/viewarticle/569393_1
- Jones, C. B. (2004). The costs of nursing turnover, Part I: an economic perspective, *Journal of Nursing Administration*, 34, 562–570.

- Jones, C. B. (2005). The costs of nursing turnover, Part II: application of the nursing turnover cost calculation methodology, *Journal of Nursing Administration*, 35(1), 41–49.
- Jones, C. B. (2008). Revisiting nurse turnover costs: Adjusting for inflation, *The Journal of Nursing Administration*, 38(1), 11–18.
- Jones, C. B., & Gates, M. (2007). The costs and benefits of nurse turnover: A business case for nurse retention, *The Online Journal of Issues in Nursing*, 3. Retrieved from <http://www.nursingworld.org/MainMenuCategories/-ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Volume122007/-No3Sept07/NurseRetention.aspx>
- Jury, C., Machin, M. A., Phillips, J., Goh, H.E., Olsen, S.P., & Patrick, J. (2009). Developing and implementing an action-oriented staff survey: Queensland Health and the "Better Workplaces" initiative. *Australian Health Review*, 30(3), 365–370.
- Karkos, B. & Peters, K. (2006). A magnet community hospital: Fewer barriers to nursing research utilization. *Journal of Nursing Administration*, 36(7/8), 377–382.
- Katz, D. & Kahn, R. L. (1978). *The social psychology of organizations*. New York: Wiley.
- Kearney, G., & Thomas, L. (2010). Submission to consultation by the Department of Education, Employment and Workplace Relations on the discussion papers: An indicator framework for higher education performance funding; and Measuring the socio-economic status of higher education students. Kingston, ACT: Australian Nursing Federation.
- Keenan, J. (1999). A concept analysis of autonomy. *Journal of Advanced Nursing*, 29(3), 556–562.
- Kenny, D., & McIntyre, D. (2004). Constructions of occupational stress: nuisances, nuances or novelties? In C. L. Cooper, & A. S. Antoniou (Eds.), *Research companion to organizational health psychology* (pp. 20–58). Northampton, MA: Edward Elgar Publishing.
- Keogh, B., & O'Lynn, C. (2007). Male nurses' experiences of gender barriers: Irish and American perspectives. *Nurse Educator*, 32(6), 256–259.
- Keuter, K., Byrne, E., Voell, J., & Larson, E. (2000). Nurses' job satisfaction and organizational climate in a dynamic work environment. *Applied Nursing Research*, 13(1), 46–49.
- Kimball, B., & O'Neill, E. (2002). *Health care's human crisis: The American nursing shortage*. Princeton, New Jersey: The Robert John Wood Foundation.

- Kingma, M. (2001). Nursing migration: Global treasure hunt or disaster-in-the-making? *Nursing Inquiry*, 8 (4), 205.
- Kingma, M. (2007). Nurses on the move: A global overview. *Health Services Research*, 42(3), 1281-1298.
- Kirchbaum, K., Diemert, C., Jacox, L., Jones, A., Koenig, P., Mueller, C., et al. (2007). Complexity compression: Nurses under fire. *Nursing Forum*, 42(2), 86-95.
- Kirschenbaum, A., & Weisberg, J. (1990). Predicting worker turnover: an assessment of intent on actual separations. *Human Relations*, 43, 829-47.
- Kline, D. S. (Second quarter 2003). Push and pull factors in international nurse migration. *Journal of Nursing Scholarship*, 35(2), 107-111.
- Knights, K. A. (2006). *Psychometric evaluation of Queensland Health's Better Workplaces Staff Opinion Survey*. Unpublished honour's thesis, University of Southern Queensland, Toowoomba, Australia.
- Konno, R. (2008). *Lived experience of overseas-qualified nurses from non-English-speaking backgrounds in Australia*. (Doctoral dissertation, University of Adelaide). Retrieved from <http://digital.library.adelaide.edu.au/dspace/handle/2440/41889>
- Kopelman, R.E., Rovenpor, J.L., & Millsap, R.E. (1992). Rationale and construct validity evidence for the Job Search Behavior Index: Because intentions (and New Year's resolutions) often come to naught. *Journal of Vocational Behavior*, 40, 269-287
- Kovner, C. T., Brewer, C. S., Greene, W., & Fairchild, S. (2009). Understanding new registered nurses' intent to stay at their jobs. *Nursing Economics*, 27(2), 81-98.
- Koys, D. J., & DeCotiis, T. A. (1991). Inductive measures of psychological climate. *Human Relations*, 44(3), 265-285.
- Kozlowski, S. W. J., & Doherty, M. L. (1989). Integration of climate and leadership: Examination of a neglected issue. *Journal of Applied Psychology*, 74(4), 546-553.
- Kramer, M. & Schmalenberg, C. (1988a). Magnet hospitals: Part I, institutions of excellence. *Journal of Nursing Administration*, 18(1), 13-24.
- Kramer, M. & Schmalenberg, C. (1988b). Magnet hospitals: Part II, institutions of excellence. *Journal of Nursing Administration*, 18(2), 11-19.
- Kramer, M. & Schmalenberg, C. (1993). Learning from success: Autonomy and empowerment. *Nursing Management*, 24(5), 58-61.

- Kramer, M. & Schmalenberg, C. E. (2005). Best quality patient care: A historical perspective on magnet hospitals. *Administration Quarterly*, 29(3), 275–287.
- Krech & Crutchfield (1974). *Elements of psychology* (3rd ed.). New York: Knopf.
- Kreisman, B. J. (2002). Insight into employee motivation, commitment and retention. *Business Training Experts: Leadership Journal*, 1–24. Retrieved August 25, 2011, from <http://www.ascendrewards.com/static-resources/papers/employee-commitment.pdf>
- Lafer, G. (2005). Hospital speedups and the fiction of a nursing shortage. *Labor Studies Journal*, 30(1), 27–46.
- Lafollette, W. R. & Sims, H. P. (1975). Is satisfaction redundant with organizational climate? *Organizational behavior and human performance*. 13(2), 257–278.
- Langan, J.C., Tadych, R.A., & Kao, C.C., (2007). Exploring incentives for RNs to return to practice: a partial solution to the nursing shortage. *Journal of Professional Nursing: Official Journal of the American Association of Colleges of Nursing*, 23(1), 13–20.
- Larrabee, J. H., Janney, M. A., Ostrow, C. L., Withrow, M. L., Hobbs, G. R., & Burant, C. (2003). Predicting registered nurse job satisfaction and intent to leave, *Journal of Nursing Administration*, 33(5), 271–283.
- Larrabee, J. H., Sions, J., & Fanning, M. (2007). Evaluation of a program to increase evidence-based practice change. *Journal of Nursing Administration*, 37(6), 302–310.
- Laschinger, H. K. S., Shamian, J. & Thomson, D. (2001). Impact of Magnet Hospital Characteristics on Nurses' Perceptions of Trust, Burnout, Quality of Care, and Work Satisfaction. *Nursing Economics*, 19(5), 209–219.
- Lash, A. A., & Munroe, D. J. (2005). Magnet designation: A communique to the profession and the public about nursing excellence. *MEDSURG Nursing*, (April 2005 Supplement), 7–13.
- Laughlin, B. D. (2002). Assessment of the psychometric characteristics of an employee opinion survey and the use of web versus paper survey dissemination methodologies at a fortune 500 company. Dissertation Abstracts International: Section B: The Sciences and Engineering, 62(9–B), 4259.
- Lazarus, R. S., (1990). Theory-Based Stress Measurement. *Psychological Inquiry*, 1(1), 41–51.
- Ledgister, M. (2003). The nursing shortage crisis: a familiar problem dressed in new clothes: Part I. *International Journal of Health Care Quality Assurance Incorporating Leadership in Health Services*. 16(1). xi–xviii.

- Lee, T., Mitchell, T., Wise, L., & Fireman, S. (1996). An unfolding model of voluntary employee turnover. *Academy of Management Journal*, 42, 450–462.
- Lee, T.W., & Mitchell, T. R. (1994). An alternative approach: The unfolding model of voluntary employee turnover. *Academy of Management Review*, 19, 51–89.
- LeVasseur, S. A., Wang, C., Mathews, B., & Boland, M. (2009). Generational differences in registered nurse turnover. *Policy, Politics & Nursing Practice*, 10(3), 212–223. doi: 10.1177/1527154409356477
- Lewin, K. (1951). *Field theory in social science*. New York: Harper & Row.
- Lim, J., Bogossian, F., & Ahern, K. (2010). Stress and coping in Australian nurses: a systematic review. *International Nursing Review*, 57(1), 22–31.
- Lim, S. Y., & Murphy, L. R. (1997). Models of healthy work organization, in Proceedings of the 13th Triennial Congress of the International Ergonomics Association, Tampere, Finland. From Experience to Innovation, pp. 501–3, Helsinki: Finnish Institute of Occupational Health.
- Lindstrom K, Schrey K, Ahonen G, & Kaleva S. (2000). The effects of promoting organisational health on worker well-being and organisational effectiveness in small and medium-sized enterprises. In L. Murphy & C. L. Cooper (Eds.), *Healthy and Productive Work: An International Perspective* (pp. 83–104). London: Taylor & Francis.
- Litwin, G. H., & Stringer, R. A., Jr. (1968). *Motivation and organizational climate*. Boston: Harvard University.
- Lovel, V. (2006). *Solving the nursing shortage through higher wages*. Washington DC: Institute for Women's Policy Research.
- Lynn, M., & Redman, R. (2005). Faces of the nursing shortage: influences on staff nurses' intention to leave their positions or nursing, *Journal of Nursing Administration*, 35(5), 264–270.
- Machin, A. & Goh, H. E. (2007, September). *Developing and implementing an organisational improvement strategy based on the organisational health research model*. Presentation for Australian Psychological Society Annual Conference, Brisbane, Australia.
- Machin, M. A., Fogarty, G. J., & Albion, M. J. (2004, Sept 21–24). *The relationship of work support and work demands to individual outcomes and absenteeism of rural nurses*. Paper presented at the 36th Annual Conference of the Australian Psychological Society, Adelaide, S.A.
- Maertz, C. P., & Campion, M. A. (2004). Profiles in quitting: Integrating process and content turnover theory. *Academy of Management Journal*, 47(4), 566–582. doi: 10.2307/20159602

- Malhotra, N., Sizoo, S., & Chorvat, V. (2002). *Barriers to adult participation in undergraduate education*. Retrieved January 12, 2007, from www.ahea.org/Barriers_to_adult_participation.htm
- March, J.G., & Simon, H.A. (1993). *Organizations*. (2nd ed.). Oxford: Blackwell.
- McClure, M. (2005). Magnet hospitals: Insights and issues. *Nursing Administration Quarterly*, 29, 198–201.
- McClure, M., Poulin, A., Sovie, M., & Wandelt, M. (2002). Magnet hospitals: Attraction and retention of professional nurses (the original study). In M. McClure & A. Hinshaw (Eds.), *Magnet hospitals revisited: Attraction and retention of professional nurses* (pp. 1–24). Washington, DC: American Nurses Publishing.
- McDonald, R. P. & Ho, M. R. (2002). Principles and practice in reporting structural equation analyses. *Psychological Methods*, 7(1), 64-82.
- McGinnis, S. L., Brush, B. L., & Moore, J. (2010). Cultural similarity, cultural competence, and nurse workforce diversity. *Western Journal of Nursing Research*, 32(7), 894-909. doi: 10.1177/0193945910361727
- McGregor, D. M. (1960). *The human side of enterprise*. New York: McGraw-Hill.
- McLaughlin, K., Muldoon, O. T., Moutray, M. (2010). Gender, gender roles and completion of nursing education: A longitudinal study. *Nurse Education Today*, 30, 303-307. doi:10.1016/j.nedt.2009.08.005
- Meachin, K., & Webb, C. (1996). Training to do women's work in a man's world. *Nurse Education Today*, 16(3), 180-188.
- Meadus, R. J. & Twomey, J. C. (2011), Men Student Nurses: The Nursing Education Experience. *Nursing Forum*, 46, 269–279. doi: 10.1111/j.1744-6198.2011.00239.x
- Meglino, B. M. & DeNisi, A. S. (1987). Realistic job previews: Some thoughts on their more effective use in managing the flow of human resources. *Human Resource Planning*, 10(3), 157–167.
- Middleton, S., Griffiths, R., Fernandez, R., & Smith, B. (2008). Nursing practice environment: How does one Australian hospital compare with magnet hospitals? *International Journal of Nursing Practice*, 14(5), 366-372. doi: 10.1111/j.1440-172X.2008.00708.x
- Mills, E. J., Schabas, W. A., Volmink, J., Walker, R., Ford, N., Katabira, E. et al. (2008). Should active recruitment of health workers from sub-Saharan Africa be viewed as a crime? *The Lancet*. Retrieved from http://eprints.ru.ac.za/1078/2/Recruitment_of__health_workers.pdf

- Mobley, W. H. (1977). Intermediate linkages in the relationship between job satisfaction and employee turnover. *Journal of Applied Psychology*, 62(2), 237–240.
- Mobley, W. H. (1982). Some unanswered questions in turnover and withdrawal research. *Academy of Management Review*, 7(1), 111–116.
- Moran, E. T. & Volkwein, J. F. (1992). The cultural approach to the formation of organizational climate. *Human Relations*, 45(1), 19–47.
- Morgan, S. H. (2007). *The forces of magnetism: Core characteristics to achieve magnet recognition*. American Nurses Credentialing Center. Retrieved from <http://www.medscape.com/viewarticle/562944>
- Morphet, J., McKenna, L., & Considine, J. (2008). The career development year: Responding to the emergency nursing shortage in Australia. *Australasian Emergency Nursing Journal*, 11(1), 32–38. doi:10.1016/j.aenj.2007.11.001
- Morrell, K., Loan-Clarke, J., & Wilkinson, A. (2001). Unweaving leaving: the use of models in the management of employee turnover. *International Journal of Management Reviews*, 3(3), 219–244. doi: 10.1111/1468-2370.00065
- Morrell, K. Loan-Clarke J., & Wilkinson, A. (2004). The role of shocks in employee turnover, *British Journal of Management*, 15, 335–349.
- Morris-Thompson, T., Shepherd, J., Plata, R. & Marks-Maran, D. (2011). Diversity, fulfillment and privilege: the image of nursing. *Journal of Nursing Management*, 19(5), 683–692.
- Mowday, R. T.; Porter, L. W.; Steers, R. M. (1982). Employee-organization linkages: The psychology of commitment, absenteeism, and turnover. New York: Academic Press.
- Mumby, D. (1988). Communication and power in organizations: Discourse, ideology and domination. Norwood, NJ: Ablex.
- Myers, G., & Bushnell, K. (2007). Inactive nurses: making a comeback. *Nursing Management*, 38(8), 16, 19.
- National Health Workforce Taskforce. (2009). *Health Workforce in Australia and Factors for Current Shortages*. Retrieved from Australia's Health Workforce Online website: <http://www.ahwo.gov.au/documents/NHWT/-The%20health%20workforce%20in%20Australia%20and%20factors%20influencing%20current%20shortages.pdf>
- Needleman, J., Buerhaus, P., Mattke, S., Stewart, M., & Zelevinsky, K. (2002). Nurse staffing levels and the quality of care in hospitals. *The New England Journal of Medicine*, 346(22), 1715–1722.

- Neisner, J. & Raymond, B. (2002). *Nurse staffing and care delivery models: A review of the evidence*. Oakland, California: Kaiser Permanente Institute for Health Policy.
- Nelson, R. (2004). The nurse poachers, *The Lancet*, 364(9447), 1743–1744. Retrieved from http://www.sciencedirect.com/-science?_ob=ArticleURL&_udi=B6T1B-4DSGXJNR&_user=1472215&_coverDate=11%2F19%2F2004&_rdoc=1&_fmt=high&_orig=search&_sort=d&_docanchor=&view=c&_searchStrId=1258628619&_rerunOrigin=google&_acct=C000052720&_version=1&_urlVersion=0&_userid=1472215&md5=cd3597d32ba072db42cd3c27a4177f6f
- Nevidjon, B. & Erickson, J. I. (2001). The nursing shortage: solutions for the short and long term. *Online Journal of Issues in Nursing*, 6. Retrieved from <http://www.nursesource.org/mission.html>.
- Newhouse, R. P. (2007). Diffusing confusion among evidence-based practice, quality improvement and research. *Journal of Nursing Administration*, 37(10), 432–435.
- Newman, K., Maylor, U., & Chansarkar, B. A. (2002). The nurse satisfaction, service quality and nurse retention chain: implications for management of recruitment and retention. *Journal of Management in Medicine*, 16(4), 271–291.
- Noone, J. (2008). The Diversity Imperative: Strategies to Address a Diverse Nursing Workforce. *Nursing Forum*, 43, 133–143. doi: 10.1111/j.1744-6198.2008.00105.x
- Norris, D. (2003). The nursing shortage and RN salaries. *Advanced Practice Nursing eJournal*, 3(2). Retrieved from <http://www.medscape.com/-viewarticle/457362>
- North, N., & Buchan, J. (2009). Winners and losers: organizational impacts of a nurses pay agreement. *Policy, Politics & Nursing Practice* 10(4), 259–268.
- Nunnally, J. C. (1978). *Psychometric theory*. New York: McGraw-Hill.
- Nursing and Midwifery Board of Australia (NMBA). (2010). Framework for the assessment of internationally qualified nurses and midwives for registration.
- O'Brien-Pallas, L., Duffield, C. & Alknis, C. (2004). Who will be there to nurse?: retention of nurses nearing retirement, *Journal of Nursing Administration*, 34(6), 298–302.
- O'Brien-Pallas, L., Duffield, C., & Hayes, L. (2006). Do we really understand how to retain nurses? *Journal of Nursing Management*, 14, 262–270.
- OECD. (2009a). *Health at a glance 2009: OECD indicators*, OECD Publishing. Retrieved from http://dx.doi.org/10.1787/health_glance-2009-en

- OECD. (2009b). *OECD Economic Outlook*. OECD Publishing, Paris, June. Retrieved from http://www.oecd.org/document/4/0,3343,en_2649_-33733_20347538_1_1_1_1,00.html
- Ohr, S.O., Parker, V., Jeong, S., Joyce, T. (2010). Migration of nurses in Australia: where and why? *Australian Journal of Primary Health* 16, 17–24.
- Olson, L. (2002). Ethical climate as the context for nurse retention. *Chart*, 99(6), 3–7.
- Omeri, A. (2006). Transcultural nursing the way to prepare culturally competent practitioners in Australia. In I. Papadopoulos (Ed), *Transcultural health and social care development of culturally competent practitioners*, Edinburgh: Churchill Livingstone Elsevier.
- Omeri, A., & Ahern, M. (1999). Utilising culturally congruent strategies to enhance recruitment and retention of Australian Indigenous nursing students. *Journal of Transcultural Nursing*, 10(2), 150-155.
- Omeri, A., & Atkins, K. (2002). Lived experiences of immigrant nurses in New South Wales, Australia: searching for meaning. *International Journal of Nursing Studies* 39, 495-505.
- Omeri, A., & Raymond, L. (2009). Diversity in the context of multicultural Australia: Implications for nursing practice. In J. Daly, S. Speedy & D Jackson (Eds.), *Contexts of nursing: An introduction*, Ch. 19, 3rd Edition, Australia: Elsevier, Churchill Livingstone.
- Ongori, H. (2007). A review of the literature on employee turnover, *African Journal of Business Management*, 49–54. Retrieved from <http://academicjournals.org/ajbm/PDF/Pdf2007/Jun/Ongori.pdf>
- Oulton, J. (Dec. 8, 2004). *Leadership challenges in a global community*. Presentation, CGFNS Distinguished Leadership Award. Philadelphia.
- Page, K. M., & Vella-Brodrick, D. A. (2008). The what, why and how of employee well-being: A new model. *Social Indicators Research*, 90, 441–458. doi 10.1007/s11205-008-9280-3.
- Pappas, S. H. (2009). Profits, payers, and patients: Responding to changes, *Nursing Management*, 40(4), 31–35.
- Parker, V., & McMillan, M. (2007). Challenges facing internationalisation of nursing practice, nurse education and nursing workforce in Australia. *Contemporary Nurse*, 24, 128–136.
- Parry, J. (2008). Intention to leave the profession: Antecedents and role in nurse turnover. *Journal of Advanced Nursing*, 64(2), 157–167.
- Patterson, M. G., West, M. A., Shackleton, V. J., Dawson, J. E., Lawthom, R., Maitlis, S. et al. (2005). Validating the organizational climate measure: links

to managerial practices, productivity and innovation, *Journal of Organizational Behavior*, 26, 379–408.

Patterson, M., Warr, P., & West, M. (2004). *Organizational climate and company productivity: The role of employee affect and employee level* (CEP Discussion Paper No. 626). London: Centre for Economic Performance, London School of Economics and Political Science.

Peter D Hart Research Associates. (2001). *The nurse shortage: Perspectives from current direct care nurses and former direct care nurses*. Federation of Nurses and Health Professionals. Retrieved September 26, 2006, from http://www.aft.org/pubs-reports/healthcare/Hart_Report.pdf#search=%22peter%20d%20hart%20research%20associates%20nurses%22

Phillips, C. B., Pearce, C., Hall, S., Kljakovic, M., Sibbald, B., Dwan, K. . . . Yates, R. (2009). Enhancing care, improving quality: the six roles of the general practice nurse. *Medical Journal of Australia*, 191(2), 92-97.

Pinkerton, S. (2002). Payoffs from investments: Improving, transforming and building skills. *Nursing Economics*, 20(5), 244, 248.

Pinkerton, S. (2005). The financial return on magnet recognition. *Journal of Continuing Education in Nursing*, 36(2), 51–52.

Porter, L. W., & Steers, R. M. (1973). Organizational, work and employee factors in employee turnover and absenteeism. *Psychological Bulletin*, 80, 151–176.

Potempa, K. M., Redman, R. W., & Landstrom, G. (2009). Human resources in nursing education: A worldwide crisis. *Collegian*, 16(1), 19–23.
doi:10.1016/j.colegn.2008.12.003

Preston, B. (2009). The Australian nurse and midwifery workforce: Issues, developments and the future. *Collegian*, 16(1), 25-34.
doi:10.1016/j.colegn.2008.12.002

Price, J. L. & Mueller, C. W. (1981). A causal model of turnover for nurses. *Academy of Management Journal*, 24(3), 543–565.

PricewaterhouseCoopers. (2001). *Patients or paperwork? A report commissioned by the American Hospital Association*. Retrieved from <http://www.aha.org/-aha/content/2001/pdf/FinalPaperworkReport.pdf#search=%22pricewaterhouseCoopers%20patients%20or%20paperwork%22>.

Princess Alexandra Hospital. (2008). *Recognised for excellence in nursing services: Organisational Overview*. Brisbane: Queensland Health. Retrieved from http://203.147.140.236/pahospital/about_pa/docs/overview.pdf

Princess Alexandra Hospital. (2009a). *2009 re-designation submission*. Queensland Health. Retrieved from http://www.health.qld.gov.au/-pahospital/about_pa/magnet.asp

- Princess Alexandra Hospital. (2009b). *Year in Review 2008–2009: Annual Report*. Brisbane: Queensland Health. Retrieved from http://www.health.qld.gov.au/pahospital/news_events/docs/annreport_2009_3.pdf
- Princess Alexandra Hospital. (2011). *Year in Review 2010–2011: Annual Report*. Brisbane: Queensland Health. Retrieved from http://www.health.qld.gov.au/pahospital/news_events/annualreport.asp
- Productivity Commission. (2005). *Economic Implications of an Ageing Australia*. Retrieved from the Australian Government, Productivity Commission Web site: <http://www.pc.gov.au/study/ageing/finalreport/index.html>
- Queensland Government. (2005). *Action plan. Building a better health service for Queensland*. Retrieved from http://www.health.qld.gov.au/publications/corporate/action_plan.asp
- Queensland Health. (2002). *Smart State: Health 2020 a vision for the future*. Retrieved from http://www.health.qld.gov.au/Health2020/2020_directions.pdf
- Queensland Health. (2006). *Princess Alexandra Hospital – We know our nurses are great*. Retrieved from http://www.health.qld.gov.au/pahospital/about_pa/magnet.asp
- Queensland Health. (2008). *Annual report: Princess Alexandra Hospital Health Service District 07/08*. Retrieved April 19, 2009 from http://www.health.qld.gov.au/pahospital/news_events/annualreport.asp
- Queensland Health. (2011). *Queensland Health strategic plan 2011-2015*. Retrieved October 10, 2011, from http://www.health.qld.gov.au/about_qhealth/strat_plan/strategic-plan-full.pdf
- Rafferty, A. M., Clarke, S. P., Coles, J., Ball, J., James, P., Mc Kee, M., & Aiken, L. H. (2007). Outcomes of variation in hospital nurse staffing in English hospitals: cross-sectional analysis of survey data and discharge records. *International Journal of Nursing Studies* 44, 175–182. doi: 10.1016/j.ijnurstu.2006.08.003
- Reichers, A. E. & Schneider, B. (1990). Climate and culture: An evolution of constructs. In B. Schneider (Ed.), *Organizational climate and culture* (pp. 5–39), San Francisco, California: Jossey-Bass.
- Ring, I., & Brown, N. (2002). Indigenous health: Chronically inadequate responses to damning statistics. *The Medical Journal of Australia*, 177(11), 629-631.
- Roche, M., Diers, D., Duffield, C., & Catlin-Paull, C. (2010). Violence toward nurses, the work environment and patient outcomes, *Journal of Nursing Scholarship*, 42(1), 13–22.

- Rossmann, A. (2011). The US nursing shortage and nonprofits, *SPNHA Review*, 6 (1). Retrieved from <http://scholarworks.gvsu.edu/spnhareview/vol6/iss1/6>
- Rother, J., & Lavizzo-Mourey, R. (2009). Addressing the nursing workforce: A critical element for health reform, *Health Affairs*, 28(4), w620–w624.
- Rousseau, D. M. (1988). Organizational climate and culture. In J. Saari (Ed.), *Encyclopaedia of Occupational Health and Safety ILO* (4th ed., Vol. 2, Part V. Psychosocial and organizational factors, Chapter 34. Psychosocial and organizational factors.).
- Rousseau, D. M., & Ho, V. T. (2000). Psychological contract issues in compensation. In S. L. Rynes, & B. Gerhart, (Eds.), *Compensation in organizations, current research and practice* (pp. 273–310). San Francisco: Jossey–Bass.
- Ryan, S. (2001). Perspectives on widening university access: critical voices of newly qualified therapists. *British Association of Occupational Therapy*, 64(11), 534-540.
- Sanders, T. J., & Davey, K. S. (2010). A review of the magnet hospital concept from the perspective of organizational behaviour. Allied Academies International Conference. *Proceedings of the Academy of Health Care Management*, 7(1), 30-34.
- Sand-Jecklin, K. E., & Schaffer, A. J. (2006). Nursing students' perceptions of their chosen profession. *Nursing Education Perspectives*, 27(3), 130-135.
- Sargent, L., Harley, B. & Allen, B. (2009). *Working in aged care 2009: Phase two of the ANF–University of Melbourne study*. The University of Melbourne, Australian Nursing Federation: Victorian Branch.
- Sauter, S. L., Lim, S., & Murphy, L. R. (1996). Organizational health: A new paradigm for occupational stress research at NIOSH. *Japanese Journal of Occupational Mental Health*, 4(4), 248–254.
- Schein, E. H. (1987). *Process Consultation*. Vol. 2. Reading, MA.: Addison-Wesley.
- Schein, E. H. (1992). *Organizational culture and leadership*. (2nd ed.), San Francisco: Jossey–Bass.
- Schneider, B. & Snyder, R. A. (1975). Some relationships between job satisfaction and organizational climate. *Journal of Applied Psychology* 60(3), 318–328.
- Schneider, B. (1990). *Organizational climate and culture*. San Francisco, California: Jossey–Bass Inc. Publishers.
- Schneider, B., & Reichers, A. E. (1983). On the etiology of climates. *Personnel Psychology*, 36, 19–39.

- Schneider, B., Bowen, D. E., Ehrhard, M. G. & Holcombe, K. M. (2000). The climate for service: Evolution of a construct. In N. M. Ashkanasy, C. P.M. Wilderom, & M. F. Peterson. (Eds.). *Handbook of organizational culture and climate* (pp. 21–36). Thousand Oaks, California: Sage.
- Schneider, B., Brief, A. P., & Guzzo, R. A. (1996). Creating a climate and culture for sustainable organizational change. *Organizational Dynamics*, 24(4), 6–19.
- Schneider, B., Gunnarson, S. K., & Niles-Jolly, K. (1994). Creating the climate and culture of success. *Organizational Dynamics, Summer*, 17–29.
- Schneider, B., Parkington, J. J., & Buxton, V. M. (1980). Employee and customer perceptions of service in banks. *Administrative Science Quarterly*, 25(2), 252-267.
- Schneider, B., Salvaggio, A. N., & Subirats, M. (2002). Climate strength: A new direction for climate research. *Journal of Applied Psychology*, 87(2), 220–229.
- Schulte, M., Ostroff, C., & Kinicki, A.J. (2006). Organizational climate systems and psychological climate perceptions: A cross-level study of climate-satisfaction relationships. *Journal of Occupational and Organizational Psychology*, 79, 645–671.
- Seago, J. (2006). The nursing shortage: Is it really about image? *Journal of Healthcare Management*, 51, 96-108.
- Seago, J. A., & Spetz, J. (2005). California's minority majority and the white face of nursing. *Journal of Nursing Education*, 44(12), 555-62.
- Segal, L., & Bolton, T. (2009). Issues facing the future health care workforce: the importance of demand modelling. *Australia and New Zealand Health Policy*, 6, 12. Retrieved from <http://archive.biomedcentral.com/1743-8462>.
- Senate Community Affairs Committee. (2001). *Report on the Inquiry into Nursing – The patient profession: Time for action*. Parliament of Australia, Senate. Retrieved from http://www.aph.gov.au/senate/committee/clac_ctte/-completed_inquiries/2002-04/nursing/report/
- Shader K., Broome M.E., Broome C.D., West M.E. & Nash M. (2001). Factors influencing satisfaction and anticipated turnover for nurses in an academic medical center, *Journal of Nursing Administration*, 31(4), 210–216.
- Shadur, M. A., Kienzle, R., & Rodwell, J. J., (1999). The relationship between organizational climate and employee perceptions of involvement. *Group and Organization Management*, 24(4), 479–503.
- Shields, M. A., & Ward, M. (2001). Improving nurse retention in the National Health Service in England: the impact of job satisfaction on intentions to quit. *Journal of Health Economics*, 20(5), 677–701.

- Shoaf, C., Genaidy, A., Karwowski, W. and Huang, S. H. (2004). Improving performance and quality of working life: a model for organizational health assessment in emerging enterprises. *Human Factors and Ergonomics in Manufacturing*, 14(1), 81–95.
- Sigma Theta Tau International. (2005). *International nurse migration: Policy/position statement*. Retrieved from http://www.nursingsociety.org/about/policy_migration.doc
- Simoens, S., Villeneuve, M., & Hurst, J. (2008). *Tackling nurse shortages in OECD countries*. OECD Health Working Papers No. 19. Retrieved from <http://www.oecd.org/dataoecd/11/10/34571365.pdf>
- Skinner, N., van Dijk, P., Elton, J., & Auer, J., (2011). An in-depth study of Australian nurses' and midwives' work-life interaction. *Asiapacific Journal of Human Resources* 49(2), 213–232. doi: 10.1177/1038411111400263
- Sleutel, M. R. (2000). Climate, culture, context, or work environment: Organizational factors that influence nursing practice. *Journal of Nursing Administration*, 30(2), 53–58.
- Smircich, L. (1985). Is the concept of culture a paradigm for understanding organizations and ourselves. In P. Frost, L. Moore, M. Louis, C. Lundberg, & J. Martin (Eds.), *Organizational culture*, 55-72. Newbury Park, CA: Sage.
- Sourdif, J. (2004). Predictors of nurses' intent to stay at work in a university health center, *Nursing and Health Sciences*, 6, 59–68.
- Spector, P. E. (1982). Behavior in organizations as a function of employee's locus of control. *Psychological Bulletin*, 91, 482–497.
- Spry, C. (2009). Between two cultures: Foreign nurses in the United States, *AORN Journal*, 89(3), 593–595.
- Staiger, D., Auerbach, D. I., & Buerhaus, P. (2012). Registered nurse labor supply and the recession: Are we in a bubble? *The New England Journal of Medicine*, 336(16), 1463-1465.
- Steel, R. P. & Ovalle, N. K. (1984). A review and meta-analysis of research on the relationship between behavioural intentions and employee turnover. *Journal of Applied Psychology*, 69(4), 673–686.
- Steel, R. P., Shane, G. S., & Griffeth, R.W. (1990). Correcting turnover statistics for comparative analysis. *Academy of Management Journal*, 33(1), 179–187.
- Steel, R., & Griffeth, R. (1989). The elusive relationship between perceived employment opportunity and turnover behaviour: A methodological or conceptual artefact? *Journal of Applied Psychology*, 81, 846–854.

- Steers, R. M., & Mowday, R. T. (1981). Employee turnover and post-decision accommodation processes. In L. L. Cummings & B. M. Staw (Eds.), *Research in organizational behaviour* (Vol. 3), Greenwich, Conn: JAI Press.
- Steinbinder, A. (2005). The magnet process: One appraiser's perspective. *Nursing Administration Quarterly* 29(3), 268–276.
- Stokowski, L. A. (2009). *Nurse staffing for safety: Safe staffing legislation*. Retrieved from http://www.medscape.com/viewarticle/711116_6
- Stordeur, S., D'Hoore, W., & the NEXT-Study Group. (2007). Organizational configuration of hospitals succeeding in attracting and retaining nurses, *Journal of Advanced Nursing*, 57(1), 45–58.
- Stovel, M., & Bontis, N. (2002). Voluntary turnover: knowledge management – friend or foe? *Journal of Intellectual Capital*, 3(3), 303–322. doi: 10.1108/14691930210435633
- Sullivan Commission. (2004). *Missing persons: Minorities in the health profession*. A report of the Sullivan Commission on diversity in the healthcare workforce. Retrieved from http://depts.washington.edu/ccph/pdf_files/Sullivan_Report_ES.pdf
- Swider, B. W., Boswell, W. R., & Zimmerman, R. D. (2011). Examining the job search-turnover relationship: The role of embeddedness, job satisfaction, and available alternatives, *Journal of Applied Psychology*, 96(2), 432–441.
- Tabachnick, B.G. & Fidell, L.S. (2001). *Using Multivariate Statistics*, 4th edn. Boston, MA: Allyn and Bacon.
- Tagiuri, R. The concepts of organizational climate. In R. Tagiuri and G. Litwin (Eds.), *Organizational climate: Explorations of a concept*. Boston: Division of Research, Harvard Business School, 1968.
- Takase, M., Maude, P., & Manias, E. (2006). Impact of the perceived public image of nursing on nurses' work behaviour. *Journal of Advanced Nursing*, 53(3), 333–343.
- Tanova, C., & Holtom, B.C. (2008). Using job embeddedness factors to explain voluntary turnover in 4 European countries, *International Journal of Human Resource Management*.
- Tillett, J., & Senger, P. (2011). Determining the value of nursing care, *Journal of Perinatal & Neonatal Nursing*, 25(1), 6–7.
- Tourangeau, A. E., & Cranley, L. A. (2006). Nurse intention to remain employed: understanding and strengthening determinants. *Journal of Advanced Nursing*, 55(4), 497–509.

- Trice, H. M., & Beyer, J. M. (1993). *The cultures of work organizations*. New Jersey: Prentice Hall.
- Trinkoff, A. M., Johantgen, M., Storr, C. L., Han, K., Liang, Y., Gurses, A. P. et al. (2010). A comparison of working conditions among nurses in magnet and non-magnet hospitals, *Journal of Nursing Administration*, 40(7/8), 309–315.
- Tuaoi, L., Cashin, A., Hutchinson, M., & Graham, I. (2011). Nurse practitioner preparation: Is it time to move beyond masters level entry in Australia? *Nurse Education Today*, 31(8), 738–742. doi:10.1016/j.nedt.2010.12.013
- Tuazon, N. (2007). Is magnet a money-maker? *Nursing Management*, 38(6), pp. 24, 26, 28–31.
- Turkel, M. C. (2004). *Magnet status: Assessing, pursuing, and achieving nursing excellence*. Marblehead, MA: HCPro.
- Twigg, D., & Duffield, C. (2009). A review of workload measures: A context for a new staffing methodology in Western Australia. *International Journal of Nursing Studies*, 46(1), 132-140. doi: 10.1016/j.ijnurstu.2008.08.005.
- Twigg, D., Duffield, C., Thompson, P. L., & Rapley, P. (2010). The impact of nurses on patient morbidity and mortality: The need for a policy change in response to the nursing shortage. *Australian Health Review*, 34(3), 312–316.
- Ulrich, C. M., & Zeitzer, M. B. (2009). Ethical issues in nursing practice. In V. Ravitsky, A. Fiester, & A. L. Caplan (Eds). *Penn Center Guide to Bioethics*. New York, NY: Springer Publishing Company.
- Upenieks, V. V. (2003). What constitutes effective leadership: Perceptions of magnet and nonmagnet nurse leaders. *Journal of Nursing Administration*, 33(9), 456-467.
- Usher, K., Miller, A., Lindsay, D., Miller, M., O’Conner, T., Turale, S., et al. (2003). *Successful strategies for the retention of Indigenous students in nursing courses*. Unpublished report to the Queensland Nursing Council Research Committee, School of Nursing Sciences, James Cook University, Townsville, Australia.
- Van Breukelen, W., Van Der Vlist, R. & Steensma, H. (2004). Voluntary employee turnover: combining variables for the traditional turnover literature with the theory of planned behaviour, *Journal of Organizational Behavior*, 25, 893–914. doi: 10.1002/job.281
- Van de Ven, C. (2004). *The psychological contract: a big deal?* Retrieved from <http://www.internationalmta.org/Documents/2004/2004024P.pdf>
- Van Wyngaeren, K. & Stuart, T. (2011). Increasing new graduate nurse retention from a student nurse perspective. *RN Journal*. Retrieved from

http://rnjournal.com/journal_of_nursing/increasing-new-graduate-nurse-retention-from-a-student-nurse-perspective

- Vandenberg, R. J., & Barnes Nelson, J. (1999). Disaggregating the motives underlying turnover intentions: When do intentions predict turnover behavior? *Human Relations*, 52(10), 1313–1336.
- Verbeke, W., Volgering, M., & Hessels, M. (1998). Exploring the conceptual expansion within the field of organizational behaviour: Organizational climate and organizational culture. *Journal of Management Studies*, 35, 303–330.
- Victorian Healthcare Association (VHA). (2007). *The business case for work force stability study summary*. Retrieved from https://www.vha.com/portal/-server.pt/gateway/PTARGS_0_2_6781_1052_505725_43/http%3B/-portlets.vha.com%3B80/portlets/VHASearchPortlet/-ciopener.aspx?ci=117522
- Waldman, J.D., Hood, J.N., Smith, H.L., & Arora, S. (2004). Retention Rather than Turnover: Changing the Approach to Workforce Movements. *Journal of Applied Business and Economics*, 4(2), 38–60.
- Walker, K. Duff, J., Di Staso, R., Cobbe, K., Bailey, K., Pager, P., & Leathwick, S. (2011). Perioperative nursing shines! Magnet designation reflected in staff engagement, empowerment and excellence. *ACORN: The Journal of Perioperative Nursing in Australia*, 24(3), 34, 36-38, 40-42.
- Walker, L. (2006). Practice nurses: Working smarter in general practice, *Australian Family Physician*, 35, 20–22.
- Wanous, J. P. (1992). *Organizational Entry: Recruitment, Selection and Socialization of Newcomers*. (2nd ed.). Reading, MA: Addison Wesley Publishing Company.
- West, M. (1990). The social psychology of innovation in groups. In M. West & J. Farr (Eds.), *Innovation and creativity at work: Psychological and social strategies* (pp. 101–122). Oxford, UK: John Wiley & Sons.
- West, R., Usher, K., & Foster, K. (2010). Increased numbers of Australian Indigenous nurses would make a significant contribution to ‘closing the gap’ in Indigenous health: What is getting in the way? *Contemporary Nurse*, 36(1-2), 121-130.
- West, S., Boughton, M., & Byrnes, M. (2009). Juggling multiple temporalities: The shift work story of mid-life nurses. *Journal of Nursing Management*, 17, 110–119.
- Westendorf, J. (2007). The nursing shortage: Recruitment and retention of current and future nurses. *Plastic Surgical Nursing*, 27(2), 93–97.

- Williams, S. (1994). Ways of creating healthy work organizations. In C. L. Cooper & S. Williams (Eds.), *Creating healthy work organizations* (pp 7–24). Chichester, England: J. Wiley & Sons.
- Winfield, C., Melo, K., & Myrick, F., (2009). Meeting the challenge of new graduate role transition: clinical nurse educators leading the challenge. *Journal for Nurses in Staff Development* 25 (3), E7–E13.
- Winterton, J. (2004). A conceptual model of labour turnover and retention. *Human Resource Development International*, 7(3), 371–390.
- Wisotzkey, S. (2011). Will they stay or will they go? Insight into nursing turnover. *Nursing Management*, 42, 15–17.
- Wolf, E. J. (2001). Four strategies for recruitment and retention. *Healthcare Executive*, 16(4), 14–18.
- World Health Organisation (WHO). (2000). *World Health Report 2000: Health systems: Improving performance*. Retrieved from http://www.who.int/whr/2000/en/whr00_en.pdf
- World Health Organisation (WHO). (2006a). *Working together for health: The world health report 2006*. Retrieved from <http://www.who.int/whr/2006/en/>
- World Health Organisation (WHO). (2006b). *Country health system fact sheet 2006: Ghana*. Retrieved from <http://www.afro.who.int/index.php?Itemid=1840>
- World Health Organisation (WHO). (2008). *Primary health care: Now more than ever*. Retrieved from http://www.who.int/whr/2008/whr08_en.pdf
- Xu, Y., Gutierrez, A., & Kim, S. H. (2008). Adaptation and transformation through (un)learning: lived experiences of immigrant Chinese nurses in US healthcare environment. *Advances in Nursing Science*, 31(2), E33–E47.
- Yin, J.T., & Yang, K.A. (2002). Nursing turnover in Taiwan: a meta-analysis of related factors. *International Journal of Nursing Studies*, 39(6), 573–581.
- Zohar, D. (1980). Safety climate in industrial organizations: Theoretical and applied implications. *Journal of Applied Psychology*, 65(1), 96–102.
- Zurn, P., Dal Poz, M., Stilwell, B. & Adams, O. (2004). Imbalances in the health workforce. *Human Resources for Health*, 2(13).

**APPENDIX A BETTER WORKPLACES STAFF OPINION
SURVEY ("HOW YOU FEEL ABOUT YOUR JOB")**

This appendix removed as required by Queensland Health.