UNIVERSITY OF SOUTHERN QUEENSLAND

Employee perceptions of workforce retention strategies in a health system

A dissertation submitted by:

Cheryl Belbin, BAppSci(Biol), GDHE, MBA, MEd

Student Number: D8942067

In partial fulfilment of the award of

Doctor of Business Administration,

Faculty of Business, University of Southern Queensland

2011

ABSTRACT

Retaining a skilled workforce and decreasing unwanted employee turnover is an economic and service delivery necessity for organisations. Key to operational and service delivery excellence is high employee retention. Many studies have investigated the job satisfaction/turnover relationship with regards to employee retention. This study builds on these works to investigate employee retention from a different angle by examining employee perceptions of workforce retention strategies to determine if any aspects of the strategy have an influence on employee turnover intention. The test site for this study was Queensland Health. The 3000 nurses targeted were from 63 sites in 8 Health Service Districts within the organisation. Survey methodology was chosen as the most appropriate for the geographically spread sample. Three motivation theories were adapted and applied to workforce retention strategies to identify retention factors and these were included in a conceptual framework to test the relationships. The survey looked at awareness of, participation in, and perceived effectiveness of, 28 workforce retention strategies offered by Queensland Health and how these might influence an employee's intention to turnover. The relationship between retention factors and turnover intention was also investigated, and demographic variables were included to determine if they affected the relationship between retention factors and turnover intention.

The study's findings confirmed that of the cohort of nurses surveyed, most were aware of, and had participated in, one or more of the workforce retention strategies listed. The major obstacle in the respondents' awareness was their lack of knowledge of which workforce retention strategies were being offered, mostly due to lack of promotion. The ranking of the effectiveness of workforce retention strategies exposed a preference for those that provided a monetary advantage, and to a lesser degree, a professional development opportunity. The study also revealed that there was a positive relationship between retention factors and decreased turnover intention. Further to these findings, a number of themes emerged consistently and strongly regarding nurses' perception of turnover intention. These included; lack of support, lack of leadership, high workload, shortage of staff, bullying and no recognition of the role. These results have important implications for practical improvements in Queensland Health. The findings have set a solid foundation for further investigations and expanded research opportunities, whilst shedding a little light on this complex relationship.

CERTIFICATION OF DISSERTATION

I certify that the ideas, experimental work, results, analyses, software 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   Date

ENDORSEMENT

_____   _____

_____   _____

Signature of Supervisors   Date

ACKNOWLEDGEMENTS

The burden of an arduous journey littered with uncertainty is manifestly lightened when heartfelt support and assistance is offered. So has been my experience during the past three years whilst undertaking this study.

The advice and guidance of my supervisor, Professor Ronel Erwee, has been nothing less than excellent. As a distance education student, her timeliness of responses and encouragement were heartening and kept me motivated. Thanks also to Associate Professor Retha Wiesner for her insightful suggestions and comments that helped to steer me through. A special thank you is extended to the most helpful of librarians, Vivienne Armati, who was an absolute life-saver and sanity keeper.

Queensland Health has provided me the opportunity to study from within the organisation, and also, has allowed me the flexibility to pursue the study through the *Study and Research Assistance Scheme*, for which I am extremely grateful.

Many work colleagues at Queensland Health have provided valuable assistance through their thoughts, anecdotes, insights and experiences, as well as supplying data and other relevant information when called upon. All of this has enriched the experience and provided a depth to the study which would not have otherwise been possible.

Family are the foundation of who you are and I have been gifted. To my three beautiful sisters, Mum and Dad – I know you are always there.

Finally, thanks to Chris. It is amazing what spouses put up with when one of them is embroiled in writing a dissertation which is seemingly all-consuming over a number of years. Thanks for your patience and housekeeping skills.

I am indebted to you all; your support and assistance to me whilst I was on this journey are humbly acknowledged.

Cheryl Belbin

2010

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1 - INTRODUCTION

1.1   Background to the research

Retaining a skilled workforce and decreasing unwanted employee turnover is an economic and service delivery necessity for organisations. Key to operational and service excellence is high employee retention (2004, p. 319 after Aiken, Clarke, Sloane, Sochalski, Busse, Clarke, Giobannetti, Hung, Rafferty & Shamian 2001; Buchan & Calman 2005; Rafferty, Maben, West & Robinson 2005; Zurn, Dolea & Stillwell 2005). This is because retention of staff results in a reduction in overtime, less need to employ temporary staff and lower costs when orienting new staff to the workplace. Unwanted turnover increases recruitment costs, adds to lost work days and often places an extra workload on the remaining staff (Aitken, Clarke, Sloane, Sochalski & Silber 2002; Albion, Fogarty, Machin & Patrick 2008; Asquith, Sardo & Begley 2008) In addition, increased turnover may have a negative impact on organisational effectiveness and financial performance (Asquith et al. 2008).

Competition to retain staff can be intense (Mitchell, Holtom & Lee 2001a). This is why many organisations have invested major human, financial and material resources in workforce retention strategies to maintain staffing and decrease turnover.   Positive factors that affect job satisfaction and organisational commitment potentially result in reduced job turnover (Smith, Gregory & Cannon 1996). Organisations that excel in providing effective workforce retention strategies become regarded as preferred employers or employers of choice.

Employee intention to turnover is a complex area of study. Many investigations have been published about employee turnover and job satisfaction (Albion et al. 2008; Porter & Steers 1973; Tett & Meyer 1993) however, there is a paucity of information in the literature about workforce retention strategies and their effect on employee intention to turnover (Kuhar, Miller, Spear, Ulreich & Mion 2004). Major investments are made by many organisations in developing and implementing workforce retention strategies to decrease unwanted turnover. In spite of this, there appears to be a lack of evidence in the literature that indicates whether or not there is return on the investment.

This lack of investigation and the need for increased understanding about workforce retention strategies (Kuhar et al. 2004) and their affect on employee intention to turnover, are key drivers for this research. This study investigates employee perceptions of the effectiveness of workforce retention strategies and whether this effectiveness influences an employee's intent to turnover. Queensland Health has been selected as the test site for this study. The investigation is built on studies in the areas of motivation and turnover theories, and through the development of a conceptual framework described in Chapter 2 Literature Review, applies these theories to workforce retention strategies.

This chapter presents the background to the research, explains the context of the study, states the research problem and provides a justification for the research. The methodology employed, outline of the dissertation, key definitions and delimitations are also explained.

1.2 Context of the study

The following discussion provides a better understanding of the health services in Australia, and gives more clarity about the Queensland Health context for this study.

The Australian health system is of world class standing and it supports universal and affordable access to high quality medical, pharmaceutical and hospital services (Department of Health and Ageing 2006). The Australian Government considered health and ageing a top priority, and in the 2009-10 budget, a record $64 billion was delivered to fund the healthcare agreement with the states and territories (Roxon 2009). While Australia's health system has many strengths, the National Health and Hospitals Reform Commission announced in their final report that the system is under growing pressure from increasing demands for services, increasing expenditure of health care, inequities in health outcome, growing concerns about safety and quality, and notably for this study, workforce shortages (National Health and Hospitals Reform Commission 2009).

In tackling these issues, major improvements in hospitals, health infrastructure, the health workforce, maternity services, and health services in rural areas are being driven through a series of reforms for Australia's health and hospital system (National Health and Hospitals Reform Commission 2009; Roxon 2009). All jurisdictional health services in Australia are undergoing these pressures and challenges, with Queensland being no exception.

The research objective, research issues and research questions derived for this study will be investigated in one of Australia's key health services, namely Queensland Health. Queensland Health is a department of the Queensland Government, Australia. It is a large multi-layered, diverse and complex organisation in which the researcher has worked at length in the area of support and development for employees. The organisation employs approximately 74 000 staff members and includes clinicians, administrators, trades people and artisans, and operational staff employed in 25 different occupational streams (Queensland Health 2010). The Department has 15 Health Service District across the state and they range from populated metropolitan to rural and remote communities (See Appendix I: Queensland Health map of health service districts). Services provided include acute care, acute and community-based mental health, primary health care in community health settings and population health units (Queensland Health 2008). Queensland Health's operating budget for 2009-10 was $9.037 billion, and the Queensland Government stated in its 2009 budget papers that it will continue investment in health professionals, health infrastructure, services and research to support and meet the increasing needs of the community (Queensland Government 2009 p. 5). Queensland Health is a large, complex and multi-layered organisation and retaining a skilled workforce and decreasing unwanted employee turnover are economic and service delivery necessities. These issues are even more salient in the current period of health reform in Australia.

The impetus of the study is to determine if employee perceptions of workforce retention strategies have any affect on employee intent to turnover. The focus of the study is on analysing the perceptions of nursing staff, as this group constitutes a significant proportion of Queensland Health's professional staffing complement. Districts with higher and lower turnover of nursing staff have been selected as primary sites for investigation to ensure a range of responses from across the organisation.

1.3 Justification for the research

Employee perceptions of workforce retention strategies and their effect on intention to turnover are investigated in this research. The research is justified by four major points: a gap exists in the literature; the importance of workforce retention strategies; developing a conceptual framework as a contribution to theory, and the potential applications of the research's findings, especially in health services.

To elaborate on the first point, many studies can be found in the literature that investigate employee turnover, intention to turnover and job satisfaction (Griffeth, Hom & Gaertner 2000; Kuhar et al. 2004; Leurer, Donnelly & Domm 2007; McEvoy & Cascio 1985; Tzeng 2002; Zurn, Dolea & Stilwell 2005). To illustrate this further, a comprehensive meta-analysis of turnover antecedents which built on earlier work done by Hom and Griffeth (1995) was reported by Griffeth, Hom and Gaertner (2000). This study represented the most wide ranging quantitative review to date of the predictive strength of numerous turnover antecedents.

The study established findings reconfirming the relative predictive strength of turnover determinants found in past meta-analyses and proposed by existing theoretical perspectives (Hom & Griffeth 1995; Kim, Price, Mueller & Watson 1986; Mobley, Griffeth, Hand & Meglino 1979; Price & Mueller 1986; Steers & Mowday 1981 cited in (Griffeth et al. 2000). Proximal precursors in the withdrawal process were shown to be among the best predictors of turnover and included; job satisfaction, organisational commitment, job search, comparison of alternatives, withdrawal cognitions, and quit intentions (Griffeth et al. 2000). The point of this discussion is that there appears to be no reference or inclusion in any of these studies of the effect of workforce retention strategies and their effects on turnover intention. Therefore, the biggest gap in the literature seems to be of studies on the relationship between employee intention to turnover and workforce retention strategies. This research aims to contribute to the existing gap in the literature by investigating if there is any relationship between employee perceptions of workforce retention strategies and employee intention to turnover. There is potential for increasing theory development in this area because research investigating workforce retention strategies is limited.

The importance of workforce retention strategies is the second major point that justifies this investigation, explained as follows. It has been established in Section 1.1 that retaining a skilled workforce and decreasing unwanted employee turnover is an economic and service delivery necessity for organisations like Queensland Health. It is therefore vitally important for Queensland Health to investigate employee intention to turnover because this has been identified as one of the best predictors of turnover (Griffeth et al. 2000; Koh & Boo 2004; Mobley 1977; Tzeng 2002).

To further demonstrate this, besides stress, burnout and lack of service continuity, increasing turnover costs also pose serious operational and strategic challenges (Aitken et al. 2002; Hinkin & Tracey 2000; Tracey & Hinkin 2008). Indeed, there are many direct and indirect costs associated with replacing staff. Hard costs, soft costs and opportunity costs have been used as one way to explain the increasing expenses which may result following unwanted employee turnover (Tracey & Hinkin 2008). For example, in the Queensland Health situation, the cost of replacing a nurse who leaves the service would be the advertising (hard cost), interviewing and time spent on selection of the new applicant (soft cost) and time spent for the new employee to learn the role (opportunity cost) (Tracey & Hinkin 2008).

Although turnover costs are sometimes difficult to determine, it has been claimed that when recruitment, training, specialist knowledge and productivity are considered, it can cost up to 150 per cent of an employee's salary to replace a skilled employee (Asquith et al. 2008). The largest occupational stream in Queensland Health is nursing, with a head count of approximately 29 600 employees. This group of employees possess high level skills and knowledge. The Queensland Health turnover rate for nursing, averaged over the five years from 2005 to 2009, is 5.4 percent - this equates to 1 598 employees (Queensland Health 2009a). The nurses being sampled for this study receive an average wage of $57 700. Even if a very conservative estimate for replacement of twenty percent of the average annual wage is used, a cost of $18 440 920 results. These figures illustrate the dire financial consequences of the impact of unwanted turnover for an organisation. Therefore, determining which workforce retention strategies can make a difference to intention to turnover and why, are extremely important for organisations like Queensland Health. This leads to the next point of justification - the importance of workforce retention strategies.

Organisations invest significant resources in developing and implementing workforce retention strategies and there are some indications that strategies such as family friendly benefits and work life balance initiatives do have some impact on employee retention (Holland, Sheehan & De Cieri 2007 after Brown 2005). With competitiveness between organisations increasing, the determining factor for success and competitive advantage is often reliant on human capital. This reliance on human capital is due to the increasing levels of technological advancement and transfer of information counteracting physical capital and organisational capital (Holland et al. 2007). This means that retaining staff and decreasing turnover are important issues for organisations (Holland et al. 2007 after Barney & Wright 1998; Wright, McMahon & McWilliams 1994). Although competitive advantage resulting from retaining staff is the preferred result, workforce retention strategies may also be costly investments for organisations. Therefore workforce retention strategies are important because they may contribute to decreasing intention to turnover, and on the other hand, they can be a costly exercise if there is no return on investment. Understanding which side of the equation an organisation is operating, that is workforce retention strategies benefiting or costing, justifies this study.

In health services such as Queensland Health, efforts to reduce intention to turnover are apparent by the diversity of studies and the variety of themes commissioned by the organisation. Examples within Queensland Health include; Ministerial Taskforce on Nursing, Better Workplaces Culture Surveys, People Plan projects and numerous workforce retentions strategies that have been developed and implemented to support and retain staff members (See Appendix II Queensland Health workforce retention strategies).

Despite the many resources being invested in developing and implementing workforce retention strategies, and the dire consequences that may result when turnover is unwanted, there is a paucity of research on retention strategies and turnover intent in Queensland Health. There is also an obvious gap in the literature on adaptation and application of motivation theories to workforce retention strategies. In an attempt to bridge the gap, a conceptual framework to investigate this area has been developed for this study.

The conceptual framework developed for this study is the third major point listed to justify the research. In searching the literature, previous studies have used motivation theories as the theoretical framework in an attempt to explain employee turnover (Bassett-Jones & Lloyd 2005; House & Wigdor 1967; Locke 1975). This research will build on these previous studies by adapting and applying three motivation theories to workforce retention strategies to develop a conceptual framework. The conceptual framework will be tested to determine if any relationship exists between an employee's perception of workforce retention strategies and employee turnover intention. This is justified because the conceptual framework, whilst building on previous studies, attempts to break new ground in the complex area of motivation and turnover intent by the adaptation and application of motivation theories to workforce retention strategies. Further to this, investigating demographic variables and their effects on the independent/dependent variable relationship, as a part of the conceptual framework, is a new contribution to this area of study. The conceptual framework is further explained in Chapter 2 Literature Review.

Finally, the findings from this research have potential application not only for health care services, but also for other organisations because they may assist in identifying which workforce retention strategies have been perceived by employees as being effective for decreasing employee turnover intention (Barney 2002). These findings may also contribute to developing more effective workforce retention strategies and may lead to improved turnover rates (Albion et al. 2008). This is important for organisations as competition for skilled and capable employees increase. The research findings could also contribute to an organisation's policy formulation and the development of a reputation as an employer of choice in a competitive environment.

1.4 Research issue, research objective and research questions

Given the reasons for decreasing turnover described in Sections 1.1 and 1.3, unwanted employee turnover can be a complicated issue for organisations. In an attempt to mitigate the impact, many organisations have developed and implemented workforce retention strategies.

Acknowledging the increased interest and the consequent financial commitment organisations make in attempting to retain employees; the obvious question is whether any of this effort does make a difference to employee intention to turnover.

The research objective is:

To examine the perceptions of employees regarding the effectiveness of workforce retention strategies implemented in a health service.

The contention argued is that workforce retention strategies do have some effect on an employee's intention to turnover, but that there are probably greater influences on an employee's decision to leave an organisation.

To more fully study this problem and inform the overall objective, the following research questions (RQ) and associated hypotheses have been identified.

RQ1. What are employees' perceptions about workforce retention strategies being used in Queensland Health; informed by:

    a. Employees' awareness of workforce retention strategies.

    b. The level of participation in workforce retention strategies.

    c. The perceived level of effectiveness of workforce retention strategies.

    d. The perceived barriers to participating in workforce retention strategies.

RQ2. How do respondents characterise their preferred workforce retention strategy in terms of retention factors?

RQ3. What is the relationship between various retention factors and turnover intention?

    H_1 There is a positive relationship between retention factors and decreased turnover intention.

RQ4. How does the relationship between retention factors and turnover intention vary when taking into account the demographic variables of gender, age and tenure?

    H_2 Gender does not significantly moderate the relationship between retention factors and turnover intention.

    H_3 Age does not significantly moderate the relationship between retention factors and turnover intention.

H_4 Tenure (length of time in the location) does not significantly moderate the relationship between retention factors and turnover intention.

H_5 Tenure (length of time in the profession) does not significantly moderate the relationship between retention factors and turnover intention.

These research questions and their derivation will be fully explained in Chapter 2 Literature Review and the rationale for the choice of hypotheses fully explained in Chapter 3 Methodology.

1.5 Methodology

The research paradigm used for this investigation is a positivist approach emphasising a commitment to naturalism and quantitative methods (Neuman 2003; Punch 2006 after Seale 1998). The study employs a mix of the three types of research design; exploratory, descriptive and causal. It is of an exploratory nature because there is a paucity of material in the literature within the subject context, that is, employee perceptions of workforce retention strategies and the relationship with employee turnover intention. The study is considered descriptive because there has been a dearth of research in relation to the research topic being examined. Although the research is not causal and therefore not predictive, it is correlational because hypotheses have been formulated and correlations will be calculated to determine relationships between a number of the variables (See Chapter 2 Literature Review). The study does not examine the complex cause and effect relationships between variables as this falls beyond the scope and may be a topic for further research (Zikmund 2003b).

An extensive literature review was undertaken to at first gain an understanding of what studies had been completed in the wider topic of workforce retention and turnover. From these works and further searching of the narrower topic of workforce retention strategies and turnover intention, gaps in the literature were identified. Discussions with colleagues working in employee support and development areas of Queensland Health were also pursued to gain further insight and understanding of workforce retention strategies as they applied to Queensland Health. In-house reports and publications on workforce retention and turnover were also studied.

The data collection method chosen was survey research. Survey research enables learning about a large population by surveying a sample of that population (Leedy & Ormrod 2005, p. 183). The key reason for selecting survey research was that quantitative methodology best suited the research objective and research questions. Other methodologies such as the interview process were not suitable as it is much more resource intensive and time consuming to conduct, compared with the survey method of data collection.

Queensland Health is a large, diverse and geographically dispersed organisation and given the limited timeframes and restricted resources available to conduct the research, survey research was justified as the choice of methodology. The target survey group was registered nurses Grades 5 and 6. Further to this, selected nurses were invited to participate in focus groups to validate the survey content prior to piloting the survey. Once all changes were made, the survey was disseminated. Details about the sampling frame and sample size are included in Chapter 3 Methodology.

Data analysis methods were applied to the survey data once they were collated, and included descriptive and inferential statistics, factor analysis and multiple regression analysis using the Statistical Package for the Social Sciences (SPSS), version 11 (Cavana, Delahaye & Sekaran 2001; Coakes & Steed 2007; Hair, Black, Babin, Anderson & Tatham 2006). The steps in the methodology therefore included; survey development, sample selection, pre-testing the survey, survey dissemination, data collection and data analysis. These steps will be fully explained in Chapter 3 Methodology.

1.6 Outline of the dissertation

The dissertation is presented in five chapters which describe and explain it in a logical and understandable sequence. Chapter 1 comprises the Introduction and this chapter is aimed at setting the scene and introducing the research problem. Included in Chapter 1 is a section on justification of the research arguing the importance of the study for both the theoretical field and the application to industry.

An overview of the methodology is presented and this is followed by the definitions of key terms. Finally, delimitations of scope are discussed and clear boundaries of the research problem are given.

Chapters 2 to 5 describe the research itself. Chapter 2 is the Literature Review and endeavours to build the theoretical groundwork on which the research is based. The concepts of the *Workforce Continuum* and the *Workforce Retention Framework* are introduced in this chapter. The chapter also includes discussion on the key discipline areas of motivation, turnover and retention, and then explains the application of the key discipline theories of motivation and turnover in the development of a conceptual framework for the research. Chapter 3 Methodology, includes justification of the choice of the research paradigm and the reasons behind the choice of the research methodology. It also explains the sampling methods chosen and describes how the data was gathered and analysed. The chapter also provides explanation about the ethical considerations and limitations of the study. The analysis of the data is found in Chapter 4 Analysis of Results. This chapter presents the results and explains the analysis of them relevant to the research objective and the research questions. The fifth and final chapter provides the discussion and conclusions drawn as a result of the study and its findings. This includes discussion on the research questions and linking to theory, contributions of the research and implications for management practice. The final section of Chapter 5 looks at directions for future research.

1.7 Key definitions

This section on key definitions explains the use of the main terms employed, and how these terms will be interpreted for the purposes of this study. The terms include: workforce retention strategies; retention factors, turnover, retention and intention to turnover.

Firstly, **workforce retention strategies** are defined as professional development and support opportunities that have been developed and implemented by Queensland Health, for employees of Queensland Health.

These strategies include for example; mentoring, succession planning, leadership opportunities, work/life balance and flexible work options.

Retention factors for the purposes of this study are defined as those factors within a specific workforce retention strategy that can be identified as contributing to satisfaction or motivation, as adapted from the three motivation theories (Atchison & Lefferts 1972; Bassett-Jones & Lloyd 2005; DeShields Jr O W, Kara & Haynak 2005; Ivancevich & Matteson 1990; Mukhi, Hampton & Barnwell 1991). This is more fully explained in Chapter 2 Literature Review.

Turnover and retention: The literature suggests that many studies have researched employee retention and turnover and in some cases the terms appear to have been used interchangeably (Huang, Lin & Chuang 2005; Kuhar et al. 2004; Mitchell et al. 2001a; Sheridan 1992). Logically, decreased turnover would result in increased retention of staff.   For the purposes of this study, **turnover** will be used as the measure rather than retention rate. The rationale for this determination follows: **Retention** is defined by the Collins English Gem Dictionary as 'keeping' or 'engaging services of'(*Collins English Gem Dictionary* 1968, p. 440). Retention rate is not simply the inverse of turnover (Waldman & Arora 2004), however, retention rate may be complemented by turnover to give a greater understanding of worker movement (Waldman & Arora 2004). Turnover may be defined as the number of employee terminations in a given period – voluntary, involuntary or both, divided by the average number of active employees during the same period (Waldman & Arora 2004 after Saratoga Institute 2001).   Turnover is exclusively a one year calculation, considers the entire workforce, or sub-parts, but regards all workers as equivalent. It can be greater than 100 percent but never negative. Retention follows specific people or groups of people indefinitely over time, while turnover is an annual spot-check on the workforce as a whole (Waldman & Arora 2004, p. 9).   Turnover is an annual calculation and given the size and complexity of Queensland Health, is easier to calculate than retention rate (Waldman & Arora 2004) and is therefore chosen as the preferred measure for this study.

Intention to turnover: The immediate precursor of behaviour is thought to be intentions (Mobley, Griffeth, Hand & Meglino 1979, p. 517 after Dulaney, 1961, 1968; Fishbein & Ajzen, 1975; Locke, 1968; Mobley, 1977; Ryan, 1970) and therefore the best predictor of turnover, which will be used for this study, is **intention to turnover**.

This study focuses on employee perceptions of workforce retention strategies and in this capacity is limited to identifying intention to turnover. This will be discussed further in Chapter 2 Literature Review.

1.8 Delimitations of scope, key assumptions and their justifications

There are a number of delimitations that apply to this study. Firstly, the investigation focused on one organisation - Queensland Health, a department of the Queensland Government, Australia. The organisation has approximately 74 000 employees and includes clinicians, administrators and operational staff employed in 25 different occupational streams (Queensland Health 2008). The organisation is complex and multi-layered and provides health services across the health care continuum (Queensland Health 2007a) which comprise acute care to community and population health settings (Queensland Health 2008). The location of services range from populated metropolitan to rural and remote communities (See Appendix I: Queensland Health map of health service districts).

Secondly, the investigation is focused on the occupational stream of nursing. This choice is justified because of all the occupational streams in Queensland Health, nursing has the largest number of employees with a head count of approximately 29 600 (Queensland Health 2009a). Further to this, nursing staff are employed across the state and in almost all health services from metropolitan to rural and remote communities. The prevalence of nursing employees across Queensland Health provides a good sample size and mix for the study.

Key assumptions for this study include:
   i.   Queensland Health invests substantial resources in developing and implementing workforce retention strategies (Queensland Health 2007b)
   ii. Queensland Health offers the opportunity to survey employees on a state-wide basis

iii. The researcher, as a longstanding employee of Queensland Health, will be supported and have access to information to assist with investigating the research objective and research questions

Conducting the study within this test site is justified on the grounds that Queensland Health is a large, complex and multi-layered establishment, thereby providing scope for generalisation of findings to other organisations, especially other health services. This study was a unique opportunity to analyse some of the complex interactions that impact on employees and their perceptions of the effect of workforce retention strategies on turnover intention.

The study was undertaken against the background of severe economic changes, changing workforce patterns and demographics, competition with other industries and the unwanted costs of staff turnover (Arah, Ogbu & Okeke 2008; Barney 2002; Collins & Collins 2007; Kilpatrick, Johns, Millar, Le & Routley 2007; Queensland Health 2002).

1.9 Summary of the chapter

This chapter has provided a base for the construction of the dissertation. In building this base, the background to the research leading to the research objective has been discussed and the research issue, research objective and the research questions have been presented. The chapter also details justification for the research and an overview of the methodology. Key definitions and delimitations of scope are explained, and key assumptions are stated. The chapters that follow detail the implementation and progression of the theories, processes and analyses applied to the data to inform the research objective and answer the research questions.

CHAPTER 2 - LITERATURE REVIEW

2.1 Introduction

The previous chapter built the foundation for this dissertation and focussed on describing the background and presenting the justification for the research. Chapter 2 encompassing the literature review follows this foundational theme and builds the theoretical base for the research.

2.1.1 Classification framework

A classification framework has been developed that categorises the sequencing of Chapter 2 and it is presented in Figure 2.1 (See for example Erwee 2009, p. 22; Perry 2002). The framework presents the structure of the chapter and shows how the core concepts, key disciplines, key themes, research objective and the conceptual framework, are clustered and linked, and is explained in more detail as follows.

The first part of the framework (2.1) is the introductory section. This segment clusters the parts of the discussion that describe the flow of the chapter and the context for the study. The next level of the classification framework (2.2) presents the definition of the core concepts integral to the research issue as they are employed for the purposes of this study. The next part of the sequence (2.3) discusses the identification of the key discipline areas and the key theories relevant to the study. The discussion then focuses on the three key disciplines identified as pertinent to the study, that is; motivation, turnover and retention (2.4, 2.5, 2.6). Consideration of each of these key disciplines is given regarding relevant theory and its application to workforce retention strategies, as well as any shortcomings that require acknowledgement in the application of the relevant theory. This section also identified gaps in the literature between each of the three key discipline areas and the research objective in preparation for the next section which focused on the research objective itself. The gaps identified in the literature were the drivers of the research objective and research questions which are elicited as the chapter progresses.

The research objective (2.7), workforce retention in a health service, and more specifically, Queensland Health, with a focus on the occupational stream of nursing, is then duly presented. The final cluster of concepts (2.8), and crux of the chapter, relates to the development and explanation of the conceptual framework for the study. The last part of the classification framework (2.9) is a summary of the chapter and concludes with a reiteration of the research issue and the research objective. Figure 2.1 presents the classification framework diagrammatically.

Figure 2.1 Classification framework of the sections for Chapter 2

```
                    ┌─────────────────────────────────────┐
                    │ 2.1 Introduction                    │
                    │ 2.1.1 Classification framework      │
                    │ 2.1.2 Context of the study          │
                    └─────────────────────────────────────┘
                                   │
                    ┌─────────────────────────────────────┐
                    │ 2.2 Definition of core concepts     │
                    │ 2.2.1 Turnover and retention        │
                    │ 2.2.2 Workforce retention strategies│
                    │ 2.2.3 Retention factors             │
                    │ 2.2.4 Turnover intention            │
                    └─────────────────────────────────────┘
                                   │
              ┌──────────────────────────────────────────────┐
              │ 2.3 Identifying key disciplines and key       │
              │ theories                                      │
              └──────────────────────────────────────────────┘
```

Key discipline 1	Key discipline 2	Key discipline 3
2.4 Motivation	2.5 Turnover	2.6 Retention
2.4.1 Literature findings	2.5.1 Literature findings	2.6.1 Literature findings
2.4.2 Herzberg's theory	2.5.2 Turnover theory	2.6.2 Retention Framework
2.4.3 Expectancy theory	2.5.3 Summary	2.6.3 Workforce Continuum
2.4.4 Equity theory		2.6.4 Summary
2.4.5 Summary		

```
                    ┌─────────────────────────────────────┐
                    │ Research objective                  │
                    │ 2.7 Workforce retention in a health │
                    │ service                             │
                    │ 2.7.1 Workforce retention strategies│
                    │ – Nurses                            │
                    │ 2.7.2 Summary                       │
                    └─────────────────────────────────────┘
                                   │
                    ┌─────────────────────────────────────┐
                    │ 2.8 Conceptual framework            │
                    │ 2.8.1 Literature findings           │
                    │ 2.8.2 Components of the framework   │
                    └─────────────────────────────────────┘
                                   │
                    ┌─────────────────────────────────────┐
                    │ 2.9 Summary of the chapter          │
                    └─────────────────────────────────────┘
```

Adapted from: Erwee (2009, p. 10 after Chew 2001) and Perry (2002, p. 27)

2.1.2 Context of the study

i) Retention and turnover

Recruiting and retaining appropriately skilled and competent staff are major challenges for most organisations world wide (Barney 2002; Smith et al. 1996; Studer 2004; Tracey & Hinkin 2008; Zurn et al. 2005). It has also been well established in the literature that high employee retention is key to operational and service excellence (Smith et al. 1996; Studer 2004). Workforce retention and especially employee turnover have been, and continue to be, prolific areas of research (Tracey & Hinkin 2008). Notably, the cost of employee turnover has received considerable attention as organisations continue to compete for highly skilled employees across the global economy (Asquith et al. 2008; Hinkin & Tracey 2000; Tracey & Hinkin 2008).

Workforce retention and the various facets of research contributing to this phenomenon, such as motivation, turnover and retention, are significant and relevant because all work organisations worldwide employ staff in some capacity. It is also well accepted that retaining a skilled workforce and decreasing employee turnover are economic and service delivery necessities. Although much research has been published on this field of study, new and innovative approaches are necessary to widen the current perspectives on employees leaving or staying with an organisation (Mitchell et al. 2001a; Mobley et al. 1979). This study attempts to approach this challenge by building on previous studies, and investigating from a different perspective in a state-wide health organisation to break new ground in this complex area.

The body of literature most relevant to this study can be loosely categorised in to three main areas. Firstly there are research papers written about employee turnover, turnover intention, retention strategies, motivation, satisfaction and engagement; secondly; there is literature about theories focussed on employee motivation and turnover; and thirdly, there are Queensland Health specific reports and publications on workforce retention strategies and employee turnover. Review of all three categories of literature has revealed that many studies investigating employee retention and turnover have been published (Best Practice Australia and New Zealand 2008; Huang et al. 2005; Mitchell et al. 2001a; Mobley et al. 1979; Udechukwu & Mujtaba 2007), but not many studies have investigated workforce retention strategies and their relationship with turnover, or turnover intention (Asquith et al. 2008; Kuhar et al. 2004; Leurer et al. 2007).

Of the studies identified that have investigated retention and turnover, the emphasis has been on attributes associated with job satisfaction (Kuhar et al. 2004, p. 11), for example: autonomy, communication, recognition, pay and benefits, age, education, experience. Although there are few consistencies throughout the turnover literature, one that stands out is the finding that job satisfaction is inversely related to turnover and absenteeism rates (Atchison & Lefferts 1972 after Vroom 1964). Although job satisfaction appears to be inversely related to turnover, several studies have found that generally less than 25 per cent of variance in turnover is accounted for by job satisfaction (Mitchell et al. 2001a; Mobley et al. 1979). Consequently, calls for further research that move beyond the job satisfaction construct as the sole explanatory variable have been made (Kuhar et al. 2004; Mitchell et al. 2001a; Mobley et al. 1979). Although approximately 4000 articles on job satisfaction were published during the 1990s (Kavanaugh, Duffy & Lilly 2006, p. 305), it appears that few have described or tested specific retention strategies that are perceived as meaningful by staff (Kuhar et al. 2004, p. 11). The paucity of research in this area raises pertinent questions about whether the concentrated and often costly efforts of organisations to retain staff make any difference. Retention and turnover are important areas and key to this study.

In further developing the context for this study, the next section looks at why people leave an organisation.

ii) Why people leave an organisation

Personal and organisational costs of leaving a job are often high and for these reasons, understanding employee retention and turnover has the attention of top level managers in today's organisations (Mitchell, Holtom, Lee, Sablynski & Erez 2001b). The reasons why people leave or stay with an organisation have been partially answered by researchers over the years; however, there are still many gaps in understanding this relationship. Many studies have presented findings suggesting why people leave. For example, motivation at work is widely believed to be a key factor for performance individuals and is also a significant predictor of intention to quit the workplace (Zurn et al. 2005). According to Mitchell et al. (2001b), given alternatives, people stay if they are satisfied with their jobs and committed to their organisations and leave if they are not. Job satisfaction, poor career advancement opportunities, inadequate pay and conditions and lack of work-life balance were the five top reasons for employee turnover in a 2007 study based on exit data (Asquith et al. 2008).

Other reasons cited as to why people voluntarily leave an organisation include personal, for example, changes in family situations, another job offer or a desire to learn a new skill, or the reasons may be influenced by the employing organisation (Mitchell et al. 2001a). These organisational influences may include unfair treatment, missing out on a promotion or being asked to do something outside someone's beliefs (Mitchell et al. 2001a).

As employers grapple with why people leave an organisation, one of the attempts to mitigate the problem is for an organisation to offer workforce retention strategies. For example, retention strategies that focus on employee development may be seen by the employee as supportive and a positive influence and they may be inclined to stay with the organisation. Other positive influences may be perceived from retention strategies that focus on work-life balance and flexible work plans. There are many types of workforce retention strategies that may be implemented. However, in an effort to shed some light on these questions, this study investigated employee perceptions of workforce retention strategies within a health service - Queensland Health. Therefore, the research objective for this study was: ***To examine the perceptions of employees regarding the effectiveness of workforce retention strategies implemented in a health service.***

Having established the context for this study, the next section looks at defining the core concepts that were integral to the study. Defining these core concepts also assisted with determining boundaries for the discussion. The core concept definitions were necessary because the area of study is broad and encompassing, whereas this investigation required focus and concentration on the research objective.

2.2 Definition of core concepts

The core concepts integral to the study requiring clarification and definition were: turnover and retention; workforce retention strategies; retention factors; and turnover intention. The following section presents their definitions as determined for the purposes of this study.

2.2.1 Turnover and retention

Turnover and retention are sometimes seen as the opposite of each other. Although some researchers regard staying as the simple obverse of leaving (Phillips & Edwards 2009), others believe that staying and leaving involve different psychological and emotional processes (Mitchell et al. 2001a; Waldman & Arora 2004). In this study, turnover and retention are important terms and clarity of each is important. The term **turnover** for the purposes of this study refers to voluntary employee turnover – that is, those employees choosing to leave an organisation. Voluntary turnover has often been portrayed as a consequence of employees initiating the termination of their employee-organisation relationship (Udechukwu & Mujtaba 2007, p. 165 after Lambert 2001). This description of the turnover relationship simply includes the employee and the organisation and does not consider other reasons which may induce an employee to stay or leave an organisation (Lee, Mitchell, Wise & Fireman 1996; Udechukwu & Mujtaba 2007).

There are many references in the literature about investigations on employee turnover and intention to turnover (Albion et al. 2008; Chiu, Chien & Chieh-Peng 2005; Mobley et al. 1979; Tett & Meyer 1993; Udechukwu & Mujtaba 2007; Van Vianen, De Pater & Van Dijk 2007). However, past efforts to predict turnover have not been very successful, given 75 per cent of the variance in turnover remains unexplained (Mitchell et al. 2001a, pp. 97-8). According to the literature, the withdrawal decision process appears to follow several intermediate steps: experienced dissatisfaction, intention to search, thoughts of quitting, expressed intention to quit, turnover (Huang et al. 2005; Lee et al. 1996; Mobley 1977; Mobley et al. 1979). The challenge is to understand the possible mediating steps between dissatisfaction and actual turnover (Lee et al. 1996; Mobley 1977). An interesting point to note is the finding that "under nearly all conditions, the most accurate single predictor of labour turnover is the state of the economy" (Huang et al. 2005, p. 495 after March & Simon 1958). That is, workers tend to stay with an organisation in times of economic recession and during more prosperous times, the turnover rate in the overall market tends to be higher (Huang et al. 2005). Further studies have explored other dimensions of the turnover field, and not simply focussed on the notion that turnover resulted from a particular combination of job dissatisfaction and perceived job alternatives (Lee et al. 1996).

This has lead to the realisation that the leaving process is considerably more complex than initially thought (Mitchell et al. 2001a). From the literature, it appears that turnover may be caused by many internal and external forces, and the impacts can be multi-dimensional and multidisciplinary and not simply a linear sequence (Hom & Griffeth 1991). Section 2.6.2 describes the Workforce Retention Framework and explains the impact of various influences on an employee in Queensland Health. This framework attempts to illustrate the overlapping complexities of these influences, and therefore is an indication of how difficult it is to tease this area apart in an effort to better understand the turnover process.

The definition for turnover as it applies to this study is therefore:
Turnover is when an employee voluntarily leaves the organisation, but acknowledging that there are many forces impacting on an employee leading to this decision point.

Retention has been defined as 'keeping', or 'engaging the services of' (*Collins English Gem Dictionary* 1968, p. 440). Retention rate may be complemented by turnover to provide a greater understanding of worker movement, however according to some researchers, it is not simply the opposite of turnover (Waldman & Arora 2004). Retention follows specific people or groups of people over time. In reviewing the scholarly literature about retention, there is good evidence that supports the notion that staying and leaving involve different psychological and emotional processes (Mitchell et al. 2001a). This stance leads to the following definition for retention:
Retention is when an employee remains with an organisation, but acknowledging that there are many forces impacting on an employee leading to this decision point.

The definitions stated here for turnover and retention reiterate the findings in the literature that: turnover and retention are not opposites; there are many complex forces impacting on an employee and their decision to stay or leave an organisation; the turnover process is more complex than initially expected.

2.2.2 Workforce retention strategies

Given the highly competitive environment for skilled workers, retention strategies to keep confident and competent staff are ongoing challenges for organisations, especially health services like Queensland Health.

The literature presents numerous studies undertaken to investigate retention strategies (Asquith et al. 2008; Kuhar et al. 2004; Leurer et al. 2007; North Queensland Workforce Unit 2005). In most cases, however, the retention strategies described were things like; consultation and communication, recognition, adequate staffing levels, supportive management, regular staff meetings, teamwork, and shared governance (Kuhar et al. 2004; Leurer et al. 2007; Wilson, Squires, Widger, Cranley & Tourangeau 2008). Whilst these 'strategies' are important and must not be overlooked, a different perspective is to consider those workforce retention strategies that are support or development opportunities/programs which have been developed and implemented by the organisation to retain the employee. Of the few studies that identify what impact workforce retention strategies developed and implemented by an organisation have on employee turnover intention, coaching and mentoring programs have been mentioned as contributing to decreasing turnover (Kavanaugh et al. 2006).

Queensland Health, an employer of approximately 74 000 staff members, has invested substantial human, financial and physical resources in retention strategies. Examples include: mentor programs, leadership development activities, work/life balance agreements, mature-age retention programs, workplace culture surveys, employee assistance schemes and the study assistance schemes. The definition of workforce retention strategies for the purposes of this investigation will be:

Workforce retention strategies are those professional support and development activities and programs developed and implemented by Queensland Health for employees of Queensland Health.

A list of Queensland Health workforce retention strategies is presented in Table 2.1. The column headings in the table reflect the occupational streams in Queensland Health: Health Practitioner (previously Allied Health); Aboriginal and Torres Strait Islander Health Worker; Nursing; Medical; Trades and Artisans; Operational Services; Administration. The first column presents an example of 28 workforce retention strategies that have been developed and implemented by Queensland Health. Although this represents a range of workforce retention strategies, it is by no means an exhaustive list. Many of the programs are designed for generic application whilst others are focused on clinical or non-clinical work roles. Several of the programs are specifically designed for Aboriginal and Torres Strait Islander employees.

All programs are not available at all locations – a case in point is the Rural Scholarship Scheme where the employee would need to be employed at a rural facility to participate. The remainder of the strategies are available to employees regardless of their location because information about them is available on the Queensland Health intranet site 'QHEPs'. This must be prefaced by stating that not every employee has intranet access, or the time to access the medium and this can not be underestimated as a limiting factor. The other limiting factor is support from both the Supervisor and the organisation for the employee to participate in the strategy and this is duly noted.

It is also noted that some programs are only available to certain levels of staff. For example some of the leadership programs are intended for more experienced employees whilst the graduate programs are tailored for the less experienced and newly graduated. Although it is acknowledged that some of these strategies may have been implemented for other reasons, such as improving employee or leader performance, the strategies chosen for this study are being investigated in light of them as a retention strategy. For example, it may be argued that Performance Appraisal and Development is a retention strategy if the employee is supported by their Supervisor and together they have developed a positive plan of action for the employee. The employee may see this support and the opportunities offered, as a reason for staying with organisation. This rationale may also be applied to other workforce retention strategies listed, such as the better workplaces staff opinion survey, the employee assistance scheme and the study and research assistance scheme.

Table 2.1 Workforce retention strategies and occupational stream in Queensland Health

Occupational stream / W'force Retention Strategy	Health Pract	ATSI Health Worker	Nursing	Medical	Trades & Artisan	Op Service	Admin
Leadership programs:							
1. Inspiring leadership	√	√	√	√	√	√	√
2. Emerging clinical leaders	√	√	√	√			
3. Personal leadership qualities	√	√	√	√	√	√	√
4. On-line leadership modules	√	√	√	√	√	√	√
5. Energising from conflict	√	√	√	√	√	√	√
6. Wal-Meta Leadership Prog	√#	√#				√#	√#
7. Coaching for leaders	√	√	√	√	√	√	√
8. Practical People M'ment	√	√	√	√	√	√	√
Mature age programs:							
9. Maturity Matters	√	√	√	√	√	√	√
10. Transition to Retirement			√				
Other retention programs:							
11. Work/life balance	√	√	√	√	√	√	√
12. Flexible work practices	√	√	√	√	√	√	√
13. Peer support program	√	√	√	√	√	√	√
14. Work shadowing							√
15. Supervision	√						
16. Succession planning			√				
17. Coaching		√#					
18. Mentoring	√#	√#	√#	√#	√#	√#	√#
19. Rural Connect (Mentoring)	√						
20. Mentoring Framework			√				
21. Cadetships			√#				
22. Scholarships	√		√	√			
23. Apprenticeships					√		
24. Traineeships		√					√
25. Graduate Programs			√				
26. Better Workplaces staff opinion survey	√	√	√	√	√	√	√
27. Study and Research Assistance Scheme (SARAS)	√	√	√	√	√	√	√
28. Employee Assistance Scheme (EAS)	√	√	√	√	√	√	√

Workforce retention strategies developed for Aboriginal and Torres Strait Islander staff
Source: Developed for this study

In pursuit of meeting the research objective, the first research question elicited therefore is to investigate employees' perceptions about workforce retention strategies being offered by Queensland Health. The approach employs a graduated effort, by first seeking employee **awareness** of workforce retention strategies. This aims to set a baseline of information on which to build the survey thread. Accordingly, once it is established that there is some employee recognition and awareness of employee retention strategies, the obvious progression is to determine if employees have **participated** in any of the workforce retention strategies and then, of these, which do

they perceive have been **effective**. Although little evidence in the literature has been found to indicate that workforce retention strategies have been ranked or measured by their perceived effectiveness, it is anticipated that the data analysis will provide the evidence to rank workforce retention strategies offered to employees of Queensland Health. The first research question is therefore:

RQ1. What are employees' perceptions about workforce retention strategies being used in Queensland Health, informed by:

  a. *Employees' awareness of workforce retention strategies*

  b. *The level of participation in workforce retention strategies*

  c. *The perceived level of effectiveness of workforce retention strategies.*

Another aspect to this line of inquiry is to investigate the perceived barriers that employees may have to participating in workforce retention strategies.

Barriers to the participation in workforce retention strategies

Although it is recognised that genuine efforts have been made to develop and implement workforce retention strategies to support Queensland Health employees, it is pertinent to note that there may also be perceived barriers to employee participation in the retention strategy. Throughout the literature, numerous examples of both individual and organisational barriers to strategies to retain employees are given. Examples are provided below.

*a) Individual or personal barriers***:** Employees may sometimes perceive barriers as to why they could or would not participate in a workforce retention strategy, activity or program that are personal or limiting from their perspective. Such perceived barriers include for example; lack of time due to increasing patient need and other workload pressures (Kuhar et al. 2004; North Queensland Workforce Unit 2005), disconnect between employee and management perspectives (Asquith et al. 2008) and workplace culture that is resistant to change (Kilpatrick et al. 2007).

b) Organisational barriers: Perceived organisational barriers are also relevant to this discussion. For instance, if workforce retention strategies are available but the employee perceives the organisation is not supportive, this will be seen as a barrier to participating in the workforce retention strategy. Organisational barriers include for example; lack of policies to support the implementation of workforce retention

strategies (Leurer et al. 2007), cost of the program and lack of resources (Kilpatrick et al. 2007), and a lack of support from supervisors to attend the activity (Wilson et al. 2008).

Although it appears that no formalised study of Queensland Health employees, specifically nurses, has been published to date to inform the organisation of these perceived barriers, anecdotally, through personal discussions with many staff members over the years supports the literature findings mentioned above. This study explores the types of perceived individual and organisational barriers that influence the participation of employees in workforce retention strategies for nurses in Queensland Health through research question 1 part d:

RQ1 What are employees' perceptions about workforce retention strategies being used in Queensland Health, informed by:

d. The perceived barriers to participating in workforce retention strategies.

2.2.3 Retention factors

It is acknowledged that workforce retention strategies could act on known antecedents of turnover by improving job attitudes, enhancing job characteristics including opportunity, increasing job embeddedness, reducing work and family conflict that may lead to turnover, or otherwise removing impediments to continued employment.

Rather than studying each workforce retention strategy as a whole, this study aims to characterise the strategy by introducing the notion of retention factors.

Having defined workforce retention strategies as professional development and support activities and programs, retention factors are those aspects of a retention strategy that can be identified as contributing to satisfaction or motivation as a result of participating in the workforce retention strategy (Atchison & Lefferts 1972; Bassett-Jones & Lloyd 2005; DeShields Jr O W et al. 2005). These retention factors have been derived by adapting and applying three motivation theories to workforce retention strategies, that is, producing a set of characteristics for workforce retention strategies generally (See Table 2.3 and Section 2.4 for further explanation of the identification of retention factors). This enables all workforce retention strategies to be characterised with this same set of retention factors – that is they can be applied to all workforce retention strategies.

The definition for retention factors is therefore:

Retention factors are those factors that characterise a workforce retention strategy and can contribute to satisfaction or motivation, and are identified by adapting and applying three motivation theories to the workforce retention strategy.

2.2.4 Turnover intention

To achieve the research objective namely "To examine the perceptions of employees regarding the effectiveness of workforce retention strategies implemented in a health service" requires the study of current employees. Accordingly, current employees' intention to turnover was investigated, because once the employee leaves, the intention to turnover has progressed through to turnover. Turnover of employees is a process that can be lengthy to track and measure. Although official turnover data was used to inform which sites would be best to sample for this study, the respondents canvassed were in employment with Queensland Health and therefore turnover intention was more appropriate to use than actual turnover, given the time limits of the study.

The deliberate use of 'intention to turnover' for this study is based on literature findings where according to the theory of planned behaviour, intention to leave is the most proximal precursor of actual occupational turnover (van der Heijden B, van Dam K & Hasselhorn 2009 after Ajzen 1991). To further explain, earlier studies of voluntary employee turnover by many researchers including Mobley (1977), Steers and Mowday (1981), Hom, Griffeth and Sellaro (1984), and Steel and Ovalle (1984), have used turnover intentions as the most accurate predictor of actual turnover (Van Breukelen W, Van Der Vlist R & Steensma 2004). The main approach when studying attitudes and behaviour was to develop integrated models of behaviour, including additional determinants such as social norms or intentions (Armitage & Conner 2001, p. 471 after Olson & Zanna 1993). The most widely researched of these models are the theory of reasoned action (Armitage & Conner 2001 after Ajzen & Fishbein 1980; Fishbein & Ajzen 1975) and the theory of planned behaviour (Armitage & Conner 2001 after Ajzen 1988; 1991). The assumption that self-reported intentions or plans are the best predictors of behaviour has been elaborated in the theory of reasoned action and extended in the theory of planned behaviour (Van Breukelen W et al. 2004) by the addition of measures of control belief and perceived behavioural control (Armitage & Conner 2001). Although this does not mean that intention to turnover directly precedes

or causes turnover, findings from studies have found that turnover intentions have proved to be the best predictor of turnover (Van Breukelen W et al. 2004). It is acknowledged that there are no absolutes when studying people's intentions and behaviours, however, it was determined that turnover intention would be used for this study, based on these previous works.

It is also acknowledged from the literature that global job satisfaction influences turnover intentions (Chiu et al. 2005, p. 837). Considering all of these aspects, the definition for turnover intention for the purposes of this study will be:
Turnover intention is an employee's intentions, desires and plans to quit their job voluntarily.

Having defined the core concepts of turnover and retention, workforce retention strategies, retention factors and turnover intention, the next part of the discourse provides an understanding of how the key discipline areas and key theories were identified. A thorough and in-depth discussion on each of the key discipline areas and their relevant theories for this investigation follows.

2.3 Identifying the key discipline areas and key theories

Literature searching and study of relevant articles and texts about the topic 'workforce retention' clearly elicited three key discipline areas for this study. They were determined as motivation, turnover and retention. Further to this, a number of theories were studied during the initial stages of the literature search to get a feel for the workforce retention landscape. These included: contingency theory, motivation theories, employee turnover theory, attraction-selection-attrition model, theory of reasoned action, theory of planned behaviour and organisational culture theory. An in-depth investigation of all of these theories identified that each could be applied to some aspect of the study regarding employee perceptions of workforce retention strategies and the impact on employee intention to turnover.

A general evolutionary trend in the theories studied seemed to be the exploration in greater depth of an employee's actual experiences. This has anticipated the growing use

of multi-level methods to truly understand the nature of organisations (Klein and Koslowski, 2000, in Boselie, Dietz & Boon 2005, p. 82) and the unfolding complexity involved when an employee decides to stay or leave a job (Hom & Griffeth 1991; Mitchell et al. 2001a; Mobley 1977; Mobley et al. 1979). This trend reflects the complex and multi-dimensional analysis required to understand employee turnover intention. This is especially evident in Figure 2.2, the Workforce Retention Framework, which illustrates the overlapping and complex influences impacting on an employee in a health service, such as Queensland Health. Due to the scope of the study, resources available and sampling requirements, four theories emerged as the most applicable to the Queensland Health situation. The theories were: Herzberg's two factor theory of motivation, expectancy theory, equity theory and employee turnover theory.

These 4 theories were selected for three reasons. Firstly, they appeared to be most appropriate and applicable to the Queensland Health situation. Secondly, the literature has indicated that these theories have been accepted and this study is therefore able to build on solid foundations. Thirdly, the three motivation theories were able to be adapted to apply to workforce retention strategies and it appears logical to compare their constructs with turnover intent as the dependent variable. The rationale for these choices is more fully discussed in Sections 2.4 and 2.5.

This section has developed the base which starts to build the conceptual framework for the study. Before this can be achieved however, a more in depth investigation and discussion of the key disciplines and the respective key theories is required. Therefore, having identified the key discipline areas and the key theories, the following section will explain each of the key disciplines of motivation, turnover and retention in greater detail and will describe why each is necessary and relevant to the development of the conceptual framework. A careful and thorough search of the literature has informed this section and it is presented by firstly explaining what the key discipline is about, secondly by presenting relevant literature findings, thirdly by discussing relevant theories within the discipline and how they apply to workforce retention strategies and lastly by acknowledging any shortcomings of the relevant theory. The first key discipline area for consideration in this manner is motivation.

2.4 Motivation

There is extensive evidence throughout the literature, of studies and investigations about motivation, and what motivates employees (Bassett-Jones & Lloyd 2005; Fielden, Davidson & Sutherland 2009; Lee 2007; Locke 1975; Tzeng 2002). As a result of the many studies, numerous definitions of the term abound. The most relevant have been chosen from the perspective of motivation as a key discipline for this discussion.

Motivation can be defined as the 'willingness to perform' and it has been regarded as a construct that intervenes between a stimulus and response that fashions the nature of the response (Ivancevich & Matteson 1990, p. 121). As most behaviours are considered to be under the voluntary control of the person and therefore motivated, Vroom defines motivation as a process governing choices among alternative forms of voluntary activity (Ivancevich & Matteson 1990, p. 133). Therefore, motivation may be described as an employee's desire and commitment, manifested as effort (Whetton 1989, p. 340). The salient point from all contributing researchers is that motivation is voluntary.

The dilemma for employers, managers and line supervisors is that all employees are different and they are motivated by different stimuli. Therefore, inducing people to contribute their efforts to the performance of the task at hand is the challenge of motivation (Mukhi et al. 1991, p. 299). A point worth noting is that some opinions suggest that managers cannot motivate employees, but they can stimulate them sufficiently for activation to occur (Ivancevich & Matteson 1990, p. 157).

Furthermore, it is important for managers to understand and acknowledge that employees perform tasks in their own interests as defined by their needs. Therefore, motivating employees to contribute their efforts to accomplishing tasks requires that managers make it possible for employees to satisfy their needs by making such contributions. A list of such needs that is workable and comprehensive is difficult. Over the years countless lists have been compiled that purportedly set employees in motion. Consequently, no universally accepted single list of human needs has yet been produced (Mukhi et al. 1991, p. 299).

2.4.1 Literature findings: Motivation

Before moving on to a discussion about the key motivation theories, it is important to consider the relevant literature and to present a summary of the most pertinent findings, as these provide the background for a more focussed discussion on motivation and for developing the conceptual framework discussed in Section 2.8. Accordingly, a careful and thorough search of the motivation literature has provided relevant findings to inform the research objective.

In view of the relevant literature findings on motivation, the most significant was that there appears to be nothing definitive about why employees are motivated to stay or leave an organisation (Kuhar et al. 2004). From the theoretical perspective, there are numerous motivation theories, for example; hierarchy of needs, Alderfer ERG theory, theory X and Y, Herzberg's two factor theory, McLelland's theory of needs, cognitive evaluation theory, goal-setting theory, self-efficacy theory, reinforcement theory, equity theory and expectancy theory, and many research findings in the literature that attempt to explain the behaviour/outcome relationship of motivation (Bassett-Jones & Lloyd 2005; Ivancevich & Matteson 1990; Kavanaugh et al. 2006; Robbins, Judge, Millett & Waters-Marsh 2008; Smith & Rupp 2003). Notably, the literature reflects the complexity of the interrelationships surrounding motivation and indeed the attempt by some to tie all of the contemporary motivation theories together to explain them (Robbins et al. 2008). Further explanation of this integration of motivation theories suggests that one motivation theory that is found to be valid does not make another theory invalid and in fact many motivation theories are complementary (Robbins et al. 2008). Other perspectives attempt to draw links with personality theory, leadership, individual values, self-concept and self-efficacy (Wood, Zeffane, Fromholtz, Wiesner, Creed, Schermerhorn, Hunt & Osborn 2010). All of these contributions are tempered by the findings that a number of the theories assume cultural characteristics that are not universal (Robbins et al. 2008). The salient point in this part of the discussion of the literature findings is that as studies and research progress, more complexities and interrelationships are uncovered.

A concentrated focus is required to tease out this vastly complex tapestry of interrelating factors coupled with the certainty that all individuals differ in their basic motivational drive (Robbins et al. 2008). As a result of this focus, and due to

limitations of time and resources, three motivation theories have been chosen to build the conceptual framework for this study. The theorists and theories deemed relevant to this study have been determined as: Herzberg – Two factor theory (1959); Adams – Equity theory (1963) and Vroom – Expectancy theory (1964) (Bassett-Jones & Lloyd 2005; Ivancevich & Matteson 1990; Kavanaugh et al. 2006; Mukhi et al. 1991; Smith & Rupp 2003; Wood et al. 2010). These three have been selected because much of their classical work as well as more recent studies based on these theories, has informed this study in some capacity (Bassett-Jones & Lloyd 2005; DeShields Jr O W et al. 2005; Lee 2007; Schroder 2008; Shore 2004).

The major difference and contribution that this study offers is a change in the perspective of the investigation. That is, where these classical works have looked at the employee's participation in and perception of their job, this study is focussing on an employee's awareness of, participation in, and perception of the effectiveness of a workforce retention strategy in which they have participated. Table 2.2 provides a summary of the relevant articles prudently selected from the plethora of literature on the subject of motivation. They were selected because they contributed to the body of knowledge for this study and indeed, the study builds on their findings, as discussed above. Studies in healthcare have been highlighted.

Table 2.2 Summary of relevant literature findings: Motivation

Motivation			
Researcher	**Purpose**	**Methodology**	**Relevant findings**
House & Wigdor (1967)	Review Herzberg's Theory	Review of previous studies	Two-factor theory is an oversimplification of the relationships between motivation and satisfaction and the sources of job satisfaction and dissatisfaction
Steers & Porter (1974)	Research reviewed an employees' task goal attributes to ascertain which are related to work performance	Review of the goal-setting process - 80 empirical studies relating to six factor analytically derived attributes of task goals examined	Findings are discussed within a motivational framework (expectancy /valence model). Argued that performance is a function of: nature of the task; situational-environmental factors and individual differences
Locke (1975)	Selective review and critique of major approaches and major research areas relevant to employee attitudes and motivation	Review and critique	Trends in literature: dramatic decrease in the popularity of equity theory; the validity of Herzberg's theory remains in doubt; expectancy theory has clearly become the most popular approach to motivation.
Tzeng (2002)	Investigate whether higher **nurses'** levels on job satisfaction, satisfaction with role and	Survey Ordinal logistics regression analyses: **Nurses**	Study provided strong evidence that job satisfaction and job happiness are two discrete concepts and explained a significant amount of variance of **nurses'**

Motivation			
Researcher	**Purpose**	**Methodology**	**Relevant findings**
	job happiness lead to lower intention to quit		intention to quit.
Smith, A D & Rupp (2003)	Explores the effect of performance rating in workers' motivation	Survey: Knowledge staff; banking, retail, **healthcare**, software	Motivation was found to be more positive as length of employment increases.
Bassett-Jones & Lloyd (2005)	Assess whether or not Herzberg's contentious seminal studies on motivation at work still hold true today	Survey: stratified sample of 32 organisations Focus on observable behaviours rather than emotions	Despite the criticism, Hezberg's two factor theory still has utility nearly 50 years after it was first developed. Motivators associated with intrinsic drivers outweigh movers linked to financial inducement, and observing others benefiting from recognition and extrinsic rewards.
Lee, S. (2007)	To understand the components of Vroom's expectancy theory	Conceptual paper	After Robins (1983) – although expectancy theory has its critics, it has generally developed results that indicate it is currently the clearest and most accurate explanation of individual motivation

Adapted from: Perry (2002, p. 24); developed for this study

The section above gave examples of literature findings relevant to this study on motivation theorists and theory and provided a small snapshot of the wealth of work invested in the key discipline of motivation. The next section takes a more in-depth look at the motivation theories selected for application to this study, why they were chosen, how they map to workforce retention strategies, and discusses any shortcomings that have been identified. The theories selected were Herzberg's two factor theory; expectancy theory and equity theory and each is explained in turn as follows.

2.4.2 Herzberg's two factor theory

i) Rationale for choice of the theory

There are two main types of motivational theories, categorised as content and process (Ivancevich & Matteson 1990, p. 124; Wood et al. 2010). Content theories focus on factors within the person that energise, direct, sustain and stop behaviour, whilst process theories attempt to describe and analyse how behaviour is energised, directed, sustained and stopped (Ivancevich & Matteson 1990, p. 124). Herzberg's two factor theory of motivation is classified as a content theory and has been applied in many studies about satisfaction/dissatisfaction and employee turnover with mixed results (Atchison & Lefferts 1972; Bassett-Jones & Lloyd 2005; DeShields Jr O W et al. 2005; Grigaliunas & Herzberg 1971; House & Wigdor 1967; Locke 1975). Key to Herzberg's theory was the idea that satisfaction and dissatisfaction were not opposite poles on one dimension,

but two separate dimensions (Mukhi et al. 1991, p. 311). Herzberg proposed that satisfaction was affected by motivators - factors contained within the job itself (intrinsic), and dissatisfaction was affected by hygiene or maintenance factors – those factors outside the job (extrinsic) but related to it. According to Herzberg's theory, people are not motivated and lose interest in their work when their job only meets basic needs: they don't make the employee want to do the job on their own (Anderson 1984, p. 265). Although Herzberg's technique in developing the theory has been the subject of considerable debate over the decades, the findings of his theory have been valuable (Wood et al. 2010).

Further to this, Herzberg's theory was chosen as applicable to this study because each of the extrinsic and intrinsic conditions as they applied to a person's job could be meaningfully and logically mapped to the aspects of a workforce retention strategy (See Table 2.3). The resultant conditions were termed 'retention factors' for the purposes of this study. Although Herzberg's theory was applied to a person's job, this study adapted and applied the theory to a workforce retention strategy to determine if the mapped conditions, which were identified as retention factors, influenced an employee's intention to leave their employment.

To further explain this perspective, in practice, it appears that certain aspects of workforce retention strategies, that is, retention factors, can contribute positively to the work experience for an employee. For example, if an employee is able to attend a workforce retention program in work time (retention factor identified as *accessibility* under Herzberg's, See Table 2.3), it may be perceived by the employee that they are being employed by a supportive organisation. A feeling of satisfaction for the employee and a willingness to stay with that organisation may follow. Adapting and applying Herzberg's two factor theory to a workforce retention strategy identified 13 retention factors as presented below.

ii) Mapping to workforce retention strategies

As a result of the adaptation and application of Herzberg's motivation theory to workforce retention strategies, the retention factors for extrinsic conditions were identified as: job security; accessibility; status; support; coordination; interaction. The intrinsic factors were identified as: achievement; recognition; responsibility; advancement; conduct; applicability; growth (See Table 2.2).

iii) Critique of Herzberg's two factor theory

It is noted that throughout the literature, Herzberg's theory has had its supporters (Atchison & Lefferts 1972; Bassett-Jones & Lloyd 2005; DeShields Jr O W et al. 2005; Smith et al. 1996) and detractors (Grigaliunas & Herzberg 1971; House & Wigdor 1967; Locke 1973 after Schneider & Locke 1971; 1975; Ondrack 1974; Schroder 2008). For example, recent studies have applied Herzberg's theory to investigate the extent to which personality and demographic factors explain variance in motivation and job satisfaction and found that the factors essentially corresponded to the motivator/hygiene categorisation (Furnham, Eracleous & Chamorro-Premuzic 2009). Conversely, other studies have reported that Herzberg's two factor theory, based on extensive empirical investigation has received both widespread support and criticism (Schroder 2008 after Maidani 1991), where conflicting evidence was found regarding job satisfaction and its relationship to demographic variables. Other criticisms include the feeling by some researchers that Herzberg's work oversimplifies the nature of job satisfaction (House & Wigdor 1967; Ivancevich & Matteson 1990) and that the theory is method-bound (Wood et al. 2010, p. 93). On the basis of the perceived problems with methodology, cynics have continued to argue that money can motivate and that Herzberg's results could be attributed to a range of factors including personality (Bassett-Jones & Lloyd 2005 after Evans & McKee 1970) and social desirability bias (Bassett-Jones & Lloyd 2005 after Wall 1972).

Further to this, it is argued that the presence of such variables compromised Herzberg's methodology (Bassett-Jones & Lloyd 2005, p. 933). The theory has also been criticised because of the suggestion that people are disposed to defend their egos or self-esteem by crediting their feelings of satisfaction to their own accomplishments and their dissatisfactions to outside forces (Mukhi et al. 1991 after Vroom 1964). Although there are criticisms of the theory, it has been replicated many times and it is still considered to add value to research in the motivation area (Bassett-Jones & Lloyd 2005; Mukhi et al. 1991; Wood et al. 2010).

Therefore, despite variable support for this theory, dependent upon the studies reviewed, it has been determined that Herzberg's extrinsic and intrinsic conditions can be meaningfully and logically mapped to a workforce retention strategy and therefore provide a starting point for the building of the conceptual framework for the purposes of this study.

2.4.3 Expectancy theory

i) Rationale for the choice of the theory

Expectancy theory is categorised as a content theory and it is premised on the condition that employees expect a return for input of effort. Victor Vroom developed this motivation theory in 1964, and defined motivation as a process governing choices among alternative forms of voluntary activity (Ivancevich & Matteson 1990 after Vroom 1964). Many studies have been done to test the accuracy of expectancy theory in predicting employee behaviour (Ivancevich & Matteson 1990 after Nadler & Lawler 1977), and the theory has become a popular approach to understanding motivation and employee behaviour (Lee 2007; Locke 1975; Smith & Rupp 2003).

In applying the theory, an important implication is that motivation programs should be designed with a sufficient degree of flexibility to address the kinds of individual differences as well as need differences of employees (Ivancevich & Matteson 1990). The implication is relevant to this study because a degree of flexibility can be applied to the improvement of workforce retention strategies in the Queensland Health environment.

Expectancy theory was chosen for a number of reasons. Firstly the theory attempts to account for important variables within the individual and also within the individual's work environment (Steers & Porter 1974). Secondly, a considerable amount of research has emerged that provides some support for the theory in explaining the decision to perform at a given level (Steers & Porter 1974). To explain further, if for example, an employee invested considerable effort, mapped as retention factor *effort,* in participating in a workforce retention strategy and they felt their performance was high, mapped as retention factor *performance*, they may feel that there will be some form of personal gain following their efforts, mapped as retention factor *personal gain* (See to Table 2.3). If this personal gain eventuated through other work opportunities or advancement for example, the employee may feel that they were employed by a supportive organisation and their intention to turnover may be low. Adapting and applying expectancy theory to a workforce retention strategy identified 3 retention factors as presented below.

ii) Mapping to workforce retention strategies

Expectancy theory was adapted and applied to workforce retention strategies to identify retention factors (See Table 2.3). The retention factors identified were: effort; performance and personal gain.

iii) Critique of expectancy theory

Although expectancy theory was introduced in the 1960s generating substantial interest, it has been noted that research studies over the past decade have made few advances in the theory (Smith & Rupp 2003). Nevertheless, expectancy theory provides a general framework for assessing, interpreting and evaluating employee behaviour (Locke 1975; Smith & Rupp 2003) and is therefore considered able to add value to the development of the conceptual framework for this investigation.

2.4.4 Equity theory

i) Rationale for the choice of the theory

Equity theory is also a process theory and was developed by J Stacey Adams (1963) in an effort to suggest answers to questions about what motivates people at work and how the process of motivation occurs (Huseman, Hatfield & Miles 1987; Mukhi et al. 1991). Equity theory draws from exchange, dissonance and social comparison theories and makes predictions about how individuals manage their relationships with others (Huseman et al. 1987). The underlying concept is that employees compare their efforts and rewards with others in similar work conditions (Ivancevich & Matteson 1990). This motivation theory is based on the assumption that employees are motivated by a desire to be equitably treated at work (Ivancevich & Matteson 1990, p. 136). Equity theory was chosen because it added an extra dimension to the retention factors mapped using Herzberg and expectancy theory. This extra dimension gave respondents in the study the chance to indicate their perception of fairness and rewards – the aim being to provide more insight to their perceptions of workforce retention strategies and the resultant impact on turnover intention.

ii) Mapping to workforce retention strategies

Equity theory has been adapted and applied to workforce retention strategies to identify retention factors (See Table 2.3). The retention factors identified were: fairness; treatment of participants; prerequisites; rewards.

iii) Critique of equity theory

Considerable research evidence supports the notion that employees compare their contributions and rewards to organisational tasks with others (Mukhi et al. 1991 after Austin & Walster 1974). However, the main shortcoming of this theory is that the process breaks down because of the subjective valuation of inputs. More specifically, employees have a tendency to inflate their own inputs and devalue those of others (Mukhi et al. 1991 after Adams 1963). Taking this discussion in to account, it was nevertheless determined that equity theory as applied to workforce retention strategies, would also add value to further develop the conceptual framework and has therefore been included.

This section has explained the rationale for the choice of Herzberg's, expectancy and equity motivation theories, presented how they were mapped to workforce retention strategies and acknowledged shortcomings that have been identified for the theory. Adapting the selected motivation theories and applying them to workforce retention strategies identified 20 retention factors: Herzberg's – 13; expectancy theory – 3 and equity theory – 7. Importantly, identifying retention factors will assist in finding those dimensions that can be used to measure the impact of workforce retention strategies on turnover intent (Al-Hakim 2007, p. 164).

Where previous studies have mostly looked at job satisfaction, job alternatives and/or organisational commitment, this study takes a different perspective and builds on the previous work to investigate the 20 identified retention factors as constructs (Crossley, Jex, Bennett & Burnfield 2007). The next research question emerges from this tranche of the discussion where the investigation leads to exploring how employees characterise their preferred workforce retention strategy when asked to comment on it in terms of the retention factors:

RQ2. How do respondents characterise their preferred workforce retention strategy in terms of retention factors.

The three motivation theories and their adaptation and application to workforce retention strategies to identify the retention factors are presented in Table 2.3. Each of the chosen motivation theories has their respective conditions listed. The conditions are applied to workforce retention strategies in the Queensland Health situation and the resultant identified 'retention factor' is listed in the last column.

The 'retention factor identified' is a short description of the condition as it applies to the Queensland Health workforce retention strategy.

Table 2.3 Adaptation and application of three motivation theories

Adaptation and application of motivation theories to workforce retention strategies (WRS)		
Theory / Conditions	Adaptation of the condition to the Queensland Health (QH) situation	Retention factor identified
Herzberg's		
Extrinsic conditions		
Salary	Unable to apply to WRS in QH case – standard awards	
Job security	Participation in WRS enhances job security	Job security
Working conditions	WRS accessible in work time	Accessibility
Status	WRS recognised as a valued program	Status
Company procedures	WRS supported by company policy	Support
Quality of technical supervision	WRS presented/coordinated by an expert	Coordination
Quality of interpersonal relations	WRS encourages interaction with peers	Interaction
Intrinsic conditions		
Achievement	Achievement felt when WRS completed	Achievement
Recognition	Recognition received for participating in WRS	Recognition
Responsibility	Completion of WRS increases responsibility	Responsibility
Advancement	Possibility of advancement after completing WRS	Advancement
The work itself	The WRS was professionally conducted The WRS was applicable to my work	Conduct Applicability
The possibility of growth	Possibility of growth in my work after completing WRS	Growth
Expectancy Theory		
Effort	Effort was invested in participating in WRS	Effort
Performance	Performance during participation was high	Performance
Outcome	Personal gain Increase in work status Approval and recognition from superiors	Personal gain
Equity Theory		
Person	Opportunity was offered fairly to all to participate in WRS	Fairness
Comparison	Participants in the WRS were treated the same	Treatment of participants
Inputs	All participants had similar skills, knowledge and experience	Prerequisites
Outcomes	All participants who completed the WRS received similar achievement and recognition rewards	Rewards

Adapted from: (Ivancevich & Matteson 1990; Mukhi et al. 1991); developed for this study

2.4.5 Summary of motivation section

This section discussed motivation as a key discipline by firstly reviewing the broader motivation literature, then noting the main findings that were relevant to investigating the research objective, followed by describing, justifying and critiquing the three

selected motivation theories that were carefully chosen to develop the conceptual framework. The next key discipline area is turnover and it will be presented in a like manner.

2.5 Turnover

Employee turnover has also been a prolific and wide area of study over the past few decades (Albion et al. 2008; Atchison & Lefferts 1972; Chiu et al. 2005). Turnover for the purposes of this study is voluntary employee turnover or departure from an organisation.

The enigma of why employees choose to leave an organisation, or stay, has challenged many researchers and continues to do so, irrespective of the important insights made over the years (Aitken et al. 2002; Atchison & Lefferts 1972; Barney 2002; Peterson 2007; Porter & Steers 1973). The reason why so much interest has been given to this field of study is that increased unwanted turnover can be a very costly venture. Unwanted turnover results in both direct and indirect costs to an organisation (Phillips & Edwards 2009; Tracey & Hinkin 2008). The impact of the cost of turnover however, is often underestimated. This is due to the less obvious soft or indirect costs such as time taken to interview applicants, time taken for the recruits to become fully functional in the job and loss of corporate knowledge (Podsakoff, LePine & LePine 2007). Indirect and direct categories of turnover costs include; separation; attraction and recruitment; selection; hiring; training; customer dissatisfaction; lost productivity (Phillips & Edwards 2009; Tracey & Hinkin 2008). In some cases, replacement costs for a skilled position, including recruitment, training, specialist knowledge and productivity, may cost up to 150 per cent of an employee's salary.

To illustrate this cost, when considering a 10.1 million person workforce and applying a conservative figure of 75 per cent of an average $55 000 salary, the cost to organisations based on Australian Bureau of Statistics data is conservatively estimated at $20 billion nationally (Asquith et al. 2008, p. 1). Further to the cost, continuity of a service, especially in an area requiring skilled staff such as the health industry, is a service delivery necessity. The repercussions of increased turnover are mostly negative and

detrimental to the remaining staff and can ultimately impact on the client group (Aitken et al. 2002; Hinkin & Tracey 2000). Therefore, turnover is an extremely important area of study and organisations that can maintain their target turnover rate are much better placed in the highly competitive global economy.

Having established that the turnover field of study is vitally important for organisations, it is also recognised from the literature that many organisations do not attribute enough attention to the area of unwanted turnover (Barney 2002; Campion 1991; Hegney, McCarthy, Rogers-Clark & Gorman 2002; Phillips & Edwards 2009). In fact, many organisations do not measure or monitor turnover, set turnover targets or implement retention policies (Asquith et al. 2008). The looming threat of skills shortages and the ageing workforce in Australian organisations putting further strain on the supply of key talent is therefore a major concern for organisations, especially those operating in the health services, given the specialised skills mix required for optimum health service delivery. The next section of the discussion looks at the turnover discipline as it is relevant to this study.

2.5.1 Literature findings: Turnover

Prior to beginning a more focused discussion on turnover and turnover theory, it is appropriate to firstly consider the literature findings on turnover that are relevant and pertinent to the research objective. As with the first key discipline discussed - motivation, turnover has also been investigated in a relatively large number of studies over the years. Of the many references and publications, the ones selected for closer study appear below. They have been so chosen because they are the precursors to the focus of this study and have assisted in painting the background picture. One of the most salient messages from this background information has been that the turnover theories and models studied, as with motivation theories discussed above, have their supporters as well as their detractors (Bassett-Jones & Lloyd 2005; House & Wigdor 1967; Locke 1975). Further to this, some studies have suggested that turnover intention is the strongest predictor of turnover (Mobley et al. 1979; Tett & Meyer 1993, p. 260 after Lee & Mowday 1987; Michaels & Spector 1982; O'Reilly & Caldwell 1981), whilst other findings indicated that turnover and intention to turnover appear to be more complicated than previously believed (Lee et al. 1996; Mitchell et al. 2001a). Indeed, although it is generally agreed that given alternatives, people will stay if they are

satisfied, the research in scientific journals reports that work attitudes play only a relatively small role overall in employee turnover (Mitchell et al. 2001b after Hom & Griffeth 1995; Griffeth, Hom & Gaertner 2000). That is, other factors besides job satisfaction, organisational commitment and job alternatives are important for understanding turnover (Mitchell et al. 2001b after Maertz & Campion 1998). For example, alternative pathways not induced by job dissatisfaction were posited in Lee and Mitchell's (1994) unfolding model of voluntary turnover (Crossley et al. 2007). This work has lead to the development of the construct, 'job embeddedness', where people can become stuck or 'embedded' in their job (Crossley et al. 2007; Mitchell et al. 2001b).

Nevertheless, one consistency in the turnover literature that did become apparent was that job satisfaction was inversely related to turnover, however even the more complex theories with multiple attitudes and assessments leave about 75 per cent of the variance in turnover unexplained (Mitchell et al. 2001a, p. 98; Mobley et al. 1979).

The most relevant literature findings that elicited the above prominent points about turnover as a key discipline for this study are summarised in Table 2.4. The information from this section of the literature builds the base for the more focussed discourse on turnover which follows the summary table below. Studies in healthcare have been highlighted.

Table 2.4 Summary of relevant literature findings: Turnover

Turnover			
Researcher	**Purpose**	**Methodology**	**Relevant findings**
Porter & Steers (1973)	To attempt to break down the global concept of job satisfaction by analysing withdrawal behaviour	Critical examination of research over the past 10-12 years concerning turnover and absenteeism	Overall job satisfaction represents an important force in an individual's participation decision, however, it is not sufficient for explaining the withdrawal process.
Newman (1974)	To examine the relative efficacy of the Fishbein model and job attitude as predictors of absenteeism and turnover	Studied lab to field generalisability of Fishbein's attitude-behaviour model	Some field support for the model. Concluded that neither approach seemed more superior
Mobley (1977)	To suggest several of the intermediate steps in the withdrawal decision process	Review of literature, development of a heuristic model	Suggests that thinking of quitting is the next logical step after experienced dissatisfaction, and that 'intention to leave' following several other steps may be the last step prior to actual quitting.
Mobley et al. (1979)	Attempt to clarify and integrate constructs of	Review of literature, development of a	Analysis of employee turnover literature reveals that age, tenure, overall

Turnover			
Researcher	**Purpose**	**Methodology**	**Relevant findings**
	turnover into a general model of the individual employee turnover process	conceptual model	satisfaction, job content, intentions to remain, and commitment are consistently and negatively related to turnover. Generally however, less than 20% of the variance is explained. Turnover intentions significantly related to turnover.
Bluedorn (1982)	Developing a unified model of turnover	A model is developed by synthesising 3 turnover models and tested via path analysis	Price Model: series of structural and individual determinants of job satisfaction; Organisational Commitment Model: strength of involvement with and organisation; Mobley Model: linkages between job satisfaction and turnover New model generally supported.
Hom & Griffeth (1991)	Two studies were designed to overcome shortcomings of past research on Mobley's (1977) theory	1. Construct validation 2. Panel investigation	The study supported many of Mobley's (1977) basic tenets but also compelled revision. Job dissatisfaction may stimulate a general behavioural predisposition to withdraw, may mobilise more specific withdrawal intentions.
Tett & Meyer (1993)	Comparison of job satisfaction and organisational commitment as unique precursors of employee withdrawal	Aggregations of 178 independent samples from 155 studies	Job satisfaction, organisational commitment and intent to quit are among the most commonly proposed antecedents of turnover. Turnover intention is the strongest cognitive precursor of turnover.
Lee et al. (1996)	Report on a test of Lee and Mitchell's unfolding model of voluntary departure from an organisation	Interviews with **nurses** and a mailed survey analysed quantitatively and qualitatively	Data indicate that quitting is more complicated than traditional turnover theories imply. In 55% of the cases, job dissatisfaction was reported, followed by a job search, an evaluation of located alternatives and subsequent quitting. The remaining 45% cannot be easily explained by traditional turnover theories. Introduced the notion of 'shocks to the system' and 4 decision pathways.
Mitchell, Holtom & Lee (2001a)	Describes some new research and its implications on managing turnover and retention – unfolding model of turnover	Qualitative and quantitative studies: Bank, **nursing**, grocery store and accounting staff	Leaving process is considerably more complex than reflected in the conventional wisdom. Complex theories leave about 75 percent variance in turnover unexplained. Process of leaving was initiated by a shock 63%, than by accumulated dissatisfaction 37%.
Mitchell et al. (2001b)	Introduction of a new construct to predict voluntary turnover "job embeddedness"	Developed a measure of job embeddedness with 2 samples: grocery store and hospital respondents	Embeddedness was conceptualised specifically as reflecting the totality of forces that constrain people from leaving their current employment, capturing those factors that embed and keep an employee

Adapted from: Perry (2002, p. 24); developed for this study

2.5.2 Turnover Theory

i) Rationale for the choice of turnover theory

It is apparent from the literature that most of the contemporary turnover theory developed its current form during the years 1977 to 1981 when many of the discipline's most impressive turnover models were first presented (Steel 2002, p. 346). Since this period, the newer turnover frameworks mostly resemble extensions or enhancements of these earlier 'core models' (Steel 2002). The earliest formative arguments were based on a long tradition of job satisfaction – turnover research, which later expanded to include organisational commitment, job search and attitude theory (Steel 2002 after Porter & Steers 1973). Also reflected in the literature is the application of behavioural intentions – notably intention to turnover, as one of the best predictors of employee turnover (Steel 2002 after Carsten & Spector 1987; Him et al. 1992; Steel & Ovalle 1984).

Testing of these models has lead to a convergence of results around the importance of dissatisfaction, perceived alternatives, intentions to search and intentions to quit as the four antecedents of voluntary turnover (Crossley et al. 2007 after Steel 2002). Whilst there appears to be some similarities in the models, one notable exception to the traditional theme is Mitchell and Lee's (1994) unfolding model of voluntary turnover (Crossley et al. 2007). This model proposes alternative pathways to voluntary turnover that are not induced by job satisfaction (Crossley et al. 2007), and may in fact result from a shock to the person.

In view of the discussion above, turnover theory was selected as a major plank in this investigation because the dependent variable has been determined as turnover intention, regarded by many researchers as an antecedent of turnover (Griffeth et al. 2000; Williams & Hazer 1986).

ii) Mapping to turnover

The construct turnover intention for the purposes of this study will include; Job satisfaction, thoughts of quitting, job search and intention to quit. These items are considered by a number of researchers to be important in the predictor-turnover relationship (Griffeth et al. 2000; Mobley et al. 1979). They will be investigated further in this study with regards to their relationship with the identified retention factors.

Although this study is investigating relationships between variables, it must be noted that it is not investigating path analysis or causality at this time.

iii) Critique of turnover studies

Some researchers have concluded that many studies from the turnover literature point to the importance of job satisfaction as a predictor of turnover, whilst other studies report investigations in to the importance of intermediate linkages in the withdrawal process (Griffeth et al. 2000; Mobley 1977; Porter & Steers 1973; Williams & Hazer 1986). The significant point in all of these findings and conclusions is that there is yet to be found a definitive model for the behaviour/withdrawal process. For this reason, ongoing testing of models and investigations from different perspectives are necessary to shed more light on the area.

2.5.3 Summary of turnover section

It is obvious from the large number of studies and investigations in to employee turnover that the turnover topic is one of great relevance and importance. Although there is no one turnover theory per se, this section has attempted to distil the wide ranging studies to focus on those areas relevant to the research objective for this study. Accordingly the section firstly discussed turnover and then presented relevant literature findings as the discourse became more focused. Discussion about turnover theory then ensued followed by the rationale, mapping the theory to the research objective and acknowledging some of the shortfalls. The next key discipline area is retention.

2.6 Retention

Along with motivation and turnover, retention is another important perspective in the effort to understand why employees stay or leave organisations and has therefore been included as the third key discipline for this study. Retention of staff and especially skilled practitioners is crucial to sound clinical and service delivery outcomes for a health service such as Queensland Health. It is readily acknowledged in the literature that retaining skilled and competent staff is key to service and operational excellence (Studer 2004). Furthermore, high employee retention will reduce overtime of

temporary staff and decrease transition costs for new employees as well as encourage continuity of service delivery for clients (Hudson 2007; Studer 2004). Employee retention is also a complex and multi-dimensional area of study. This is because of the many influences impacting on an employee in a health service such as Queensland Health.

2.6.1 Literature findings: Retention

To better inform the discussion, and in keeping with the sequence of the previous key discipline discussions, the next section firstly looks at relevant literature findings on retention. The most significant discoveries from the literature searching include the fact that there appears to be very little that is conclusive or definitive, regarding employee retention or turnover and what motivates employees to stay or leave an organisation (Kuhar et al. 2004; Mobley et al. 1979). Other findings present numerous effects that correlate with retention including gender, marriage, education and pay (Huang et al. 2005). Further to this, other studies have found numerous predictors of retention including age, motivation, rewards and job satisfaction (Tourangeau & Cranley 2006; Zurn et al. 2005). However, once again it is obvious that there is no definitive model or a definitive set of predictors of the complex process.

A brief snapshot of the relevant literature findings that have contributed to this section of the discourse as well as contributed to the knowledge base on which to build the conceptual framework for this study are presented in Table 2.5. The studies in healthcare have been highlighted.

Table 2.5 Summary of relevant literature findings: Retention

Retention			
Researcher	**Purpose**	**Methodology**	**Relevant findings**
Atencio, Cohen & Gorenberg (2003)	To better understand factors that influence workforce burnout and ultimately turnover	Longitudinal descriptive study – surveyed every 6mths over 24mths	The role of retention efforts has become a critical task for **nursing** leaders
Dockery (2004)	To explore workforce experience and retention in **nursing** in Australia	Self-completion questionnaire	Job satisfaction, personal safety and recognition are important for increasing retention
Kuhar et al. (2004)	Develop, test and implement the Meaningful Retention Strategy in a **multihospital** system	Survey: **Nurses** Development of the Meaningful Retention Strategy Inventory	No single key retention strategy that solves the **nursing** shortage, rather a multi-component approach is necessary to create the milieu that retains staff.

Retention			
Researcher	**Purpose**	**Methodology**	**Relevant findings**
Huang, Lin & Chuang (2005)	Examine the effect of various factors on job retention	Secondary data, interviews, hierarchical regression analysis: Construction and HR staff	Gender, marriage, education, honoured employee status, pay and cyclical economic effects were found to be significantly correlated with retention length.
Zurn, Dolea & Stilwell (2005)	To examine how to develop and retain a motivated **nursing** workforce	Review of data and policy from developed and developing countries	Motivation at work is widely believed to be a key factor for performance of individuals and organisations and is also a significant predictor of intention to quit.
Tourangeau & Cranley (2006)	To test an hypothesised model of the determinants of **nurse** intention to remain	Descriptive survey design adopted	Strongest predictors of retention were nurse age, overall nurse job satisfaction and years of employment
4-consulting & Research (2007)	Review of employee engagement literature	Staged approach – literature review, review of current status of employee engagement	Employee engagement is a two-way interaction between employer and employee
Penz et al. (2008)	Examines predictors of job satisfaction among **nurses**	Analysis of a cross-sectional national survey	Recruitment and retention strategies must acknowledge that work lives and community lives are inextricable intertwined
Lavoie-Tremblay et al. (2008)	To address the turnover issue among new **nurses**	Self-administered questionnaire to 1002 **nurses**	The balance between the level of effort extended and reward received plays an important role in young **nurses'** intent to leave
Armstrong-Stassen & Ursel (2009)	To investigate organisational support, career satisfaction and the retention of older workers	Tested a conceptual model of the relationships between organisational and career factors and older workers intention to stay	Authors conclude that implementing training and development practices targeting older workers and tailored to their needs are important to perceptions of organisational support

Adapted from: Perry (2002, p. 24); developed for this study

The next part of the discussion about retention further explains the complexities including the multi-dimensional influences on employees. It introduces two models; the Workforce Retention Framework and the Workforce Continuum. These models have been developed to present the context of the employee environment – specifically the influences and impacts on employees within the Queensland Health milieu.

2.6.2 Workforce Retention Framework

The Workforce Retention Framework (Figure 2.2) has been developed for this study in an attempt to contextualise the complex processes impacting on employees in Queensland Health in a simplified way. It is acknowledged that there are many complex processes that impact on an employee's decision to stay or leave an organisation (Albion et al. 2008; Mobley et al. 1979; Porter & Steers 1973). For the

purposes of this study, they have been categorised in to three domains: *workforce retention strategies* including support and development opportunities; *culture* of the organisation and *systems* within the organisation. It is acknowledged that culture and systems in organisations may have a significant effect on an employee, including their turnover intentions; however the focus of this study is on the workforce retention strategies and their impact on employee turnover intention. Although culture and systems are very important and can be influential, they are not the part of the in-depth investigations and are not within the scope of this study.

Developing workforce retention strategies, that is, support and development opportunities, requires the organisation to embrace a culture of learning (Senge 1990). The central star in the Workforce Retention Framework (Figure 2.2) represents the employee and suggests that if all these influences are suitably balanced, employee turnover may be maintained at a level acceptable by the organisation. The diamond symbol represents some of the tools that Queensland Health has used in an attempt to measure and monitor employee turnover. For the purposes of this study, the focus will be on a survey instrument that surveys employee perceptions of workforce retention strategies (See Figure 2.2). The oval at the top of the figure represents the ultimate aim and the important benefit to Queensland Health which will be the ability to better meet and maintain turnover targets.

Figure 2.2 Workforce Retention Framework
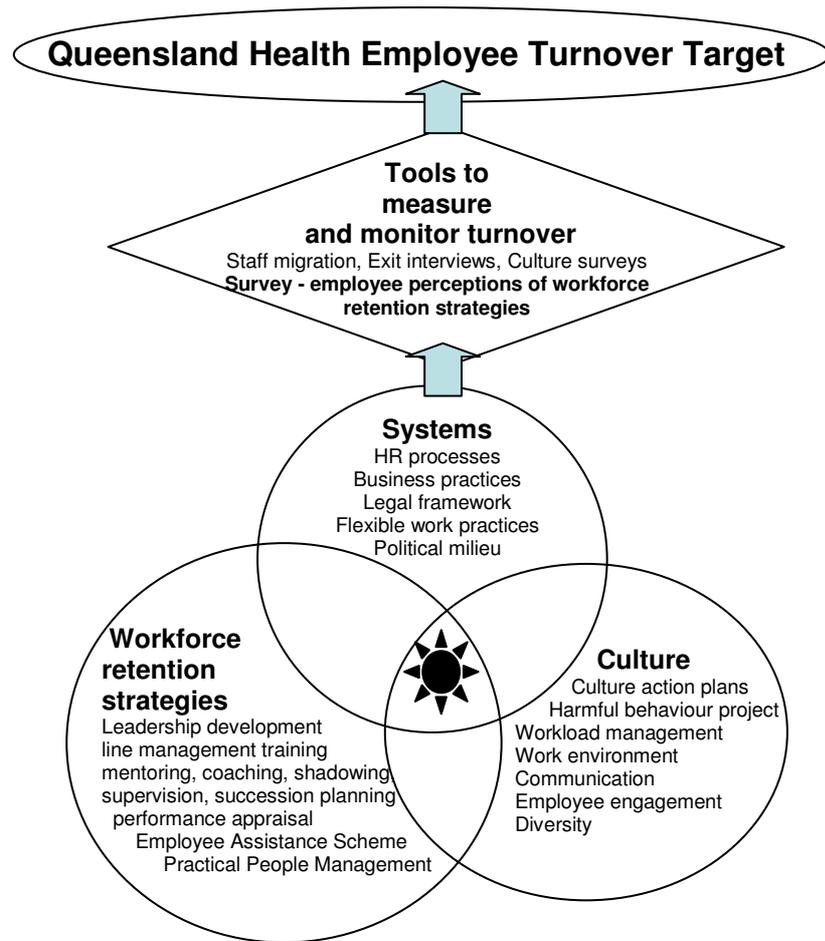
Source: Developed for this study

Whilst the Workforce Retention Framework illustrates the impacts and influences that employees may experience in their working lives, the Workforce Continuum presents the path an employee takes from hire to retire. Further to this, Figure 2.3 illustrates where workforce retention strategies fit on the Workforce Continuum.

2.6.3 Workforce Continuum

The Workforce Continuum (Figure 2.3) is connected to the Workforce Retention Framework (Figure 2.2) through the domains of *workforce retention strategies*, *culture* and *systems*. These domains are multi-dimensional, multidisciplinary, complex and overlapping. The Workforce Continuum has been included in this study because it helps to contextualise where workforce retention strategies link with an employee whilst they are employed with Queensland Health (Belbin 2006, 2007b, 2007a, 2008).

The Workforce Continuum was first developed in 2004 to describe the pathway experienced by an employee (represented by the blue star) from the pre-recruitment stage to their exit from Queensland Health. The model has been used in reports on Talent Management Transition for Apunipima Cape York Health Council (2006) and Gurriny Yealamucka Health Services Aboriginal Corporation (2007). It has also been used to provide the framework for the Northern Area Health Service Workforce Strategy (2007) and the Queensland Health Aboriginal and Torres Strait Islander Workforce Strategy (2010) (Belbin 2006, 2007b, 2007a, 2008).

Figure 2.3 Workforce Continuum

WORKFORCE CONTINUUM
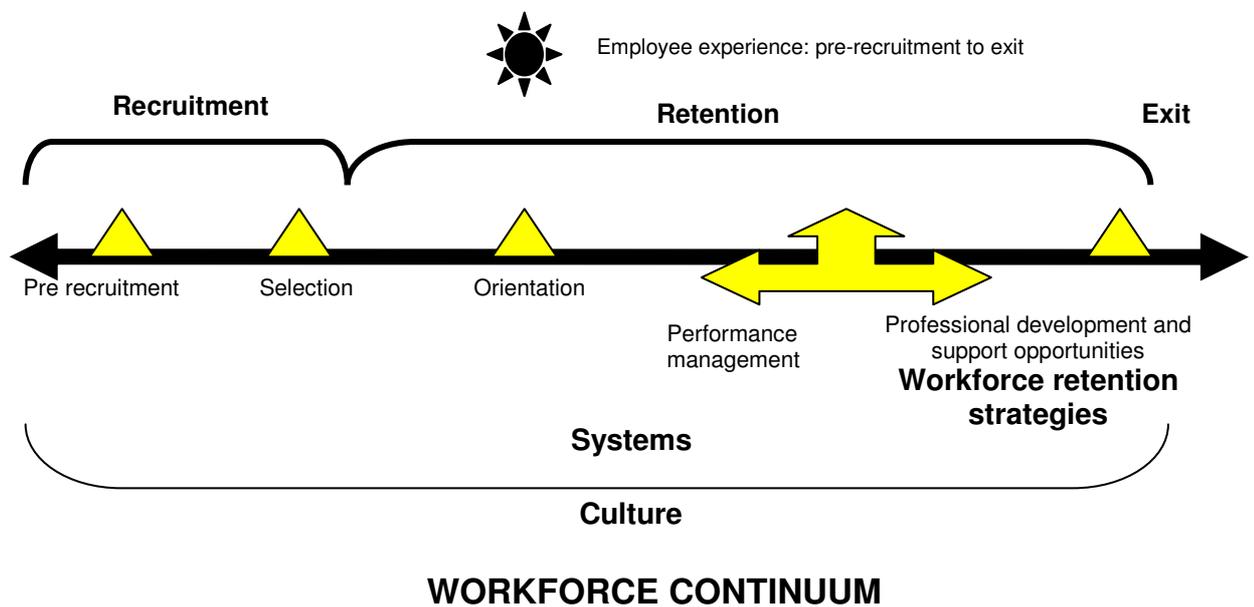
Source: C Belbin 2004

The main parts of the continuum are *recruitment*, *retention* and *exit* of the employee. The continuum is represented by a two-way arrow because Queensland Health invests resources in its pre-recruitment efforts to attract prospective employees, as well as having staff re-enter the workforce after exiting, through refresher training and attractive re-entry programs. These strategies are underpinned by a set of systems within the organisation, and are manifestly influenced by the culture of the organisation.

The triangles along the continuum in Figure 2.3 represent employee engagement in strategies such as selection, orientation, performance management and professional development and support opportunities (workforce retention strategies). Systems, culture and workforce retention strategies have been categorised as domains and they

connect with the Workforce Retention Framework in this regard (see in Figure 2.2). The strategies listed under the three-way arrow (performance management and professional development and support/workforce retention strategies) indicate that these strategies may occur at any and many points along the continuum.

2.6.4 Summary of retention section

This section has established the importance of retention as a key discipline. Specifically, it has provided context around the employee and the influence of the Queensland Health environment. The Workforce Retention Framework was presented to illustrate the influences from the three domains of systems, culture and workforce retention strategies on an employee whilst the Workforce Continuum was presented to exhibit where workforce retention strategies fit on an employee's employment pathway.

2.7 Workforce retention in a health service

The previous sections (2.5, 2.6 and 2.7) presented an overview of the three key disciplines; motivation, turnover and retention, as they applied to the research objective – workforce retention in a health service. From searching the literature, it is apparent that research and investigations into the three key disciplines are interrelated and overlapping (Zurn et al. 2005). Based on the previous discussion, it appears that there is plenty of scope and indeed necessity to view this area of research from different angles and perspectives to shed more light on the complexities. As a result of calls for new and innovative studies, this discussion now turns to a concentration on the research objective and presents an alternative perspective for investigation in to employee retention.

Recruiting and retaining a highly skilled, confident and competent health workforce is a huge challenge for health managers. The performance and quality of a health system ultimately depends on the calibre and motivation of the human resources in the system (Zurn et al. 2005). For these reasons, understanding as much as possible about retention and turnover intention is imperative.

The next section focuses on workforce retention strategies within Queensland Health, and specifically those strategies developed and implemented for the occupational stream of **Nursing**.

2.7.1 Workforce retention strategies – Nurses

In August 1998, The Ministerial Taskforce - **Nursing Recruitment and Retention** was established as an initiative of the Queensland State Government (Health Advisory Unit 1999). A Steering Committee was formed to manage the project with the aim to review workforce issues and the recruitment and retention of nurses in Queensland. As a result of the taskforce's work, 59 recommendations were submitted to the Minister for Health, the Honourable Wendy Edmond MLA. Recommendations from the Taskforce report included a number of workforce retention activities be implemented to decrease employee turnover among nurses. Many of these strategies are still being refined and updated.

In June 2005 a paper was prepared and overseen by the North Queensland Workforce Unit, Queensland Health, to examine the issues affecting mature-aged nurse retention in regional and north Queensland (North Queensland Workforce Unit 2005). The aim was to also gain information about strategies which could improve retention of nurses in this age demographic. A list of recommendations was submitted with the final report. Numerous other investigations have also studied aspects of nursing retention with findings that generally reflect a list of factors that are perceived as improving job satisfaction (Dockery 2004; Hegney et al. 2002; Queensland Government 2008). It is obvious from the literature available that efforts have been made to improve retention for nurses through the development and implementation of professional support and development programs and activities. The question that begs is *whether any of these efforts have made any return on the investment*.

This next section of the discussion presents the types of workforce retention strategies that have been developed and implemented by Queensland Health. Many of the programs are generic – that is, available to a number of occupational streams, whilst some are designed specifically for nurses.

These programs are intended to support and develop the employee and in doing so may improve motivation and job satisfaction subsequently leading to decreased turnover intention. Examples of these programs are listed in Table 2.6.

The table presents 28 different workforce retention strategies that may be accessed by nurses working in Queensland Health, however this is not claimed as an exhaustive list. Seven of the strategies have been specifically developed for nurses. To some extent, a number of these seven nurse-only oriented strategies are a result of the recommendations from the Ministerial Taskforce - Nursing Recruitment and Retention. Notably, some of the strategies have been specifically aimed at Aboriginal and Torres Strait Islander nurses working in Queensland Health.

Table 2.6 Workforce retention strategies in Queensland Health – accessible by nurses

Workforce retention strategy	Duration	Description/ target group	Nurses only	Generic
Leadership programs:				
1. Inspiring leadership	2 days	Upcoming leaders		✓
2. Energising from conflict	2 days	Upcoming leaders		✓
3. Coaching skills for leaders	1 day	Upcoming leaders		✓
4. Leadership qualities	1 day	Develop leadership skills		✓
5. Emerging clinical leaders	12 mths	Aspiring clinical leaders		✓
6. On-line leadership modules	On-line	Leadership understanding		✓
7. Practical People Management	3 stages	Whole of govt initiative		
Other retention programs:				
8. Maturity Matters	Negotiated	Flexible work options	✓	
9. Transition to Retirement	Negotiated	Phased approach	✓	
10. Work/life balance agreement	Negotiated	Human resources policy		✓
11. Flexible work plan	Negotiated	Balancing work, family, life		✓
12. Peer support program	Negotiated	Support from colleagues		✓
13. Work shadowing	Negotiated	Support from colleagues		✓
14. Succession planning	Ongoing	Career development	✓	
15. Coaching	Negotiated	Career development		✓
16. Mentoring Framework	6-12 mths	Career development	✓	
17. Indigenous Mentoring Program	6-12 mths	Aimed at new recruits		✓#
18. Cadetships – Indigenous Nursing	3 years	Undergraduate nurses	✓#	
19. Rural Scholarship Scheme	2-4 years	Service period obligation	✓	✓
20. Graduate Programs (Transition)	12 mths	Clinical nursing within an educational framework	✓	
21. Better Workplaces staff survey	Every 2 yrs	Satisfaction survey		✓
22. Study and Research Assistance Scheme (SARAS)	Negotiated	Assistance to participate in further education		✓
23. Employee Assistance Scheme (EAS)	As required	Confidential and external		✓
24. Performance Appraisal & Devt	6 mth cycle	Negotiated with supervisor		✓

Workforce retention strategy	Duration	Description/ target group	Nurses only	Generic
Remuneration incentives				
i. Salary packaging	As required			✓
ii. Prof development allowance	As required	Part of nursing award	✓	
iii. Prof development leave	As required	Part of nursing award	✓	
iv. Half pay holidays	As required			✓

\# Workforce retention strategies developed for Aboriginal and Torres Strait Islander staff
Source: Developed for this study

2.7.2 Summary

This section of the chapter focussed on the research objective, namely 'Workforce retention in a health service'. It specifically looked at workforce strategies for nurses and explained some of the efforts made by Queensland Health to provide workforce retention strategies for nursing staff. The subsequent discussion is the culmination of all the pertinent literature findings to develop and explain the conceptual framework, which provides the backbone of the research investigation.

2.8 Conceptual framework

This section of the chapter focuses on the conceptual framework and begins by including the significant literature findings that have either influenced or have been applied in its development. Following this, the components of the conceptual framework are explained and presented diagrammatically. Funnelling down from this discussion is an explanation of the variables selected to inform the research objective.

2.8.1 Literature findings: Conceptual framework

There are a number of findings from the key discipline literature that underpin the rationale of the conceptual framework. The following segment is a summary of the most significant findings from the relevant literature that have influenced or impacted on its development and design. The left hand column in Table 2.7, 'Literature findings', is the source of the concept and the right hand column, 'Influenced or included in the conceptual framework', explains how the concept was included or in some way influenced the development of the conceptual framework.

Table 2.7 Summary of the most significant literature findings that have influenced the development of the conceptual framework

Literature findings	Influenced or included in the conceptual framework
▪ A more complete understanding of the psychology of the withdrawal decision process requires investigation beyond the satisfaction-turnover model (Mobley 1977). Numerous calls to expand turnover research in new directions (Mossholder, Settoon & Henagan 2005)	▪ Attempt has been made to use a completely different perspective to shed further light on why employees stay or leave an organisation by analysing content and context of workforce retention strategies rather than the traditional job content or job context.
▪ Prior to Mobley's work (1977), most studies of turnover had investigated the direct relationship between job satisfaction and turnover. Mobley presented a model suggesting a number of mediating steps between dissatisfaction and actual quitting: dissatisfaction – thoughts about quitting – job search – uncovering alternatives – quit decisions – resignation (Hom & Griffeth 1991 after Mobley 1977). As work progressed in this field, the search for affect-turnover linkages expanded to include organisational commitment, attitude theory and behavioural intentions (Steel 2002).	▪ The conceptual framework does not in any way represent causality. The literature indicates that as more research in to this field occurs, the more complex it seems to become. The application of cybernetics to model human decision making (Steel 2002) attests to the complexity.
▪ Meta-analysis of the literature divulged that proximal precursors in the withdrawal process were the best predictors of turnover: job satisfaction, organisational commitment, job search, comparison of alternatives, withdrawal cognitions, quit intentions (Griffeth et al. 2000)	▪ There are some consistencies as a result of turnover theory studies and this is reflected in the framework. It is generally agreed that motivation and satisfaction are antecedents (not necessarily causal) of turnover intention.
▪ When studies focus on turnover resulting from constructs such as organisational commitment or job involvement – and not the usual focus of job dissatisfaction, the causal process that induces employees to quit is not well understood (Lee et al. 1996).	▪ The conceptual framework will test whether there are any relationships between the independent variables - retention factors, and the dependent variable – turnover intention.
▪ The state of the economy appears to be an accurate and single predictor of labour turnover (Huang et al. 2005 after March & Simon 1958).	▪ This is noted, but is outside the scope of the study and therefore not included in the framework.

Literature findings	Influenced or included in the conceptual framework
▪ Moderator variables need to be considered as they can affect the direction and/or strength of the relationship between dependent and independent variables (Hair et al. 2006).	▪ Moderator variables have been included in the conceptual framework to assess the impact of any overarching influences on an employee's perceptions about turnover and turnover intention to ensure validity of the study. They include gender, age and tenure.

Source: Developed for this study

2.8.2 Components of the conceptual framework

The conceptual framework is the result of the combination of three selected motivation theories that have been applied to workforce retention strategies to identify the retention factors. Referring to Figure 2.4, the black arrowed line represents a pathway that explores employees' perceptions of retention strategies and their effects on turnover intention, rather than the traditional perspective of investigating employees' perceptions of their job and its effects on turnover. It is important to note that the conceptual framework does not represent a causal link between retention factors and turnover intention and it is acknowledged that there may be many intermediate linkages between each step along the pathway (Mobley 1977; Podsakoff et al. 2007).

Moderator variables were also included in the conceptual framework. Their inclusion in the study was based on the literature search which indicated that their presence may have some effect on the retention factors - independent/ turnover intention - dependent variable relationship and therefore also required investigation. The dotted line in Figure 2.4 represents the exploration of the effect of the selected moderator variables on the independent/dependent variable relationship.

The conceptual framework will be tested to determine if the relationship between the independent variables and dependent variables is varied when taking into account the moderator variables listed. Moderated regression analysis of the three models for each demographic variable in the conceptual framework will be used to investigate the relationships, as portrayed in Figure 2.4.

Figure 2.4 Conceptual framework
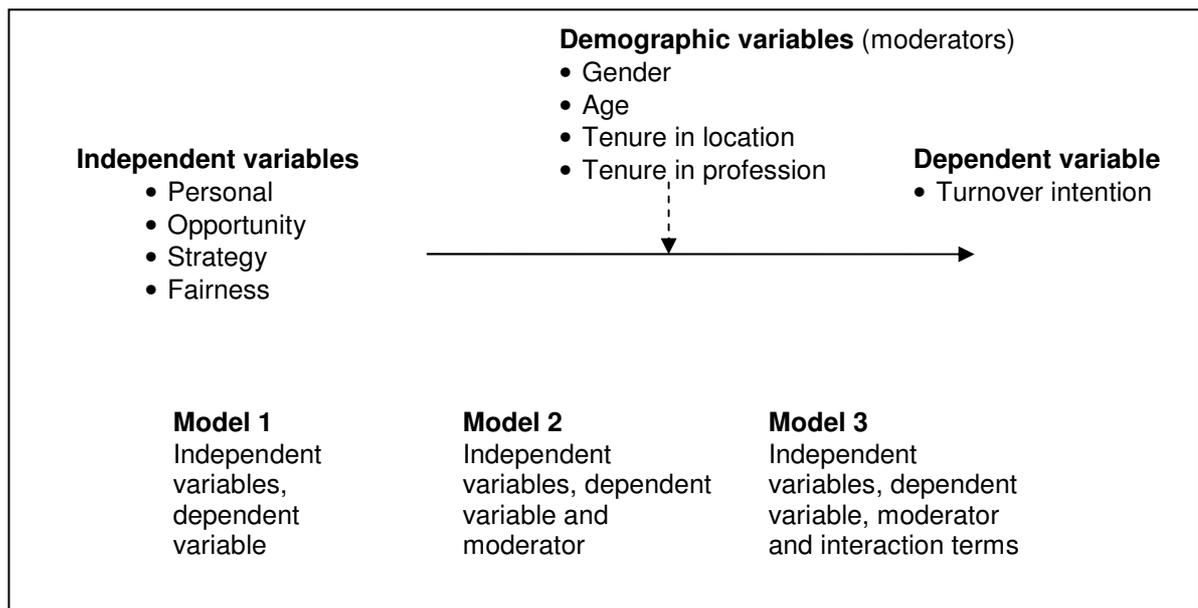
Source: Developed for this study

The following discussion explains the components of the conceptual framework in more detail.

i) Independent variables: retention factors

To investigate the complexities of the pathway between retention factors and turnover intention, Herzberg's two-factor theory, expectancy theory and equity theory were adapted and applied to workforce retention strategies to identify retention factors (Bassett-Jones & Lloyd 2005; DeShields Jr O W et al. 2005; Ivancevich & Matteson 1990; Mukhi et al. 1991; Schroder 2008). The 20 identified retention factors (See Table 2.3) are the **independent variables** in this study and they will be tested against turnover intention as the dependent variable to see if any relationships are identified (Atchison & Lefferts 1972; Bassett-Jones & Lloyd 2005; DeShields Jr O W et al. 2005; Mukhi et al. 1991). Traditionally, investigations have looked at aspects of an employee's job situation and organisation environment for example, whereas this study investigates from the perspective of an employee's perceptions of workforce retention strategies. The identified retention factors are therefore considered independent variables because they will be investigated to determine if there are any relationships between them and the dependent variable – turnover intention – the phenomenon to be explained.

To enable the examination of underlying patterns and relationships of a large number of variables, factor analysis was conducted on the independent variables, that is, the retention factors, resulting in four factors (Coakes & Steed 2007; Hair et al. 2006). Chapter 4 Analysis of Results fully explains the data analysis process. These four factors, that is, the groupings of the 20 retention factors, were applied to the conceptual framework as the independent variables for the study (See Figure 2.4).

The ensuing discussion on turnover theory provides justification and clarity about the dependent variable chosen - turnover intention.

ii) Dependent variable: Turnover intention

Based on previous studies, this study applies employee turnover theory (See Section 2.5.2) to identify if there are any relationships between the independent variables, that is, retention factors (See Table 2.3) and the **dependent variable** of turnover intention (See Figure 2.4). Prior to Mobley's work on turnover (1977), studies had looked at the direct relationship between job satisfaction and turnover. Mobley however, presented a model of turnover research that suggested a number of mediating steps between dissatisfaction and actual quitting (Hom & Griffeth 1991 after Mobley 1977). Building on these findings, the proposed constructs of the dependent variable turnover intention for the purposes of this study are: job satisfaction; thoughts of quitting; job search; intentions to quit, and they have therefore been included in the conceptual framework (Hom & Griffeth 1991; Mobley 1977; Mobley et al. 1979)

Factor analysis was also conducted on the dependent variables and resulted in 1 factor labelled as turnover intention. Chapter 4 fully explains the data analysis process. The dependent variable was also incorporated into the conceptual framework.

iii) Demographic variables

To ensure there were no major underlying influences affecting employee perceptions, certain demographic factors were investigated for their impact on the relationship between the independent variables – retention factors, and the dependent variable - turnover intention. These factors included: gender, age and tenure. Moderator variables need to be considered as they can affect the direction and/or strength of the relationship between the dependent and independent variables (Hair et al. 2006).

These demographic factors have been chosen because they may have an influence on how participants characterise workforce retention strategies in terms of retention factors. This is adapted from findings in the literature where similar demographic factors have been used to investigate job satisfaction and job attitudes (Furnham et al. 2009; Kavanaugh et al. 2006; Ng & Sorensen 2008; Schroder 2008). Notably, regarding turnover, moderators have been reported as having 'pervasive variability', and this also emphasises the importance of determining if there is an influence on the independent/dependent variable relationship as a result of their presence (Griffeth et al. 2000).

The next section of the discussion explains more fully the demographic variables for this study and how they may impact on the independent/dependent variable relationship (See Figure 2.4), including references to previous studies justifying their application to this study.

a) Gender: Although conditions are changing, men and women generally live in different social contexts where women are still mostly responsible for the majority of household and care giving tasks (Griffeth et al. 2000; Ng & Sorensen 2008 after Vaux 1988). Gender has been included as a moderator variable because the majority of nurses working in Queensland Health are female. For example, workforce retention strategies may not work as well for women because they may have less time to participate, given their high time commitments for care giving tasks.

b) Age: Age has been included as a moderator variable because the literature has identified that there are different perceptions of job satisfaction and motivation across the age spectrum. For example, studies of healthcare professionals which examined the association between job satisfaction and generational differences found that younger nurses had lower levels of job satisfaction while the older age group 40+ had higher levels of job satisfaction (Griffeth et al. 2000; Kavanaugh et al. 2006; Wilson et al. 2008). Investigating age as a moderating variable may identify whether a certain age group is more receptive to the benefits of workforce retention strategies. For example, younger nurses may be keen to participate in retention strategies than older more experienced nurses who are more comfortable in their positions and have been working in them for a long period.

Further to this, useful information could be gained if it was to be determined that a particular age group influenced the types of retention factors that affected their intention to leave the organisation.

c) Tenure: Employees with higher tenure may have familiarity with their work role and have reached a higher level of career attainment than those employees with lower tenure (Ng & Sorensen 2008). Studies have shown that nurses with different levels of tenure are not motivated to remain with an organisation by the same incentives (Kavanaugh et al. 2006, p. 305). For example, experienced nurses tended to view flexible schedules as more important for their job satisfaction than those nurses beginning their careers (Kavanaugh et al. 2006, p. 307). This study will investigate both tenure of the nurse at their current location and tenure of the nurse in the profession as moderating variables to determine if either has any significant effect on the relationship between retention factors and turnover intention. The rationale for choosing both these aspects of tenure is that firstly certain locations (work units) may influence an employee's characterisation of retention factors by being very supportive of these programs, and secondly, a nurse's tenure in the profession may also influence their characterisation of retention strategies. For example, nurses with longer tenure may be more cognisant of the type of workforce retention strategies available and therefore, may participate more frequently and with better outcomes.

In view of the discussions and speculations on the choice of moderator variables of gender, age and tenure, it is apparent that determining if there are any influences on the retention factor / turnover intention relationship may assist in shedding more light on the relationship. Studies have been referenced and examples given in the section above have suggested how each moderator variable may affect the independent/dependent relationship and therefore require closer scrutiny. Investigating these moderator variables and their effects on the independent/dependent variable relationship is a new contribution to this area of study.

d) Economic climate: Although it is noted that individual-based and organisation-based factors are important to worker retention, the state of the economy has been reported in the literature as being the most accurate predictor of labour turnover (Huang et al. 2005 after March & Simon 1958; Ehrenberg & Smith 1994; Hulin et al 1985; Michaels and Spector 1982; Gerhart 1990). Further to this, it is noted in the literature that there is a

greater propensity for workers to turnover when it is relatively easy to get another job. Therefore turnover rate in the overall market tends to be higher during times of prosperity, compared to times in economic recession (Huang et al. 2005 after Ehrenberg & Smith 1994). More specifically, the period from late 2008 to early 2010 saw Australia embroiled in an economic downturn. Anecdotally, during this time period, Queensland Health experienced periods of full rosters and a complete slowing of employee turnover in many of its facilities.

Although there does not appear to be any formal study reporting this in the literature, personal communication with relevant human resources managers have supported this. Since the beginning of 2010, it has been reported through the financial sector that the economy has picked up again. Employees will therefore be affected by these economic changes in different ways. Although there may be influences on employees and their turnover intention, these factors are outside the scope of this study at this time.

It is also salient to note that Queensland Health experienced major difficulties with its payroll during the latter part of 2010, whilst transitioning to a new payroll system. This unforeseen event affected nursing staff in the cohort being studied and is further discussed in Chapter 5, Discussion and Conclusions.

iv) Three models to explore the relationships

The three models presented in the conceptual framework were designed to explore the independent/dependent relationships and to determine whether there was an effect on this relationship as a result of the moderating variables. Model 1 includes the independent and dependent variables. Model 2 includes the independent and dependent variables plus the moderating variables. Model 3 includes the independent and dependent variables, the moderating variables and the interaction terms. These models were tested using moderated multiple regression which is fully explained in Chapter 4 Analysis of Results, Section 4.4.4. It is also noted that theoretical justification must not be neglected when analysing and interpreting results and this is further discussed in Chapter 5 Discussion and Conclusions. All of these components are illustrated in Figure 2.4 which presents the conceptual framework for the study.

This brings the discussion to a point where research questions 3 and 4 are elicited:

RQ3. What is the relationship between various retention factors and turnover intention?

RQ4. How does the relationship between retention factors and turnover intention vary when taking into account the demographic variables of gender, age and tenure?

2.9 Summary of the chapter

Previous studies in the area of turnover research have focussed on the proximal antecedents such as job satisfaction, organisational commitment and job search (Crossley et al. 2007; Griffeth et al. 2000; Steel 2002; Williams & Hazer 1986). This discussion has argued a case for applying previous findings and theoretical models, and adapting them to view the study of turnover research from the perspective of an employee's perception of workforce retention strategies rather than the employee's perception of their job per se. The study will apply Herzberg's two factor theory of motivation, expectancy theory and equity theory to workforce retention strategies to investigate the employee perceptions of the effectiveness of workforce retention strategies and their influence on employee intention to turnover.

Although there are numerous references in the literature that have reported on employee turnover and job satisfaction, motivation and engagement (Chiu et al. 2005; Lee et al. 1996; Mitchell et al. 2001a; Price 2001; Sheridan 1992), there appears to be a gap in the literature concerning employee perceptions of workforce retention strategies and their effect on turnover intention or turnover. This study will contribute to bridging this gap and shed more light on the complexities of employee turnover from a different perspective. This study attempts to increase knowledge in the theoretical understanding of employee turnover (theory generating), and may contribute to policy considerations by Queensland Health regarding development and implementation of workforce retention strategies (Punch 2006, p. 69). The findings will also assist with increasing the toolkit for practitioners wishing to decrease employee turnover, further developing and implementing effective workforce retention strategies and ensuring the effective use of a finite budget.

The chapter has presented the arguments and rationale for this line of study based on the extensive literature search conducted. The chapter firstly set the scene with an explanation of the context of the study, followed by definitions of the core concepts before moving in to a discussion on each of the key discipline areas as relevant to this study. The research objective was then explained and the point of the chapter was the development of the conceptual framework which was then elucidated. The chapter concludes with the key research issue and objective, as follows.

Research issue

Targeting employee perceptions of workforce retention strategies: Application of three motivation theories to investigate the effect on turnover intention

Research objective

To examine the perceptions of employees regarding the effectiveness of workforce retention strategies implemented in a health service.

CHAPTER 3 - METHODOLOGY

3.1 Introduction

This chapter restates the research objective and the research questions introduced in Chapter 1 Introduction and further elaborated in Chapter 2 Literature Review, because they form the basis for the choice of paradigm, the research design, research methodology and the selection of instruments (Erwee 2009). Furthermore, this chapter describes the major methodology employed to collect and analyse the data and also discusses the quality, limitations and ethical considerations of the study.

3.2 Research objective, questions and hypotheses

Acknowledging the importance of workforce retention for organisations and especially within health services requiring a skilled, competent and confident workforce as described in Chapter 2 Literature Review, the **research objective for this study is: *To examine the perceptions of employees regarding the effectiveness of workforce retention strategies implemented in a health service.***

This section reiterates the research questions previously elicited and drills down to present the hypotheses developed to inform the research objective. Consequently, the research questions and hypotheses formulated to inform the research objective are:

RQ1. *What are employees' perceptions about workforce retention strategies being used in Queensland Health; informed by:*
  a. Employees' awareness of workforce retention strategies.
  b. The level of participation in workforce retention strategies.
  c. The perceived level of effectiveness of workforce retention strategies.
  d. The perceived barriers to participating in workforce retention strategies.

RQ2. *How do respondents characterise their preferred workforce retention strategy in terms of retention factors?*

RQ3. *What is the relationship between various retention factors and turnover intention?*

H_1 There is a positive relationship between retention factors and decreased turnover intention.

RQ4. *How does the relationship between retention factors and turnover intention vary when taking into account the demographic variables of gender, age and tenure?*

H_2 Gender does not significantly moderate the relationship between retention factors and turnover intention.

H_3 Age does not significantly moderate the relationship between retention factors and turnover intention.

H_4 Tenure (length of time in the location) does not significantly moderate the relationship between retention factors and turnover intention.

H_5 Tenure (length of time in the profession) does not significantly moderate the relationship between retention factors and turnover intention.

i) Determination of the hypotheses

The directional hypothesis determined for research question 3: *RQ3 H_1 There is a positive relationship between retention factors and decreased turnover intention,* was supported by literature findings as they applied to employee retention and turnover, on which this study was based. The literature findings indicate a strong relationship between job satisfaction and motivation and decreased turnover (Mobley, Horner & Hollingsworth 1978) (Griffeth et al. 2000). For this reason the concept was adapted to employee perceptions of workforce retention strategies and turnover intention to arrive at this hypothesis.

Null hypotheses, were chosen to test whether a statistically significant relationship existed between the variables for research question 4: *RQ4 How does the relationship between retention factors and turnover intention vary when taking into account the demographic variables of gender, age and tenure?* The null hypothesis states that there is no difference between the two conditions beyond chance differences. However, if a statistically significant relationship is found, the null hypothesis is rejected (Levin & Fox 1988). The null hypotheses have been employed to determine if there is any variation in the relationship between retention factors and turnover intention when taking into account the demographic variables of gender, age and tenure. Null hypotheses were chosen because there is a paucity of information in the literature pertaining to these relationships.

The generation of the hypotheses for this study has been a deductive process in that firstly the conceptual framework was developed and then testable hypotheses were formulated (Cavana et al. 2001, p. 103).

3.3 Research paradigm

Determining the paradigm or perspective behind the research is important because it informs and sets the foundation for the research process (Punch 2006). Paradigms are fundamental assumptions that scholars bring to their work and cause them to approach argument or inquiry in very particular ways (Toma 1997 after Guba 1993). They are belief systems about "…questions of reality, truth, objectivity and method that cut across the disciplinary boundaries" (Toma 1997, p. 681). The differing beliefs in the field of business research can be broadly categorised under three schools of thought, or paradigms, namely, positivist, interpretivist and critical research (Cavana et al. 2001, p. 8).

The research paradigm applied for this study is a positivist approach emphasising a commitment to naturalism and quantitative methods (Neuman 2003; Punch 2006 after Seale 1998). Positivism has been chosen as the most suitable paradigm for this study because it is usually associated with quantitative data, a linear strategy of formulating hypotheses is used and the null hypothesis is employed in the attempt to disprove the hypotheses. In addition, rigorous steps are followed to gather the data and they are analysed using statistical methods. Positivist research uses deductive reasoning to firstly develop a theoretical position and then moves towards empirical evidence to support or reject the hypotheses (Cavana et al. 2001, p. 8). The approach taken for this study fits with all of these elements and therefore positivism is justified as the research paradigm of choice.

Although positivism was chosen as the most appropriate paradigm, it is important to note and acknowledge criticisms of the positivist research paradigm. For example, some critics believe that positivist research is superficial and fails to deal with the way people think and feel (Cavana et al. 2001). There is also criticism about the supposed independence of the researcher and the suggestion that the use of statistical procedures

attempts to hide the fact that all researchers have subjective responses and involvement with their research (Cavana et al. 2001). These criticisms are noted and duly acknowledged. Careful consideration of these shortcomings, and efforts to mitigate them will be explained further in Section 3.4 following.

3.4 Research design

Having determined the research paradigm, the next section of the discussion focuses on the research design for the investigation. Research design is the plan, structure and strategy of the investigation developed to inform the research objective and answer the research questions (Kerlinger & Lee 2000). The choice of research design involves a series of rational decision-making choices. Notably, the extent of scientific rigour in the study depends on the appropriate choices matched to the study's specific purpose (Cavana et al. 2001).

There are six basic aspects of research design and these include; purpose of the study, type of investigation, extent of researcher interference, the study setting, time horizon and the unit of analysis of the study (Cavana et al. 2001). Other aspects of importance include; measurement, data collection methods, sampling design and data analysis (Cavana et al. 2001). These aspects of research design and the relevant choices for each are presented in Figure 3.1 and explained as follows.

i) Purpose of the study: Exploratory and descriptive
There are generally three types of research design (Zikmund 2003b): Exploratory which attempts to classify the nature of problems; descriptive which describes characteristics of a population by answering who, what, where, when and how questions; and causal which determines cause and effect relationships (Leedy & Ormrod 2005). This study employs a mix of the types of research design. It is of an exploratory nature because there is not a significant amount of material in the literature within the subject context. For this reason it is anticipated that this study will enhance the understanding of workforce retention strategies and turnover intention and serve as a justification for further research into more specific areas in Queensland Health. The study is also considered descriptive because there appears to be a dearth of information in the

literature in relation to workforce retention strategies and turnover intention. The study will provide data about a specific sample drawn from the Queensland Health population. This approach is supported by Zikmund (2003b), where it is suggested that the objective is to provide a systematic description that is as factual and accurate as possible.

ii) Type of investigation: Correlational

Although the research is not causal and therefore not predictive, it is correlational because correlations will be calculated to determine relationships between some of the variables. The study does not examine the complex cause and effect relationships between variables as this falls beyond the scope of the proposed study and may be a topic for further research (Leedy & Ormrod 2005; Zikmund 2003b).

iii) Extent of researcher interference: Minimal

The extent of researcher interference will be minimal because the data will be gathered through a survey. This will not require the researcher to be directly in touch with the participants of the survey and the flow of work in the workplace will continue as normal.

iv) Data collection: Survey

The data will be collected by survey. The justification for using survey methodology is explained in more detail in Section 3.5.1.

v) Time horizon: Cross-sectional

This will be a cross-sectional or one-shot study because the data will be gathered just once at each of the chosen sites, over a period 2 months.

vi) Unit of analysis: Individuals

The unit of analysis refers to the level of aggregation of the data collected (Cavana et al. 2001; Leedy & Ormrod 2005). The research objective seeks to examine employee perceptions of the effectiveness of workforce retention strategies. For this reason the study is interested in the individual employee and their perceptions, and therefore the unit of analysis is the individual. Further discussion about the unit of analysis is given in Section 3.5.4.

vii) Study setting: Non-contrived

This study will be carried out in the natural work environment where work proceeds normally. No requirement for the researcher to be present on site or to visit or directly contact the survey participants is necessary. The study setting is therefore non-contrived in that the work setting is untouched.

viii) Data analysis: Quantitative

The data will be collected through a survey which will yield quantitative information that can then be summarised through statistical analyses (Leedy & Ormrod 2005). This therefore falls in to the realm of a quantitative data analysis. This topic is more fully explained in Section 3.5.5.

ix) Sampling design: Non-probability - purposive

This study requires information from a group of employees that can be compared across health service districts. The largest group of employees in Queensland Health that enable this capacity are the registered nurses, Grades 5 and 6. For this reason, this group were purposively selected as the sample. This issue is further discussed and explained in Section 3.5.2.

x) Measurement: Scaling

Measurement of the variables is an integral part of research and an important aspect of quantitative research (Cavana et al. 2001). The survey designed for this study uses scaling to measure variables. The types of scaling chosen for each section of the survey are detailed in Section 3.5.1.

This section has briefly described the important aspects of research design and the decisions made in the choice of the design. These aspects are presented diagrammatically in Figure 3.1.

The intent of the figure is to show how all of the considerations listed have an impact on the integrity and rigour of the study and therefore influence the outcome and findings of the research objective, ***To examine the perceptions of employees regarding the effectiveness of workforce retention strategies implemented in a health service.***

Figure 3.1 Research design
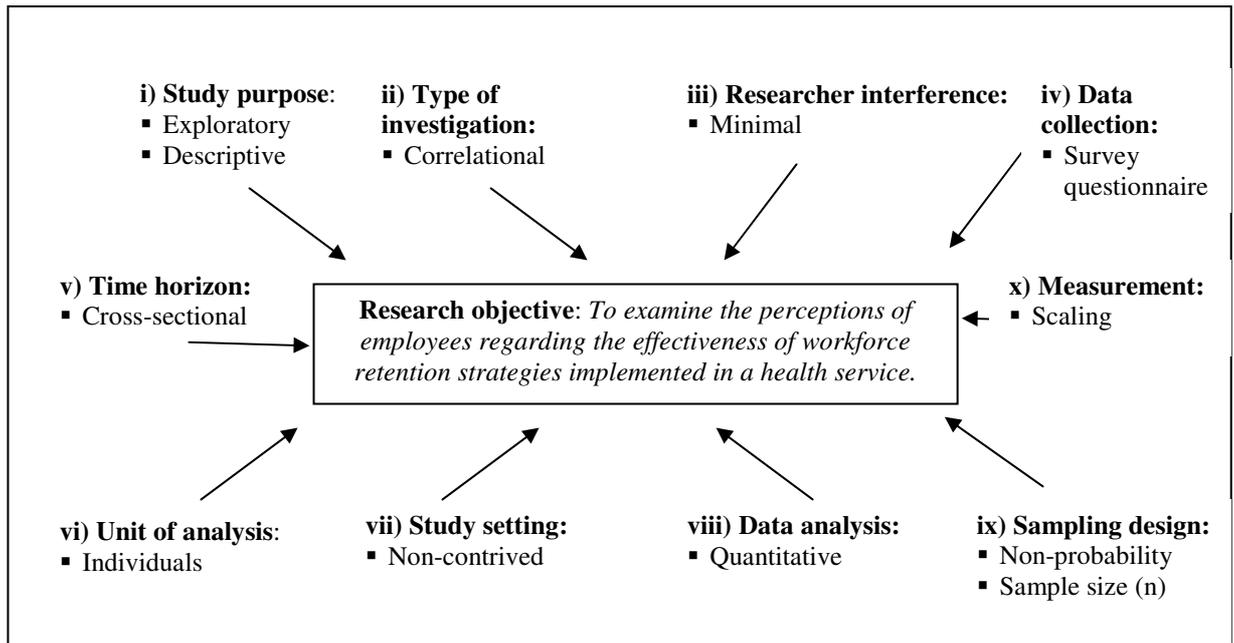
Adapted from: Cavana, Delahaye & Skaran (2001, p. 107); developed for this study

3.5 Research methodology

This section of the chapter elucidates the research methodology chosen for the study. Justification of the choice of method, that is, survey research, is firstly addressed.

There were three important features that were considered in the choice of the research methodology for this study that has been designed to meet the research objective. Firstly there was the significant geographic dispersal of the sample across the length and breadth of Queensland, secondly there was the large sample size being targeted and thirdly, the research objective and research questions were best suited to a quantitative methodology.

Having considered these features and noting that the types of descriptive quantitative research methodologies included; observation studies, correlational research, developmental designs and survey research (Leedy & Ormrod 2005), it was determined that survey research was most appropriate for this study. The reasons for this determination are as follows. Survey research involves acquiring information about groups of people by asking questions and tabulating answers to learn about a large

population by surveying a sample of that population (Leedy & Ormrod 2005, p. 183). Put simply, the researcher presents a series of questions to willing participants, summarises their responses with percentages, frequency counts, or more sophisticated statistical indexes and then draws inferences about a particular population from the responses of the sample (Leedy & Ormrod 2005, p. 183). This methodology was a good fit for the proposed study. The next important consideration was the most appropriate way to disseminate the survey and collect the data.

The three most commonly used data collection methods are; interviews, observation and surveys (Cavana et al. 2001). Each of the methods has advantages and disadvantages which are dependent on considerations of cost, the type of study, and the degree of rigour the research goal requires (See Section 3.5.4 Data collection). Administering surveys to large numbers of staff over a broad geographic area is far less time consuming and less costly than telephone or face-to-face interviewing of the same sample (Cavana et al. 2001; Leedy & Ormrod 2005). The use of observation as a data collection method does not fit with the survey research methodology for this study. Therefore, survey research via questionnaire was considered more applicable for this study than the interview process, phone or face to face, because it was suited to the large, diverse and geographically dispersed milieu of Queensland Health. This methodology also allowed for more opportunity to target a sample size as large as possible within the parameters of the study.

Whilst survey research via questionnaire was the chosen research methodology, weaknesses in this design must be noted and where possible mitigated. Survey research using a questionnaire relies on *self-report* data. This infers that willing participants may respond in a number of ways. For example, they may respond with information they think the researcher wants to receive, they may respond with distortions of reality, or they may respond without thinking through their responses logically (Leedy & Ormrod 2005, p. 184). The other weakness of surveys to note is the increased possibility of a low return rate with the participants who do return them not necessarily representative of the originally chosen sample (Cavana et al. 2001; Leedy & Ormrod 2005). Research quality, Section 3.6, explains the various strategies employed to mitigate the weaknesses identified in the use of this methodology ensuring the most rigorous study possible ensued. The survey methodology was designed to eliminate as many of the acknowledged weaknesses as possible. To this end, the survey methodology developed

for this study consisted of six main steps, namely; survey development, sample selection, pre-testing the survey, survey dissemination, data collection and data analysis. The next six sections explain each of the steps of the survey research methodology in greater detail.

3.5.1 Step I: Survey development

As determined above, given the geographical challenges and large sample size, the most suitable way to administer the survey was by questionnaire. Step I encompasses the layout of the survey and the justification for the choice of variables, item development and measures.

i) Survey layout

The survey was presented professionally and concisely and consisted of four sections that were written unambiguously and in a logical sequence (Leedy & Ormrod 2005).

Section A Retention Strategies was used to investigate employee awareness of workforce retention strategies, their participation in them, and requested participants to rate them. This section provided the data source for research question 1. Section B Retention Factors, of the survey focused on employee perceptions of retention factors and provided the data source for research questions 2 and 3.

Section C Barriers asked participants to rate statements about individual and organisational barriers to the implementation of workforce retention strategies. This section also included open questions about perceived individual and organisational barriers and provided the data source for research question 1d. Section D Demographics sought demographic information from respondents with questions similar to those used in the Queensland Health Better Workplaces Survey 2008. It asked questions about the respondents' gender, age and tenure and provided the data source for research question 4. As a matter of researcher choice, the questions seeking personal information were placed at the end of the survey (Cavana et al. 2001, p. 233). The final survey is presented in Appendix III.

Table 3.1 presents the Survey Sections A, B, C and D and how these data sources relate to the research questions formulated to investigate the research objective.

Table 3.1 Research objective, research questions and data source

Research Objective:		
To examine the perceptions of employees regarding the effectiveness of workforce retention strategies implemented in a health service		
Research questions:		Data source:

RQ1	*What are employee's perceptions about workforce strategies being used in Queensland Health, informed by:*
	    a. *Employees' awareness of workforce retention strategies*
	    b. *The level of participation in workforce retention strategies*
	    c. *The perceived level of effectiveness of workforce retention strategies*
	    d. *The perceived barriers to participation in workforce retention strategies.*
		Survey Section A Retention Strategies and Section C Barriers

RQ2	*How do respondents characterise their preferred workforce retention strategy in terms of retention factors?*	Survey Section B Retention Factors
RQ3	*What is the relationship between various retention factors and turnover intention?*	Survey Section B Retention Factors, Turnover Intention
RQ4	*How does the relationship between retention factors and turnover intention vary when taking into account the demographic variables of gender, age and tenure?*	Survey Section B Retention Factors and Section D Demographics

Source: Developed for this study

ii) Variables and item development

The research objective and questions indicate the type of information that must be collected from the survey (Zikmund 2003c). It is also noted from the literature that there must be 'strong and clear links established between items and a theoretical domain' (Churchill 1979; Hinkin 1995, p. 982). This is acknowledged and indeed, the constructs are clearly aligned to Herzberg's, expectancy and equity motivation theories and selected contributions from relevant turnover theories. For these reasons, a number of independent, dependent and demographic variables were carefully chosen for inclusion in the survey. The first set of items in the survey making up Section A Retention Strategies, were selected because they represented a comprehensive, although not exhaustive, list of Queensland Health's workforce retention strategies available to nursing employees. The purpose of Section A was to determine the respondents' awareness of, participation in, and effectiveness of, the 28 listed retention strategies.

The items chosen for Section B Retention Factors, of the survey were derived from the literature pertaining to Herzberg's, expectancy and equity motivation theories. Each of these motivation theories has conditions or criteria which attempt to provide explanations to explain an employee's participation in and perception of their job (Ivancevich & Matteson 1990). For example, in Herzberg's, the conditions include; salary, job security, working conditions, status, company procedures, quality of technical supervision, quality of interpersonal relations, achievement, recognition, responsibility, advancement, the work itself, the possibility of growth. Expectancy theory includes the criteria; effort, performance, outcome; and equity theory includes the criteria; person, comparison, inputs, outcome (Ivancevich & Matteson 1990; Mukhi et al. 1991). Further investigation of these conditions and criteria suggested that many may be logically applied to an employee's participation in and perception of workforce retention strategies. The choice of the 22 items in Section B Retention Factors was based on this adaptation. Only the most suitable conditions or criteria from each of the 3 selected motivation theories were adapted and applied to develop the list of retention factors (See Table 2.3). The adaptation was achieved by tailoring the wording of the item, but keeping the intent of the condition or criteria, as determined by the relevant theory. The retention factors identified for the purposes of the survey were; job security, accessibility, status, support, coordination, interaction, achievement, recognition, responsibility, advancement, conduct, applicability, growth, effort, performance, personal gain, fairness, treatment of participants, prerequisites and rewards (Atchison & Lefferts 1972; Ivancevich & Matteson 1990; Mukhi et al. 1991; Schroder 2008). Questions 1 to 22 in Section B Retention Factors of the survey were derived from this set of conditions or criteria. The 22 items, adapted from Herzberg's, expectancy and equity motivation theories aim to measure the extent to which the nominated retention strategy was perceived as having produced certain outcomes or having certain characteristics. The retention factors were the independent variables in this study because they may influence an employee's perception of turnover intention – the variable of main interest for this study (Cavana et al. 2001).

Although perhaps at first not obvious, the 22 retention factors listed in Section B Retention Factors are all relevant to the 28 retention strategies listed in Section A Retention Strategies. All of the strategies listed are coordinated either by a group of employees in a work unit or by one or several staff members, depending on the strategy.

Where any of the retention factors are perceived by the respondent as not producing for the particular retention strategy chosen, then the expected response would be 1=strongly disagree.

The dependent variable for this study was turnover intention. The reasons for its choice were obvious in that the entire study was grounded on an employee's perception of workforce retention strategies and whether there was any effect on their turnover intention. The rationale for adopting the set of items asking about job satisfaction, thoughts of quitting, job search and intent to quit for the dependent variable turnover intention, follows.

The literature reports the relative predictive strength of the determinants for turnover found in past meta-analyses (Griffeth et al. 2000 after Hom & Griffeth 1995; Kim, Price, Mueller & Watson 1996; Price & Mueller 1986; Steers & Mowday 1981; Mobley et al. 1979) and more recently, studies have shown that proximal precursors in the withdrawal process were among the best predictors of turnover (Griffeth et al. 2000). These predictors included job satisfaction, organisational commitment, job search, comparison of alternatives, withdrawal cognitions and quit intentions. This study is based on previous work in the area of turnover and the concepts have been adapted to the investigation of turnover intention. Although six predictors of turnover were identified in the literature, four were selected as most appropriate when applying the concept to workforce retention strategies; job satisfaction, thoughts of quitting, job search and quit intentions. Organisational commitment is included as a proximal precursor in the withdrawal process (Griffeth et al. 2000). However, investigation of responses to job satisfaction was preferred in this case because commitment is an affective response to the whole organisation, whilst job satisfaction represents an affective response to specific aspects of the job (Williams & Hazer 1986). The precursor job search was chosen over comparison of alternatives because of the accessibility of the internet and job search opportunities on Queensland Health's intranet site, for respondents. Questions 23 to 26 in Section B Turnover Intention, reflect this part of the investigation.

Further to the selection of job search as an item. it is noted in studies by Steel (2002 after Mobley 1977; Steers & Mowday 1981) that although it is customary to view the employment search as an outgrowth of job disaffection, it ignores the fact that workers

who are relatively satisfied routinely scan the employment market with a view to improving current situations.

The items in Section C Barriers questions 1a, b and c and 2a, b and c were designed to investigate the individual and organisational barriers to participating in a workforce retention strategy. The items were derived from the literature as follows. Employees may perceive that individual or personal barriers exist preventing their participation in a workforce retention strategy. For example, lack of time to participate: Increased demand for nurses due to patient needs and other workload pressures exacerbated by staff shortages may lead to a lack of time for an employee to participate in a workforce retention strategy (Hegney, Plank & Parker 2003, 2006; Kuhar et al. 2004). Lack of interest in participating: On the other hand, some employees may not be interested in participating in workforce retention strategies because not all employees respond equally well to learning and development opportunities (Maurer & Lippstreu 2008). The employee's lack of interest could be regarded as a barrier to participation. Unaware of the activity: Another individual or personal barrier that may occur is where the participant was unaware of the workforce retention strategy taking place (Leurer et al. 2007). These three barriers; lack of time, lack of interest and not knowing about the activity, are reflected in Section C questions 1a, b and c.

The items for organisational barriers were also derived from the literature. Meta-analysis studies by Ng and Sorensen (2008) investigating the effect of supervisor support on work attitudes indicated that perceived supervisor support strongly related to job satisfaction. Lack of line manager support was therefore included as an organisational barrier. The next item proposed that workforce retention strategies were not well accepted in the work area.

This was based on a meta-analysis study by Lavoie-Tremblay et al. (2008 after Irvine & Evans 1995) where findings suggested that administrators and nurse managers have more control over work environment variables through appropriate leadership support and human management practices. That is, line manager support and fostering of a positive work environment ensures the acceptance of such activities as workforce retention strategies. This leads on to the last organisational barrier to be investigated; workforce retention strategies were not well promoted in the work area. Further to the findings of the importance of line manager support is the concept of promoting

activities such as workforce retention strategies. Therefore, the three items for organisational barriers included in the survey were; lack of line manager support, workforce retention strategies are not well supported in my work area, and workforce retention strategies are not well promoted in my work area and are reflected in Section C Barriers questions 2a, b, and c.

The moderating variables were an important inclusion in the study because it was important to determine if there was any change in the relationships between the retention factors and turnover intention as a result of the demographic influences of gender, age and tenure (Hair et al. 2006). These demographic factors were selected after findings in the literature report that similar demographic factors have been used to investigate job satisfaction and job attitudes, as discussed in Section 2.8.4 (Kavanaugh et al. 2006; Ng & Sorensen 2008; Schroder 2008). Section D Demographics, of the survey taps these variables. Further to this, such demographic information gives the researcher a fuller picture of the characteristics of the sample (Cavana et al. 2001).

iii) Focus groups

The focus group method relies on collecting information through group interaction (Cavana et al. 2001). Although the research technique has a number of commonalities with the interview process, it is useful because a number of similarities and differences of opinions and experiences can be expressed at the one session (Cavana et al. 2001 after Morgan 1997). The structured method was chosen for each of the focus group sessions. The researcher facilitated the focus group sessions.

Section A Retention Strategies, of the survey consisted of a list of workforce retention strategies currently offered to nurses by Queensland Health. This proto-list was developed by compiling all retention strategies on the Queensland Health intranet site available to nursing employees. These were mostly known to the facilitator. The list was then sent to 2 colleagues expert in nursing workforce and development to ensure no major strategies were missing. Following their assurances that the retention strategy list was accurate and relevant, the list required validation from representatives of the cohort of nurses to be surveyed. Focus group methodology was chosen to ensure the survey content was relevant to Grades 5 and 6 nurses. Consequently, four focus groups were used to validate the list of retention strategies. The focus groups were made up of Grade 5 and Grade 6 nurses from Innisfail Hospital (two groups with 4 participants in

each) and Cairns Base Hospital (two groups with 7 in the first group and 8 in the second). Nurses at these locations were chosen because Innisfail and Cairns were not included as sample sites in the study, however nurses from these locations were expected to be representative of the sample sites. Initially permission was sought through the governance process to permit the focus groups to proceed. This was duly granted and the coordination of the venue, timing and attendance at the focus groups was negotiated with the Quality Coordinator at Innisfail Hospital and the Nurse Manager Human Resource Management, Cairns Base Hospital.

The aim of the focus groups was to review the list of workforce retention strategies presented by the facilitator, discuss their awareness of them, and to add or remove any strategies based on the groups' knowledge and/or experience of them. Following courtesy introductions and a short explanation about the study, a document (handout 1) was handed out to each of the group outlining the purpose of the session and three questions that were designed to stimulate discussion. The purpose was to validate the list of Workforce Retention Strategies for inclusion in a survey. The questions were: *1) What do you think the term Workforce Retention Strategy (WRS) means?; 2) What workforce retention strategies are you aware of that Queensland Health has put in place?; 3) Are there any workforce retention strategies missing from the list that should be included, or any that should be removed?*

Methods of collecting the data:

To start the focus group discussion, the facilitator read out Question 1 and responses from the group were received regarding various interpretations of the terminology *Workforce Retention Strategy*. Question 2 was then read out to the group to get them thinking about what retention strategies Queensland Health had put in place for nurses. Following this discussion, another one-paged handout (handout 2) was given to each group member with a list of the retention strategies to be validated, removed or to add new ones. This handout (2) was accompanied by reading out question 3. Participants were requested to indicate by ticking the relevant columns on handout 2 whether they were aware of the retention strategy, if they thought it was effective or not, and if they had never heard of it. Participants were advised that they could include their names on handout 2 or pass them in anonymously, as they chose. The sessions lasted 30 minutes, limited by the changeover of shifts. The facilitator took notes during all sessions, and the focus group members completed the handout 2 sheet and returned it for analysis.

Development of the survey as a result of focus group analysis:

The interaction of responses received for question 1 indicated that the term *Workforce Retention Strategy* was mostly understood by all focus group members. For the few who weren't sure, further discussion with colleagues assisted with understanding the term. The facilitator chose to include this query about the term to ensure it was not completely foreign to this representative group. Those unsure were mainly newly graduated nurses. A topic that commonly arose was email usage and access, with many of the group participants indicating their lack of time or inability to make the most of the medium. However, the main aim of the focus group sessions was to validate the list of workforce retention strategies. This was achieved by collating each group members' responses from handout 2 on to one master sheet. This then identified how many strategies the group was aware of collectively. The process provided the facilitator with more insight regarding the understanding and awareness of retention strategies. This was important because the list needed to be as familiar to as many Grades 5 and 6 nurses as possible. During the sessions, the facilitator made notes about which strategies were to be added to the final list for the survey and which would best be removed. The refined list was then included in the survey for Section A Retention Strategies.

iv) Measures

The variables and consequent items developed for this study were sourced from the motivation and turnover literature (Atchison & Lefferts 1972; House & Wigdor 1967; Ivancevich & Matteson 1990; Mukhi et al. 1991).

The variables investigated were measured using scales taken and modified from the existing literature and tailored for the purposes of this study (Cavana et al. 2001; Hair et al. 2006; Hinkin 1995; Leedy & Ormrod 2005; Zikmund 2003a). The types of scales selected for the various sections of the survey included; dichotomous – used to elicit a 'yes' or 'no' answer, category – used multiple items to elicit a single response, ordinal – used to rank items and interval – where the differences in the responses between any two points were the same (Cavana et al. 2001; Hair et al. 2006; Zikmund 2003a). The following discussion describes the type of scales adopted to measure relevant sections of the survey and some of the controversies surrounding their use (Hinkin 1995). The measures used in the survey are presented in Table 3.2.

Section A Retention Strategies, used a dichotomous scale to determine if participants were aware of any of the listed workforce retention strategies and further to this, to elicit in which of these they had participated. This section also used an ordinal scale using the same list of items, to rate which workforce retention strategies were perceived as more effective. Section B Retention Factors and part of Section C Barriers, used a 5 point Likert-type scale designed to examine how strongly subjects agreed or disagreed with statements using the following anchors: 1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly disagree (Cavana et al. 2001).

Section D Demographics also used a 5 point Likert-type scale to examine the strength of feeling / thoughts / intention to three questions. The decision to apply the five point Likert-type scale to measure Sections B Retention Factors and C Demographics of the survey requires further explanation given the controversy about whether individual Likert items may be considered as interval or merely ordinal scales (Perry 2002 after Newman 1994; Zikmund 2003a). After careful review of the literature, the adoption of the five point Likert-type scale as an interval scale measure was chosen for the following reasons.

Firstly, the five point Likert-type scale was chosen over a seven point, nine point or ten point scale because coefficient alpha reliability with Likert-type scales has shown to increase up to the use of five points, however, after this it levels off (Hinkin 1995, p. 973 after Lissitz & Green 1975). Supporting this, other findings have indicated that an increase from five to seven or nine points on a rating scale does not improve the reliability of ratings (Cavana et al. 2001, p. 206 after Elmore & Beggs 1975) or produce markedly different scores (Dawes 2008). Secondly, the scale has been interpreted as interval which allows the measurement between any two points on the scale (Cavana et al. 2001). The justification for this is the use of the five point scale where the magnitude of the difference between 1 and 2 is the same as the magnitude of difference between 4 and 5, or between any other two points for each item (Cavana et al. 2001; Hair et al. 2006). Although the researcher can never be absolutely certain that the respondent selects their responses with the same justification in mind, it is noted that in business research it has become conventional to accept such response scales as interval (Cavana et al. 2001). Therefore, for the purposes of this investigation, the five point Likert-type scale was adopted to provide interval level data.

A familiar response format was designed by using the same anchor points for the 5 point Likert-type scale for items in Sections B Retention Factors, C Barriers and D Demographics in an attempt to increase response rate and to make participation more attractive (Schroder 2008, p. 232). The familiar response format was also supported for another reason where literature findings indicate that altering scale anchors can change the meaning of a construct and potentially compromise its validity (Podsakoff, MacKenzie & Lee 2003, p. 888).

Other aspects of the choice of measures to be considered include response pattern bias and the number of items. Although reverse scored items are used primarily to attenuate response pattern bias, the method has not been adopted for this survey because literature findings indicate that they have been shown to reduce validity and may introduce systematic error (Hinkin 1995, p. 972 after Idaszak & Drasgow 1987; Schriesheim & Hill 1981; Jackson, Wall, Martin & Davids 1993). Regarding scale length, the fewer number of items in a measure minimises response biases. However, the down side is that too few responses results in lack of content and decreased construct validity and internal consistency and test-retest reliability (Hinkin 1995, p. 972). Conversely, scales with too many items may create problems with respondent fatigue or response bias (Hinkin 1995 after Anastasi 1976). Although as few as three items can return adequate internal consistency reliabilities (Hinkin 1995 after Cook et al 1981), the number of items for each domain in this survey range from a minimum of 4 in the second part of Section B Retention Factors to a maximum of 28 in Section A Retention Strategies.

Section D Demographics used a dichotomous scale for respondents to record their gender. The section also used a category scale for selections to be made regarding various factors including; age, position, tenure and location. All items in the survey that used dichotomous, ordinal, category and interval scales were considered closed questions and care was taken to ensure that alternatives were mutually exclusive and collectively exhaustive (Cavana et al. 2001, p. 229). Participants were also offered the opportunity to answer four open ended questions which were edited and categorised for subsequent data analysis. Table 3.2 presents the survey sections and relevant questions, and how they related to the choice of measure.

Table 3.2 Survey– item measures

Survey	Question number	Measure	
Section A Retention Strategies	Q 1 to 24, i to iv (columns A and B)	Dichotomous scale	Yes or No
	Q 1 to 24, i to iv (column C)	Interval scale	1=effective; 2=slightly effective; 3=not effective; 4=don't know
Section B Retention Factors	Q 1 to 26 (column A, B and C)	Interval scale	1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly disagree
Section C Barriers	Q 1a, 1b, 1c, 2a, 2b, 2c	Interval scale	1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly disagree
	Q 3a, 3b, 4	Open ended questions	Edited and categorised for data analysis
Section D Demographics	Q 1	Dichotomous scale	Male or Female
	Q 2 to 7	Category scale	Age, position, stream, tenure, location – range of choices given, select one
	Q 8 to 10	Interval scale	1=not at all; 2=to some extent; 3=neutral; 4=to quite a large extent; 5=to a great extent
	Q 11	Open ended question	Edited and categorised for data analysis

Source: Developed for this study

3.5.2 Step II: Sample selection

This section of the discussion focuses on the population, sampling frame, sample size and the sampling design selected as most appropriate for this study. The explanation following about the hierarchy of the sample process will give more clarity on the reasons for the choice of population, sampling frame, sample size and sampling design.

The terminology includes: population – the entire group of interest; element – a single member of the population; sampling frame – all elements listed from which the sample is drawn; sample – a subset of the population; subject – a single member of the sample and unit of analysis – the level of aggregation of data collected (Cavana et al. 2001, pp. 252-3).

Table 3.3 presents the hierarchy and lists the numbers of Grade 5 and Grade 6 nurses for each category. The title Grade 5 or Grade 6 nurse is the current terminology, however, it is noted that the terms Level 1 Nurse and Nursing Officer 1 (NO1) or Registered

Nurse (RN) are sometimes used interchangeably with Grade 5 nurse; whilst Level 2 Nurse and Nursing Officer 2 (NO2) or Clinical Nurse (CN), are sometimes used interchangeably with Grade 6 nurse. Rationale for the choice of Grade 5 and Grade 6 nurses as the choice of sample follows.

Table 3.3 Sampling hierarchy

	Constituents of the category	Head count as at January 2010
Population	Queensland Health employees	74 015
Element	Single employee	1
Sampling frame	All Grade 5 and Grade 6 nurses from 8 districts listed on payrolls	6 256
Sample	Grade 5 and Grade 6 nurses from 8 districts – purposively selected	3 000
Subject	Single Grade 5 or Grade 6 nurse within 8 districts selected	1
Unit of analysis	The individual Grade 5 or Grade 6 nurse	1

Adapted from: (Queensland Health 2010), (Cavana et al. 2001); developed for this study

i) Population

The study investigated employee perceptions of workforce retention strategies to determine if they had any effect on turnover intention. To ensure the most rigorous design to investigate this required surveying a large, geographically diverse, relatively homogenous group of employees from higher and lower turnover health service districts.   The nursing stream was chosen for three main reasons; sheer numbers, geographic dispersal and homogeneity, explained as follows.

The nursing stream was chosen because of its large numbers of staff (See Table 3.4), homogeneity within its ranks, and importantly, their wide geographical dispersal across the whole organisation.   Nursing had an approximate headcount of 29 800 in Queensland Health as at January 2010 (Queensland Health 2010), and within this group, the Grade 5 and Grade 6 nurses make up approximately 63 per cent of the total of the 12 different nursing disciplines. The headcount for Grade 5 nurses as at January 2010 was 12 639 (Queensland Health 2010).   Grade 6 nurses made up the second biggest discipline subset in nursing with a headcount of 6157 as at January 2010 (Queensland Health 2010).

Although the highest turnover rate for any occupational stream in Queensland Health is the Allied Health group, the total employee number (headcount: 9 900) consists of a very diverse set of therapies and, due to such heterogeneity, was not chosen as a sample

group. Consequently, an important part of this study was the ability to compare groups as homogenous as possible across health service districts. Of the 12 disciplines in the occupational stream of nursing in Queensland Health, the Grade 5 and Grade 6 nurses are deemed the most similar to each other. Further to this, Grades 5 and 6 nurses were chosen because the larger numbers provided a bigger pool for the dissemination of the survey. For these important reasons, Grade 5 and Grade 6 nurses were chosen as the sample.

Table 3.4 provides the staff numbers for each occupational stream for Queensland Health, calculated by headcount current as at January 2010 (Queensland Health 2010). The subset disciplines of Grade 5 and Grade 6 nurses are included for comparison of staff numbers.

Table 3.4 Occupational stream and headcount for Queensland Health

Occupational stream	Headcount as at January 2010
Nursing Grade 5 nurses (Level 1, NO1, RN) 12 639 Grade 6 nurses(Level 2, NO2, CN) 6157 *Total* *18 796*	**29 891**
Managerial and clerical	14 165
Operational	12 679
Health Professionals and Technical	9940
Medical	6920
Trades and artisans	420
Total	**74 015**

Adapted from: (Queensland Health 2010); developed for this study

ii) Sampling frame and sample size

To determine the most appropriate sample, analysis of the turnover trends over a five year period from 2005 to 2009 revealed eight districts that would be suitable for closer investigation. Six of these districts represented higher level turnover and two represented lower level turnover when compared with the Queensland Health average for this time period. The sample chosen was therefore Grade 5 and Grade 6 nurses from six higher turnover and 2 lower turnover districts. The sampling frame was determined as each health service's district payroll, which listed all of the Grade 5 and Grade 6 nurses from which the sample was drawn. As seen in Table 3.3 Sampling hierarchy - sample selection, the total number for the sampling frame was 6256 Grades 5 and 6

nurses from the 8 selected health service districts. It is noted from the literature that regarding sample size, the larger the better (Leedy & Ormrod 2005). It has also been suggested that where the population size is above 5000 units, a sample size of 400 should be adequate (Leedy & Ormrod 2005 after Gay & Airasian 2003).

Therefore, in order to obtain a statistically sound number of returned surveys, and given the recent challenges with a new payroll system affecting staff in Queensland Health, especially nurses currently, as well as other state wide surveys being conducted, a careful consideration of sample size and dissemination technique and timing was imperative.

Further to these deliberations was the findings, anecdotally and then confirmed through the focus groups, that up to two thirds of all Grades 5 and 6 nurses do not access their email in a timely manner – for many given reasons. Exacerbated by the often low return rate of surveys, and as a result of limited human resources, time and financial constraints, it was determined that a cap of 1500 surveys would be posted out to Grades 5 and Grade 6 nurses across the 8 health service districts selected for the study. This would be made up of 750 Grade 5 and Grade 6 nurses from the six higher turnover districts and 750 Grade 5 and Grade 6 nurses from the two lower turnover districts. This cap was based on two main factors: Firstly, a presumed return rate of 30 per cent gives a sample size of 450, which adequately met the suggested sample size for a population greater than 5000 – where the population for this study was 74 015 Queensland Health staff members, and secondly, the expenditure for 1500 surveys printed, couriered to sites and including reply paid costs was just within the $2000 budget.

The hard copy survey was also converted to *Survey Monkey* format, and emailed to the same sample number (1500), but a different selection of Grades 5 and 6 nurses in each of the chosen districts, with the intent of capturing those nurses who may be tempted to complete the survey on-line. The combination of the hard copy survey returned via reply paid post, and the electronically delivered and returned survey, was intended to ensure a statistically sound number of returns, given the extenuating circumstances in Queensland Health at the present time.

iii) Sampling design

The two major types of sampling design are probability and non-probability sampling (Cavana et al. 2001). Each of these designs has different sampling strategies depending on the purpose of the study, the amount of time and resources available and the extent of the generalisability desired (Cavana et al. 2001). The sampling design best suited to this study was non-probability – purposive sampling. Purposive sampling is where specific target groups are chosen for a particular purpose (Cavana et al. 2001; Leedy & Ormrod 2005).

This situation called for purposive sampling so that Grade 5 and Grade 6 nurses could be purposely chosen for investigation of a homogenous group, across health service districts within the nursing occupational stream. It is noted that non-probability sampling designs are restricted in their generalisability; however this design was the most viable for the task. Measures to increase research quality are further discussed in Section 3.6.

The decision made to determine how many nurses from each district would be sampled requires further explanation as follows. Of the districts sampled, five are classed as rural or remote (Mt Isa, Cape York, Torres, Central West and South West) whilst Mackay, Townsville and Sunshine Coast – Wide Bay are considered provincial.

As can be observed from the total Grade 5 and Grade 6 nurses for each district in Table 3.5, if the sample was collected using a proportional stratified sampling technique (Leedy & Ormrod 2005, p. 203), the numbers for the rural and remote districts would be very small compared to the provincial districts sample numbers. It is important for rural and remote facilities to be able to compare with their provincial colleagues, because although their staffing numbers may be lower, their needs and challenges still need to be heard and addressed. To achieve this, and to ensure that the findings would be of most benefit to Queensland Health in regard to rural and remote districts, it was determined that a greater percentage of the total sample (up to 91 per cent for Cape York) from each of the rural and remote districts will be offered the survey. Whether the respondents were Grade 5 and/or Grade 6 was determined by each district's alphabeticised payroll list. That is, the list of Grade 5 and Grade 6 nurses was filtered from each district's payroll list in alphabetical order.

The sample posted the survey were first selected and then the number selected for emailing followed on down the list, continuing the alphabetical order.

The higher and lower turnover health service districts are listed in Table 3.5, together with their respective 5 year average turnover rates. The table also presents the total number of Grade 5 and Grade 6 nurses for each of the selected districts and the number of Grade 5 and Grade 6 nurses surveyed via post and email. Also included is the percentage of Grade 5 and Grade 6 nurses surveyed in each district, noting that the higher percentages are in the rural and remote districts, as explained above.

Table 3.5 Higher and lower turnover districts - sample selection

Health service District (HSD)	Turnover rates: 5 year average 2005-2009 QH Av = 5.4%	Total Gr 5 & Gr 6 nurses	Number surveyed by post and email	% surveyed Gr 5 & Gr 6 nurses	Sample posted survey	Sample emailed survey
Higher turnover districts	%			%		
Mt Isa	12.67	185	160	86	80	80
Cape York	10.36	88	80	91	40	40
Torres - Nthn Peninsula	9.52	38	30	79	15	15
Central West	7.02	61	50	82	25	25
Mackay	6.39	529	330	62	165	165
Townsville	6.04	1536	850	55	425	425
Lower turnover districts	%					
S'shine Coast-Wide Bay	4.01	2059	1350	66	675	675
South West	5.03	178	150	84	75	75
TOTAL		**4674**	**3000**		**1500**	**1500**

Adapted from: (Queensland Health 2009b, 2010); developed for this study

Table 3.6 presents the 8 sample districts with a listing of the locations surveyed for each. In summary, the survey was sent to 3 000 Grade 5 and Grade 6 nurses (1500 posted and 1500 emailed) located in 63 sites within 8 health service districts across Queensland Health.

Table 3.6 Health service districts and locations surveyed

Health service District (HSD)		Number of locations surveyed in each HSD
Higher turnover districts		
Mt Isa	6	Cloncurry, Doomadgee, Julia Creek, Mornington Island, , Mt Isa, Normanton
Cape York	11	Aurukun, Coen, Cooktown, Hopevale, Kowanyama, Laura, Lockhart River, Mapoon, Napranum, Pormpuraaw, Weipa
Torres - Nthn Peninsula	2	Thursday Is, Bamaga
Central West	5	Alpha, Barcaldine, Blackall, Longreach, Winton
Mackay	6	Clermont, Dysart, Mackay, Moranbah, Proserpine, Sarina
Townsville	8	Ayr, Ingham, Home Hill, Bowen, Hughenden, Charters Towers, Palm Island, Collinsville, Townsville
Lower turnover districts		
Sunshine Coast - Wide Bay	14	Biggenden, Bundaberg, Caloundra, Childers, Eidsvold, Gayndah, Gin Gin, Gympie, Hervey Bay, Maleny, Maryborough, Monto, Mundubbera, Nambour
South West	11	Augathella, Charleville, Cunnamulla, Dirranbandi, Injune, Mitchell, Mungindi, Quilpie,,Roma, St George, Surat
TOTAL	63	

Adapted from: (Queensland Health 2009b, 2010); developed for this study

3.5.3 Step III: Pre-testing the survey

Once the survey was developed, it underwent careful pre-testing to ensure useability and validity (Cavana et al. 2001). This was achieved by checking that the questions were clear, concise and unambiguous, and the instrument measured what it was intended to measure. There are a number of pre-tests recommended in the literature to address these concerns (Cavana et al. 2001; Leedy & Ormrod 2005). After consideration of those available, the pre-tests chosen for the survey were; face validity, content validity and a pilot study (Leedy & Ormrod 2005, p. 192).

i) Face validity

This pre-test was engaged to determine if respondents found the wording of the items clear and unambiguous and whether, on the face of it, read as if it measured what is was supposed to measure (Cavana et al. 2001). Consequently, a sample of 5 respondents were offered the survey and then interviewed afterwards to ascertain if any items caused confusion (Cavana et al. 2001). The group consisted of three Grade 5 nurses, one Grade 6 nurse and one Grade 7 nurse. Although the sample group was Grade 5 and Grade 6 nurses, the Grade 7 nurse was invited to contribute her comments and critique of the survey given her knowledge and experience in the area of workforce surveys.

Each respondent was interviewed separately and the same set of discussion points were used for all. These included: *1) Time taken to complete the survey; 2) Understanding of the survey; 3) Presentation of the survey; 4) Any major issues with the survey?* Collation of the five sets of results enabled the researcher to make improvements to the survey as follows: Changes made to instructions for Section A Retention Strategies and Section B Retention Factors; Slight word changes to Section A Retention Strategies; Adjusted layout of the survey to improve user friendliness by adding bolded font, increasing spacing and use of shading where possible. Overall, the feedback from the respondents was positive and no major issues arose as a result of the respondents' completion of the survey.

Completing the face validity pre-test dealt with the concern of whether the survey appeared to measure the concepts being investigated (Cavana et al. 2001, p. 238 after Burns 1994). Although face validity is useful, it is not regarded as a valid component of content validity. The feedback from the interviews is presented in Appendix IV Face validity interview feedback.

ii) Content validity

This pre-test relates to the representativeness of the survey regarding the constructs to be measured (Cavana et al. 2001, p. 238 after Burns 1994). Evidence of content validity in the items of the survey was provided in Section 3.5.1 where the variables, item development and measures were clearly related back to their origins in motivation and turnover theories. Further to this, the survey was sent to two experts in the field (supervisors to the researcher) for their comment and feedback. The two experts were asked to comment throughout the development stages of the survey and their contributions included critique on layout as well as construction and content. Their comments via email spanned a six month time frame where the survey was refined through 6 versions. Feedback provided was carefully considered and changes made accordingly to improve the content validity. The main improvements included: Rewording of questions in Section D Demographics, rewording instructions in Section A Retention Strategies to improve clarity; Changed Part C Section A Retention Strategies to an interval scale; coded all questions; ensured consistency when using Likert-type scales.

iii) Pilot study

This pre-test was very useful to test what sort of data might be returned on the surveys and to determine potential problems with the survey instrument. For this process, 20 Grade 5 or Grade 6 nurses at Cairns Base Hospital and 10 from Innisfail Hospital were randomly selected by the relevant nurse manager, and were asked to complete the survey and return it to the researcher. The Cairns Base and Innisfail locations were chosen because they were not included as sample sites and therefore sample numbers were not affected. Poor return rates for the pilot study may have been indicative of the 'mood' within the organisation – 3/10 surveys were returned from Innisfail and 6/20 were returned from the Cairns group. To further explain, although there may be a number of reasons why the response rate for the pilot surveys was low, Queensland Health was in the throes of implementing the new payroll system. Anecdotally through discussions with colleagues and media reports, as well as comments made in the focus groups appeared to indicate that the payroll challenges for Queensland Health may have been having some effect on the morale of some staff, potentially including nurses. This gave further validation to the strategy of both posting and emailing the survey to a large sample group. The piloted surveys also indicated where blank responses may need to be dealt with when preparing the data for analysis.

3.5.4 Step IV: Data collection procedure

Dissemination of the posted survey to the selected sites required carefully planned use of limited human resources. The 1500 surveys required individual attention aimed at maximising the return rate, as explained in the following section of the discourse. This personal approach was determined from focus group feedback, in that if the survey was personally addressed, the recipient may be more inclined to respond.

i) Delivery of the survey

Once the survey was tested and finalised, it was then printed and collated into individually addressed envelopes. These envelopes included the survey, a covering letter inviting participation in the survey, a reply paid envelope and a pen or pencil gift. The packages were then sent to the 8 health service districts selected via courier. The survey was emailed out to the second set of recipients 6 weeks after the hard copy survey was posted. Both surveys were closed in mid August 2010.

ii) Invitation to participate

The "Invitation to participate" covering letter was prepared to accompany every survey that was posted or emailed (See Appendix V Invitation to participate) (Leedy & Ormrod 2005). This covering letter explained the nature of the survey and assured the participant of their voluntary participation and ability to withdraw at any time, their confidentiality and anonymity and offer of a copy of the Executive Summary once the study was completed (Cavana et al. 2001; Leedy & Ormrod 2005). The researcher's contact information was included and the participant was directed to an independent party should they have concerns or complaints about any aspect of the survey or the study itself. The covering letter also stated that the participant's return of the survey indicated their agreement to participate in the survey, thus serving as their authorisation.

iii) Maximising return rate

To ensure the most representative sample possible given the survey size cap discussed in Section 3.5.2, at least 400 survey returns were required from the 3 000 sent out. Maximising the return rate was a very important task in the process because surveys are notorious for having low return rates (Leedy & Ormrod 2005). This low response rate was expected to be exacerbated by Queensland Health's recent difficulties in the transition to a new payroll system. Consideration of the method and timing of the survey distribution (ie: not clashing with the two yearly Queensland Health culture surveys; recent challenges with Queensland Health's new payroll system; and the lack of email use by Grades 5 and 6 nurses), necessitated as many inducements and reminders as possible within the limited resources and scope of the study.

The survey was administered through key contact staff in each district – usually the Director of Nursing or their delegate in each of the 8 health service districts, and where possible, a contact at the specific location. The key contacts were responsible for handing out the individually addressed envelopes to the Grades 5 and 6 nurses selected in the sample. Each participant could then complete the survey at their leisure and return it via internal mail on site in their facility, or respond to the email survey on-line. The surveys were then sent on to the researcher's nominated reply paid address, or email address as appropriate.

An audit trail was kept on when the postal surveys were couriered to the respective sites, when it was received and who by, when it was distributed to participants, and then

when contact was made to encourage responses (Perry 2002). A record was also kept of when the emailed surveys went out to which locations for tracking purposes. The survey administration and tracking evidence is presented in Appendix VI Survey administration for postal survey and Appendix VII Survey administration for on-line survey. Having developed and disseminated the survey, the next step was the collection of the data.

iv) Survey collection

The survey was designed to investigate employee perceptions about workforce retention strategies and whether they have any effect on the turnover intention of current employees. To pursue this course of action, staff were canvassed using the survey – posted and emailed. As described in detail in Section 3.5.2, the survey was distributed to a total of 3 000 Grade 5 or Grade 6 nurses working in 63 sites within 8 health service districts of Queensland Health. The surveys were posted (1500) and emailed (1500). Although the personally addressed envelopes and reply paid response added considerably to the cost of the study, the intent was to maximise return rate. The effort to maximise return rate can not be underestimated, and this process was vigorously pursued. To further explain, the survey was conducted across two modes, paper based as a postal survey and on-line as an electronic survey. The methodology applied to receive and store the data during the data collection process ensured that data was treated without bias (Erwee 2009 after Berg 2001), and is summarised as follows.

Paper based survey: The paper based survey was posted to 1500 Grades 5 and 6 nurses in 63 locations across 8 health service districts of Queensland Health (See Appendix VI Survey administration for postal survey). The surveys were grouped by destination and either posted or couriered to their respective districts where they were then disseminated to the relevant sites within each district. Each envelope was individually addressed to the participant and enclosed was the *Invitation to participate*, the 4-page survey, a reply paid envelope and a pen or pencil gift. Two hundred and fifty-five (255) surveys were returned via reply paid post, by the closing date.

On-line survey: The paper based survey was adapted to an on-line format using *Survey Monkey*. As with the paper based survey, the on-line survey was emailed to a second set of 1500 Grade 5 and Grade 6 nurses in the same 63 locations across the same 8

health service districts in Queensland Health. One hundred and twenty-four (124) surveys were submitted by the closing date.

Storage and retrieval: The paper based surveys were returned by reply paid to a postal box for collection. They were then stored in a locked filing cabinet located in a swipe card entry only office at the Innisfail Hospital, for the duration of the study. The on-line surveys were pass word protected and only accessible by the researcher. The next major step in the survey methodology was the data analysis.

3.5.5 Step V: Data analysis

3.5.5.1 Justification of the basic assumptions used in the data analysis process

The Statistical Package for Social Sciences (SPSS) version 11 was used to conduct the statistical tests. This section outlines the basic assumptions that were used during the data analysis process. Firstly, although the most common significance level for testing hypotheses in business and management research is at the 5 per cent level (Cavana et al. 2001, p. 415), a more descriptive reporting course of action will be used to present the significance of test results in a graduated manner (Perry 2002 after Coolican 1990, p. 174). That is: Significant: $0.05 > p > 0.01$; highly significant: $0.01 > p > 0.001$ and very highly significant: $p < 0.001$.

The next basic assumption is concerned with tests of significance. This study investigates workforce retention factors and their relationship with turnover intention. As there is a paucity of information regarding this particular area of study, all probabilities reported in this analysis (except those indicated in research question 3) are based on two-tailed tests because each comparison had two possible directions (Levin & Fox 1988; Perry 2002). Research question 3 investigates only one direction, and is therefore one-tailed.

Further to these basic assumptions, it is also noted that every statistical test should only be used if consideration has been made of certain requirements, conditions or underlying assumptions (Coakes & Steed 2007; Levin & Fox 1988).

These underlying assumptions will be addressed when the relevant SPSS statistical test is discussed. All SPSS reports developed for this study are listed in Appendix VIII.

3.5.5.2 Data analysis process

Having established the basic assumptions, this section continues by focusing on the data analysis process. There are four main steps in the quantitative analysis of data and they have been implemented for this study. The steps include preparing the data for analysis, getting a feel for the data, checking goodness of the data, and then testing hypotheses (Cavana et al. 2001, p. 315). Figure 3.2 was developed to portray these processes in context, and they are summarised in the next section of this discussion, whilst Chapter 4 goes further to discuss the results of the data analysis in more detail.

Figure 3.2 Data analysis process

Data collection

      i) Preparing the data: edit; blanks handled; code; categorise; enter

               Data analysis   ii) Getting a feel for the data
                                 iii) Goodness of data
                                 iv) Hypotheses testing
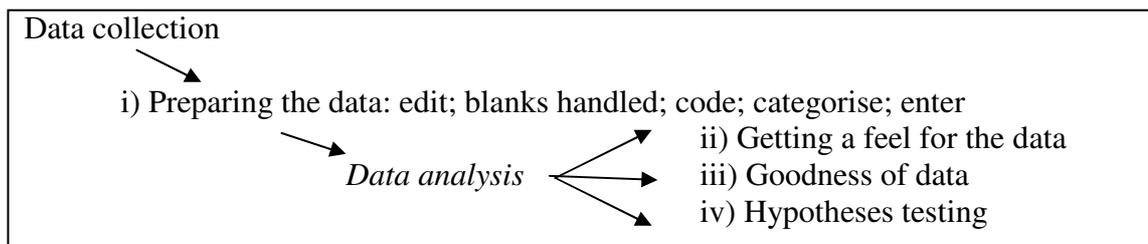
Adapted from:(Cavana et al. 2001, p. 315); developed for this study

i) Preparing the data

Preparation of data for analysis, although sometimes under-rated is an extremely important first step in the data analysis process (Hair et al. 2006). The most important parts in this process are: a) checking for correct data input and handling missing data and b) determining response rate; (Cavana et al. 2001; Hair et al. 2006). These processes and the analysis methods that were employed are explained as follows.

a) Check for correct data input and handling missing data: *Editing data* **-** Prior to the actual analysis, data must first be converted from data source to data file, that is, where the raw source material is converted to a useable data file (Coakes & Steed 2007, p. 20). To achieve this, firstly data collected were edited by checking over the returned surveys, searching for blanks and incomplete sections.

Handling blank responses - Unfortunately, blank spaces and incomplete survey sections are one of the drawbacks of surveys as compared to phone and face to face interviews where the editing is often taken care of automatically during the interview process, whilst the respondent is answering the questions. In this case, following up respondents that sent in blank responses was not possible given this survey was designed to ensure responses remained anonymous. Blank responses were dealt with by determining what percentage of the case was blank using the missing variable analysis in SPSS, and then depending on the blanks being ignorable or not ignorable data, a determination to remove the case or to keep it was made.

Coding data - Prior allocation of a unique alphanumeric code was made for each of the items on the survey. This ensured that every item from every case entered in to the data set could be tracked back to the original survey sheet for ease of cross checking and for audit purposes.

Categorising - Categorising the variables allowed for items measuring a concept to be grouped together (Cavana et al. 2001; Coakes & Steed 2007). Each of the four sections in the survey was grouped conceptually. Section A was focused on workforce retention strategies and employees' awareness, participation and perception of effectiveness of them, whilst Section B was focussed on the retention factors. The second part of Section B was focussed on turnover intention, Section C was focused on barriers to the participation in workforce retention strategies and Section D was focused on the demographic set of items. The categories of variables and the coding of the relative sections and questions are set out in Table 3.7 below.

Table 3.7 Questions coded and categories of variables

Survey	Questions coded	Category of variables
Section A Retention Strategies Questions 1 to 28 (columns A, B and C)	AA1 to AA28 AB1 to AB28 AC1 to AC28	Workforce retention strategies
Section B Retention Factors Questions 1 to 22 (columns A, B and C)	BA1 to BA22 BB1 to BB22 BC1 to BC22	Retention factors
Section B Turnover Intention Questions 23 to 26	B23 to B26	Turnover intention
Section C Barriers Questions 1 to 4	C1, C2, C3a, C3b, C4	Barriers to participation
Section D Demographics Questions 1 to 11	D1 to D11	Demographics

Source: Developed for this study

Data entry - Data were entered on to the computer using both Microsoft Excel and the Statistical Package for Social Sciences (SPSS) version 11. Ten per cent of the surveys were checked for data input accuracy by an independent party, as suggested in the literature (Cavana et al. 2001).

Descriptive statistics using frequencies were firstly run to check for either incorrectly inputted data or to determine if data was missing. During this analysis, determination was made about whether the data was missing at random, or whether there was a pattern of missing data for a particular group, using the missing value analysis.

The survey has 4 Sections: A Retention Strategies, B Retention Factors, C Barriers and D Demographics (See Table 4.1). Two data input errors from Section A were identified and corrected and an error in variable values for Section B was also corrected. The data from the survey consisted of 'not ignorable' and 'ignorable' missing data (Hair et al. 2006). Two items in Section D Barriers questions 9 and 10 were reverse coded to match similar item values in Section B Turnover Intention questions 23-26 (Coakes & Steed 2007).

Part A of Section A Retention Strategies, was deemed not ignorable because it required acknowledgement from the respondent of whether they were aware of various

workforce retention strategies, or not, as the basis for the remainder of the survey. The remainder of Section A Retention Strategies and all of Section B Retention Factors were treated as ignorable data because of the design of the survey instrument - that is, completion of these sections depended on the respondents' awareness and participation in a workforce retention strategy – which may have been nil if they had never participated in any workforce retention strategy.

The responses received for Section B Retention Factors required careful attention because this section of the survey provided the data for relationship analysis between the independent variables – retention factors, and the dependent variable – turnover intention. This attention is necessary because cases with missing data for dependent variables typically are deleted to avoid any artificial increase in relationships with independent variables (Hair et al. 2006, p. 56). Although Section B Retention Factors had 3 parts – A, B and C, initially designed to inform this question, it was determined that only Section B questions A1-22 would be analysed. This was because the number of respondents to Section A Retention Strategies was 375 and this decreased to 190 for Section B Part A, 146 for Section B Part B and to 96 for Section B Part C. Further to this, for the purposes and scope of this study and for reasons of parsimony, the first preference workforce retention strategy responses (Section B Part A) will be explored, with the second and third preference responses (Section B Parts B and C) held over for future analysis (See Appendix III Survey).

Section D Barriers was determined as not ignorable because this data was used to inform RQ4 *How does the relationship between retention factors and turnover intention vary when taking in to account the demographic variables of gender, age and tenure?* Given that missing data under 10 per cent for an individual case can generally be ignored (Hair et al. 2006, p. 55), and imputation was not appropriate for these items, the missing values analysis for Section A Retention Strategies Part A gives 11 cases that have greater than 10 percent missing data and Section D Barriers has 42 cases with greater that 10 percent missing data. However, based on the importance of these sections to inform the research, it has been determined that only those cases with 100 percent data missing for the respective sections will be excluded. Therefore Section A Retention Strategies will have 2 out of the 379 cases excluded, and Section D Barriers will have 40 out of the 379 cases excluded. This is because SPSS through the function 'exclude cases pairwise' excludes from the analysis those cases with missing values for

either or both of the pair of variables in computing a specific statistic (Coakes & Steed 2007). This is also in the interests of using as much of the data from the survey as possible to inform the research questions (Hair et al. 2006).

Table 3.8 presents the sections and parts of the survey, the codes used to identify each item and the determination of missing data as 'not ignorable' or 'ignorable'.

Table 3.8 Survey sections and analysis of missing values

Survey				
		Code	Not ignorable	Ignorable
Section A Retention Strategies	Part A1-28	AA1 to AA28	✓ 2/379 cases 100% missing	
	Part B1-28	AB1 to AB28		✓
	Part C1-28	AC1 to AC28		✓
Section B Retention Factors	Part A0-22	BA0 to BA22		✓
	Part B0-22	BB0 to BB22		✓
	Part C0-22	BC0 to BB22		✓
Turnover Intention	23-26	B23 to B26		✓
Section C Barriers	1-2	C1a,b,c to C2a,b,c		✓
Section D Demographics	1-10	D1 to D10	✓ 40/379 cases 100 % missing	

Source: Appendix VIII, Report Nos 5, 6, 7, 8, 9; developed for this study

b) Response rate: Both the paper based and electronic survey dissemination processes were recorded on tracking sheets to check if indeed they had reached their destination and to monitor response rates. Both surveys were closed on the same date after which the response rate was determined for both survey modes individually and collectively. Three thousand Grades 5 and 6 nurses were invited to participate in the survey (1500 paper based and 1500 on-line) at 63 sites within 8 health service districts of Queensland Health. Although the survey rate was low, much effort was expended in following up respondents and line managers with reminders and requests to participate if they had not already. Appendices VI and VII Survey administration, portrays dates and the number of times that reminders were phoned or emailed to respondents and/or their line managers to encourage participation. The total number of responses was 379. The low response rate may be attributed to many causes. Although this is only based on

speculation, some of the causes may have included the challenging times currently present in Queensland Health, particularly for nurses as a result of the implementation of the new payroll system, the difficulty in understanding the instructions for completing the survey, the length of the survey and perceived time taken to complete it and survey fatigue. Survey fatigue refers to the number of surveys nurses may be asked to complete, for example: Queensland Health's Better Workforce Culture Survey, Health Service Districts canvassing feedback from staff, as well as nursing organisations who also survey their members.

Table 3.9 Survey response rate: Paper based and on-line survey modes

Survey mode	Number invited to participate	Number returned/submitted	
Paper based	1500	255	17.0%
On-line	1500	124	8.3%
Total	3000	379	12.6%

Source: Developed for this study

Once these tasks were completed, the data were then ready for preliminary analysis. This refers to the description of the data and its display in an effort to present the data in an ordered and easily understood manner.

ii) Description of the data and data display

The description of data and data display allows a good understanding of the data obtained from the survey, as well as some insight in to the respondents to the survey. Activities that enable this important insight include; a) determining response bias and checking for normality
 and b) obtaining descriptive statistics. These processes are described as follows.

a) Response bias and normality testing: Response bias was checked to determine if respondents were biased in the way they responded to either of the modes of survey - paper based or on-line. For this analysis the independent group t-Test was used to compare the means of the two groups of cases for the interval scaled data. It is acknowledged that accuracy of t-Test interpretation depends on the underlying assumptions – interval scale of measurement; random sampling and normality (Coakes & Steed 2007, p. 63). Assessment of normality was conducted by exploring the data through descriptive statistics. The data were also explored for normality by splitting it via survey mode. Boxplots, histograms, skewness and kurtosis were particularly noted.

Skewness was within the acceptable range– less than 3, whilst kurtosis was within the acceptable range – less than 10 (Hair et al. 2006). Therefore, each of the assumptions was met to ensure the t-Test was conducted as accurately as possible. The chi square test was used to compare expected versus observed frequencies for the nominal data. Although assumption testing for nonparametric techniques is not as critical as for parametric methods, general assumptions still apply. Generic assumptions that apply for nonparametric techniques such as the chi square test that were incorporated and tested included; random sampling; similar shape and variability across distributions and independence of groups (Coakes & Steed 2007, p. 157).

Analysis: The independent group t-Test was conducted on interval scaled data for Sections B Retention Factors questions A1-22, Section B Turnover Intention questions 23-26, Section C Barriers questions 1-2 and Section D Demographics questions 8-10. When Levene's test has a probability greater than 0.05, it may be assumed that the population variances are relatively equal. This indicates the ability to use the t-value, degrees of freedom (df) and two-tail significance for the equal variance estimates to determine whether respondent differences exist between the group means of the two survey modes (Coakes & Steed 2007, p. 71).

Firstly, inspection analysis for Section B Retention Factors items 1 - 22 showed that three (BA1, BA8 and BA22) out of the 22 items presented as significant $p < 0.05$ for Levene's test for equality of variances (See Appendix VIII, No.10). Where the significance value for the Levene's test is low, $p < 0.05$, the *equal variances not assumed* results are used (Coakes & Steed 2007). Further investigation of the results indicated that the t-value for all 3 items was not significant $p > 0.05$ and therefore it could not be concluded that a significant difference exists between the two group means. For the remaining 19 items, all of the Levene's test scores were $p > 0.05$, indicating that the variances were not significantly different. Where the significance value for Levene's test is high, $p > 0.05$, the *equal variances assumed* results are used (Coakes & Steed 2007). This produced only 2 (BA3 and BA4) of the 19 items with t-values that were significant, where $p < 0.05$. The same process was continued to analyse the remainder of the items.

Section B Retention Factors items 23 – 26 were not significant for Levene's test, $p > 0.05$. Inspection of the *equal variances assumed* results indicated that the t-values for B23 and B26 were significant, $p < 0.05$. Analysis of Section C Barriers indicated that items C1c, C2a, C2b and C2c were all significant for Levene's test, $p < 0.05$, however after inspection of the *equal variances not assumed* results, all t-values tested as not significant, $p > 0.05$. Section D Demographics items 8 – 10 were not significant for Levene's test, $p > 0.05$, and the t-values were also not significant, $p > 0.05$.

The chi square test for nominal data and survey mode was performed on Sections A Retention Strategies questions A1-28, AB1-28, AC1-28 and Section D Demographics 1-7. The analysis was conducted using the SPSS cross-tabulation function (See Appendix VIII, No.14). This revealed a level of significance for chi square, $p < 0.05$, in 32 out of 84 variables for Section A Retention Strategies. The only variable in the demographic Section D Demographics questions 1-7 to present with a significance level $p < 0.05$, was D3, *Occupational stream and level*.

Closer examination of the chi square results for Sections A Retention Strategies and D Demographics, revealed that 31 out of 90 items displayed expected cell frequencies less than 5, which is a violation of one of the main assumptions (Coakes & Steed 2007, p. 165). To further investigate these results, a Mann Whitney U test was also applied to the data. Interestingly, the results of significance regarding the survey modes were very similar with 31 out of 34 items where $p < 0.05$ for the Z score were the same 31 items as those that were significant for chi square (See Appendix VIII, No. 67).

b) Descriptive statistics: Descriptive statistics were conducted on the inputted data using SPSS. Specifically, these were obtained by running frequency distributions for the demographic variables: gender, age, position, stream, tenure at location, tenure in profession and health service district. Visual displays of the frequency data were created through SPSS for ease of comparison of the demographic data and are presented in Section 4.2.1. Measures of central tendency and dispersion including the mean, standard deviation, range and variance were conducted on the other dependent and independent variables using SPSS. This gave a picture of how respondents answered the survey items, and also gave an indication about the variability in their responses.

As noted in the literature (Cavana et al. 2001; Leedy & Ormrod 2005; University of Southern Queensland 2008a), getting a feel for the data is a very important step in the data analysis process. The better the data is understood, the greater the opportunity to address the research problem through the true meaning derived from the statistical tests applied (University of Southern Queensland 2008a).

Having obtained a level of understanding of the data through the descriptive statistics applied, the next step was to test goodness of data through testing the reliability and validity of the measures (Cavana et al. 2001).

iii) Testing goodness of data

In preparation of data for analysis it is important to ensure the data obtained are reasonably good. Testing the goodness of data can be achieved by submitting the data for factor analysis and obtaining Cronbach's alpha of the measures (Cavana et al. 2001, p. 319). Furthermore, it is acknowledged that reliability of a measure is established by testing both for consistency and stability (Cavana et al. 2001). The procedures engaged in this part of the analysis included; a) factor analysis, b) reliability; c) validity and d) relationship of the variables. These are discussed below.

a) Factor analysis: Data reduction using factor analysis in SPSS was conducted on the 22 retention factors and the 4 turnover intention variables to produce a more manageable set of variables, but still being representative of the larger group. The most frequently used methods for factor analysis are principal component and principal axis factoring (Coakes & Steed 2007). Although the two methods usually yield very similar results, principal components analysis was chosen because it is often preferred as a method for data reduction, whilst principal factors analysis is often preferred when the aim of the analysis is to detect structure (StatSoft 2010). Tests to determine factorability of the matrix were conducted as part of the factor analysis and included Bartlett's test of sphericity and Keiser-Meyer-Olkin's measure of sampling adequacy.

b) Reliability: Cronbach's alpha is a commonly used reliability coefficient which measures internal consistency of the variable group and ranges in value from 0 to 1. A value of greater than 0.7 is considered acceptable (Hair et al. 2006, p. 102). This reliability measure was applied to Section B Retention Factors Part A1-22 items: retention factors = independent variables; and the dependent variables = turnover

intention, Section B Turnover Intention questions 23 to 26. As a result of this analysis, Cronbach's alpha for the 22 items – retention factors, was 0.9417 and for the 4 items – turnover intention, was 0.9063. The results indicated that the internal consistency reliability of these two measures was acceptable (Cavana et al. 2001).

c) *Validity:* The results of factor analysis can also confirm whether or not the theorised dimensions are present (Cavana et al. 2001). This establishes factorial validity which verifies the planned structure of the survey instrument has held true (Cavana et al. 2001).

d) *Relationship of the variables:* A correlation matrix was also obtained to give an indication of how closely related the variables under investigation were (Cavana et al. 2001; Hair et al. 2006). Following factor analysis, this test was conducted on the independent, dependent and demographic variables.

iv) **Research questions and hypotheses testing**

Once all of the background work was completed on the preparation and preliminary analysis of the data, the next stage was to focus on the research questions and hypotheses. Consequently, the methodology used to answer the research questions and hypotheses follows.

RQ1. What are employees' perceptions about workforce retention strategies being used in Queensland Health; informed by:

    a. Employees' awareness of workforce retention strategies.

    b. The level of participation in workforce retention strategies.

    c. The perceived level of effectiveness of workforce retention strategies.

    d. The perceived barriers to participating in workforce retention strategies.

Research question one focused on employees' awareness, participation in and perceived effectiveness of the listed workforce retention strategies in Section A of the survey. Descriptive statistics using SPSS were conducted on data from Section A Retention Strategies questions Part A (awareness of) 1-28, Part B (participation in) 1-28 and Part C (perceived effectiveness) 1-28. Determining awareness of, and participation in, was achieved by analysing the frequencies and valid percentages for each retention strategy, from the SPSS results. This information was collated in to Excel.

The analysis of results for Part C (perceived effectiveness) was investigated by analysing the frequencies and the means. This was possible because the items in Part C were interval scaled; 1=not effective, 2=slightly effective, 3=effective. Although 4=don't know responses, they were not included in this analysis. The results from Part C were also added to the Excel collation. Using 'sort' on Excel, all three columns of data, plus the column listing the retention strategies was sorted by the means identified for Part C responses. The number of respondents who were aware and participated was also calculated as a percentage and included. A final column was then added, indicating which retention strategies were perceived as effective in rank order from 1 to 28. Any ratings made by people who said they were unaware of the program or did not participate were not included (See Table 4.11). The results were presented as: Column 1 – list of workforce retention strategies; Column 2 – awareness of (Number of responses and percentage of respondents); Column 3 – participated in (Number of responses and percentage of respondents); Column 4 number of respondents who were aware and participated as a percentage, Column 5 – viewed as effective (Number of responses and mean of responses); Column 6 – rank order (1 – 28).

Perceived individual and organisational barriers to participating in workforce retention strategies were identified by conducting descriptive statistics on Section C Barriers Parts 1 and 2 of the survey. Specifically, frequency of respondents and the mean and standard deviation of responses were analysed from the descriptive statistics. This information was presented in tabular form where individual barriers included: lack of time; lack of interest; did not know about them; and organisational barriers included: lack of line manager support; not well accepted; not well promoted (See Table 4.12).

A number of respondents provided responses to the open ended questions in this section. These responses were theme coded allowing the raw data to be reorganised according to conceptual themes as recognised by the researcher (Cavana et al. 2001 after Minichiello et al. 1990). This was achieved by firstly transcribing all of the comments provided by respondents on the paper based surveys to a table, including their case number. Secondly, all of the comments were retrieved from the electronic surveys by copying and pasting to the same table, including case number. This ensured that every response now recorded in the table could be tracked back to the original source. After reading through all of the responses, a number of common themes emerged.

These were included as columns on the table, and a tick (✓) was indicated whenever the particular theme was found (See Appendix XII: Barriers to participation: Themes).

RQ2. How do respondents characterise their preferred workforce retention strategy in terms of retention factors?

Descriptive statistics including the mean and standard deviation using SPSS were conducted on the 4 component variables representing retention factors to answer research question two.

RQ3. What is the relationship between various retention factors and turnover intention?

> ***H_1 There is a positive relationship between retention factors and decreased turnover intention.***

Research question three required the use of multiple regression using SPSS, to explore the relationship between retention factors and turnover intention. Multiple regression provides a means of objectively assessing the degree and character of the relationship between the dependent and independent variables (Hair et al. 2006, p. 191).

In this approach, in addition to their collective prediction of the dependent variable, the independent variables may also be considered for their individual contribution to the variate and its predictions. For noting, correlation among the independent variables may make some redundant in the predictive effort. These aspects will be further explored and explained in Chapter 5, Discussion and Conclusions.

A number of assumptions underpin the use of regression analysis and these include: ratio of cases to independent variables; outliers; multicollinearity; normality, linearity, homoscedasticity, independence of residuals (Coakes & Steed 2007, p. 136). The assumption concerning the ratio of cases to variables was satisfied through the research design. The effects of sample size can be seen most directly in the statistical power of the significance testing and generalisability of the result. For example, sample sizes of 100 will detect fairly small R^2 values ranging from 10 to 15 per cent, with up to 10 variables and $p < 0.05$ (Hair et al. 2006). The remainder of the assumptions are assessed through regression analysis (Coakes & Steed 2007).

The detection of outliers was the assumption of most concern after running the regression analysis. Extreme cases of outliers may have considerable impact on the

regression solution. To identify their presence, the Mahalanobis distance and scatterplots were therefore employed in this analysis (Coakes & Steed 2007, p. 136). An examination of the Mahalanobis distance values indicated that there was 1 value that was greater or equal to the critical chi square value of 18.47 for 4 df at an alpha level of 0.001 (Coakes & Steed 2007, p. 142), having a Mahalanobis distance value of 24.16. Further to this, testing the threshold level for outlier detection (Hair et al. 2006, p. 75) where D^2/df should result in values of 4 in larger samples presented the following:

$$D^2/df = 24.16/4$$
$$= 6.04 \text{ thus also indicating outlier detection.}$$

Investigation of this case (No. 251) indicated that the respondent had a number of extreme responses for Section B Retention Factors questions A1-22, questions B1-22 and questions BC1-2, where they were strongly agreeing or strongly disagreeing for most of the items. The profile of the outlier appears to resemble *extraordinary observations* (Hair et al. 2006, p. 74), and although these types of outliers are most likely to be omitted, it was decided that the case probably did represent a valid (though extreme) element of the population and was therefore retained. Given the assumptions were satisfied, the analysis was continued. A stepwise regression was also conducted to further explore the contribution that each independent variable made to the variance of the dependent variable.

RQ4. How does the relationship between retention factors and turnover intention vary when

> *taking into account certain demographic variables (gender, age, tenure)?*
> *H₂ Gender does not significantly moderate the relationship between retention factors and turnover intention.*
> *H₃ Age does not significantly moderate the relationship between retention factors and turnover intention.*
> *H₄ Tenure (length of time in the location) does not significantly moderate the relationship between retention factors and turnover intention.*
> *H₅ Tenure (length of time in the profession) does not significantly moderate the relationship between retention factors and turnover intention.*

Research question four required the application of moderated multiple regression to identify if there was any variation in the relationship between retention factors and turnover intention as a result of gender, age or tenure. Firstly, standardisation is applied

so that all variables are converted to a common scale and variability (Hair et al. 2006). Following this, exploration of the moderating effects of variables is achieved by forming a moderator term by multiplying the independent variable by the moderator variable. This new term, was then entered in to the regression equation and multiple regression analyses were conducted (Hair et al. 2006). This analysis is more fully explained in Chapter 4 Analysis of Results. In addition to reliability and validity related to measurement, the internal and external validity of the research project as a whole must also be considered (Leedy & Ormrod 2005). Accordingly, the next part of the discussion concentrates on ensuring the reliability and validity of the research project per se.

3.6 Reliability and validity

The tests for establishing quality and rigour in a design methodology include reliability, internal validity and external validity (Quemard 2004 after Dooley 1995; Ellran 1996; Huberman & Miles 1994; Neuman 1997; Yin 1994). Whereas previous references to reliability and validity in Section 3.5.6 were referring to the measures in the survey, this part of the discussion focuses on the reliability and validity of the study as a whole and these are explained below.

3.6.1 Reliability

Reliability refers to the stability and consistency of the research project in its entirety. In essence, reliability is the demonstration that the operations of the study can be repeated (University of Southern Queensland 2008b). To ensure the greatest reliability possible, the following steps were taken: measures were determined based on the application of well recognised and accepted motivation and turnover theory; the measurement instrument was validated through focus groups, face and content validity and pilot tested using 20 participants; the data collection and data analysis procedures were carefully documented in a step-wise logical process. Further to this, the development of the research project, and the findings were discussed with an expert panel prior to finalising the dissertation.

The expert panel consisted of the researcher's two supervisors. Contributions were also sought from other experts on specific topics, for example survey development and statistical advice, as required.

3.6.2 Internal validity

In experimental research, internal validity allows the researcher to draw accurate conclusions about cause and effect based on the research design and data yielded (Graziano & Raulin 2007; Leedy & Ormrod 2005). It is important to note that this research is not causal, however correlational studies are used to examine relationships between a number of the variables (Graziano & Raulin 2000). As applied in this case, internal validity also refers to the researcher being able to draw accurate conclusions about other relationships in the data. To achieve the highest internal validity possible, the survey was carefully designed and thoroughly tested prior to dissemination. The items and measures were cautiously chosen, based on motivation and turnover theories. As well as presenting the justification for the selection of the various measures, the data collection and analysis procedures were carefully planned, documented and followed meticulously.

3.6.3 External validity

This refers to the extent to which results and conclusions drawn may be generalised to other contexts (Leedy & Ormrod 2005). It is accepted that the random selection of participants from a population is the best way to control problems of generalisability from a sample to a population (Graziano & Raulin 2007, p. 183). This study investigated employee perceptions of workforce retention strategies and the effect on turnover intention.

Accordingly, the research design dictated the comparison of like groups from higher and lower turnover health service districts. Nurses, having the highest staff numbers were chosen and from this group, the population was determined as Grade 5 and Grade 6 nurses, as explained in Section 3.5.2. Choosing this particular subset from the nursing occupational stream prevented a simple random selection and consequently purposive sampling was necessary.

To achieve the highest external validity possible within the constraints of the study, the largest sample size affordable – 3 000, from within the population were surveyed across a wide geographical area which included 63 locations, in Queensland Health. Table 3.10 summarises the important aspects of reliability and validity that were included to ensure that confidence in conclusions drawn were defensible from the data collected.

Table 3.10 Summary of the reliability and validity of the research project

Research quality initiative and definition	Threats to research quality mitigated by:
i) Reliability: Stability and consistency, ability for the study to be repeated	• Measures determined based on the application of well recognised and accepted motivation and turnover theory • Measurement instrument validated through focus groups and pilot tested • Data collection and data analysis procedures carefully documented in a step-wise logical process; and the • Entire work including the findings from the research considered by an expert panel
ii) Internal validity: Data yielded enables the drawing of accurate conclusions about relationships within the data	• Survey carefully designed and thoroughly tested prior to dissemination • Measures cautiously chosen and justified • Data collection and analysis procedures carefully planned and followed
iii) External validity: Ability to generalise conclusions to other contexts	• Largest sample size affordable • Surveyed across a wide geographical area of Queensland Health • Higher turnover and lower turnover districts selected • Survey posted and emailed

Adapted from: (Graziano & Raulin 2007; Leedy & Ormrod 2005); developed for this study

3.7 Limitations of the methodology

There were a number of limitations of the methodology that impact on this research that required noting. These included selection of the sample, the survey and generalisability.

3.7.1 Limitations of the sample

It is acknowledged that regardless of the type of research, sampling randomly from the population best allows for generalisability (Graziano & Raulin 2000). This study required purposive sampling to ensure that the participant pool was as similar in as

many respects as possible. To decrease the effect of this limiting factor, the largest sample size possible was surveyed from across a wide geographical area.

3.7.2 Limitations of the survey

There are many advantages in using a survey to gather data, however, there are also limitations. For example, although wide geographic areas can be reached, the response rate is usually low with a 30 per cent return rate being quite acceptable (Cavana et al. 2001; Leedy & Ormrod 2005). Common method bias is a limitation as a result of the survey being restricted to a self report measure (Podsakoff et al. 2003). Other common method biases that may also be present include social desirability bias where participants respond to items more as a result of their social acceptability than as their true feelings (Podsakoff et al. 2003). For example respondents may feel that they need to keep their job and may not respond to any of the items in a negative way. Response bias is also a limitation and its presence will be investigated because there are possible ways of responding; paper based and electronic. Another limitation worth noting is that a participant's response to the survey may be influenced by transient mood state bias where the impact of a relatively recent mood-inducing event (for example Queensland Health's current payroll issues) may affect how they view themselves and the world around them with consequences when they complete the survey (Podsakoff et al. 2003). As mentioned earlier, this is purely speculative, however worth noting.

Attempts to mitigate these types of responses are included in the 'Invitation to participate' covering letter where anonymity and confidentiality are assured. Although surveys can be touted as anonymous and confidential, they do not allow for the participant to seek explanation or clarification on any aspect of the survey as they are completing it (Leedy & Ormrod 2005; Steel 2002). The limitations of the survey are noted and efforts to control for them included: the careful design and layout of the survey based on a solid theoretical background; focus group validation of the list of workforce retention strategies; pre-tests including face validation, content validation and pilot testing of the survey prior to dissemination; the inclusion of an 'Invitation to participate' covering letter assuring confidentiality and anonymity which accompanied every survey; the individual addressing of each survey package and the supplying of a reply paid envelope and the second round of the survey disseminated via email.

3.7.3 Limitations of generalisability

This study has focused on the occupational discipline of nursing and more specifically Grades 5 and 6 nurses. Care must be taken when generalising findings to other nursing disciplines within the occupational stream of nursing. This is because Grades 5 and 6 nurses are much more similar to each other in work roles and responsibilities than other nursing disciplines. For example, many substantive Grade 5 nurses working in two part-time jobs at the one time may work at the Grade 5 level for one part and the Grade 6 level for the other. The role is mainly ward work consisting of patient care and shift duties. Higher grade nurse positions are often less manual and not as demanding for shift work. Further to this, caution must be taken when attempting to generalise the findings from this study to other Queensland Health employees (Leedy & Ormrod 2005; van der Heijden B et al. 2009) because the way the nursing units, hierarchy and support programs are set up is often different to other occupational groups. There would however be some ability to generalise at the principle level. These potential limitations have been noted and efforts have been made in the research design and methodology to mitigate and where possible negate these limitations, as described above and summarised in Table 3.11 Research methodology limitations.

Table 3.11 Research methodology limitations

Limitation		Efforts to reduce limitations
i) Sample selection	• Purposive sampling	• Large sample size • Wide geographical area included
ii) Survey	• Low return rate • Common method biases: Self-report, social desirability, transient mood state • Snapshot in time • Inability to clarify or explain the survey	• Clear easy to understand questions, easy to complete, individually addressed package, reply paid • Carefully designed survey • Focus group validation • 'Invitation to participate' covering letter to explain the survey and assuring anonymity and confidentiality • Pre-tests: face and content validity and pilot testing of survey • Survey posted and emailed
iii) Generalisability		• Comparison across a large area and canvassing a large sample

Source: (Podsakoff et al. 2003)*; developed for this study*

3.8 Ethical considerations and clearance

Ethical clearance was sought from the University of Southern Queensland and Queensland Health for permission to conduct the research. This was a relatively straight forward process with the University of Southern Queensland, however the process with Queensland Health was much more challenging. In essence, there was no centralised process for ethical research clearance in Queensland Health, with each health service district either defaulting to a larger hub, or doing their respective approvals independently.

Consequently, clearance was required for ethics from five human resource ethics committees and then governance approval for the site was also required from the eight health service districts. The process commenced in July 2009, and after continuous follow up and persistence, all approvals were finally received by the end of April 2010. An 'Invitation to participate' covering letter accompanied each survey (See Section 3.5.3) where participants were thoroughly informed and assured of anonymity, confidentiality, appropriate use of results, and ability to withdraw at any time. Return of the survey indicated consent.

As a courtesy, the Queensland Nurses Union was notified of the survey and its purpose prior to circulation of the survey to Grades 5 and 6 nurses from June to August 2010. Appendix IX University of Southern Queensland ethics application and Appendix X Queensland Health ethics application, provide the details of the application process.

3.9 Summary of the chapter

This chapter began with presenting the research objective and hypotheses before presenting the justification for the positivist choice of research paradigm. The discourse then moved on to explaining the elements of research design, providing the justification for the choice of survey research as the best fit for this particular study. The research methodology was then explained in a step by step process encompassing; the survey development, the sample selection, pre-testing of the, dissemination of the survey, collection of data and finally the data analysis. Important considerations were explained

in the reliability and validity section followed by the limitations, and ethical considerations explained as they applied to the research methodology. The next chapter concerns the results and analysis which follows by building on the solid foundation constructed in this research methodology chapter.

CHAPTER 4 - RESULTS

4.1 Introduction

The previous chapter described the research methodology for this study providing the framework to underpin and support this chapter – Analysis of Results. The objective of the Analysis of Results chapter is to present, examine and analyse the collected data from the workforce retention survey. The chapter does not attempt to draw conclusions or compare results with the research studies previously discussed in Chapter 2 Literature Review. The discussion of results, drawing of conclusions and implications within the context of the literature are held over until Chapter 5 Discussion and Conclusions, for ease of understanding, to decrease repetition and to preserve objectivity (Perry 2002 after Lindsay 1995).

This chapter begins with an introductory Section, 4.1. This is followed by Section 4.2 which provides a description of the data by presenting the results of the application of descriptive and inferential statistics (Cavana et al. 2001; Perry 2002) and continues with information about the data reduction process. The data findings are then delineated according to the relevant research questions in Section 4.3.1 through to 4.3.4 (Erwee 2009). Section 4.4 summarises the findings that have informed the research investigation within the context of the collected data from the workforce retention survey and the chapter is summarised in Section 4.6.

4.2 Descriptive statistics: Frequency distributions of demographic variables and measures of central tendency of independent and dependent variables

This section of the discussion will summarise and describe the data obtained from the surveys (Coakes & Steed 2007), by firstly presenting the frequency distributions of the demographic variables, and then secondly by focussing on the measures of central tendencies and dispersions of the independent and dependent variables.

4.2.1 Frequency distributions for the demographic variables

The frequency distributions of the demographic variables provide a profile of the respondents to the survey. To provide this profile, Section D of the survey focussed on the gathering of demographic data from the respondents. Frequency distributions were obtained for each of the 7 demographic variables (D1-7).

From the 336 respondents to this section, the frequencies obtained indicated that 9.5 per cent of the respondents were male, the greatest number of respondents was in the age bracket 41-50 years (35.9%), and the majority of respondents worked in either permanent full time (47.0%), or permanent part time (42.9 %) positions.   The demographic data also indicated that most respondents were working in Grade 5 positions (59.6%), with most having worked in their current location for 2-5 years (11.0%). By far, the greatest majority of respondents (47.3%) had been in the nursing profession for over 20 years.

Nurses from all of the 8 health service districts responded, with the larger numbers coming from the larger districts; Sunshine Coast (38.2%) and Townsville (29.3%) Health Service Districts.   Table 4.1 below presents the frequency distributions for the demographic variables by numbers, percentages and in bar graph format for ease of visual comparison.

Table 4.1 Frequency distributions for the demographic variables

Gender	No.	%
Male	32	9.5
Female	306	90.5

Age	No.	%
21-30	54	16.0
31-40	64	19.0
41-50	121	35.9
51-60	85	25.2
Over 60	13	3.9

Position	No.	%
Perm f/time	159	47.0
Perm pt/time	145	42.9
Casual/flex	16	4.7
Temp f/time	8	2.4
Temp pt/time	9	2.7
Other	1	0.3

Position level	No.	%
Grade 5	201	59.6
Grade 6	135	40.1
Other	1	0.3

Time at location	No.	%
< 1 yr	55	16.4
1-2 yrs	64	19.0
2-5 yrs	88	26.2
5-10 yrs	52	15.5
10-15yrs	35	10.4
15-20 yrs	23	6.8
Over 20 yrs	19	5.7

Time in nursing	No.	%
< 1 yr	8	2.4
1-2 yrs	16	4.8
2-5 yrs	37	11.0
5-10 yrs	48	14.3
10-15yrs	32	9.5
15-20 yrs	36	10.7
Over 20 yrs	159	47.3

Location	No.	%
Cape York	12	3.6
Central West	8	2.4
Mackay	43	12.7
Mt Isa	20	5.9
Southwest	19	5.6
S'shineCoast	129	38.2
Torres	7	2.1
Townsville	99	29.3
Other	1	0.3
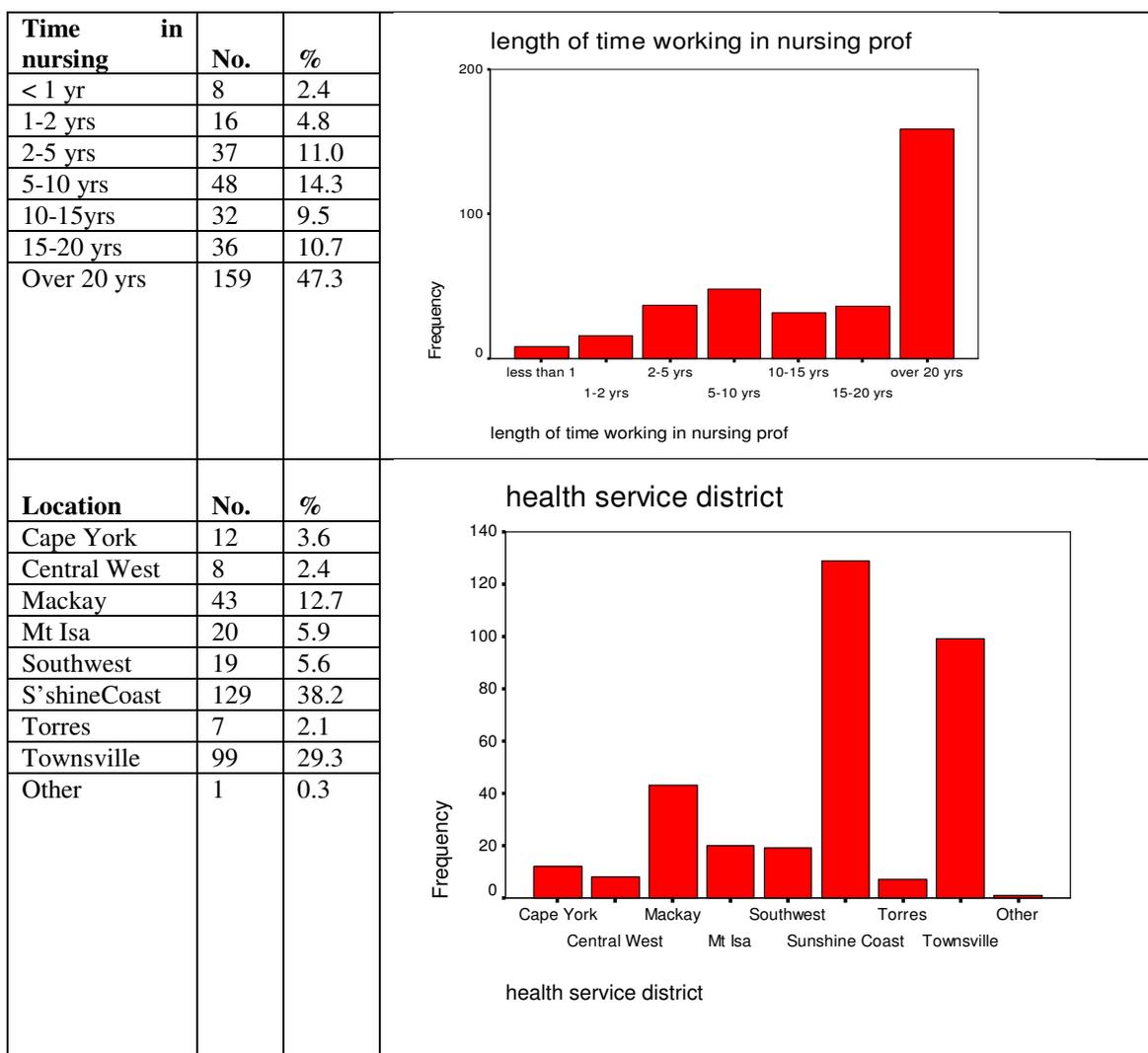
Source: Appendix VIII, Report No. 42; developed for this study

These descriptive statistics have provided a profile of the respondents to the workforce retention survey. In summary, respondents were generally female, aged between 41 and 50 years, employed as permanent full-time at Grade 5. They had been working from between 2 and 5 years at their current location and had been in the nursing profession for over 20 years. The next section focuses on the description of the interval scaled independent and dependent variables by investigating the descriptive statistics measuring central tendencies and dispersions.

4.2.2 Measures of central tendencies and dispersions

i) Independent and dependent variables

It is acknowledged that it is a prudent exercise to also obtain descriptive statistics including the mean, standard deviation, variance and range for the interval scaled

independent variables (retention factors), and dependent variable (turnover intention), to get a feel for the data (Coakes & Steed 2007). The Likert type scale used the anchor points of: 1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree.

Table 4.2 presents a summary of these statistics indicating that 6 out of the 22 retention factors – independent variables, had a mean value that tended towards the agree rating.

The retention factors were:

> *The WRS was supported by QH policy*
> *The WRS was applicable to my work*
> *I invested effort when participating in the WRS*
> *My performance during my participation in the WRS was high*
> *I felt personal gain having completed the WRS*
> *Participants in the WRS were treated the same*

The 16 items remaining produced a mean value of around 3, indicating neither disagreement nor agreement with the respective retention factor. The mean scores for the dependent variables indicated that there was neither strong disagreement nor strong agreement for any of the items listed. These data are presented in Table 4.2 following. It is important to note that the reason for many of the responses missing in the table (N = valid; N = missing) was because many respondents reported that they had not participated in any workforce retention strategy, and therefore could not comment on any of Section B Retention Factors. If they had never participated in any workforce retention strategy, the survey requested they go to Section C Barriers.

Table 4.2 Descriptive statistics: central tendencies and dispersions for the independent and dependent variables

	N		[1]Mean	[1]Std. Deviation	[1]Var	[1]Range
	Valid	Missing				
Independent variables – retention factors						
Participation in the WRS enhanced my job security	203	176	3.2759	1.13572	1.28986	4.00
The WRS was accessible in work time	203	176	3.5567	1.19839	1.43613	4.00
The WRS was recognised by my Supervisor as a valued program	201	178	3.7612	1.04052	1.08269	4.00
The WRS was supported by QH policy	201	178	3.9751	0.87429	0.76438	4.00
The WRS was presented/coordinated by an expert	202	177	3.5248	1.15551	1.33521	4.00
The WRS encouraged interaction with peers	201	178	3.5423	1.03414	1.06945	4.00
I felt some level of achievement when the WRS was completed	202	177	3.7129	1.01075	1.02162	4.00
I received recognition for participating in the WRS	200	179	3.0650	1.17374	1.37766	4.00
Completion of WRS increased my work responsibility	199	180	3.1809	1.14479	1.31054	4.00
There is possibility of advancement having completed the WRS	198	181	2.9899	1.15319	1.32985	4.00
The WRS was professionally conducted	197	182	3.6802	1.07108	1.14721	4.00
The WRS was applicable to my work	200	179	3.8550	1.05334	1.10952	4.00
There is possibility of growth in my work having completed the WRS	198	181	3.3333	1.13549	1.28934	4.00
I invested effort when participating in the WRS	200	179	3.9400	0.95444	0.91095	4.00
My performance during my participation in the WRS was high	199	180	3.8995	0.90451	0.81813	4.00
I felt personal gain having completed the WRS	199	180	3.8141	0.99016	0.98041	4.00
I have an increase in my work status having completed the WRS	198	181	3.0303	1.17896	1.38994	4.00
I received approval and recognition from my superior/s having completed the WRS	198	181	3.0101	1.11287	1.23848	4.00
The opportunity to participate in the WRS was offered fairly to all staff	201	178	3.5622	1.10334	1.21736	4.00
Participants in the WRS were treated the same	199	180	3.8191	0.97309	0.94691	4.00
All participants had similar skills, knowledge and experience when they commenced the WRS	199	180	3.0251	1.05619	1.11553	4.00
All participants received similar achievement and recognition rewards when they completed the WRS	199	180	3.3317	0.99522	0.99046	4.00
Dependent variables – turnover intention						
Participating in the WR strategy/ies has lead to increased job satisfaction	206	173	3.2184	0.98072	0.96180	4.00
Participating in the WR strategy/ies has decreased my thoughts of quitting	205	174	2.9073	0.96822	0.93745	4.00
Participation in the WR strategy/ies has decreased my need to search for jobs	205	174	2.9073	0.99321	0.98647	4.00
Participation in the WR strategy/ies has decreased my intention to quit	204	175	2.9461	0.98363	0.96752	4.00

[1]1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree
Source: Appendix VIII, No. 43; developed for this study

In summary, the measures of central tendency for the independent and dependent variables show there is some variation in the responses, however on average, there appears to be no strong disagreement or strong agreement for any of the independent or dependent variables overall. The standard deviations are within an acceptable range.

ii) Descriptive statistics for perceived barriers to participation in workforce retention strategies and thoughts and intentions to quit

The next part of this section looks at the remaining variables that constitute the survey instrument. These include the items around perceived barriers to participating in workforce retention surveys, and the thoughts and intention to quit in the next 12 months. The results indicate that there is a great variance in the responses, especially in the variables about thoughts of leaving and whether the respondent was motivated to stay or leave by the economic downturn. Table 4.3 presents the results as discussed. Further discussion of these results will be presented in Chapter 5.

Table 4.3 Descriptive statistics: central tendencies and dispersions for the remaining variables – perceived barriers and thoughts of leaving

	N		^Mean	^Std. Deviation	^Var	^Range
	Valid	Missing				
Perceived barriers						
My lack of time to participate	312	67	3.6859	1.17479	1.38012	4.00
My lack of interest in participating	305	74	2.3377	1.03590	1.07308	4.00
I did not know about them	328	51	3.8445	1.07383	1.15312	4.00
Lack of Line Manager support	312	67	3.1346	1.21399	1.47378	4.00
They are not well accepted in my work area	308	71	2.9123	1.02832	1.05744	4.00
They are not well promoted in my work area	325	54	3.7446	1.13285	1.28334	4.00

^1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree

	N		*Mean	*Std. Deviation	*Var	*Range
	Valid	Missing				
Motivated by economic downturn	336	43	2.5893	1.41561	2.00394	4.00
Thoughts of leaving job	335	44	3.1075	1.50461	2.26387	4.00
Intention of quitting within 12 months	336	43	3.7173	1.40802	1.98251	4.00

*1=not at all; 2=to some extent; 3=neutral; 4=to quite a large extent; 5=to a great extent

Source: Appendix VIII, No. 44; developed for this study

The last part of this section presents the techniques of identifying representative variables from a larger set, explained as follows.

4.3 Factor analysis

Factor analysis is a data reduction technique which has been applied to reduce a large number of variables to a smaller, more manageable set of factors or components without losing essential information contained in the variables (Coakes & Steed 2007). A number of assumptions and practical considerations underlying the application of factor analysis must be taken in to account and these will be presented accordingly.

Assumption testing:

Bartlett's Test of Sphericity and Kaiser-Meyer-Olkin sampling adequacy: A strong conceptual foundation is required to support the assumption that a structure does exist before performing factor analysis (Hair et al. 2006). The foundation for this survey was based on the studies outlined in the literature review in Chapter 2. The sample size and number of variables met the minimum requirement for factor analysis (Coakes & Steed 2007, p. 123; Hair et al. 2006, p. 113). Frequency and descriptive statistics were conducted to check for normality of the variables.

The initial computation of the complete set of intercorrelations showed they were suitable for factoring because the vast majority of loadings for both independent and dependent variables was greater than 0.3. Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin measure of sampling adequacy (MSA) are both tests that may be used to determine factorability of the matrix as a whole (Coakes & Steed 2007). The Bartlett test also tested for the presence of correlations among the variables. The results for both the independent and dependent variables indicated that there were significant correlations among the variables in the correlational matrix and the report is displayed in Appendix XI Factor analysis: Correlational matrix.

The results for the Bartlett test were 2940.820 for the independent variables and 639.662 for the dependent variables. The results for the Kaiser-Meyer-Olkin measure were 0.913 for the independent variables and 0.819 for the dependent variables.

The significant value was 0.000 - Barlett is significant if less than 0.05 (Coakes & Steed 2007, p. 127). Where Bartlett's test is large and significant and the Kaiser-Meyer-Olkin measure is greater than 0.6, factorability is assumed. Another measure to

determine the appropriateness of factor analysis by quantifying the degree of intercorrelations was the measure of sampling adequacy (Hair et al. 2006, p. 114). Measure of sampling adequacy (MSA) values must exceed 0.5 to be indicative of appropriateness for factor analysis. All MSA levels for the correlational matrix were well above the acceptable level of 0.5. The highest MSA for the independent variables was 0.952 (BA2 = *The WRS was accessible in work time*) and the lowest was 0.775 (BA19 = *The opportunity to participate in the WRS was offered fairly to all staff*). The highest MSA for the dependent variable was 0.950 (B23 = *Participating in the WRS has lead to increased job satisfaction*) and the lowest was 0.743 (B26 = *Participation in the WRS has decreased my intention to quit*). Linearity and outliers were also considered prior to conducting factor analysis. It was therefore determined that there were a significant number of correlations and the independent and dependent variables were suitable for factor analysis. Consequently, factor analysis was conducted on the independent variables – retention factors (BA1-22), and on the dependent variables – turnover intention (B23-26) with the assumption being that the factors were correlated.

The principal components (PC) method of factor extraction was used with the loading value set at 0.4. An orthogonal factor rotation - Varimax was conducted to make the factor structure more interpretable (Coakes & Steed 2007, p. 122), however, the component matrix still presented a number of dual factor loadings of greater than 0.3. An oblique rotation (Direct Oblimin) was applied with greater success giving only one component with dual loading and a structure much easier to interpret (Coakes & Steed 2007).

4.3.1 Factor analysis of independent variables – retention factors

Results

The factor analysis for the 22 independent variables (BA1-22 retention factors) produced 4 components or groups which represented 67.117 per cent of the variance. Factor analysis resulted in four items for Factor 1 that loaded above 0.700 and three that loaded below 0.700. The items in Factor 2 all had negative loadings of which four loaded above 0.700 and two loaded below 0.700; Factor 3 had one item loading above and four items loading below 0.700 and Factor 4 had two items loading strongly on the

factor. Table 4.4 presents the groupings for the independent variables – retention factors.

Table 4.4 Factor analysis conducted on the 22 independent variables - retention factors, producing four factors: Pattern matrix

Section B Retention Factors	Factor			
	R1	**R2**	**R3**	**R4**
I invested effort when participating in the WRS	0.909			
My performance during my participation in the WRS was high	0.816			
I felt personal gain having completed the WRS	0.745			
The WRS was applicable to my work	0.700			
I felt some level of achievement when the WRS was completed	0.562			
The WRS was professionally conducted	0.510			
The WRS encouraged interaction with peers	0.483			
The WRS was accessible in work time				
There is possibility of advancement having completed the WRS		-0.842		
There is possibility of growth in my work having completed the WRS		-0.754		
I received approval and recognition from my superior/s having completed the WRS		-0.749		
I have an increase in my work status having completed the WRS		-0.749		
Completion of WRS increased my work responsibility		-0.723		
I received recognition for participating in the WRS		-0.669		0.486
Participation in the WRS enhanced my job security		-0.552		
The opportunity to participate in the WRS was offered fairly to all staff			0.847	
The WRS was supported by QH policy			0.630	
Participants in the WRS were treated the same			0.600	
The WRS was recognised by my Supervisor as a valued program			0.569	
The WRS was presented/coordinated by an expert			0.506	
All participants had similar skills, knowledge and experience when they commenced the WRS				0.816
All participants received similar achievement and recognition rewards when they completed the WRS				0.772

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalisation.
A rotation converged in 14 iterations.
Source: Appendix VIII, No. 32; developed for this study

Reliability analysis assessed the degree of consistency in the factors and was determined using Cronbach's alpha. The generally agreed upon lower limit for Cronbach's alpha is 0.70, however, it may decrease to 0.60 in exploratory research (Hair et al. 2006, p. 137). Cronbach's alpha for the 4 factors of the independent variables was: 0.9185, 0.9041, 0.8187 and 0.6366 respectively. Table 4.5 presents the reliability analysis as well as the results of Bartlett's test and Keiser-Meyer-Olkin measure of sampling adequacy for the retention factors – independent variables. The reasons for labelling the factors are described in Section 4.3.3.

Table 4.5 Factor analysis conducted on the independent variables - retention factors, including reliability analysis, Bartlett's test and Keiser-Meyer-Olkin's measure of sampling adequacy

Factor	Items Section B Retention Factors Part A	Reliability Cronbach's alpha	Bartlett's test	Keiser-Meyer-Olkin
R1 Personal	14, 15, 16, 12, 7, 11, 6	0.9185		
R2 Opportunity	10, 13, 18, 17, 9, 8, 1	0.9041	2940.820	0.913
R3 Retention strategy	19, 4, 20, 3, 5	0.8117		
R4 Fairness	21,22	0.6366		

Source: Appendix VIII, Nos 32, 33; developed for this study

4.3.2 Factor analysis of dependent variables – turnover intention

Results

The factor analysis for the 4 dependent variables (B23-26) produced 1 factor which represented 78.980 per cent of the variance. Table 4.6 below presents the grouping for the dependent variable – turnover intention.

Table 4.6 Factor analysis conducted on the dependent variable - turnover intention, producing one factor: Component matrix

Section B Turnover Intention	Factor
	R1
Participation in the WR strategy/ies has decreased my intention to quit	0.945
Participating in the WR strategy/ies has decreased my thoughts of quitting	0.919
Participation in the WR strategy/ies has decreased my need to search for jobs	0.909
Participating in the WR strategy/ies has lead to increased job satisfaction	0.771

Extraction Method: Principal Component Analysis.
 1 component extracted.
Source: Appendix VIII, No. 34; developed for this study

The Cronbach's alpha for the dependent variable component was 0.9099. The reliability analysis, as well as the results of Bartlett's test and Keiser-Meyer-Olkin measure of sampling adequacy, are presented in Table 4.7 following.

Table 4.7 Factor analysis conducted on the dependent variable - turnover intention, including reliability analysis, Bartlett's test and Keiser-Meyer-Olkin's measure of sampling adequacy

Factor	Items Section B Turnover Intention	Reliability Cronbach's alpha	Bartlett's test	Keiser-Meyer-Olkin
Turnover intention	23, 24, 25, 26	0.9099	639.662	0.819

Source: Appendix VIII, Nos 34, 35; developed for this study

4.3.3 Labelling the factors

Once factor analysis was conducted and the groupings identified, descriptive labels were then prescribed to each factor group. The first factor included variables that were mainly focused on personal aspects of the respondents' perception to various retention factors and was therefore labelled as *personal*. The second grouping was based around the opportunity the retention strategy provided the respondent having participated in it, and so it was labelled as *opportunity*.   The third factor was concerned with the workforce retention strategy itself and for this reason was labelled as *workforce retention strategy*. The fourth component was concerned with fairness and equity of the participants in the workforce retention strategy and so was labelled as *fairness*. The item, *The WRS was accessible in work time,* did not group. Table 4.8 below presents the results of the independent variables grouped as determined by factor analysis and labelled as indicated above.

Table 4.8 Independent variables - retention factors, grouped as determined by factor analysis and the descriptive name for each group

Qn	Retention factors	Descriptive label
14	I invested effort when participating in the WRS	
15	My performance during my participation in the WRS was high	
16	I felt personal gain having completed the WRS	
12	The WRS was applicable to my work	
7	I felt some level of achievement when the WRS was completed	Personal
11	The WRS was professionally conducted	
6	The WRS encouraged interaction with peers	
10	There is possibility of advancement having completed the WRS	
13	There is possibility of growth in my work having completed the WRS	
18	I received approval and recognition from my superior/s having completed the WRS	
17	I have an increase in my work status having completed the WRS	Opportunity
9	Completion of WRS increased my work responsibility	
8	I received recognition for participating in the WRS	
1	Participation in the WRS enhanced my job security	
19	The opportunity to participate in the WRS was offered fairly to all staff	
4	The WRS was supported by QH policy	
20	Participants in the WRS were treated the same	Workforce retention strategy
3	The WRS was recognised by my Supervisor as a valued program	
5	The WRS was presented/coordinated by an expert	
21	All participants had similar skills, knowledge and experience when they commenced the WRS	
22	All participants received similar achievement and recognition rewards when they completed the WRS	Fairness
2	The WRS was accessible in work time	Did not group

Source: Appendix VIII, No. 32; developed for this study

The 4 dependent variables grouped as 1 factor after factor analysis. They were concerned with the respondents' perception about *turnover intention* and were labelled as such. Table 4.9 below presents the 4 items that grouped for this factor.

Table 4.9 Dependent variable - turnover intention, grouped as determined by factor analysis and the descriptive name

Qn	Turnover intention items	Descriptive label
23.	Participating in the WR strategy/ies has lead to increased job satisfaction	
24.	Participating in the WR strategy/ies has decreased my thoughts of quitting	Turnover intention
25.	Participation in the WR strategy/ies has decreased my need to search for jobs	
26.	Participation in the WR strategy/ies has decreased my intention to quit	

Source: Appendix VIII, No. 34; developed for this study

4.3.4 Descriptive statistics and relationships amongst variables

The descriptive statistics and investigation of the relationships amongst the variables are presented in this section (Cavana et al. 2001, p. 320).

The mean, standard deviation, Cronbach's alpha, skewness, kurtosis and the Pearson product-moment correlation were calculated using SPSS, on all of the variables in the study. All Cronbach alpha values were greater that 0.7 indicating that they were acceptable (Appendix VIII, No. 33), whilst skewness was within the acceptable range of less than 3 and kurtosis was within the acceptable range of less than 10 (Appendix VIII, Nos 47, 48) (Hair et al. 2006). The correlation matrix gave an indication of how related the variables under investigation were, with no result greater than 0.75. This indicated that they were measuring different concepts, as required (Appendix VIII, No. 49) (Cavana et al. 2001).

Result

Of the demographic variables, gender (6) and length of time in the nursing profession (9) had significant relationship with the dependent and independent variables. Opportunity (2) and length of time in the nursing profession (9) were negatively correlated (See Sections 5.2.3 and 5.2.4 for further discussion on this finding). Opportunity (2) and turnover intent (5) had the highest correlation for the independent and dependent variables. The data are based on the full item scores of the variables. Some of the correlations between the demographic variables and the independent and dependent variables were not significant and are designated by 'x' in the table. All of the correlations listed were significant at the $p < 0.01$ level of significance unless designated with an asterisk '*' which represents a significance level of 0.05. These results are summarised below in Table 4.10 which displays the descriptive statistics and correlations among variables in the study.

Table 4.10 Descriptive statistics, Cronbach's alpha values, correlations among variables

Variables	Mean	SD	α	Skew	Kurt	2	3	4	5	6	7	8	9
1. Personal	3.79	0.82	0.92	-0.815	0.810	0.682	0.686	0.504	0.337	0.143*	x	x	x
2. Opportunity	3.13	0.91	0.90	-0.368	-0.102		0.502	0.414	0.419	0.170*	x	x	-0.248
3. Strategy	3.73	0.78	0.81	-0.634	0.518			0.457	0.382	x	x	x	x
4. Fairness	3.18	0.88	0.64	-0.162	0.151				0.272	x	x	x	x
5. Turnover int	3.00	0.87	0.91	-0.169	-0.042					0.181	x	x	x
6. Gender				-2.78	5.77						x	x	0.178
7. Age	3.82	1.10		-0.191	-0.786							0.326	0.642
8. Time at loc	3.28	1.69		0.531	-0.485								0.453
9. Time in prof	5.45	1.80		-0.769	-0.684								

N = 166 valid listwise, all correlations significant at the 0.01 level (2-tailed), X = no significant correlation
* correlation is significant at the 0.05 level (2-tailed)
 Source: Appendix VIII, Nos 33, 35, 45, 47, 48, 49: (Leiter & Maslach 2009, p. 337), adapted for this study

This section has provided a description and summary of the data from the workforce retention survey. After calculating the descriptive statistics, conducting factor analysis and gaining a general understanding of the respondent profile, the next section will focus on the methodology employed to answer the research issue, objective and the research questions.

4.4 Survey results and data findings concerning the research questions

The next section focuses on the survey results and data findings with regards to the research questions.

4.4.1 Employees' perceptions about workforce retention strategies

Research question one is designed to develop an understanding of which workforce retention strategies were being used in Queensland Health by Grades 5 and 6 nurses, and what they perceived were most effective. Section A Retention Strategies of the survey was intended to tap this information. Section A questions A1-28 presented a list of workforce retention strategies that were available to this group of nurses working in Queensland Health. Respondents indicated whether or not they were aware of the particular strategy. Section A questions B1-28 then requested respondents to indicate in

which of these retention strategies they had participated. Section A questions C1-28 followed this trend by requesting the respondents to rate workforce retention strategies they had participated in, as effective or not.

All of this data from the survey was firstly inputted on to the SPSS data view. For ease of manipulation, it was then imported to Excel. The analysis included determining percentages of respondents who indicated awareness of, and participation in, the workforce retention strategies listed, and then the ranking of the means to determine the order in which they were perceived as most effective.

i) Awareness of participation in and ranking of retention strategies

The results from Section A Retention Strategies data indicated that the top five workforce retention strategies that respondents were **aware** of were; salary packaging 97.3 per cent, professional development allowance 93 per cent, performance appraisal and development 91.3 per cent, graduate programs 89.5 per cent, and professional development leave 87.6 per cent. The top 5 strategies that respondents had **participated** in were; performance appraisal and development 80.3 per cent, salary packaging 70.7 per cent, professional development allowance 70.5 per cent, better workplaces staff survey 59.5 per cent, and professional development leave 53.3 per cent. The percentage of respondents who were aware of the workforce retention strategy and participated in it was also calculated.

ii) Rank order

The rank order of perceived **effectiveness** for the top five workforce retention strategies was: 1. half pay holidays, 2. salary packaging, 3. professional development leave, 4. cadetships – Indigenous nursing, 5. professional development allowance. The results are presented in Table 4.11 below.

Table 4.11 Workforce retention strategies: Respondents' awareness; participation, perceived effectiveness and rank order

Workforce retention strategies	Aware of:		Participated in:		Participated /Aware**	Viewed as effective:		Rank order
	N=	%	N=	%	%	N =	Mean#	
iv. Half pay holidays	253	68.0	61	18.7	24.1	150	2.89	1
i. Salary packaging	362	97.3	244	70.7	67.4	278	2.82	2
iii. Prof Development Leave	326	87.6	184	53.3	56.4	254	2.76	3
18. Cadetship – Indigenous Nsg	89	24.0	9	3.1	10.1	32	2.75	4
ii. Prof Development Allowance	348	93.0	246	70.5	70.7	277	2.75	5
19. Rural Scholarship Scheme	215	57.6	20	6.4	9.3	85	2.72	6
20. Graduate Programs (Transition)	332	89.5	142	42.0	42.8	221	2.69	7
17. Indigenous Mentoring Program	110	29.5	9	3.0	8.2	37	2.68	8
23. Employee Assistance Scheme	220	58.8	44	13.8	20.0	116	2.61	9
16. Mentoring Framework	171	45.7	78	25.9	45.6	107	2.60	10
15. Coaching	99	26.6	26	8.9	26.3	62	2.58	11
5. Emerging clinical leaders	124	33.2	25	7.9	20.2	65	2.54	12
4. Leadership qualities	144	38.7	38	12.2	26.4	75	2.53	13
7. Practical People Management	70	18.8	16	5.1	22.9	40	2.51	14
22. SARAS	241	65.0	50	15.4	20.8	131	2.51	15
3. Coaching skills for leaders	161	42.9	28	8.8	17.4	72	2.5	16
9. Transition to Retirement	70	18.8	8	2.7	11.4	33	2.48	17
1. Inspiring leadership	164	43.7	53	16.5	32.3	102	2.47	18
6. On-line leadership modules	126	33.7	42	13.3	33.3	67	2.47	18
12. Peer support program	115	30.7	37	12.5	32.2	64	2.42	20
11. Flexible work plan	99	26.6	30	10.4	30.3	71	2.39	21
14. Succession planning	105	28.1	41	13.9	39.1	73	2.34	22
13. Work shadowing	35	9.4	13	4.6	37.1	36	2.33	23
2. Energising from conflict	91	24.5	36	11.7	39.6	67	2.25	24
24. Performance Appraisal & Devt	346	91.3	273	80.3	78.9	283	2.25	25
10. Work/life balance agreement	126	33.7	24	8.2	19.0	70	2.19	26
8. Maturity Matters	41	11.0	5	1.7	12.2	26	2.04	27
21. Better Workplaces staff survey	286	76.5	198	59.5	69.2	178	2.01	28

% = valid percent
#1=not effective; 2=slightly effective; 3=effective
**Number of people who were aware of the strategy and participated in it (percentage)
Source: Appendix VIII, Nos: 50, 51, 52; developed for this study

iii) The perceived barriers to participating in workforce retention strategies

Research question one part d, was designed to identify some of the barriers respondents perceived impacted on their ability to participate in a workforce retention strategy. Section C Barriers questions 1a, b and c and 2a, b and c were intended to tap this information. The barriers were categorised as individual and organisational. Results for the individual barriers indicated that generally respondents felt they did not know about the strategies and that they felt there was a lack of time to participate. Most did not perceive that a lack of interest was an individual barrier.

The organisational barriers perceived generally indicated that the strategies were not well promoted, and there was some agreement for a lack of line manager support. These results are summarised in Table 4.12.

Table 4.12 Perceived individual and organisational barriers to participating in a workforce retention strategy

Barriers to participation	N	Mean#	Std Dev#
Individual			
Lack of time	312	3.69	1.17
Lack of interest	305	2.34	1.04
Did not know about them	328	3.84	1.07
Organisational			
Lack of Line Manager support	312	3.13	1.21
Not well accepted	308	2.91	1.03
Not well promoted	325	3.74	1.13

#1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree
Source: Appendix VIII, No. 54; developed for this study

Section C Barriers Parts 3a and 3b also included two open ended questions asking respondents if there were personal and/or organisational reasons or barriers that could, or do prevent their participation in workforce retention strategies. Analysis of the comments identified several main themes for each barrier (See Appendix XII Barriers to participation).

These themes that emerged in the open ended questions 3a and 3b were somewhat reflected in the results of the descriptive statistics used to analyse the scale items in questions 1a, b and c, and 2a, b, and c of Section C Barriers, presented in Table 4.12 above. The themes that emerged from the 'personal reasons' comments were: busy with family commitments; not aware of the strategies; not interested in participating; only work on casual or part time basis.

The themes that emerged from the 'organisational reasons' comments were: no support from management; strategies not promoted; heavy workload; short of staff; bullying; lack of leadership. A number of other comments were given and although recorded, they did not fit in to these more common theme categories. As a result, the open ended question responses enriched the findings regarding perceived individual and organisational barriers. Further discussion regarding the themes identified and their implications will be presented in Chapter 5, Discussion and Conclusions.

4.4.2 RQ2. How do respondents characterise their preferred workforce retention strategy in terms of retention factors?

Research question two was focussed on how respondents characterised their preferred workforce retention strategy in terms of the 22 retention factors listed in Section B. The most preferred workforce retention strategy that was commented on in Section B Retention Factors was *Graduate programs – transition,* with 48 out of a possible 190 responses. The second most commented on was S*alary packaging* with 25 responses, followed by the M*entoring framework* with 16 responses. Generally, the comments on these strategies characterised by their retention factors were neither strongly positive nor strongly negative for all of the factor groups. The most highly rated retention factor characteristics were those identified in the personal group, followed closely by those identified in the strategy group. All groups were tending towards the 'agree' end of the scale. These results are tabulated below – see Table 4.13.

Table 4.13 Respondents' characterisation of the 4 retention components

Retention Factors	N	Mean#	Std Dev#
Personal	195	3.79	0.82
Opportunity	196	3.13	0.91
Strategy	195	3.73	0.78
Fairness	199	3.18	0.88

#1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree
Source: Appendix VIII, No. 56; developed for this study

4.4.3 RQ3. What is the relationship between various retention factors and turnover intention?

Research question three is intended to explore more about the relationship between the independent variables - the retention factors - personal, opportunity, strategy, fairness, and the dependent variable - turnover intention. Multiple regression analysis represents the best prediction of a dependent variable from several independent variables and it is used when the independent variables are correlated with one another and with the dependent variable (Coakes & Steed 2007). Selection of the independent and dependent variables has been based on theoretical relationships explained in Chapter 3 Methodology.

i) Results of the standard regression analysis conducted on the independent and dependent variables

Standard (simultaneous) regression analysis was conducted on the data. The model summary indicated that all independent variables together explained only 22.4 per cent of the variance in the dependent variable turnover intention (R squared) significant at p < 0.01 (Appendix VIII, No. 36). That is, the independent variables, personal, opportunity, strategy and fairness explained 22.4 per cent of the variance for the dependent variable turnover intention.

Although only a small percentage of the variance of the dependent variable has been explained by the independent variables, the significant F statistic $p < 0.05$ indicates that the independent variables can adequately explain the variation in the dependent variable (Coakes & Steed 2007). $F (4, 163) = 11.769$, $p < 0.01$. This information is summarised in the following Table 4.14.

Table 4.14 Results of the standard regression analysis conducted on the independent and dependent variables

	Model summary[b]	ANOVA[b]		Coefficients[b]			
	R Square	**F**	**Sig.**	**Independent variable**	**Beta**	**t**	**Sig.**
Model 1:	0.224	11.769	0.000[a]	Personal	-0.065	-0.575	0.566
				Opportunity	0.332	3.508	0.001
				Strategy	0.236	2.511	0.013
				Fairness	0.054	0.653	0.515

[a]Predictors: (Constant), fairness, opportunity, strategy, personal
[b]Dependent variable: turnover intention
N = 168
Source: Appendix VIII, No. 36; developed for this survey

A stepwise regression analysis was also conducted to examine the contribution of each independent variable (Coakes & Steed 2007; Hair et al. 2006). The results indicated the amount of variance attributed by each independent variable and are presented in Table 4.15. Potential bias is noted in this procedure resulting from considering only one variable for selection at a time (Hair et al. 2006), as is multicollinearity among the independent variables that may effect sequential estimation methods.

Table 4.15 Results of the stepwise regression analysis conducted on the independent and dependent variables

Variables entered	Model summary[b]			ANOVA[b]	
	R Square	R Square Change	Sig F Change	F	Sig.
Model 1: personal	0.119	0.119	0.000	22.397	0.000
Model 2: personal, opportunity	0.187	0.069	0.000	19.038	0.000
Model 3: personal, opportunity, strategy	0.222	0.035	0.008	15.604	0.000
Model 4: personal, opportunity, strategy, fairness	0.224	0.002	0.515	11.769	0.000

[b]Dependent variable: turnover intention
Source: Appendix VIII, No. 68; developed for this survey

RQ3. What is the relationship between various retention factors and turnover intention?

H$_1$ There is a positive relationship between retention factors and decreased turnover intention.

This research question was designed to investigate if there was any relationship between retention factors and turnover intention, based on the literature review findings in Chapter 2. A directional hypothesis was proposed for this research question given previously reported findings of the relationship between job satisfaction and turnover, on which this study was based (Bluedorn 1982; Mobley et al. 1979; Mobley et al. 1978).

To explore this hypothesis, a Pearson product-moment correlation using SPSS was conducted on the independent variables – retention factors, and the dependent variable – turnover intention. Results of the analysis indicate that higher retention factor scores are positively correlated with higher turnover intention scores. The turnover intention scores include the items: Participation in a workforce retention strategy has; lead to increased job satisfaction, decreased my thoughts of quitting, decreased my need to search for jobs, decreased my intention to quit. Therefore, the higher the turnover intention scores, the lower the actual turnover intention. These results are summarised in Table 4.16 following and will be further discussed in Chapter 5 Discussion and Conclusions.

Table 4.16 Pearson product-moment correlation conducted on independent variables: retention factors and the dependent variable: turnover intention

	Opportunity	Strategy	Fairness	Turnover intent
Personal	0.682	0.686	0.504	0.337
Opportunity		0.502	0.414	0.419
Strategy			0.457	0.382
Fairness				0.272
Turnover intent				

All correlations significant at the 0.01 level (1 - tailed)
Source: Appendix VIII, No. 40A; developed for this study

4.4.4 RQ4. How does the relationship between retention factors and turnover intention vary when taking into account the demographic variables of gender, age and tenure?

Research question 4 is designed to investigate if gender, age and/or tenure vary the relationship between the independent variables – retention factors, and the dependent variable – turnover intention. Gender, age and tenure were chosen as moderating variables based on the literature search conducted and reported in Chapter 2, where they have been found to moderate the relationship between job satisfaction and turnover in certain previous studies.

Given that this research investigation is based on the work of previous studies concerned with job satisfaction and turnover and applied to workforce retention strategies and turnover intention, it was determined that inclusion of these variables as moderators was appropriate (Kavanaugh et al. 2006; Ng & Sorensen 2008). The hypotheses were:

> H_2 *Gender does not significantly moderate the relationship between retention factors and turnover intent.*
>
> H_3 *Age does not significantly moderate the relationship between retention factors and turnover intent.*
>
> H_4 *Tenure in a location does not significantly moderate the relationship between retention factors and turnover intent.*
>
> H_5 *Tenure in the nursing profession does not significantly moderate the relationship between retention factors and turnover intent.*

To explore this, the moderator effect of the demographic variables; gender, age and tenure on the retention factors/turnover intention relationship was analysed using moderated multiple regression analysis in SPSS. The variation in response scale and variability across variables may make direct interpretation problematic. For this reason the variables were standardised, ensuring all variables were comparable prior to estimating the regression equation (Hair et al. 2006). The moderator effect is the effect in which a third independent variable, referred to as the moderator (Statistics Solutions 2009), causes the relationship between a dependent/independent pair to change depending on the value of the moderator variable (Hair et al. 2006; Sharma, Durand & Gur-Arie 1981). This is also known as the interactive effect (Hair et al. 2006, p. 172).

To quantify the effect of a moderating variable in multiple regression analysis, the additional term is added to the model (Statistics Solutions 2009). This moderator term is the interaction between the independent variable and the proposed moderating variable (Aguinis & Pierce 1999). To determine the total effect of the moderator variable, the separate and moderated effects must be combined. The moderator term is a compound variable formed by multiplying the independent variable by the moderator variable, which is then entered in to the regression equation (Hair et al. 2006, p. 202).

Further to this, the three step process to determine whether the moderator effect was significant, as outlined in Hair (2006, p. 202), was employed.

1. Estimate the original unmoderated equation
2. Estimate the moderated relationship (original equation plus moderator variable)
3. Assess the change in R^2: If it is statistically significant then a significant moderator effect is present, however only the incremental effect is assessed, not the significance of individual variables.

Age and tenure are continuous variables, however gender is categorical. To enable the use of non-metric variables such as gender in the moderated multiple regression analysis, indicator coding was applied where each category of the non-metric variable was represented by either 0 or 1. In this case, 0 = male and 1 = female (Hair et al. 2006, p. 198; Kenny 2009). It is important to note that studies suggest moderated multiple regression analyses, although frequently used, are typically conducted at low levels of statistical power in that conclusions may be incorrectly drawn where data do not support a hypothesised moderating effect (Aguinis & Pierce 1999). Further to this,

sample sizes over 200 are required to have reasonable power to detect moderator effects when one of the variables is continuous (Aguinis & Pierce 1999; Kenny 2009 after Aguinis 2004).

Consideration of these points is given especially since the sample size was $N = 166$ for the analysis, and a number of the variables were continuous. Therefore, the results obtained using SPSS moderated multiple regression analyses were re-tested using Stata robust regression analyses.[1]

Three models were tested for each moderator variable (gender, age, tenure in location, tenure in profession) to determine if there was any influence on the independent/dependent variable relationship by noting changes in the beta coefficients and in R^2 and taking in to account the significance of the change where $p < 0.05$.

Model 1 = independent variables and dependent variable

Model 2 = independent variables, dependent variable and moderating variable

Model 3 = independent variables, dependent variable, moderating variable and interaction terms

All three models for each of the demographic variables indicated that only opportunity and strategy were statistically significant $p < 0.05$. Of the three demographic variables; gender, age and tenure, only gender had a weak main effect $p < 0.10$ for Model 2. The Stata robust regression results were relatively the same. These results are summarised in Table 4.17a and b. The highlighted cells indicate the statistically significant results.

---

[1] Personal communication: Dr Banjo Roxos regarding Stata robust regression analyses

Table 4.17a Results of SPSS moderated multiple regression analysis for the three models for the moderating variables gender and age

N = 166	Model summary[^]		ANOVA[^]		Coefficients[^]	Beta	t	Sig.
	R Square	R Square change	F	Sig.	Independent variable			
(gender)								
Model 1	0.222	0.222	11.579	0.000[a]	personal	-0.059	-0.523	0.602
					opportunity	0.325	3.409	0.001
					strategy	0.241	2.548	0.012
					fairness	0.048	0.577	0.564
Model 2	0.236	0.014	9.944	0.000[b]	personal	-0.069	-0.613	0.541
					opportunity	0.312	3.275	0.001
					strategy	0.262	2.768	0.006
					fairness	0.031	0.374	0.709
					gender	0.119	1.694	0.092
Model 3	0.242	0.006	5.573	0.000[c]	personal	-0.063	-0.543	0.588
					opportunity	0.283	2.789	0.006
					strategy	0.268	2.726	0.007
					fairness	0.055	0.606	0.545
					gender	0.066	0.764	0.446
					gender x personal	0.033	-0.269	0.788
					gender x opportunity	0.034	0.244	0.808
					gender x strategy	0.060	0.694	0.489
					gender x fairness	-0.105	-0.824	0.411
(age)								
Model 1	0.222	0.222	11.453	0.000[d]	personal	-0.055	-0.482	0.630
					opportunity	0.323	3.375	0.001
					strategy	0.240	2.525	0.013
					fairness	0.045	0.544	0.587
Model 2	0.228	0.007	9.463	0.000[e]	personal	-0.028	-0.244	0.807
					opportunity	0.292	2.946	0.004
					strategy	0.247	2.604	0.010
					fairness	0.041	0.498	0.619
					age	-0.086	-1.180	0.240
Model 3	0.262	0.034	6.168	0.000[f]	personal	-0.008	-0.072	0.942
					opportunity	0.248	2.383	0.018
					strategy	0.257	2.725	0.007
					fairness	0.051	0.616	0.539
					age	-0.110	-1.494	0.137
					age x personal	-0.054	-0.504	0.615
					age x opportunity	0.184	1.804	0.073
					age x strategy	-0.118	-1.339	0.182
					age x fairness	0.105	1.313	0.191

NB: All scores standardised   [^]Dependent variable: turnover intention

[a]Predictors: personal, opportunity, strategy, fairness

[b]Predictors: personal, opportunity, strategy, fairness, gender

[c]Predictors: personal, opportunity, strategy, fairness, gender, gender x personal, gender x opportunity, gender x strategy, gender x fairness

[d]Predictors: personal, opportunity, strategy, fairness

[e]Predictors: personal, opportunity, strategy, fairness, age

[f]Predictors: personal, opportunity, strategy, fairness, age, age x personal, age x opportunity, age x strategy, age x fairness

Source: Appendix VIII, Nos 66C and 66D; developed for this study

Table 4.17b Results of SPSS moderated multiple regression analysis for the three models for the moderating variables tenure in location and tenure in profession

N = 166	Model summary^		ANOVA^		Coefficients^			
	R Square	R Square change	F	Sig.	Independent variable	Beta	t	Sig.
(location)								
Model 1	0.222	0.222	11.579	0.000[g]	personal	-0.059	-0.523	0.602
					opportunity	0.325	3.409	0.001
					strategy	0.241	2.548	0.012
					fairness	0.048	0.577	0.564
Model 2	0.232	0.010	9.725	0.000[h]	personal	-0.084	-0.736	0.463
					opportunity	0.327	3.435	0.001
					strategy	0.262	2.750	0.007
					fairness	0.044	0.541	0.589
					location	-0.100	-1.420	0.157
Model 3	0.263	0.031	6.227	0.000[i]	personal	-0.091	-0.774	0.440
					opportunity	0.347	3.571	0.000
					strategy	0.297	3.091	0.002
					fairness	0.039	0.479	0.632
					location	-0.061	-0.838	0.403
					location x personal	-0.098	-0.822	0.412
					location x opportunity	0.153	1.555	0.122
					location x strategy	-0.178	-1.741	0.084
					location x fairness	0.035	0.434	0.665
(prof)								
Model 1	0.222	0.222	11.579	0.000[j]	personal	-0.059	-0.523	0.602
					opportunity	0.325	3.409	0.001
					strategy	0.241	2.548	0.012
					fairness	0.048	0.577	0.564
Model 2	0.224	0.002	9.291	0.000[k]	personal	-0.052	-0.453	0.651
					opportunity	0.307	3.064	0.003
					strategy	0.245	2.577	0.011
					fairness	0.044	0.538	0.592
					profession	-0.042	-0.576	0.565
Model 3	0.237	0.013	5.416	0.000[l]	personal	-0.036	-0.311	0.756
					opportunity	0.266	2.512	0.013
					strategy	0.282	2.866	0.005
					fairness	0.050	0.596	0.552
					profession	-0.054	-0.708	0.480
					prof x personal	-0.074	-0.643	0.521
					prof x opportunity	0.115	1.119	0.265
					prof x strategy	-0.109	-1.120	0.264
					prof x fairness	0.025	0.281	0.779

NB: All scores standardised   ^Dependent variable: turnover intention
[g]Predictors: personal, opportunity, strategy, fairness
[h]Predictors: personal, opportunity, strategy, fairness, location
[i]Predictors: personal, opportunity, strategy, fairness, location, location x personal, location x opportunity, location x strategy, location x fairness
[j]Predictors: personal, opportunity, strategy, fairness
[k]Predictors: personal, opportunity, strategy, fairness, prof
[l]Predictors: personal, opportunity, strategy, fairness, prof, prof x personal, prof x opportunity, prof x strategy, prof x fairness
Source: Appendix VIII, Nos 66E and 66F; developed for this study

4.5 Summary of the findings

This section of the discussion is a summary of the findings as guided by the research questions. Firstly, employees' awareness of workforce retention strategies offered by Queensland Health has been determined from the data analysis, followed by their participation and perception of effectiveness. This resulted in 97.3 per cent of respondents being **aware** of *salary packaging*, whilst 80.3 per cent of respondents had **participated** in *performance appraisal and development*. The highest **ranked** workforce retention strategy was *half pay holidays.* Next, perceived barriers to the respondents participating in workforce retention strategies were identified. Results indicated that the main themes were; lack of time, did not know about the strategies, lack of line manager support and lack of strategy promotion. Following this, respondents' characterisation of the retention factors was revealed, indicating that most respondents felt more positive towards retention factors concerned with personal attributes. This was followed by investigating the relationship between the retention factors, independent variables, and the dependent variable, turnover intention. Results of this analysis indicated that higher retention factor scores were positively correlated with higher turnover intention scores. The final part of this section investigated the moderating effects of gender, age and tenure on the independent/dependent variable relationship. Analysis of the three models presented indicated that the proposed moderating variables, gender, age and tenure, did not significantly moderate the relationship between the independent variables, retention factors and the dependent variable, turnover intention.

4.6 Summary of the chapter

This chapter was designed to inform the research issue and answer the research questions within the context of the collected data. The discussion of results, drawing of conclusions and implications for all of these findings in the context of the literature will be further explained in the next and final chapter, Chapter 5 Discussion and Conclusions.

CHAPTER 5 - DISCUSSION AND CONCLUSIONS

5.1 Introduction

The purpose of this final chapter is to interpret and discuss the findings from the previous chapter, to assert the linkages of the research to prior theory and importantly to present where the research has contributed to the body of knowledge.

The chapter begins with a discussion of the research findings and its linking to theory in Section 5.2. This section addresses the research questions and hypotheses which inform the research objective and the research issue. Section 5.3 examines the contribution of the research to the body of knowledge and presents the modified conceptual framework, based on the research findings. Implications for management practice are considered next in Section 5.4 focussing on the application of the study's findings to the Queensland Health situation. This includes the salient points of; emergent themes, improvement in workforce retention strategies and application of research findings to policy. Directions for future research are then proposed in Section 5.5 and the chapter and the study conclude with Section 5.6.

5.2 Discussion and linking to theory

The overarching research issue that the study set out to investigate was: ***Targeting employee perceptions of workforce retention strategies: Application of three motivation theories to investigate turnover intention.***

In drilling down, the research objective was then identified: ***To examine the perceptions of employees regarding the effectiveness of workforce retention strategies implemented in a health service.*** The research questions were formulated to inform the research objective and meet the challenge of the research issue. The study's findings were analysed and are discussed in the context of motivation theory to investigate turnover intention, drawing on literature findings from Chapter 2.

The interpretation of results and links to prior theory will be addressed in the context of the research questions as follows.

5.2.1 Employee perceptions about workforce retention strategies

Research question one explored the respondents' general awareness of, participation in, and perceived effectiveness of, listed workforce retention strategies. This exploratory investigation provided a base-line of information for the rest of the study. Barriers to participating in workforce retention strategies were also investigated at this point and gave a fuller picture of the respondents' perceived situation.

Awareness: The findings indicated that respondents' were more aware of those strategies that were included in Queensland Health policy such as *salary packaging* and *performance appraisal and development*, as well as those strategies that were part of the nursing enterprise bargaining agreement, such as the *professional development allowance* and *professional development leave*.

Salary packaging and performance appraisal and development are Queensland Health policy initiatives. Both initiatives are promoted throughout the organisation to all discipline areas via websites, on pay notices and through various seminars and updates. Salary packaging is promoted on Queensland Health's 'Work for Us' website as a benefit and includes for example, offering employees the opportunity to make additional superannuation contributions and paying a lower rate of tax by paying with pre-tax salary (RemServ 2010). The offer of such benefits is consistent with the findings of Kuhar et al. (2004) where financial incentives were incorporated as part of a successful retention strategy, and supports the work by Huang, Lin and Chuang (2005) who propose that monetary compensation remains a powerful motivator for workers, having a strong influence on retention. Performance appraisal and development is a Queensland Health policy that applies to all Queensland Health employees except temporary staff appointed for less than three months, and short term casual staff. The initiative proposes to enhance work performance and career development for employees. The inclusion of a performance appraisal process is in line with studies by Smith and Rupp (2003) who claim that such a process was critical for success, because it allows the organisation to retain and reward high performers and offer guidance and improvement to poor performers. Interestingly, in Queensland Health's situation,

employees are subject to their relevant award and therefore pay for performance as suggested by Smith and Rupp (2003) can not be applied in most cases. However, where performance expectations, feedback, guidance, learning and development needs and activities are met and where the employer and employ collaborate effectively on the process, an employee's intention to stay with the organisation may also be enhanced.

Respondents were also very aware of the professional development allowance, up to $3000, and professional development leave, up to 5 days, on top of normal pay and conditions. Amounts of time and money vary depending on where the nurse is located and what they are attending. These strategies form part of the *Nurses and Midwives (Queensland Health) Certified Agreement (EB7) 2009*. The entitlements are offered to permanently employed registered nurses for paid professional development to undertake professional development activities relevant to nursing and midwifery practice (Queensland Health 2008). Respondents were also quite aware of the *graduate nurse program* which is offered by many health service districts across the organisation. This strategy provides an opportunity for recently graduated nurses to consolidate their nursing and clinical skills in a comprehensive twelve month course. These types of strategies are supported by the findings of Leurer, Donnelly and Domm (2007) where they had identified professional development and educational opportunities as a retention strategy which was highly valued by the nursing cohort they studied. Lavoie-Tremblay et al. (2008) also support the importance of career opportunities and lifelong learning as key factors that influence the decision to leave or stay employed with an organisation. Further to this, support in the literature regarding extensive resources being invested in learning and development as part of recruitment and retention strategies can be found in studies by Maurer and Lippstreu (2008).

Respondents may have been most aware of the workforce retention strategies discussed above because these strategies were either implemented as Queensland Health policies or they were implemented as a result of the Enterprise Bargaining Agreement between Queensland Health, Queensland Nurses' Union of Employees and The Australian Workers' Union of Employees (Queensland). This means that the activities would be coordinated centrally, accessible in work time and that they would be supported by line managers and supervisors. This suggestion is reflected in studies by Mitchell, Holtom and Lee (2001a) and Asquith, Sardo and Begley (2008) where allocation of

responsibility and resources as part of a comprehensive retention plan was mooted as an adequate retention strategy intervention.

Respondents reported less awareness for those strategies that were not offered through Queensland Health policies or on a state-wide basis. Further investigation of these findings has determined that many of the one-off retention strategies, as opposed to state-wide or policy implemented ones, are promoted to nurses via email, or offered on-line. Lack of awareness by respondents may be due to promotion of the strategy through inappropriate media channels. This suggestion was drawn from the focus groups where it was identified that only one third of Grades 5 and 6 nurses read their emails in a timely manner. Working shifts in a busy unit requires forward planning of rosters, and therefore late notice for attendance at an activity is not often favoured by the supervisor, and the request to participate in a workforce retention strategy may be denied.

Participation: Participation in workforce retention strategies followed a similar pattern to the awareness results. That is, respondents' indicated that they were mostly aware of and participated in strategies that were offered state-wide as part of Queensland Health policy or as components of the nurse enterprise bargaining agreement. The strategies in which respondents most often participated were *performance appraisal and development, salary packaging* and *professional development leave.* Performance appraisal and development is intended to enhance work performance and career development of Queensland Health employees. Governance and accountability responsibilities are included in the policy, requiring Executive Management to provide the Director General with written certification that the process has been completed consistent with the appropriate directive, and human resources policy (Queensland Health 2008). Participation in performance appraisal is therefore understandably high, because all districts and staff are meant to comply with the directive. Inclusion of strategies such as performance appraisal as policy directives is supported in findings in the literature such as studies by Leurer, Donnelly and Domm (2007 after Advisory Committee on Health Human Resources 2002; Aiken, Clarke, Sloane, Sochalski, Busse, Clarke, Giobannetti, Hung, Rafferty & Shamian 2001; Buchan & Calman 2005; Rafferty, Maben, West & Robinson 2005; Zurn, Dolea & Stillwell 2005) where policies aimed at continuing professional development were commonly cited as a significant retention strategy.

Salary packaging and professional development leave are voluntary options in which staff may participate. Findings that salary packaging had a high participation rate indicate that respondents may have been influenced by the remunerative value of the strategy. In consideration of Herzberg's two-factor theory, the presence of this extrinsic condition contrasts with findings in the literature by Zurn, Dolea and Stilwell (2005 after Kingma 2003) who found that in richer countries (which would include Australia) salary is almost taken for granted. Respondents also participated in professional development leave and this result may indicate the presence of intrinsic factors where respondents perceive professional development as important to them. In support of this, Leurer, Donnelly and Domm (2007) reported that educational opportunities were highly valued amongst nurses studied, and indeed the participants of their study lamented the lack of professional development available, the amount of resources directed and the inadequate allocation of time.

Respondents from this study tended not to participate as much in strategies such as; *coaching skills for leaders, emerging clinical leaders and practical people management.* When considering Herzberg's two-factor theory, strategies of this nature reflect intrinsic factors such as achievement, responsibility and advancement. These findings are in contrast to studies by Zurn, Dolea and Stilwell (2005) who found that most research on motivation and job satisfaction have focussed on strengthening positive attitudes towards work through intrinsic rewards. Further to this, Bassett-Jones and Lloyd (2005), found that factors associated with intrinsic satisfaction played a more important part as a source of motivation, again contrasting with these findings. To explain why these findings may show these opposite responses compared to other studies, it is suggested that the level of participation may be dependent upon the level of support provided to the participant whilst undertaking the strategy. For example, professional development allowance provides for the participant to undertake professional development whilst being supported financially to do so. This allowance is also usually coupled with professional development leave, again supporting the participant to have time off to attend the activity, on top of normal pay and conditions. It could therefore be argued that the strategy has a mix of intrinsic and extrinsic factors that appeal to respondents. On the other hand, although strategies such as *coaching skills for leaders, emerging clinical leaders and practical people management* may reflect intrinsic factors such as recognition, achievement and advancement, the strategies are usually not supported or resourced, to the extent described above, and in

fact, it may be required that they be attended in the participant's own time. These implications resonate with studies by Craft Morgan and Lynn (2009) where they found that nurses have both intrinsic and extrinsic factors that lead to work satisfaction. Further to this, studies by Wilson et al. (2008) found that potential retention strategies for nurses included the aggressive provision and support of education and career-development opportunities.

In some cases it was found that a larger percentage of respondents who knew about a retention strategy had also participated in it. For example, salary packaging and the professional development allowance were two where many of those aware of the strategy reported as participating in it, and it was viewed as effective. It may be useful for the organisation to increase communication about these strategies that were viewed as effective to other staff members (See Table 4.11). Finally, it is important to note that state-wide marketing and promotions of the policy initiatives via websites, seminars, pay sheet advertising, and enterprise bargaining conditions being promoted through newsletters and flyers have undoubtedly contributed to increased participation levels of the Queensland Health policy initiatives. This is in significant contrast to the marketing and promotions afforded other retention strategies that are not state-wide initiatives implemented though policies or enterprise bargaining initiatives.

Effectiveness: The workforce retention strategies implemented by Queensland Health that were perceived as most effective in decreasing employee turnover were *half pay holidays, salary packaging* and *professional development leave.* Half pay holidays are available to Queensland Health staff for a range of leave types including recreation, long service and paid parental leave (Queensland Health 2008). Salary packaging is promoted as a remuneration benefit for certain eligible staff and professional development leave is a condition resulting from enterprise bargaining for nurses. Extrinsic factors present in each of these strategies include aspects of salary and working conditions, when related to Herzberg's two-factor theory.

This research has shown that the group studied are extremely cognisant of the monetary aspect of their roles indicated by their awareness, participation in, and perception of effectiveness for those workforce retention strategies that reflect a monetary value. When comparing these findings with literature findings from other studies, this cohort of nurses is possibly more focussed on the pay aspect of their work role than various

other groups of employees (Asquith et al. 2008; Mukhi et al. 1991, p. 313). It is important to note however, that these findings are in contrast with some nursing studies such as Hegney, Plank and Parker (2006 after Tovey & Adams 1999) where it was found that the significance of remuneration was unclear, with the suggestion that it was only relevant if nurses perceived a discrepancy between their own and those of other professionals.

However, the finding is consistent in studies by Zurn, Dolea and Stilwell (2005) who identified that the provision of adequate and timely remuneration is important to guarantee the recruitment of motivated and qualified staff. These contrasting findings may be explained by the fact that this study is inclusive of Grades 5 and 6 registered nurses only, ensuring homogeneity of the group without higher nursing levels influencing the findings. Further probing of the literature offered an early review by Locke (1973 after Herzberg, Mausner, Peterson & Capwell 1957) where it was concluded that one of the most consistent findings in their studies was that intrinsic aspects of the job were more important to employees at higher occupational levels. Further to this, other studies have also taken in to account the job level, such as Grigaliunas and Herzberg (1971) and Furnham, Eracleous and Chamorro-Premuzic (2009). Grigaliunas and Herzberg (1971 after Malinowsky & Barry 1965; Friedlander 1965) found that job level affected the importance of extrinsic and intrinsic factors. This is was also supported in studies by Furnham, Eracleous and Chamorro-Premuzic (2009) where they conclude that individuals in lower job status may be more oriented towards the hygiene aspects of a job compared with individuals higher up the hierarchy who were motivated by the prospect of more power and status. As individuals move up the hierarchy, Furnham, Eracleous and Chamorro-Premuzic (2009) suggest that it may be the case that hygiene factors are no longer salient as they have been achieved and/or taken for granted. This progression towards self actualisation, the higher up the individual progresses, is also in line with Maslow's seminal work (Stum 2001). Building on the notion of the influence of job level, may hint that respondents from this study perceive remuneration and working conditions as being important, because they are at the lower end of the nursing pay scale.

It is noteworthy to add that as a result of the survey for this research being conducted in the midst of Queensland Health's payroll upgrade, many respondents made comments about their disappointment when incorrectly paid. This reflects studies in the body of

literature around equity theory where employees compare their efforts and rewards with others working in similar work situations (Ivancevich & Matteson 1990). Further to this, the findings from the respondents' comments are supported in studies by Shore (2004), where it was found that perceived pay fairness was highest in the equitable rewarded condition.

Results indicated that strategies such as; *professional development leave, professional development allowance* and the *cadetship in Indigenous nursing* were perceived by respondents as being effective workforce retention strategies. Professional development leave and professional development allowance are enterprise bargaining conditions and as a result, the participant is supported financially and with allocated time off to attend the professional development activity.

Findings indicated that the level of support offered through this enterprise bargaining initiative is rated highly by respondents. The perceived effectiveness of professional development leave and allowance also reflects the presence of intrinsic factors such as achievement, recognition and opportunities for advancement, when considering Herzberg's two-factor theory. Similarly, the cadetship in Indigenous nursing is a professional development opportunity with intrinsic factors present. In this initiative, the student is employed by the health service district as a temporary full time employee for the duration of the program. This includes the offer of a mentor for the cadet to support them during the cadetship. The finding indicating the strategy's perceived effectiveness is further supported in studies by Fielden, Davidson and Sutherland (2009) who reported that significant development in terms of career development and capability were the result of mentoring relationships for nurses. A point to note is that although the Indigenous nursing cadetship was rated as quite effective, only 9 people in the sample had participated. In terms of utility for the organisation, the program may not pay off in economical terms, however, it appears to rate well with participants and its inclusion contributes to Queensland Health's effort to increase the number of Indigenous peoples working in the organisation.

Salary packaging, professional development leave, and the *professional development allowance* all rated highly as having respondents participate in them as well as respondents perceiving them as effective workforce retention strategies. However, some strategies were popular in the participation stakes, but respondents' perception of

their effectiveness was low. For example, *performance appraisal and development* ranked 25 out of the possible 28 listed retention strategies as being effective. The performance appraisal and development process is an organisational requirement which is meant to be in place in all facilities, across Queensland Health and therefore had high participation rates. This finding indicates however, that if given a choice, many respondents may not have participated because they perceived the appraisal process was only slightly effective. Based on expectancy theory where an individual's belief regarding the likelihood that a particular behaviour will be followed by a particular outcome (Ivancevich & Matteson 1990), these findings suggest that respondents who have participated in the performance appraisal process do not feel that their efforts have been rewarded. This may suggest why their perception of performance appraisal and development as a retention strategy is not very effective. Although expectancy theory may help to explain the findings of why the performance appraisal strategy is not perceived as effective, it is salient to note that there are many other complex factors which influence the respondents' perception of effectiveness. This could include the employee's personality traits and aspirations (Steers & Porter 1974) as well as the credibility and motivation on the part of the leader (Smith & Rupp 2003). Another interesting insight as a result of these findings concerns the application of equity theory where employees compare their efforts and rewards with others in similar work situations (Ivancevich & Matteson 1990). Respondents indicated through comments made in the open ended questions, that there were incidents where unfair and inequitable treatment between staff members, from line managers and supervisors regarding development opportunities, often occurred. It is proposed that these feelings of inequity could also influence the perception that retention strategies such as performance appraisal were not effective. Support for this finding is suggested in Hay (2002) where it is noted that employees respond particularly well to consistent, fair and comprehensive management of their performance and development, with the possibility of the converse applying in this case.

Similarly, although the *better workplaces staff survey* had a high participation rate, it was placed 28 out of 28 in the perceived effectiveness rankings. The purpose of the bi-annual survey is to identify what is good about working life and where changes need to be made to improve working conditions and practice in Queensland Health (Community and Organisational Research Unit 2008, p. 8). The better workplaces survey is an opportunity for staff to have their say and provide feedback about a wide range of topics

within the organisation. This strategy is well resourced and highly promoted via on-line, fliers and web sites and official launch dates as it is rolled out to participating districts. Supervisors and line managers are required to promote the strategy vigorously and a coordinator is appointed in each district to ensure as many staff as possible complete the survey. Incentive prizes are also awarded as part of the promotional strategy in participating districts. Consequently, although the strategy was well promoted and participation rates were high, the consensus from respondents was that this strategy was slightly effective. It is suggested that this may have occurred because many participants of the better workplaces survey believe that management only pay lip-service to their feedback and that no positive changes will be implemented as a result. These suggestions are based on the comments offered by the respondents in the open ended questions, and are consistent with literature on employee feedback through surveys. For example, the Corporate Leadership Council (2003) found that to retain employees, employers must be responsive to workers' needs identified through feedback. The suggestion is also supported in studies by 4-consulting and Research (2007), which reported that the real value in a survey lies in the extent to which the results are used and to which the necessary corrective actions are taken. The application of expectancy theory contributes to the understanding of why this may have occurred. Participants in the better workplaces staff survey were requested to complete the survey and to provide feedback on a multitude of topics. When participants experienced a little, or no response from the organisation regarding their concerns, this may have manifested as a perceived lack of effectiveness of the better workplaces survey as a retention strategy. That is, the effort expended by the respondent did not meet the expected outcome (Ivancevich & Matteson 1990).

These findings demonstrate insights as to why respondents were aware of, participated in, and perceived effectiveness of, certain workforce retention strategies implemented by Queensland Health. Collectively, these findings indicate a duality between remuneration and development strategies when compared to Herzberg's two factor theory. This duality reflects the importance of the presence of both motivator and hygiene factors to the respondents. The importance of remuneration to this cohort also resonates with findings in the literature pertaining to expectancy and equity theory. Indeed, studies by Bassett-Jones and Lloyd (2005 after Mabey et al. 1998) have found that expectancy theory and equity theory have combined to reinforce the view that financial inducement is a critical motivator.

Barriers to participation: The most common themes identified as *individual barriers* to participate were that respondents did not know about the various retention strategies on offer and that there was a lack of time (See Appendix XII Barriers to participation). Findings where respondents were not aware of the various retention strategies on offer reflect the results regarding awareness of the various retention strategies discussed earlier. That is, many of the strategies were promoted through group email dissemination, or through promotion of a web site. Further to this, a number of the activities are offered as on-line training.

Results from focus group activities indicate that only one third of all Grades 5 and 6 nurses read their emails frequently, and in some circumstances, do not get the chance to sit at a computer for professional development purposes for any length of time due to heavy workloads and staff shortages. It becomes clear that although respondents may be interested in participating in retention strategies, not knowing what is available as a result of the reasons mentioned, is a significant barrier. These findings are somewhat supported by Eley, Soar, Buikstra, Fallon and Hegney (2009), who investigated Australian nurses' attitudes to computerisation. Their study in 2005 found that the level of the job had a major influence on computer use, increasing with the seniority of the nurse. As is the case in this study, more senior nurses, that is Grade 7 and higher, often have additional administrative and management aspects to their job role and therefore more opportunity to use the computer for longer periods of time. Regarding lack of time as a barrier to participating, findings indicated that retention strategies which were implemented under Queensland Health policy were the most likely to provide time off for employees to participate. As a result, these activities were more often attended because the participant may have felt less guilty in being allocated time away from their busy work unit. The results also showed that the mostly female respondents had a reluctance to attend activities in their own time because they were already juggling a very busy and tiring work schedule with equally busy family commitments, as indicated in the free comments. These findings are consistent with studies by Griffeth, Hom and Gaertner (2000) and Dockery (2004) where they found that the members of the female workforce were more involved with the responsibilities of household chores and child care. The findings regarding heavy workloads experienced by respondents are supported in studies by Hegney, Plank and Parker (2003) and Aitken et al. (2002), where they found this was frequently the case.

There were two main themes identified by respondents as to why they did not participate in a retention strategy as a result of *organisational barriers*. These were; the retention strategies available were not being well promoted in the various work areas, and there was a perceived lack of support from line managers. Although the findings show that the various retention strategies were not promoted through media channels that engaged effectively with the respondents, as discussed above, they also indicate that the various retention strategies were not well promoted in the work areas. Such promotion includes flyers on notice boards about what is on offer, as well as verbal promotions at staff meetings and updates. Further to this, the findings suggest a gap exists between the availability of workforce retention strategies and respondents' perception of their availability. This apparent gap is reflected throughout each of these base-line investigations regarding awareness, perception and effectiveness. Studies in the literature by Aitken, Purcell, Woodruffe and Workman (2006) support the findings that knowing what's going on, what's planned and why is crucial for staff to engage, and importantly this relies on line managers.

Accordingly, the theme regarding lack of promotion overlaps with the second most prominent theme identified by respondents as an organisational barrier; that is, a lack of support from line managers. This theme was multi-faceted with comments from respondents including; *not being given time off to attend the retention strategy, receiving no acknowledgement that the initiative was worth attending, the manager not supporting a culture of learning in the unit, the manager allowing certain staff to attend various activities over others.* The findings are multi-faceted because they include evidence of dissatisfaction as a result of inequity, as well as dissatisfaction as a result of poor communication and interpersonal relations and lack of recognition.

Regarding inequity, it is noted in the findings that respondents felt barriers to participation in strategies as a result of being unfairly treated, or when preferential treatment was given to another staff member. This may be explained when examining these findings within the realm of equity theory where efforts expended and rewards received are compared to others in similar work situations (Ivancevich & Matteson 1990). The findings indicated that when respondents felt they were being unfairly treated, treated differently to others or not rewarded by being able to attend an activity, they perceived this as a barrier to preventing them attending retention strategies. Further analysis of the findings in light of Herzberg's two factor theory establishes that

both intrinsic factors such as recognition, and extrinsic factors such as quality of interpersonal relations, may be deficient. This suggests the factors are important to the respondents and that the absence of them may have lead to respondents feeling that there are barriers to their participating in retention strategies as a result. Although no studies were identified in the literature directly referring to barriers to participating in a retention strategy, numerous studies did support the concept that the presence of fair treatment, recognition, quality interpersonal relations and communication all contribute to a feeling of support for the employee. Evidence of these findings is included in studies by Leurer, Donnelly and Domm (2007) where they include the need for systemic recognition initiatives to retain nurses and Kuhar et al. (2004) where communication was regarded as an essential component of their meaningful retention strategy inventory. Importantly, other studies have indicated that support ranks as the top expectation in nearly sixty per cent of participating organisations (Best Practice Australia and New Zealand 2008) and that supervisors are important sources of support for nurses in order to cope in demanding work situations (van der Heijden B et al. 2009).

Further information about barriers to participating in retention strategies was captured in the open ended questions and resulted in several consistent themes emerging, in addition to the findings regarding individual and organisational barriers previously discussed. The themes that emerged were not initially anticipated because this study set out to investigate individual and organisational barriers in the context of time, interest, support, acceptance and promotion. The open ended questions and free comment area enriched the findings by presenting a plethora of information on the respondents' perceptions regarding barriers to participating in workforce retention strategies. Four consistently recurring themes were identified: *short of staff; workload, lack of leadership and bullying.* It is salient to note at this point that these emergent themes are not new or surprising when considering the literature regarding nurses, retention and turnover intention, as described below. The consistency of the themes and the emotive comments provided depth to the findings.

These four themes reflect the presence of extrinsic retention factors, or hygiene factors when analysed in the context of Herzberg's two factor theory, and include working conditions, quality of interpersonal relations and status (Ivancevich & Matteson 1990). The findings indicate that respondents felt strongly about the presence of these factors

resulting in them being included as causing barriers to their participation in retention strategies. In consideration of staff shortages and heavy workloads, the findings are not unique to this study and indeed concerns about staff shortages and heavy workload are consistent with a large body of the literature, including studies by Leurer, Donnelly and Domm (2007) and Hegney, Plank and Parker (2003).

The findings of this study support the stance argued by Hegney, Plank and Parker (2003 after Fagerstrom & Ranio 1999; Mills & Blaesing 2000; Stordeur, D'hoore & Vandenberghe 2001; Fletcher 2001; Tummers, Landeweerd & van Merode 2002; Hegney, McCarthy, Roger-Clark, Gorman 2002) where they suggest that nursing workload is linked to retention and job satisfaction. The importance of staff shortages and high workload is reiterated in findings by Lyneham, Cloughessy and Martin (2008) who conclude that such conditions could give rise to burnout and attrition. Indeed, this study adds to the findings by signifying the importance of the impact of staff shortages and heavy workload on the respondents, because these conditions result in perceived barriers to their participation in retention strategies.

Lack of leadership was also a consistent theme captured in the free comments. Leadership has been identified as a key factor in nurses' job satisfaction and commitment to organisational goals (Chiu et al. 2005; Zurn et al. 2005 after Stordeur, D'hoore & Vandenberghe 2001; Stillwell 2001; Larrabee, Janney, Ostrow, Withrow, Hobbs, Burani 2003; Hasselhorn, Tachenberg & Muller 2003). Further to this, Zurn, Dolea and Stillwell (2005 after Boyle, Bott, Hansen, Woods & Taunton 1999) suggested that managers' positional power and influence over work coordination had a direct link to intent to stay. The findings for this study suggest that lack of leadership may have manifested as poor staff management, lack of advocacy, poor morale and staff not valued. Understandably therefore, the perceived lack of leadership was a concern to respondents. Further analysis of these findings in the context of expectancy theory suggests that employees perform at a certain level and expect a particular outcome for their effort. When the outcome expected is not forthcoming, dissatisfaction and decreased motivation may result, discernible as perceived barriers to participating in retention strategies.

Although there were no findings in the literature pertaining to expectancy theory and participation in retention strategies, the literature does reflect the importance of leadership and its positive impact on motivation and job satisfaction, and its negative impact on turnover intention (4-consulting & Research 2007; Hegney et al. 2006; Zurn et al. 2005).

Bullying was also present in the findings as to why respondents did not participate in retention strategies. The findings indicated that respondents perceived bullying occurred when there was favouritism given over certain staff and when there was no feedback given. Bullying was not cited extensively as a barrier to participation in retention strategies, however it was noticeably mentioned in the free comments. This finding is supported in the literature by Zurn, Dolea and Stilwell (2005 after Jackson, Clare & Mannix 2002) where they found that the most frequent violent acts against nurses include bullying, physical violence and assaults.

It is pertinent at this point to note that some respondents were not interested in any further development or participation in any extra learning activities because they were already busy with work and family commitments and felt satisfied with their situation. This finding is supported by Kuhar et al. (2004), where they found that not all people are oriented to learning and for some individuals, support for development by an organisation may even be negatively associated with commitment.

5.2.2 Respondents' characterisation of their preferred workforce retention strategy

Respondents' characterisation of their preferred workforce retention strategy presented four retention factor groupings: personal perspective; the strategy itself; fairness and opportunity. Retention strategies producing retention factor outcomes and characteristics from the respondent's personal perspective were rated highest. These included: *I invested effort…; My performance…; I felt personal gain…; …applicable to my work…; I felt some level of achievement….* In considering the impact of respondents' characterisation of the various workforce retention strategies regarding their personal perspective, the pattern appears to reflect the criticism to Herzberg's theory where it was postulated that as a means of ego-defence, respondents may be

more likely to attribute satisfaction to their own achievements and accomplishments (Ondrack 1974 after Vroom 1967). On the other hand, this personalisation may be an effort to have more control over a very uncontrollable and busy work environment (Hegney et al. 2003). For example, studies have shown that nurses employed in the public sector were most likely to believe that autonomy was quite or extremely discouraged (Hegney et al. 2006). Nurses taking responsibility and personal credit for achieving in a workforce retention strategy may find this assists them to cope in such a challenging environment.

Investigation of these results provides further insight by analysing two of the retention factors within the framework of expectancy theory; *I invested effort …* and *I felt personal gain...* Individuals in the work setting hold an effort-performance expectancy which represents their perception of how hard it is to achieve a particular outcome (Ivancevich & Matteson 1990). These findings indicate that participants agreed more strongly with outcomes where effort was invested when participating in a retention strategy, and accordingly receiving a positive outcome on the performance. The analysis shows that the action of investing effort when participating in a workforce retention strategy is a first-level outcome likely to produce the second-level outcome of a feeling of personal gain. The perception of the individual that the first-level outcome is associated with the second, suggests positive instrumentality (Ivancevich & Matteson 1990). Further to this, the effort is positively valent because the person prefers attaining it to not attaining it (Lee 2007 after Vroom 1964). No studies in the literature regarding the personal perspective of retention strategies were identified, however studies were found to support the application of expectancy theory of motivation to analyse why people chose one behaviour over another. These studies include work by Lee (2007) where customer motivation was investigated and Smith and Rupp (2003) who looked at expectancy theory and the motivational aspects of knowledge workers.

The perceived agreement with the outcome for personal perspective characteristics was followed closely by retention factors that were concerned with the workforce retention strategy itself such as: *The WRS was recognised by my Supervisor as a valuable program; The WRS was supported by QH policy; The WRS was presented/coordinated by an expert.* Analysing these findings in the context of Herzberg's two factor theory indicates the presence of extrinsic factors such as status, company procedures and quality of technical supervision (Ivancevich & Matteson 1990). Interpreting the

information captured in the respondents' free comments indicates their perception of dissatisfaction when these conditions are not present. According to Herzberg's two-factor theory, the presence of extrinsic conditions does not necessarily motivate employees, but they are needed to maintain at least a level of no dissatisfaction. The findings may indicate that respondents preferred participating in retention strategies that were recognised by their supervisor as valuable, that the strategy was supported by Queensland Health policy where it was appropriately resourced, and that the retention strategy was presented or coordinated by an expert. Retention strategies that are embedded and supported under these conditions, such as the professional development allowance and professional development leave are evidence of these indications.

Further to this, these findings are supported in the literature where outcomes from studies have recommended that retention strategies be integrated into a comprehensive workforce retention plan (Buykx, Humphreys, Wakerman & Pashen 2010; Mitchell et al. 2001a). The work of Asquith, Sardo and Begley (2008) lends further support, where they suggest that key steps to staff retention includes the allocation of responsibility and budget to staff retention initiatives. Recognising the significance of the workforce retention strategy itself also supports the findings in research question one regarding the perceived importance of professional development to the group. The findings that the respondents felt strongly about participation in professional development activities and that the offering of appropriate professional activities can contribute to staff retention are supported in the literature in studies by Kuhar et al. (2004) and Leurer, Donnelly and Domm (2007).

Retention factors that where fairness and equity was perceived as somewhat producing the outcome or characteristic nominated, included: *All participants had similar skills when they commenced…* and *All participants received similar achievement and recognition rewards…* In the context of equity theory, the findings indicate that respondents may compare their efforts and rewards with others in similar work situations. Indeed, comments elicited in the free comment section contribute to this suggestion where disappointment and dissatisfaction are noted when equity and fairness is deficient. These findings are supported in the body of literature about equity theory, where employees compare inputs and outcomes with others in similar work situations (Ivancevich & Matteson 1990). The findings also suggest that individuals may react differently to the same situation, evidenced by participation in the same retention

strategy, but resulting in different outcomes after completion. Studies by Huseman, Hatfield and Miles (1987), and Bing and Burroughs (2001) add weight to this finding with their studies regarding the equity sensitivity construct where individuals subjected to the same inequitable situations can react differently. In addition, the assumption that individuals are motivated by a desire to be equitably treated is reflected in this study's findings where comments captured suggest dissatisfaction when fairness and equity are perceived as absent.

Interestingly, the findings indicated that the opportunity group of retention factors were seen as producing fewer outcomes for respondents the longer they were in the nursing profession. This group included retention factors such as *receiving recognition for participating*, *completion of the activity leading to increased work responsibility* and *the possibility for advancement*. As a result of these findings, it is suggested that managerial recognition was perceived as being not as significant because the majority of respondents were in the age group of forty-one years and over, they had been in the nursing profession for greater than twenty years, as well as being at the lower end of the pecking order for nursing. Further to this, the findings from the information described in the free comments indicated that many respondents were dissatisfied with the leadership and support offered by management. These findings are in line with studies by Bassett-Jones and Lloyd (2005), where their results suggest that the importance of Herzberg's managerial recognition as an important motivator has declined.

The findings also resonate with studies by Bassett-Jones and Lloyd (2005) where they pose the question as to whether employee need for recognition has become a hygiene factor in the contemporary employment context. This study's findings may hint towards this; where the need for recognition has become a hygiene factor, that is, the absence leads to dissatisfaction, but its presence does not necessarily mean motivation.

It is important to note that the findings from this study indicated that, of those respondents who agreed with retention factors that produced the outcomes concerned with opportunity, also indicated less intention to leave the organisation. The results show that those respondents who most agreed with those retention factor outcomes concerned with opportunity, were those who had less tenure in the profession. This suggestion is supported in studies by Leurer, Donnelly and Domm (2007 after Zurn, Dolea & Stillwell 2005) where they posit that low-tenure nurses preferred strategies

related to learning and promotion opportunities. The findings also suggest that time in the profession is negatively related to reports of receiving opportunities as a result of participating in a workforce retention strategy. This however, does not mean that more experienced nurses do not want opportunities. What is does mean is that the respondents in this case did not think that the nominated workforce retention strategy offered much opportunity.

Previous research has indicated that the prospect of career opportunity and advancement is important to nurses' job satisfaction (Hegney et al. 2006 after Dodds, Lawrence & Wearing 1991) which is linked to retention in the nursing workforce (Hegney et al. 2006 after Adams & Bond 2000; Aitken, Clarke, Sloane, Sochalski & Silber 2002; Ingersoll, Olsan, Drew-Cates, DeVinney & Davies 2002; Leurer et al. 2007). These previous studies support findings in this study where it is suggested that the perceived opportunity outcomes produced when participating in a workforce retention strategy may have contributed to their decreased intention to turnover.

5.2.3 The relationship between various retention factors and turnover intention

Findings indicated that turnover intention was most strongly correlated with opportunity retention factors, followed by the strategy itself, personal perspective, and fairness and equity. Focussing on opportunity, this included retention factors such as *receiving recognition, increased work responsibility*, *possibility of advancement* and *possibility of growth as a result of participating in the retention strategy*. In the context of Herzberg's two factor theory, these factors indicate the presence of intrinsic conditions such as achievement, recognition, responsibility and advancement. Regarding opportunity, the literature presents studies, such as those by Leurer, Donnelly and Domm (2007) and Zurn, Dolea and Stillwell (Zurn et al. 2005), where it was found that younger nurses were likely to want further opportunities to develop their career, whilst older nurses were likely to be a more stable workforce. However, this was not found to be the case in this study's findings.

The directional hypothesis for this question: *There is a positive relationship between retention factors and decreased turnover intention,* was supported. This result by no means indicates prediction or causality. It does indicate that perceptions of retention strategies that produced certain outcomes such as, recognition or advancement, or certain characteristics such as, fairness, coordinated by an expert or availability, were positively associated with perceptions of decreased turnover intention.

It is pertinent to note that although some retention factors may influence an employee's intention to leave an organisation, there are many other influencing factors in the work milieu. The Workforce Retention Framework referred to in section 2.6.2 visually presented three domains that impact on an employee in the Queensland Health environment; systems, culture and workforce retention strategies. This framework acknowledges the many complex processes that impact on an employee's decision to stay or leave an organisation. This is consistent with studies by Albion et al. (2008) who suggest that the theoretical models designed to trace the interconnections among factors affecting turnover reveal a complex pattern .

Although the contexts are slightly different in that traditional studies investigated job satisfaction and turnover, whereas this study investigated retention factors and turnover intention, there is some similarity of results between the two. For example, studies by Bluedorn (1982) and Porter and Steers (1973) both posit the importance of job satisfaction as a central factor to withdrawal and turnover and worked on models and frameworks to explain this complex pathway. Key findings from the literature review in Chapter 2 purport that although overall job satisfaction represents an important force in an individual's intention to leave, it is not sufficient for explaining the withdrawal process, with most of the variance unexplained. In fact, previous studies by Mobley, William, Horner and Hollingsworth (1978) and Mitchell, Holtom and Lee (2001a) suggest that only 20 to 25 per cent of the variance in turnover is explained. That is, there are many internal and external forces impacting on an employee's intention to leave and they can be multi-dimensional and multidisciplinary and not simply a linear sequence (Hom & Griffeth 1991). Tourangeau and Cranley (2006) also support these findings reiterating that there are other unexplained important predictors of nurse intention to turnover, noting that much of the variance was unexplained in their studies also. Accordingly, this study's findings indicate that although satisfaction with workforce retention strategies may represent some impact on an individual's intention

to leave, it does not account for all of the turnover intention process, and in fact the majority of the variance is also unexplained, as is the case with traditional job satisfaction/turnover studies.

Another view on the reason for this weak prediction of variance may be because the predictors (retention factor ratings for one retention program) are not a conceptual match with the dependent variable in terms of target (that is, all retention strategies an employee has participated in and what effect they have had on precursors to turnover, up to and including intention to leave). This is important to consider, however, it must be noted that it is the retention factors (those components of a retention strategy) that are being rated, not the workforce retention strategy as a whole. This is based on the rationale that most (if not all) retention strategies could be broken down or characterised by a derived set of retention factors, and therefore compared on a similar basis. Employees may or may not agree with statements about each of these retention factors depending on the extent to which they agreed that the outcome or characteristic was produced, regardless of the specific retention strategy. Therefore, these predictors do conceptually match the dependent variable, turnover intention, because it is being rated by the respondent as a result of their participation in one or more retention strategies that have all been rated on the same common set of retention factors.

5.2.4 The relationship between retention factors and turnover intention when taking into account the demographic variables of gender, age and tenure

It has been established that turnover intention was most strongly correlated with opportunity retention factors. Secondly, it has been established that decreased intention to turnover is positively associated with certain outcomes and characteristics of retention factors being produced. The discussion now turns to investigating if these relationships change when considering the influence of the demographic variables of gender, age and tenure.

Gender: The findings indicate that gender had a weak main effect on turnover intention. Although no literature findings regarding gender and its moderating effect on the relationship between retention factors and turnover intention were identified, there

were studies that reported on gender and turnover. Studies by Griffeth, Hom and Gaertner (2000) regarding the latest estimate of gender-turnover correlation indicate that women's turnover rate is similar to that of men. Further to this Griffeth, Hom and Gaertner (2000), also suggest that other evidence indicates that women were more likely to remain on the job as they age. The reason for the latter occurrence may be because women, having the primary responsibility for household chores and child care, find their responsibilities in this area decrease as they age (Griffeth et al. 2000; Ng & Sorensen 2008). The inconclusive evidence continues with studies by Zurn, Dolea and Stilwell (2005 after Wai Chi Tai, Bame & Robinson 1998) where it was found that gender showed a consistent non-significant relationship with staff turnover. Further depth to understanding the results comes from comments given by the respondents where findings indicate that there was a feeling of dissatisfaction about lack of flexibility with rosters and shifts, making it difficult when juggling work and family commitments. It is important to consider gender as a demographic because the survey results indicated that ninety per cent of the respondents were female, reflecting the nursing population within Queensland Health. There is however, a body of literature that purports the blurring roles of gender and that gender differences are diminishing (Ng & Sorensen 2008 after Baruch-Feldman, Brondolo, Ben-Dayan & Schwartz 2002; Frieze, Parsons, Johnsons, Ruble & Zellman 1978).

Age: The results show that age did not moderate the relationship between retention factors and turnover intention. Further interpretation of the results indicates that the spread of the respondents' age ranged from 21 years to over 60 years. This implies that respondents were from four generations of nurses ranging from the Veterans who were born before 1945, the Baby Boomers who were born between 1946 to 1964, Generation X born between 1965 to 1979 and Generation Y or Millennials who were born from 1980 onwards (Wilson et al. 2008). Accordingly, it is noted that generational differences regarding work values and attitudes have been identified through numerous studies such as those by Wilson et al. (2008 after Zemke, Raines & Filipczak 2000; McMeese-Smith & Crook 2003) and Lavoie-Tremblay et al. (2008). Although the findings indicated a multi-generational workforce, the majority of the respondents were in the age group 41 years and over. This finding is supported in the literature where studies have identified that ageing of the nursing workforce is a major issue (Australian Government Department of Health and Ageing 2008).

The findings therefore revealed that regardless of the varying generations represented, respondents' age did not influence the relationship between retention factors and turnover intention. Delving further into the findings regarding age indicated that although most respondents were 41 years of age or older, slightly more than half indicated that they had intentions of quitting in the next 12 months. This finding contrasts with studies by Tourangeau and Cranley (2006) who found that nurses in Ontario, Canada were more likely to remain employed when they were older and had more years of nursing experience. Although it is accepted by many studies in the literature that turnover intention is one of the most commonly proposed antecedents of actual turnover (Mobley et al. 1978; Tett & Meyer 1993) it is suggested that nurses who indicated their intention to quit may have been influenced by the payroll challenges within the organisation at the time of the survey. Evidence for this suggestion was captured in the free comment area where numerous respondents indicated their dissatisfaction when not paid correctly. The suggested explanation is that these feelings were a response to the immediate pressure felt as a result of the payroll problems, and that when the payroll is corrected, these feelings may abate.

Tenure: Tenure was not found to moderate the relationship between the retention factors and turnover intention. Tenure included the length of time the respondent worked at the current location and the length of time the respondent worked in the nursing profession. The findings indicated that regardless of the length of tenure in either the location or the profession, there was no moderating effect on the relationship between retention factors and turnover. Looking more closely at the results, it was identified that most respondents were in permanent positions, being either full time or part time. This job permanency, coupled with the fact that the majority of nurses had been in the profession for greater than twenty years points towards the importance of job security. This is supported by Dockery (2004) whose study found that job security was the one job aspect measure in which nurses reported satisfaction. Analysing these findings in the context of Herzberg's two factor theory may suggest the presence of job security as a hygiene factor. This suggestion lends further weight to findings about the preference for the extrinsic conditions that need to be maintained so that at least there is a level of no dissatisfaction, as discussed earlier. Further to this, some Grades 5 and 6 nurses, being at the lower end of the pay scale and often long time employed, were not always interested in further development opportunities, as reported in the free comments. The four null hypotheses proposed to explain the demographic variables

and their influence on the relationship between retention factors and turnover intention: *Gender does not significantly moderate the relationship between retention factors and turnover intention; Age does not significantly moderate the relationship between retention factors and turnover intention; Tenure (length of time in the location) does not significantly moderate the relationship between retention factors and turnover intention; Tenure (length of time in the profession) does not significantly moderate the relationship between retention factors and turnover intention*, were therefore unable to be rejected (See Table 5.1).

5.2.5 Conclusions about the research issue and objective

Having discussed the findings for each of the research questions and linked them to theory, the discussion now turns to the research issue and objective. The findings are summarised and conclusions drawn as follows.

Studies discussed in the literature review in Chapter 2 identified the benefits and importance of workforce retention and workforce retention strategies (Barney 2002; Studer 2004; Zurn et al. 2005). Although there are some examples in the literature about workforce retention strategies and their importance in supporting and retaining staff (Kavanaugh et al. 2006), the literature is less informative about the range and type of workforce retention strategies and what aspects of them (retention factors) may influence employee turnover intention. To investigate this identified gap in the literature, the research issue to be explored was: *Targeting employee perceptions of workforce retention strategies: Application of three motivation theories to investigate turnover intention,* and the research objective was: *To examine the perceptions of employees regarding the effectiveness of workforce retention strategies implemented in a health service.*

Firstly, the principal findings for employees' awareness of workforce retention strategies were that they were most aware of those strategies that were Queensland Health policy or enterprise bargaining conditions. The conclusion that may be drawn is that Queensland Health policy initiatives have a higher profile and are better marketed than other retention strategy initiatives.

The most important findings regarding which workforce retention strategies respondents had participated in, were firstly, those that were Queensland Health policy and secondly, those that were supported by appropriate resources and mechanisms to allow participants to effectively engage with the strategy. Although some retention strategies had high participation rates, this did not mean that their level of perceived effectiveness was high also. The findings concerning the effectiveness of workforce retention strategies clearly indicated that support by way of time off to participate and financial assistance for participation in retention strategies resulted in higher perceived effectiveness. Having analysed awareness of, participation in, and perceived effectiveness of, the listed workforce retention strategies, the key findings indicate that nurses are very cognisant of the remunerative aspects of their job, coupled with a perception that professional development is also important. In the context of Herzberg's two-factor theory, these results suggest a presence of both motivator and hygiene retention factors. Further to this, the information captured in the free comments indicated findings where respondents were concerned with hygiene factors such as working conditions, quality of interpersonal relations and status. This enrichment of the quantitative findings gave more weight to the importance of hygiene factors for this group of respondents. Although these key findings contrast somewhat with studies in the literature such as those by Zurn, Dolea and Stilwell (2005), and Dockery (2004) who purport that non-pay aspects of the job appear to have a stronger influence on nurses' job satisfaction and intention to leave, these findings can be explained when analysed in the context of the three motivation theories: Herzberg's two factor theory; expectancy theory and equity theory.

Nurses characterised their preferred workforce retention strategy by more strongly agreeing with those retention factors that exhibited a personal perspective. The findings for this appear to be two-fold. Firstly, it is suggested that the attribution of satisfaction to their own achievement and results was one opportunity for nurses to have more control over work situations when they are perceived as uncontrollable. Secondly, it is suggested that participating in professional development opportunities required effort and this was rewarded by positive outcomes. This group of retention factors were closely followed by those retention factors that described the workforce retention strategy itself.

Findings indicated that respondents most agreed with those retention strategies that were perceived as having produced certain outcomes or having certain characteristics when they were embedded in organisational policy, and the importance of professional development as a retention strategy was again highlighted. Respondents somewhat perceived that retention strategies concerned with fairness produced outcomes or characteristics that were agreeable. The findings suggested that individuals may have compared their efforts and rewards with others, however it was salient to note that there are levels of complexity in these findings because individuals may react differently in similar situations. Although a number of respondents did not indicate a strong agreeability for those retention factors that were concerned with opportunity, those that did agree with the outcomes and characteristics of the opportunity group of retention factors also most strongly associated with a decreased intention to turnover.

Opportunity retention factors and turnover intention produced the highest correlation. Further to this, the hypothesis posed suggesting a positive relationship between the retention factors and decreased turnover intention was supported. Aspects of this study's findings are consistent with the findings in the job satisfaction/turnover literature where studies show that there are many factors still to be quantified that influence an employee's intention to leave an organisation. Moreover, the process is more complex than initially expected as evidenced by findings in this study where all the retention factors together explained only 22.4 per cent of the variance in turnover intention. Of the three demographic variables; gender, age and tenure, none were moderating and only gender had a weak main effect.

As a result of the study's findings, it is possible to make some conclusions regarding the research objective. It is important to note that these conclusions are exploratory in nature, are broadly based and indicate associations, in no way implying causality or prediction.

1. Respondents were more aware of and participated in strategies that formed Queensland Health policy or enterprise bargaining conditions
2. The most effective workforce retention strategies were half pay holidays, salary packaging and professional development leave
3. There is a lack of awareness of various retention strategies due to marketing and promotion through inappropriate media channels

4. Participation in a workforce retention strategy is dependent upon the level of support provided to the participant to undertake the activity

5. Respondents experienced both extrinsic (remunerative) and intrinsic (development) conditions

6. The main barriers to participation were not knowing what retention strategies were available and the lack of time to participate

7. Some respondents are not interested in further development opportunities

8. Respondents more strongly agreed with the produced outcomes and characteristics of the personal group of retention factors

9. Opportunity retention factors and decreased turnover intention are positively associated

10. Managerial recognition was perceived as not important by some respondents

11. There is a positive relationship between retention factors and decreased turnover intention

12. Respondents generally were motivated to stay employed with Queensland Health because of the economic downturn

13. Age, gender and tenure do not significantly vary the relationship between retention factors and turnover intention

The hypotheses regarding the relationship between various retention factors and turnover intention and between retention factors and turnover intention when taking into account the demographic variables of gender, age and tenure are summarised and presented in Table 5.1.

Table 5.1 Summary of hypotheses findings

H₁ There is a positive relationship between retention factors and decreased turnover intention	Supported
H₂ Gender does not significantly moderate the relationship between retention factors and turnover intention	Unable to reject
H₃ Age does not significantly moderate the relationship between retention factors and turnover intention	Unable to reject
H₄ Tenure (length of time in the location) does not significantly moderate the relationship between retention factors and turnover intention	Unable to reject
H₅ Tenure (length of time in the profession) does not significantly moderate the relationship between retention factors and turnover intention	Unable to reject

Source: Developed for this study

The contention proposed for this study was that workforce retention strategies do have some effect on an employee's intention to turnover, but there are probably greater influences on an employee's decision to leave an organisation. In the light of the study's findings, the contention has held true.

5.3 Contributions of the research

The study has made contributions to understanding more about employee perceptions of workforce retention strategies and their effectiveness on decreasing turnover intention in a health service, as explained in the previous section. The findings have also made contributions to the wider discipline areas of motivation, turnover and retention, as follows.

5.3.1 Contributions to the body of knowledge

i) Motivation

The study sought to understand the effectiveness of various retention strategies by applying motivation theories. Three motivation theories (Herzbergs's, expectancy and equity) were adapted and applied to workforce retention strategies to determine a group of retention factors. The identified retention factors were then explored to determine which ones employees agreed characterised their preferred workforce retention strategies. Although motivation theories were traditionally used to explain an employee's motivation regarding the job satisfaction/turnover relationship studies, the application of the theories to workforce retention strategies/turnover intention breaks new ground in investigating turnover intention from a different perspective. This study found that the application of these motivation theories to firstly identify retention factors and secondly to analyse employee perceptions within the motivation theory context was practical and constructive.

In seeking to understand which retention strategies were effective and to explore why employees participated in them indicated that respondents were motivated by the presence of both intrinsic and extrinsic conditions. Barriers to participating in workforce retention strategies were explored in the context of motivation theory to better understand the reasons why respondents identified them as such. This exploratory work revealed consistent themes reflecting previous studies about nursing and reasons for dissatisfaction, but not in the context of participation and effectiveness of a workforce retention strategy. These findings contribute to the need to further investigate the themes identified for a better understanding of what motivates participation in retention strategies, not only from a quantitative view, but enriched through a qualitative study. This study has presented new and useful insights on what motivates employees when considering participation in workforce retention strategies, adding to the motivation debate. Importantly it has emphasised the complexity and depth of employees' perceptions regarding the myriad influences and incidents when deciding to leave or staying with a health service.

ii) Turnover

The literature contains many studies that support turnover intention being an antecedent of the turnover process (Griffeth et al. 2000; Williams & Hazer 1986). Based on this

premise, this study went further to explore turnover intention and how it might be affected by employee participation in workforce retention strategies. The study contributes to this body of knowledge with two key findings. These are firstly that turnover intention was most strongly associated with opportunity retention factors and secondly that decreased intention to turnover is positively associated with retention factors when certain outcomes and characteristics are produced. It is acutely acknowledged that these new insights are exploratory in nature and therefore there is a need to further examine this verdant area of study through both qualitative and quantitative investigations.

iii) Retention

Staff retention has become increasingly important over the last decade and there are many examples of organisations developing and implementing workforce retention frameworks, plans and strategies (Barney 2002; Kuhar et al. 2004; Mitchell et al. 2001a). This study sought to understand more about employee perceptions of workforce retention strategies by analysing retention factors. Contributions to the body of knowledge included the finding that outcomes and characteristics of personal perspective retention factors were most agreeable to respondents when characterising their preferred workforce retention strategy. Such findings are all new insights contributing to discussions surrounding employee retention. Further analysis and understanding of these insights will contribute to improved, more effective and targeted retention strategies.

These new insights shed a little more light on the complexities involved in employee perceptions of workforce retention strategies and how they impact on their turnover intention. Further to this, the study has highlighted the importance of the key disciplines of motivation, turnover and retention and specifically how these areas of study necessarily intertwine. The study's findings reaffirm the importance of employee retention to a health service, whilst focusing on the exploration of the issue from a new perspective, that is, by investigating workforce retention strategies and their influence on turnover intention.

5.3.2 Modification of the conceptual framework

The findings from the research questions and conclusion to the research objective contribute to the further development of the conceptual framework initially described and presented in Chapter 2 Literature Review, Section 2.8. The framework contributes to the building of theory regarding retention factors and their impact on turnover intention in four main areas. Firstly, the study's findings enabled articulation of specific retention factors that have influenced employees' turnover intention. This new insight provides a more accurate representation of the process determining an employees' perception of certain retention factors and the bearing on turnover intention. Secondly, the perceived barriers to participation have been identified from the findings adding to the applicability of the conceptual framework, where other studies may follow on from these findings to investigate the barriers in more depth. Thirdly, exploration of the moderating effects of the demographic variables provided new insights about whether they influenced the relationship between retention factors and turnover intention. The finding that only gender was identified as a weak main effect, being exploratory, presents an opportunity for further investigation. Lastly, a number of emerging themes as to why nurses quit and why they might quit in the next 12 months were also revealed and have been included in the framework. These emerging themes add to the applicability of the framework and indeed highlight the need for further investigations to thoroughly understand the circumstances in which they occur and why. The modifications made to the previous conceptual framework are summarised in Figure 5.1.

Figure 5.1 Conceptual framework modified as a result of the research findings
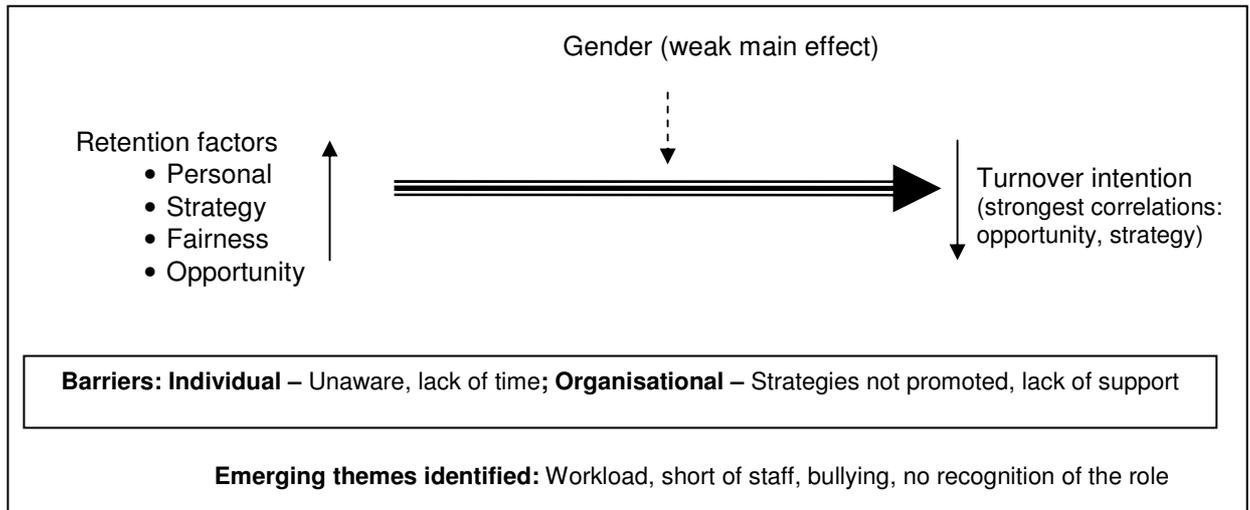
Adapted from: Figure 2.4, Section 2.8; developed for this study

In summary, the modifications to the conceptual framework have enabled a more specified listing of factors that contribute to understanding the complexities surrounding turnover intention. As previously noted, the study is exploratory in nature and although this framework suggests a pathway, further investigation is required to determine any suggestion of causality.   Finally, the findings from this study support the extant literature promulgating the need for funding and planning to develop and implement well supported, resourced and targeted workforce retention plans, frameworks and strategies for employee retention.

5.4 Implications for management practice

Survey results and consequent analyses reflect the literature findings in that there are many unquantified influences on an employee's intention to turnover, or not. This was also reinforced by the introduction of the Workforce Retention Framework presented in Section 2.6.2 which described many of the influences on an employee in Queensland Health due to the complexity and multi-dimensionality of the organisation. The study found that perceived agreement with outcomes and characteristics of retention factors was positively associated with turnover intention, although it is acutely recognised that this finding comes with many underlying factors.   Nevertheless, this has important implications for Queensland Health. The following section presents the implications of

findings for Queensland Health and it is anticipated that this information will lead to further improvements in retention to the benefit of all staff. Included in the discussion are issues about: emergent themes, improvements in workforce retention strategies and application of the research findings to policy making.

5.4.1 Emergent themes

In addition to the survey's closed questions, a set of open ended questions were included to provide a fuller and richer picture of respondents' perceptions regarding turnover intention. The open ended questions resulted in a number of additional themes emerging that have implications for Queensland Health's management practice. It is acknowledged that most of these themes have been cited in previous literature (Hegney et al. 2003; Houkes, Hanssen, de Jonge J & Bakker 2003; Lyneham et al. 2008), however, it is important to note the consistency and strength of the themes captured (See Appendix XIII Why nurses quit: Themes and Appendix XIV Quitting in the next 12 months: Themes). The questions posed were a) *Please provide your views about why you think there is staff turnover in nursing;* b) *Please list any things or happenings that may cause you to quit your job in the next 12 months.* The most consistent themes that emerged were: *Heavy workload; Lack of support from management; Bullying; No recognition of the role; Short of staff; Lack of leadership.* Of the comments provided; heavy workload, lack of support and bullying rated as the top three themes for both questions. Further to this, many respondents were quite negative about the management and leadership of their unit and indeed Queensland Health in general. This may have been a reflection on the exquisite timing of the survey – the height of the payroll challenges faced by Queensland Health. A number of respondents also felt that the survey was a waste of time because they believed that nothing would result from the findings. In the interests of a balanced approach, a few respondents commented that they loved their job and were happy with the management and leadership of their workplace.

What does this mean for Queensland Health?
There are ongoing and difficult challenges for Queensland Health as a result of these findings. The most difficult issue of contention is that the themes so strongly emerging from this study are not new for Queensland Health, and indeed, the organisation has been grappling with them for many years now. This is evidenced by the 59

recommendations provided by the *Final Report of the Ministerial Taskforce on Nursing Recruitment and Retention* (Health Advisory Unit 1999). This report was published in 1999 and efforts to implement the recommendations have been ongoing. The contribution this study makes is that these findings are not from a blanket survey of all nurses, but from a carefully selected homogenous group of nurses purposively chosen. Notably, three of the most concerning findings from this survey were that generally most respondents thought about quitting, generally many respondents were motivated by the economic downturn to stay with Queensland Health and, slightly more than half of the respondents had intentions to quit within the next 12 months. The implication for Queensland Health is that the organisation needs to make a concerted effort to improve the retention prospects of this group of nurses in the immediate future. It is salient to note that the ageing workforce also impacts on this cohort and their intention to quit in the next 12 months. For this reason, Queensland Health's ongoing commitment to recruit new staff and promote nursing refresher skills programs is acknowledged.

Another important theme to emerge was regarding Queensland Health's lack of action in response to feedback sought. For example, comments included: *…multiple reviews but little done; Surveys don't make a difference; Some staff I asked about this survey said that no one sent it back because they couldn't be bothered as nothing will come of it…* It is opportune for Queensland Health to develop and implement a campaign to promote and recognise nurses and the role of nursing, especially the lower grades (5 and 6) responsible for the bulk of the physically demanding patient/ward interface and shift work. Most importantly, the organisation must seek to regain employees' confidence that it will respond to feedback sought, in a timely and effective manner.

5.4.2 Improvement in workforce retention strategies

Another of the intended outcomes of the study was to determine what aspects (retention factors) of a workforce retention strategy were perceived as producing certain outcomes or having certain characteristics that nurses most agreed with, that consequently resulted in a decreased intention to leave the organisation. During the analysis, it was found that the characteristics of a workforce retention strategy that correlated most with decreased turnover intention were those concerned with opportunity and the strategy itself. This meant that for those respondents that felt that; the possibility of growth and

advancement, an increase in work status and work responsibility (opportunity focussed), were the characteristics and outcomes of retention factors they most strongly agreed with, were also most likely to be positively associated with decreased intentions of quitting. Furthermore, for those respondents that felt that the workforce retention strategy was recognised by their supervisor as valued, was presented/coordinated by an expert, and was supported by Queensland Health policy (strategy focussed), were also more likely to be positively associated with decreased intentions of quitting. These findings are important for Queensland Health and a conscious inclusion of such characteristics and outcomes as retention factors in future workforce retention strategies is suggested. The implications for Queensland Health include the investment of resources and commitment to apply these findings and include them in future retention strategies.

Another suggestion is the creation of a managerial rule of thumb to help identify more effective workforce retention strategies. For example, retention strategies that have a certain threshold number of nurses that participate in them and where the nurses rate them at a pre-determined level of effectiveness could be used by management as a measure of retention strategies. This may lead to certain strategies being improved and better resourced and those not performing to be challenged. It may also contribute to a better understanding of those aspects of the retention strategy that make the difference.

5.4.3 Application of the research findings to policy making

Opportunity to participate in workforce retention strategies
The study has found that where participation in workforce retention strategies - such as performance appraisal and development and the better workplaces survey, was required by the organisation through policy interventions, logically, higher rates of participation occurred. Rather than forcing participation in workforce retention strategies on to employees, a suggested policy consideration may be that staff are offered a range of opportunities to participate, and the offer and content are promoted, expertly delivered, valued by management and supported by Queensland Health. As a starting point, implementing a policy that requires all Grades 5 and 6 nurses to be offered the opportunity to participate, may be viewed as the organisation supporting the employee in this regard.

Development and implementation of a Retention Management Policy

Although the overwhelming view from organisations is that responsibility for staff retention is a business management issue, it is also recognised by a large percentage that the human resources function has a key role in providing businesses with solutions to manage the issue (Asquith et al. 2008). Further to this, a failure to recognise that the implementation of a retention policy costs money reflects the finding by Asquith, Sardo and Begley (2008) that as many as 70 per cent of the Australian organisations who responded to their survey, admitted having no budget allocation designated to retention initiatives within their organisations. Queensland Health has invested large resources in various workforce retention strategies, some of which are listed in Appendix II. However, there is great potential in improving these strategies on a number of fronts as described in Section 5.4.2. The development and implementation of a Retention Management Policy for the organisation, that complements the already developed Workforce Strategies, (for example the Queensland Health Aboriginal and Torres Strait Islander Workforce Strategy 2009 – 2012), may serve to consolidate the effort and resources currently invested in workforce retention for Queensland Health employees.

In summary, implications for Queensland Health as a result of this study are threefold. Firstly, the organisation must genuinely consider and apply the findings to improve the administration and implementation of the many retention strategies currently on offer, secondly, it must recognise the importance of targeting workforce retention strategies to mesh with employees' perceived reasons for effectiveness and thirdly, the organisation must deliver on its commitment offered to employees.

Further to this, a set of recommendations for Queensland Health's consideration are suggested:

1. Develop and implement a campaign aimed at promoting and recognising the role of nurses and nursing (especially Grades 5 and 6 given the survey's findings on their intention to quit)

2. Work to re-build credibility regarding feedback sought and timeliness and commitment of the organisation's response

3. Invest in designing or updating workforce retention strategies that include identified retention factors that are positively associated with decreased turnover intention

4. Offer the opportunity to participate in workforce retention strategies as part of an overall framework for employee retention

5. Develop and implement a targeted Retention Management Policy

5.5 Directions for future research

The investigation of workforce retention strategies is a new angle on the approach to employee turnover. During the investigation, opportunities for future research emerged and these are discussed below. However, before a discussion on the directions for future research is presented, two important points have resulted from a reflection on the methodology used. These concern the survey mode and the use of qualitative data, as explained in the following paragraph.

5.5.1 Reflections on the methodology used

An important learning from the application of the survey research methodology was relevant to the survey mode. Firstly, it is acknowledged that the survey methodology was the most appropriate for this geographically spread group of employees. Regarding the choice of survey mode, focus group findings indicated that approximately two thirds of all Grades 5 and 6 nurses do not check their email – for many reasons. Although the electronic survey is much less time consuming to disseminate and administer, and less expensive to conduct, the response rate is much lower. The paper based rate compared to the electronic survey was approximately 2:1 – which was expected. For these reasons, the use of both modes was justified in this particular survey. Future research in this area will be dictated by available resources. That is; if the research requires a similar cohort and there is little time and little money, the best effort would be to employ the electronic survey – the consequences being a low return rate. The converse is more likely to occur if a paper based survey is chosen. Another important point as a result of reflecting on the methodology used was the supplementation of the quantitative data with information captured in the free comment sections of the survey. These qualitative comments were carefully transcribed and themed and consequently added an extra dimension to the research findings.

As a result of the literature review and investigations carried out for this study, many other opportunities for future research in this area have arisen. These opportunities are now summarised in the following sections.

5.5.2 Application of the research to other discipline areas

The research methodology designed for this study may be applied to other disciplines within Queensland Health to investigate their perceptions of workforce retention strategies with the intent of developing strategies with preferred characteristics that decrease turnover intention. This research has only scratched the surface and more is required to expand the body of knowledge in this important area of workforce retention.

5.5.3 Survey replication

A repeat of the survey once the payroll problems for Queensland Health have been completely settled would be a good opportunity to compare the results with the current findings. It would also be a useful comparison to investigate the same occupational stream and level, but with a different group of health service districts. Repeat of the survey to a similar cohort may also deliver useful comparative data now that the economic downturn appears to be receding (See Section 2.8.2). A closer investigation on the different age groupings and their respective perceptions of various retention strategies may assist in a better understanding of how and where to target workforce retention strategies to improve effectiveness.

5.5.4 Focus on one workforce retention strategy

Focussing on one workforce retention strategy and investigating the effect of various retention factors related to that particular strategy on turnover intention could lead to a more controlled study, and depending on the methodology engaged may contribute to the questions surrounding causality, or antecedents of turnover intention. The findings would also make an interesting comparison to the findings of this study where the respondents' preferred workforce retention strategy, whichever one they chose, was preferentially characterised in terms of retention factors focussed on their personal perspective.

5.5.5 Queensland Health to invest in more research

Opportunities to study an organisation from within the organisation provide excellent opportunities for improvement. Queensland Health supports a lot of clinical research, however it is also a fertile ground for studies in the social sciences field. This is because the organisation is multi-layered and multi-dimensional and has a very large and diverse workforce. The employee head count is approximately 74 000 staff and includes employees in the clinical, administrative, operational and trades and artisans professions working in locations that span from large metropolitan tertiary health service centres to isolated and remote primary health care centres. This diversity provides many opportunities for future research within the organisation. This study has argued the case for the importance of workforce retention strategies and how they have a positive impact on decreasing employee intention to turnover, whilst being extremely cognisant of the impact of many other influences. There is much to learn in this space.

Other areas of future research that could be investigated include surveying staff that have exited the organisation. Although some parts of the organisation collect exit interviews, as far as can be determined, exited staff have not been previously studied in a formal way to determine why they left the organisation. Another suggestion would be a comparison of employee perceptions of workforce retention strategies and their effect on turnover intention between respondents from a high turnover district and a low turnover district. For example, are sites or districts with higher turnover also those where people do not know about retention programs, or do not participate. Grouping the workforce retention strategies into categories may also lead to insights as to why certain types of retention strategies may perform better than others. This might be achieved by using an expert panel who know intimately the contents for each workforce retention strategy and grouping them – examples of groups could be; financial, professional development, personal interest. A number of other factors could warrant closer investigation as a result of this study, including age. Age is particularly interesting because of the aging nursing workforce and the looming challenges with turnover.

5.5.6 Application to other organisations

Generalisation of the research findings should be approached cautiously, however, the survey instrument could be adapted and applied to other organisations that have developed and implemented workforce retention strategies. The ability to investigate whether an organisations' investment in workforce retention strategies is paying dividends, would be an important finding for any organisation concerned with the retention of their staff.

5.5.7 Qualitative study

Discovery, truth and objectivity remain goals and regulatory standards for many in the social sciences with positivist ideals (Toma 1997). There is however, an acknowledgement that in measuring concepts such as human perception, there will always be at least a small hint of indeterminancy or subjectivity within the analysis of the data (Toma 1997, p. 684). Although this study applied a quantitative methodology within a positivist paradigm, many respondents to this survey made numerous comments in the open ended question sections. A suggested approach to widen research opportunities might be to follow up on this study's emerging themes through the application of a qualitative methodology within an interpretivist or critical research paradigm. This approach may provide a more in-depth and enriched insight of employees' perceptions on the emergent themes identified in this study and a deeper understanding for the researcher, of how this may impact on turnover intention. Unlike the positivist approach focussed on a quantitative methodology, interpretive scholars base their work on understanding multiple realities by employing hermeneutical, phenomenological and structuralist methodologies (Toma 1997 after Campos 1993; J B White 1993; Rubin 1992; Papke 1989; Mootz 1988; Hekman 1986; Kennedy 1985a; Kennedy 1985b; Kronman 1981). This opens up a whole new realm in which to further explore the issue of workforce retention.

5.5.8 Limitations

Although Section 1.8 set out the deliberate delimitations of the research, some issues became apparent as limitations during the progress of the research (Perry 2002). This involved the timing of the survey dissemination where extensive efforts were made to gauge and plan the best time for the survey to be posted and emailed out to participants. Consultations were made regarding the scheduling of other state-wide surveys, both generic; such as the better workplaces survey, as well as nursing specific surveys. Consequently, a date was chosen to fit in with all of these happenings which seemed to suit all parties. Unfortunately, the payroll issues within Queensland Health began to unfold and the survey was already sent out when this became apparent. Although such challenges are difficult to predict, it is important to note that the timing of a survey is very important and that the best laid plans may not always progress as hoped. Although the survey responses were not as high as preferred, the number returned was gratefully received, especially in such interesting times for nurses. Timing of the survey dissemination is therefore included as a limitation, however, it is one that is sometimes very difficult to control.

5.6 Conclusion

Organisations world wide agree on the importance of retaining a skilled workforce and decreasing unwanted turnover (Studer 2004; Zurn et al. 2005), especially within the global marketplace and within such turbulent times (Arah et al. 2008; Hudson 2007). Further to this, much work has been done to investigate employee motivation, turnover and retention as evidenced in the literature, and yet organisations like Queensland Health are still challenged by the loss of talent and shortage of staff. Consequently, Queensland Health has invested large resources in the development of various workforce retention strategies and professional development activities in the attempt to retain competent and confident staff. This effort identified the need to determine if indeed there was a return on the investment into these retention programs and development activities. Methods to improve staff retention have been offered by a number of researchers including the development and implementation of retention management plans, policy directives and attention to employee intrinsic and extrinsic

motivators (Hegney et al. 2006; Mitchell et al. 2001a). Many of these studies were traditionally based on job satisfaction and turnover whereas this study adds insight from the perspective of the employees' perception of workforce retention strategies. The contention argued at the beginning of this investigation was that workforce retention strategies do have some effect on an employee's intention to turnover, but that there are probably greater influences on an employee's decision to leave an organisation. This research has revealed that the contention has held true. The study's findings have three major implications for Queensland Health. Firstly it is important that the organisation apply the findings to improve the implementation and administration of current workforce retention strategies, secondly the organisation needs to recognise the importance of targeting strategies to meet with employees' perceptions and lastly, a major implication for Queensland Health is to ensure commitment to seeking feedback and then responding is genuine.

Findings from this exploratory and descriptive study have also provided a conceptual framework that may be applied to the Queensland Health situation. The framework presents a theory building perspective which proposes that certain outcomes and characteristics of retention factors may influence employees' perception and consequent turnover intention. Further to this, the framework notes the important influence of barriers to participation as well as the emerging themes that have been identified and which must be considered in the mix. The study therefore has contributed from both a practical and theoretical point of view, and the findings have added to a deeper understanding of employee retention in a health service. The findings have potential for application in the Queensland Health milieu and they may be cautiously generalised to similar organisations. The implications for management practice pave the way for practical improvements in this important area to occur. Further to this, the findings have set a solid base for future investigations and expanded research opportunities whilst shedding a little more light on this complex relationship.

LIST OF REFERENCES

4-consulting & Research, DC 2007, *Employee engagement in the public sector - a review of literature*, Scottish Executive Social Research, Edinburgh.

Aguinis, H & Pierce, CA 1999, *Improving the power of moderated multiple regression to estimate interaction effects*, Academy of Management, Research Methods Division, viewed 27 August 2010 http://division.aomonline.org/rm, <199>.

Aitken, G, Marks, N, Purcell, J, Woodruffe, C & Worman, D 2006, *Changed Agenda: Reflections on employee engagement*, Chartered Institute of Personnel and Development, London, viewed 6 August 2008, www.cipd.co.uk.

Aitken, LH, Clarke, SP, Sloane, DM, Sochalski, J & Silber, JH 2002, 'Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction', *Journal of the American Medical Association*, vol. 288, no. 16, pp. 1987 - 93.

Al-Hakim, L 2007, 'Information quality factors affecting innovation process', *International Journal of Information Quality*, vol. 1, no. 2, pp. 162-76.

Albion, MJ, Fogarty, GJ, Machin, MA & Patrick, J 2008, 'Predicting absenteeism and turnover intentions in the health professions', *Australian Health Review*, vol. 32, no. 2, pp. 271-81.

Anderson, CR 1984, *Management: Skills, functions, and organization performance*, Wm C Brown Publishers, Dubuque Iowa.

Arah, O, Ogbu, U & Okeke, C 2008, 'Too poor to leave, too rich to stay: development and global health correlates of physician migration to the United States, Canada, Australia and the United Kingdom', *American Journal of Public Health*, vol. 98, no. 1, pp. 148 - 54.

Armitage, CJ & Conner, M 2001, 'Efficacy of the Theory of Planned Behaviour: A meta-analytic review', *British Journal or Social Psychology*, vol. 40, no. 4, pp. 417-99.

Armstrong-Stassen, M & Ursel, ND 2009, 'Perceived organizational support, career satisfaction, and the retention of older workers', *Journal of Occupational and Organizational Psychology*, vol. 82, no. 1, pp. 201-20.

Asquith, J, Sardo, S & Begley, P 2008, *AHRI Pulse: Love 'em don't lose 'em - identifying retention strategies that work*, Australian Human Resources Institute Melbourne

Atchison, TJ & Lefferts, EA 1972, 'The prediction of turnover using Herzberg's job satisfaction technique', *Personnel Psychology*, vol. 25, no. 1, pp. 53-64.

Atencio, BL, Cohen, J & Gorenberg, B 2003, 'Nursing retention: Is it worth it?', *Nursing Economic$*, vol. 21, no. 6, pp. 262 - 99.

Australian Government Department of Health and Ageing 2008, *Report on the audit of health workforce in rural and regional Australia*, Department of Health and Ageing, Canberra, viewed 11 November 2008, www.health.gov.au/internet/main/publishing.nsf/content/work-res-ruraud.

Barney, SM 2002, 'Retaining our workforce. regaining our potential', *Journal of Healthcare Management*, vol. 47, no. 5, pp. 291-5.

Bassett-Jones, N & Lloyd, GC 2005, 'Does Herzberg's motivation theory have staying power?', *Journal of Management Development*, vol. 24, no. 10, pp. 929-43.

Belbin, C 2006, *Apunipima Transition Project Talent Management*, Queensland Health, Cairns.

Belbin, C 2007a, Northern Area Health Service Aboriginal and Torres Strait Islander Workforce Strategy 2007-12, <113>.

Belbin, C 2007b, *Gurriny Yealamucka Transition Project: Talent Management*, Queensland Health, Cairns.

Belbin, C 2008, Queensland Health Aboriginal and Torres Strait Islander Workforce Strategy 2009-12: A discussion paper, <114>.

Best Practice Australia and New Zealand 2008, *Attraction, retention and turnover*, viewed 15 October <76>.

Bing, MN & Burroughs, SM 2001, 'The predictive and interactive effects of equity sensitivity in teamwork-oriented organizations', *Journal of Organizational Behavior*, vol. 22, no. 3, pp. 271-90.

Bluedorn, AC 1982, 'A unified model of turnover from organizations', *Human Relations*, vol. 35, no. 2, pp. 135-53.

Boselie, P, Dietz, G & Boon, C 2005, 'Commonalities and contradictions in HRM and performance research', *Human Resource Management Journal*, vol. 15, no. 3, pp. 67-94.

Buykx, P, Humphreys, J, Wakerman, J & Pashen, D 2010, 'Systematic review of effective retention incentives for health workers in rural and remote areas: Towards evidence based policy', *Australian Journal Rural Health*, vol. 18, pp. 102-9.

Campion, MA 1991, 'Meaning and measurement of turnover: Comparison of alternative measures and recommendations for research', *Journal of Applied Psychology*, vol. 76, no. 2, pp. 199-212.

Cavana, RY, Delahaye, BL & Sekaran, U 2001, *Applied business research: qualitative and quantitative methods*, John Wiley & Sons Australia Ltd, Milton.

Chiu, C-K, Chien, C-S & Chieh-Peng 2005, 'Understanding hospital employee job stresses and turnover intentions in a practical setting: The moderating role of locus of control', *Journal of Management Development*, vol. 24, no. 10, pp. 837-55.

Churchill, G 1979, 'A paradigm for developing better measures of marketing constructs', *Journal of Marketing Research*, vol. 16, no. February, pp. 64-73.

Coakes, SJ & Steed, LG 2007, *SPSS: Analysis without anguish using SPSS version 14.0 for Windows*, John Wiley & Sons, Australia.

Collins English Gem Dictionary, 1968, Collins Clear Type Press, London and Glasgow.

Collins, SK & Collins, KS 2007, 'Changing workforce demographics necessitates succession planning in health care', *Health Care Manager*, vol. 26, no. 4, pp. 318 - 25.

Community and Organisational Research Unit 2008, *"Better Workplaces" Queensland Health - Staff opinion survey September 2008*, Toowoomba http://qheps.health.qld.gov.au/betterworkplaces/documents/culture/reports/qh_rpt_sept_08.pdf viewed on 5 May 2009.

Corporate Leadership Council 2003, *Turnover in the health care industry*, viewed 20 November 2008, www.corporateleadershipconcil.com.

Craft Morgan, J & Lynn, MR 2009, 'Satisfaction in nursing in the context of shortage', *Journal of Nursing Management*, vol. 17, no. 3, pp. 401-10.

Crossley, CD, Jex, SM, Bennett, RJ & Burnfield, JL 2007, 'Development of a global measure of job embeddedness and integration into a traditional model of voluntary turnover', *Journal of Applied Psychology*, vol. 92, no. 4, pp. 1031-42.

Dawes, J 2008, 'Do data characteristics change according to the number of scale points used? An experiment using 5-point, 7-point and 10-point scales', *International Journal of Market Research*, vol. 50, no. 1, pp. 61-77.

Department of Health and Ageing 2006, *Department of Health and Ageing: Overview*, Australian Government, viewed 28 August 2009, <156>.

DeShields Jr O W, Kara, A & Haynak, E 2005, 'Determinants of business student satisfaction and retention in higher education: applying Herzberg's two-factor theory', *International Journal of Educational Management*, vol. 19, no. 2, pp. 128-39.

Dockery, AM 2004, *Workforce experience and retention in nursing in Australia*, Curtin Business School, Curtin University of Technology, Perth.

Eley, R, Soar, J, Buikstra, E, Fallon, T & Hegney, D 2009, 'Attitudes of Australian nurses to information technology in the workplace: A national survey', *Computers, Informatics, Nursing*, vol. 27, no. 2, pp. 114-21.

Erwee, R 2009, *Doctor of business administration dissertation study book*, University of Southern Queensland, Toowoomba, Australia.

Fielden, SL, Davidson, MJ & Sutherland, VJ 2009, 'Innovations in coaching and mentoring: implications for nurse leadership development', *Health Services Management Research*, vol. 22, pp. 92-9.

Furnham, A, Eracleous, A & Chamorro-Premuzic, T 2009, 'Personality, motivation and job satisfaction: Herzberg meets the big five', *Journal of Managerial Psychology*, vol. 24, no. 8, pp. 765-79.

Graziano, AM & Raulin, ML 2000, 'Correlational and differential methods in research', in *Research methods: A process of inquiry*, Allyn & Bacon, Needham Heights, MA, pp. 150-73.

Graziano, AM & Raulin, ML 2007, 'Hypothesis testing, validity and threats to validity', in *Research methods: A process of inquiry*, 6th edn, Allyn & Bacon, Needham Heights, MA, pp. 169-93.

Griffeth, RW, Hom, PW & 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*, vol. 26, no. 3, pp. 463-88.

Grigaliunas, BS & Herzberg, F 1971, 'Relevancy in the test of motivator-hygiene theory', *Journal of Applied Psychology*, vol. 55, no. 1, pp. 73 - 9.

Hair, JF, Black, WC, Babin, BJ, Anderson, RE & Tatham, RL 2006, *Multivariate data analysis*, Sixth edn, Pearson Prentice Hall, Upper Saddle River, New Jersey.

Hay, M 2002, 'Strategies for survival in the war of talent', *Career Development International*, vol. 7, no. 1, pp. 52-5.

Health Advisory Unit 1999, *Ministerial taskforce on nursing recruitment and retention - Final report*, Queensland Health, Brisbane.

Hegney, D, Plank, A & Parker, V 2003, 'Nursing workloads: The results of a study of Queensland nurses', *Journal of Nursing Management*, vol. 11, no. 5, pp. 307- 14.

Hegney, D, Plank, A & Parker, V 2006, 'Extrinsic and intrinsic work values: Their impact on job satisfaction in nursing', *Journal of Nursing Management*, vol. 14, no. 4, pp. 271-81.

Hegney, D, McCarthy, A, Rogers-Clark, C & Gorman, D 2002, 'Why nurses are resigning from rural and remote Queensland health facilities', *Collegian*, vol. 9, no. 2, pp. 33 - 9.

Hinkin, TR 1995, 'A review of scale development practices in the study of organizations', *Journal of Management*, vol. 21, no. 5, pp. 967 - 88.

Hinkin, TR & Tracey, JB 2000, 'The cost of turnover: Putting a price on the learning curve', *Cornell Hotel and Restaurant Administration Quarterly*, vol. 41, no. 3, pp. 14-21.

Holland, P, Sheehan, C & De Cieri, H 2007, 'Attracting and retaining talent: Exploring human resources development trends in Australia', *Human Resource Development International*, vol. 10, no. 3, pp. 247 - 62.

Hom, PW & Griffeth, RW 1991, 'Structural equations modelling test of a turnover theory: Cross-sectional and longitudinal analyses', *Journal of Applied Psychology*, vol. 76, no. 3, pp. 350-66.

Houkes, I, Hanssen, PPM, de Jonge J & Bakker, AB 2003, 'Specific determinants of intrinsic work motivation, emotional exhaustion and turnover intention: A multisample longitudinal study', *Journal of Occupational and Organizational Psychology*, vol. 76, pp. 427-50.

House, RJ & Wigdor, LA 1967, 'Herzberg's dual-factor theory of job satisfaction and motivation: A review of the evidence and a criticism', *Personnel Psychology*, vol. 20, no. Winter, pp. 136-89.

Huang, I-C, Lin, H-C & Chuang, C-h 2005, 'Constructing factors related to worker retention', *International Journal of Manpower*, vol. 27, no. 5, pp. 491-508.

Hudson 2007, *The Hudson Report: Part Two HR Insights: Engaging and retaining talent within a complex employment landscape*, Hudson Pty Ltd, Brisbane.

Huseman, RC, Hatfield, JD & Miles, EW 1987, 'A new perspective on equity theory: The equity sensitivity construct', *Academy of Management Review*, vol. 12, no. 2, pp. 232-34.

Ivancevich, JM & Matteson, MT 1990, *Organizational behaviour and management*, Second edn, BPI Irwin, Boston.

Kavanaugh, J, Duffy, JA & Lilly, J 2006, 'The relationship between job satisfaction and demographic variables for healthcare professionals', *Management Research News*, vol. 29, no. 6, pp. 304-25.

Kenny, DA 2009, *Moderator variables*, viewed 27 August 2010 http://davidakenny.net/cm/moderation.htm, <204>.

Kerlinger, FN & Lee, HB 2000, 'Research design: Purpose and principles', in *Foundations of behavioural research*, 4th edn, Wadsworth, Thompson Learning, USA, pp. 449-64.

Kilpatrick, SI, Johns, SS, Millar, P, Le, Q & Routley, G 2007, 'Skill shortages in health: innovative solutions using vocational education and training', *The International Electronic Journal of Rural and Remote Health Research, Education, Practice and Policy*, vol. 7, no. 623, pp. 1-13.

Koh, HC & Boo, EHY 2004, 'Organisational ethics and employee satisfaction and commitment', *Management Decision*, vol. 42, no. 5, pp. 677-93.

Kuhar, PA, Miller, D, Spear, BT, Ulreich, SM & Mion, LC 2004, 'The meaningful retention strategy inventory', *Journal of Nursing Administration*, vol. 34, no. 1, pp. 10 - 8.

Lavoie-Tremblay, M, O'Brien-Pallas, L, Gelinas, C, Desforges, N & Marchionni, C 2008, 'Addressing the turnover issue among new nurses from a generational viewpoint', *Journal of Nursing Management*, vol. 16, no. 6, pp. 724-33.

Lee, S 2007, 'Vroom's expectancy theory and the public library customer motivation model', *Library Review*, vol. 56, no. 9, pp. 788-96.

Lee, TW, Mitchell, TR, Wise, L & Fireman, S 1996, 'An unfolding model of voluntary employee turnover', *Academy of Management Journal*, vol. 39, no. 1, pp. 5-36.

Leedy, PD & Ormrod, JE 2005, *Practical research: planning and design*, 8th edn, Prentice Hall, New Jersey.

Leiter, MP & Maslach, C 2009, 'Nurse turnover: The mediating role of burnout', *Journal of Nursing Management*, vol. 17, no. 3, pp. 331-9.

Leurer, MD, Donnelly, G & Domm, E 2007, 'Nurse retention strategies: advice from experienced registered nurses', *Journal of Health Organisation and Management*, vol. 21, no. 3, pp. 307-19.

Levin, J & Fox, JA 1988, *Elementary statistics in social research*, 4th edn, Harper & Row Inc., New York.

Locke, EA 1973, 'Satisfiers and dissatisfiers among white-collar and blue-collar employees', *Journal of Applied Psychology*, vol. 58, no. 1, pp. 67 - 76.

Locke, EA 1975, 'Personnel attitudes and motivation', *Annual Review of Psychology*, vol. 26, pp. 457 - 80.

Lyneham, J, Cloughessy, L & Martin, V 2008, 'Workloads in Australian emergency departments: A descriptive study', *International Emergency Nursing*, vol. 16, no. 3, pp. 200 - 6.

Maurer, TJ & Lippstreu, M 2008, 'Who will be committed to an organization that provides support for employee development?', *Journal of Management Development*, vol. 27, no. 3, pp. 328-47.

McEvoy, GM & Cascio, WF 1985, 'Strategies for reducing employee turnover: A meta-analysis', *Journal of Applied Psychology*, vol. 70, no. 2, pp. 342 - 53.

Mitchell, TR, Holtom, BC & Lee, TW 2001a, 'How to keep your best employees: Developing an effective retention policy', *Academy of Management Executive*, vol. 15, no. 4, pp. 96 - 108.

Mitchell, TR, Holtom, BC, Lee, TW, Sablynski, CJ & Erez, M 2001b, 'Why people stay: Using job embeddedness to predict voluntary turnover', *Academy of Management Journal*, vol. 44, no. 6, pp. 1102-21.

Mobley, WH 1977, 'Intermediate linkages in the relationship between job satisfaction and employee turnover', *Journal of Applied Psychology*, vol. 62, no. 2, pp. 237-40.

Mobley, WH, Horner, SO & Hollingsworth, AT 1978, 'An evaluation of precursors of hospital employee turnover', *Journal of Applied Psychology*, vol. 63, no. 4, pp. 408-14.

Mobley, WH, Griffeth, RW, Hand, HH & Meglino, BM 1979, 'Review and conceptual analysis of the employee turnover process', *Psychological Bulletin*, vol. 86, no. 3, pp. 493-522.

Mossholder, KW, Settoon, RP & Henagan, SC 2005, 'A relational perspective on turnover: Examining structural, attitudinal, and behavioral predictors', *Academy of Management Journal*, vol. 48, no. 4, pp. 607-18.

Mukhi, S, Hampton, D & Barnwell, N 1991, *Australian Management*, McGraw-Hill, Sydney.

National Health and Hospitals Reform Commission 2009, *A healthier future for all Australians: Final report of the National Health and Hospitals Reform Commission - June 2009*, Barton, ACT, viewed 28 August 2009, www.health.gov.au/internet/main/publishing.nsf/content/nhhrc-report.

Neuman, WL 2003, 'Qualitative and quantitative research designs', in *Social research methods, qualitative and quantitative approaches*, 5th edn, Allyn & Bacon, Boston, pp. 137-68.

Newman, JE 1974, 'Predicting absenteeism and turnover: A field comparison of Fishbein's model and traditional job attitude measures.', *Journal of Applied Psychology*, vol. 59, no. 5, pp. 610-15.

Ng, TWH & Sorensen, KL 2008, 'Toward a further understanding of the relationships between perceptions of support and work attitudes - A meta-analysis', *Group and Organization Management*, vol. 33, no. 3, pp. 243-68.

North Queensland Workforce Unit 2005, *Report on the retention of mature-aged nurses (50 years and over) in the Northern Zone*, Queensland Health, Townsville.

Ondrack, DA 1974, 'Defense mechanisms and the Herzberg theory: An alternate test', *Academy of Management Journal*, vol. 17, no. 1, pp. 79-89.

Penz, K, Stewart, NJ, D'Arcy, C & Morgan, D 2008, 'Predictors of job satisfaction for rural acute care registered nurses in Canada', *Western Journal of Nursing Research*, vol. 3., no. 7, pp. 785-800.

Perry, C 2002, A structured approach to presenting theses: Notes for students and their supervisors, working paper, Southern Cross University, 1-56, viewed 30 March 2009, <166>.

Peterson, SL 2007, 'Managerial turnover in US retail organisations', *Journal of Management Development*, vol. 26, no. 8, pp. 770-89.

Phillips, JJ & Edwards, L 2009, *Managing talent retention: An ROI approach*, Pfeiffer (On-line book, viewed on 13 October 2009 http://library.books24x7.com.ezproxy.usq.edu.au/toc.asp?site=JE61N&bookid=29639).

Podsakoff, NP, LePine, JA & LePine, MA 2007, 'Differential challenge stressor-hindrance stressor relationships with job attitudes, turnover intentions, turnover, and

withdrawal behavior: A meta-analysis', *Journal of Applied Psychology*, vol. 92, no. 2, pp. 438-54.

Podsakoff, PM, MacKenzie, SB & Lee, J-Y 2003, 'Common method biases in behavioural research: A critical review of the literature and recommended remedies', *Journal of Applied Psychology*, vol. 88, no. 5, pp. 879-903.

Porter, LW & Steers, RM 1973, 'Organizational, work and personal factors in employee turnover and absenteeism', *Psychological Bulletin*, vol. 80, no. 2, pp. 151-76.

Price, JL 2001, 'Reflections on the determinants of voluntary turnover', *International Journal of Manpower*, vol. 22, no. 7, pp. 600 - 24.

Punch, K 2006, *Developing effective research proposals*, 2nd edn, Sage Publications, London.

Queensland Government 2008, *Review of the nurse unit manager role: Final report*, Queensland Health, Brisbane.

Queensland Government 2009, *2009-10 State budget papers*, Queensland Government, Brisbane, viewed 28 August 2009, www.budget.qld.gov.au.

Queensland Health 2002, *Smart State: Health 2020 a vision for the future*, Queensland Government, Brisbane.

Queensland Health 2007a, *Queensland Health Population Health Plan 2007-2012*, Queensland Government, Brisbane.

Queensland Health, *People Plan 2007 - 12,* 2007b, Q Health, Queensland Government, Brisbane.

Queensland Health 2008, *Overview of Queensland Health*, Queensland Health, Brisbane, viewed 5 August 2008 http://www.health.qld.gov.au.

Queensland Health 2009a, *Monthly workforce human resources profile*, Queensland Government, Brisbane, viewed 8 September 2009, <http:qheps.health.qld.gov.au/hrinformatics>.

Queensland Health 2009b, *Decision support system: Payroll data (Internal Queensland Health report - unpublished)*, Brisbane.

Queensland Health 2010, *Workforce Informatics*, Queensland Health, viewed 9 February 2010 http://qheps.health.qld.gov.au/hrinformatics, <182>.

Quemard, D 2004, 'Employee involvement: How do coal mines in Queensland utilise employee involvement processes', Dissertation thesis, University of Southern Queensland.

RemServ 2010, *Remuneration Services (Qld) Pty Ltd*, RemServ, viewed 22 November 2010, www.remserv.com.au, <213>.

Robbins, SP, Judge, TA, Millett, B & Waters-Marsh, T 2008, *Organisational behaviour*, 5th edn, Pearson Education Australia, French's Forest NSW.

Roxon, N, *Media Release 12 May 2009: Investing in the whole health system,* 2009, DoHa Ageing, Australian Government, Canberra, viewed 28 August 2009, www.health.gov.au/budget2009.

Schroder, R 2008, 'Job satisfaction of employees at a Christian university', *Journal of Research on Christian Education*, vol. 17, pp. 225-46.

Senge, P 1990, *The fifth discipline: The art and practice of the learning organization*, Doubleday, New York.

Sharma, S, Durand, RM & Gur-Arie, O 1981, 'Identification and analysis of moderator variables', *Journal of Marketing Research*, vol. 18, no. 3, pp. 291-300.

Sheridan, JE 1992, 'Organizational culture and employee retention', *Academy of Management Journal*, vol. 35, no. 5, pp. 1036 - 56.

Shore, TH 2004, 'Equity sensitivity theory: Do we all want more than we deserve?', *Journal of Managerial Psychology*, vol. 19, no. 7, pp. 722-28.

Smith, AD & Rupp, WT 2003, 'Knowledge workers: Exploring the link among performance rating, pay and motivational aspects', *Journal of Knowledge Management*, vol. 7, no. 1, pp. 107-24.

Smith, K, Gregory, SR & Cannon, D 1996, 'Becoming an employer of choice: Assessing commitment in the hospitality workplace', *International Journal of Contemporary Hospitality Management*, vol. 8, no. 6, pp. 3-9.

Statistics Solutions 2009, *Moderator variable*, Statistics Solutions Inc, viewed 28 August 2010 http://www.statisticssolutions.com?methods-chapter/statistical-tests/moderator-variable, <207>.

StatSoft 2010, *Electronic statistics textbook*, StatSoft, viewed 12 September 2010, www.statsoft.com/textbook/principal-components-factor-analysis/, <211>.

Steel, RP 2002, 'Turnover theory at the empirical interface: Problems of fit and function', *Academy of Management Review*, vol. 27, no. 3, pp. 346-60.

Steers, RM & Porter, LW 1974, 'The role of task-goal attributes in employee performance', *Psychological Bulletin*, vol. 81, no. 7, pp. 434-52.

Studer, Q 2004, *The value of employee retention*, Studer Group, viewed 31 October 2008, www.studergroup.com, <93>.

Stum, DL 2001, 'Maslow revisited: building the employee commitment pyramid', *Strategy and Leadership*, vol. 29, no. 4, pp. 4-9.

Tett, RP & Meyer, JP 1993, 'Job satisfaction, organizational commitment, turnover intention, and turnover: Path analyses based on meta-analytic findings', *Personnel Psychology*, vol. 46, no. 2, pp. 259-93.

Toma, JD 1997, 'Alternative inquiry paradigms, faculty cultures, and the definition of academic lives', *Journal of Higher Education*, vol. 68, no. 6, pp. 679-705.

Tourangeau, AE & Cranley, LA 2006, 'Nurse intention to remain employed: Understanding and strengthening determinants', *Journal of Advanced Nursing*, vol. 55, no. 4, pp. 497-509.

Tracey, JB & Hinkin, TR 2008, 'Contextual factors and cost profiles associated with employee turnover', *Cornell Hospitality Quarterly*, vol. 49, no. 1, pp. 12-27.

Tzeng, H-M 2002, 'The influence of nurses' working motivation and job satisfaction on intention to quit: an empirical investigation in Taiwan', *International Journal of Nursing Studies*, vol. 39, no. 8, pp. 867-78.

Udechukwu, II & Mujtaba, BG 2007, 'Determining the probability that an employee will stay or leave the organization: A mathematical and theoretical model for organizations', *Human Resource Development Review*, vol. 6, no. 2, pp. 164-84.

University of Southern Queensland 2008a, *Research methodology 2 (MGT 8402): Study book, Faculty of Business*, University of Southern Queensland, Toowoomba Qld Australia.

University of Southern Queensland 2008b, *Research Methodology 1 MGT 8401 Study Book*, University of Southern Queensland, Toowoomba.

Van Breukelen W, Van Der Vlist R & Steensma, H 2004, 'Voluntary employee turnover: Combining variables from the 'traditional' turnover literature with the theory of planned behavior', *Journal of Organizational Behavior*, vol. 25, pp. 893-914.

van der Heijden B, van Dam K & Hasselhorn, HM 2009, 'Intention to leave nursing: The importance of interpersonal work context, work-home interference, and job satisfaction beyond the effect of occupational commitment', *Career Development International*, vol. 14, no. 7, pp. 616-35.

Van Vianen, AEM, De Pater, IE & Van Dijk, F 2007, 'Work value fit and turnover intention: Same-source or different-source fit', *Journal of Managerial Psychology*, vol. 22, no. 2, pp. 188-202.

Waldman, JD & Arora, S 2004, 'Measuring retention rather than turnover: A different and complementary HR calculus', *Human Resource Planning*, vol. 27, no. 3, pp. 6-9.

Whetton, DA 1989, 'What constitutes a theoretical contribution?', *Academy of Management Review*, vol. 14, no. 4, pp. 490-5.

Williams, LJ & Hazer, JT 1986, 'Antecedents and consequences of satisfaction and commitment in turnover models: A reanalysis using latent variable structural equation methods', *Journal of Applied Psychology*, vol. 71, no. 2, pp. 219-31.

Wilson, B, Squires, M, Widger, K, Cranley, L & Tourangeau, A 2008, 'Job satisfaction among a multigenerational nursing workforce', *Journal of Nursing Management*, vol. 16, no. 6, pp. 716-23.

Wood, J, Zeffane, R, Fromholtz, M, Wiesner, R, Creed, A, Schermerhorn, J, Hunt, J & Osborn, R 2010, *Organisational behaviour core concepts and applications*, 2nd edn, John Wiley & Sons Australia, Milton Queensland.

Zikmund, WG 2003a, 'Attitude measurement', in *Business research methods*, 7th edn, Thomson, South Western, USA, pp. 307-28.

Zikmund, WG 2003b, *Business research methods*, 7th edn, Thomson, South Western, USA.

Zikmund, WG 2003c, 'Questionnaire design', in *Business research methods*, 7th edn, Thomson, South-Western, USA, pp. 329-65.

Zurn, P, Dolea, C & Stilwell, B 2005, 'Issue paper 4: Nurse retention and recruitment - developing a motivated workforce', *The Global Nursing Review Initiative*, no. 4, pp. 1-31, viewed 28 August 2009, www.icn,ch/global/Issue4retention.pdf.

ooOOOoo

Appendix I Queensland Health map of health service districts

Source: http://www.health.qld.gov.au/maps/Images/DHS_Map.pdf viewed 22 October 2010

Appendix II Workforce retention strategies and occupational streams in Queensland Health

Occupational stream / W'force Retention Strategy	Health Pract	ATSI Health Worker	Nursing	Medical	Trades & Artisan	Op Service	Admin
Leadership programs:							
1. Inspiring leadership	√	√	√	√	√	√	√
2. Emerging clinical leaders	√	√	√	√			
3. Personal leadership qualities	√	√	√	√	√	√	√
4. On-line leadership modules	√	√	√	√	√	√	√
5. Energising from conflict	√	√	√	√	√	√	√
6. Wal-Meta Leadership Prog	√#	√#				√#	√#
7. Coaching for leaders	√	√	√	√	√	√	√
8. Practical People M'ment	√	√	√	√	√	√	√
Mature age programs:							
9. Maturity Matters	√	√	√	√	√	√	√
10. Transition to Retirement			√				
Other retention programs:							
11. Work/life balance	√	√	√	√	√	√	√
12. Flexible work practices	√	√	√	√	√	√	√
13. Peer support program	√	√	√	√	√	√	√
14. Work shadowing							√
15. Supervision	√						
16. Succession planning			√				
17. Coaching		√#					
18. Mentoring	√#	√#	√#	√#	√#	√#	√#
19. Rural Connect (Mentoring)	√						
20. Mentoring Framework			√				
21. Cadetships			√#				
22. Scholarships	√		√	√			
23. Apprenticeships					√		
24. Traineeships		√					√
25. Graduate Programs			√				
26. Better Workplaces staff opinion survey	√	√	√	√	√	√	√
27. Study and Research Assistance Scheme (SARAS)	√	√	√	√	√	√	√
28. Employee Assistance Scheme (EAS)	√	√	√	√	√	√	√

Workforce retention strategies developed for Aboriginal and Torres Strait Islander staff

Source: Developed for this study

Appendix III Survey

Survey begins over page

Section A

The aim of this section is to determine if you are firstly **aware** of any workforce retention strategies offered by Queensland Health from the list below, and secondly, if you have **participated** in any of them. Please look at each of the workforce retention strategies currently offered by Queensland Health listed in the table and indicate in **Column A** by circling:

1=Yes if you are **aware** of the strategy or 2=No if you are not.

Next indicate in **Column B** whether you have **participated** in the strategy by circling: 1=Yes or 2=No if you have not.

Of the workforce retention strategies that you are **aware** of, please indicate in **Column C** by circling your view of the effectiveness of the strategy where:

1= not effective; 2=slightly effective; 3=effective; 4=don't know.

Workforce retention strategies	A Are you **aware** of any of these strategies		B Have you **participated** in any of these strategies		C Of the strategies you are **aware** of, please rate the strategy according to your view of its effectiveness			
	Yes	No	Yes	No	Not effective	Slightly effective	Effective	Don't know
Leadership programs:								
1. Inspiring leadership	1	2	1	2	1	2	3	4
2. Energising from conflict	1	2	1	2	1	2	3	4
3. Coaching skills for leaders	1	2	1	2	1	2	3	4
4. Leadership qualities	1	2	1	2	1	2	3	4
5. Emerging clinical leaders	1	2	1	2	1	2	3	4
6. On-line leadership modules	1	2	1	2	1	2	3	4
7. Practical People Management	1	2	1	2	1	2	3	4
Other retention programs:								
8. Maturity Matters	1	2	1	2	1	2	3	4
9. Transition to Retirement	1	2	1	2	1	2	3	4
10. Work/life balance agreement	1	2	1	2	1	2	3	4
11. Flexible work plan	1	2	1	2	1	2	3	4
12. Peer support program	1	2	1	2	1	2	3	4
13. Work shadowing	1	2	1	2	1	2	3	4
14. Succession planning	1	2	1	2	1	2	3	4
15. Coaching	1	2	1	2	1	2	3	4
16. Mentoring Framework	1	2	1	2	1	2	3	4
17. Indigenous Mentoring Program	1	2	1	2	1	2	3	4
18. Cadetship – Indigenous Nursing	1	2	1	2	1	2	3	4
19. Rural Scholarship Scheme	1	2	1	2	1	2	3	4
20. Graduate Programs	1	2	1	2	1	2	3	4
21. Better Workplaces staff survey	1	2	1	2	1	2	3	4
22. Study and Research Assistance Scheme (SARAS)	1	2	1	2	1	2	3	4
23. Employee Assistance Scheme	1	2	1	2	1	2	3	4
24. Performance Appraisal & Devt	1	2	1	2	1	2	3	4
i. Salary packaging	1	2	1	2	1	2	3	4
ii. Prof Development Allowance	1	2	1	2	1	2	3	4
iii. Prof Development Leave	1	2	1	2	1	2	3	4
iv. Half pay holidays	1	2	1	2	1	2	3	4

Any other programs or any comments to add:_____

_____

_____

Section B

The aim of Section B is to determine the characteristics of your top 3 preferred workforce retention strategies. From the list given in Section A on the previous page, choose your top 3 strategies that you have **participated** in, and that in your view are the best for supporting and keeping nurses employed with Queensland Health. Only choose from the first 24 strategies listed in Section A ie: from 1. Inspiring Leadership through to number 24. Performance Appraisal & Devt, and please disregard the last 4 strategies from number i. Salary Packaging through to number iv. Prof Devt Leave.

If you are only able to comment on one or two strategies, please comment on the ones in which you have participated. Insert the name of your preferred strategy in the top row of the table below where it says *Strategy name is:_____.

Rate each of your chosen strategies on each characteristic listed below by circling the appropriate number using the following response scale:

1= strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree

If you have never participated in any workforce retention strategy, please go to **Section C.**

	WRS = Workforce Retention Strategy	A. Your preferred strategy 1 *Strategy name is:_____					B. Your preferred strategy 2 *Strategy name is:_____					C. Your preferred strategy 3 *Strategy name is:_____				
1	Participation in the WRS enhanced my job security	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
2	The WRS was accessible in work time	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
3	The WRS was recognised by my Supervisor as a valued program	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
4	The WRS was supported by QH policy	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
5	The WRS was presented/coordinated by an expert	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
6	The WRS encouraged interaction with peers	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
7	I felt some level of achievement when the WRS was completed	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
8	I received recognition for participating in the WRS	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
9	Completion of WRS increased my work responsibility	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
10	There is possibility of advancement having completed the WRS	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
11	The WRS was professionally conducted	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
12	The WRS was applicable to my work	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
13	There is possibility of growth in my work having completed the WRS	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
14	I invested effort when participating in the WRS	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
15	My performance during my participation in the WRS was high	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
16	I felt personal gain having completed the WRS	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
17	I have an increase in my work status having completed the WRS	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
18	I received approval and recognition from my superior/s having completed the WRS	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
19	The opportunity to participate in the WRS was offered fairly to all staff	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
20	Participants in the WRS were treated the same	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
21	All participants had similar skills, knowledge and experience when they commenced the WRS	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
22	All participants received similar achievement and recognition rewards when they completed the WRS	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

Focussing on your participation in workforce retention strategy/ies generally, indicate your thoughts on the following statements by circling the appropriate number using the following response scale:

1= strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree

WR = Workforce Retention					
23. Participating in the WR strategy/ies has lead to increased job satisfaction	1	2	3	4	5
24. Participating in the WR strategy/ies has decreased my thoughts of quitting	1	2	3	4	5
25. Participation in the WR strategy/ies has decreased my need to search for jobs	1	2	3	4	5
26. Participation in the WR strategy/ies has decreased my intention to quit	1	2	3	4	5

Section C

Thinking about workforce retention strategies generally, to what extent do the following statements apply to you? Please answer by circling the appropriate number where:

1= strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree

1. Individual barriers to my participating in any or other strategies include:					
a. My lack of time to participate	1	2	3	4	5
b. My lack of interest in participating	1	2	3	4	5
c. I did not know about them	1	2	3	4	5
2. Organisational barriers to my participating in any, or other strategies include:					
a. Lack of Line Manager support	1	2	3	4	5
b. They are not well accepted in my work area	1	2	3	4	5
c. They are not well promoted in my work area	1	2	3	4	5

3. Are there any other reasons or barriers that could or do prevent you from participating in any, or any other, Workforce Retention Strategies? Please elaborate on these below.

3a. Personal reasons
_____
_____

3b. Organisational reasons
_____
_____

4. Please provide your views about why you think there is staff turnover in nursing. (ie: people quitting):
_____
_____

Section D

Please select your answer by circling the corresponding number for your answers:

1. Gender
(1) Male
(2) Female

2. Your age in years
(1) Under 21 (2) 21 - 30   (3) 31 - 40   (4) 41 - 50   (5) 51 - 60   (6) over 61

3. What type of position are you currently in?
(1) Permanent full time (2) Permanent part time (3) Casual / Flexible
(4) Temporary full time (5) Temporary part time (6) Other_____

4. Occupational stream and level
(1) Level 1/Nursing Officer 1/Grade 5 (2) Level 2/Nusing Officer 2/Grade 6
(3) _____ (if not either of these, please write your level in the space provided)

5. How long have you worked at this location?
(1) Less than 1 year (2) 1 – 2 years (3) 2 – 5 years (4) 5 – 10 years
(5) 10 – 15 years (6) 15 – 20 years (7) More than 20 years

6. How long have you worked in the nursing profession?
(1) Less than 1 year (2) 1 – 2 years (3) 2 – 5 years (4) 5 – 10 years
(5) 10 – 15 years (6) 15 – 20 years (7) More than 20 years

7. Which health service district and what is the name of the location you are currently in?

Please circle the corresponding number: Please fill in location:
(1) Cape York   Location_____
(2) Central West   Location_____
(3) Mackay   Location_____
(4) Mt Isa   Location_____
(5) Southwest   Location_____
(6) Sunshine Coast – Wide Bay   Location_____
(7) Torres – Northern Peninsula   Location_____
(8) Townsville   Location_____
(9) Other _____

The following questions are not about workforce retention, but are general questions.

Please circle your preferred response where:

1=not at all; 2=to some extent 3=neutral; 4=to quite a large extent; 5=to a great extent

8. To what extent do you feel that the current / recent economic downturn has motivated you to stay employed with Queensland Health?	1	2	3	4	5
9. To what extent do you have thoughts about leaving your job?	1	2	3	4	5
10. To what extent do you intend to quit your job within the next 12 months?	1	2	3	4	5

11. Please list any things or happenings that may cause you to think about quitting your job in the next 12 months?
_____
_____
_____
_____

Thank you!

Your confidential response is appreciated and it will contribute to Queensland Health's efforts to improve workforce retention for all staff.

Appendix IV Face validity feedback

Interviewee comments:					
Participant	**A**	**B**	**C**	**D**	**E**
Date	18 March 2010	23 March 2010	29 March 2010	12 April 2010	19 April 2010
Time taken to complete survey	25 mins	10 mins	20 mins	20 mins	15 mins
Understanding of survey	Section B instructions confusing Invite to participate changes	Made sense – all OK	Instructions OK, had to go back and read them a few times	OK for understanding Invite page useful	Understood the survey with no problems
Presentation of survey	Good	OK	Good	Very busy	Good
Any major issues with the survey	No	No	No	No	No
Researcher comments and actions:					
Participant	**A**	**B**	**C**	**D**	**E**
	Changes made to instructions for Sections A and B	Participant errors in filling out due to haste	Slight word changes to Section A as a result of feedback	Agreed that survey was busy, explained theoretical basis – Participant D OK with rationale of why so busy. Response limited due to no awareness of Workforce Retention Strategies	Good response to questions – understood the questions and had no issue with layout

Appendix V Invitation to participate

Queensland Government
Queensland Health

IMPORTANT
Please read this carefully before completing the survey

The study
As a valued member of the nursing profession, you are being invited to participate in an exclusive study targeting Levels 1 and 2/Nursing Officers 1 and 2/Grades 5 and 6 nurses. The study is investigating Queensland Health's workforce retention strategies for nurses. As the researcher, I am interested in finding out if any of the retention strategies developed and implemented by Queensland Health have made a difference to employee turnover. The study is supported by Queensland Health and the research is contributing to a graduate degree with the University of Southern Queensland.

Results from this study will hopefully contribute to improving workforce retention strategies for nurses and other employees of Queensland Health. The study aims to develop a better understanding of how these retention strategies may affect employee turnover, with a view to better supporting and retaining valued staff: **<u>YOU!</u>**

Your participation
- Your valued participation will involve the completion and return of a survey.
- The survey will take approximately 20 minutes to complete.
- Your participation is ABSOLUTELY VOLUNTARY and can be withdrawn at any time without prejudice.
- This survey is CONFIDENTIAL and ANONYMOUS. No person will be able to identify you or your responses.
- Please return the survey via reply paid post in the envelope provided.
- If you would like a copy of the Executive Summary of the research findings, please email your request to the researcher separately: Cheryl_Belbin@health.qld.gov.au.

Authorisation
Your response and return of this survey indicates your agreement to participate in the study.

The researcher
If you have any questions or concerns, please contact the researcher:
Cheryl Belbin
Phone: 07 4061 5669
Mobile: 0408 196 215
Fax: 07 4061 7345
Email: Cheryl_Belbin@health.qld.gov.au

Concerns or complaints about any aspect of the survey or this study may be directed to:
The Secretary
Human Research Ethics Committee
University of Southern Queensland
TOOWOOMBA QLD 4350
Phone: 07 4631 2690   Email: ethics@usq.edu.au

Appendix VI Survey administration for postal survey

Health Service District	$	No. sent	Contact Name	Phone	Courier/postal address	Date sent	F/up 1	2
Mt Isa (6)	**$**	**80**	**Michelle Garner EDON**	**4744 4416**				
Cloncurry	1.65	5	Lesley Laffey	4742 4500	PO Box 196 Cloncurry Q 4824	02/06	25/06	20/07
Doomadgee	1.65	2	Neil Todd	4745 8800	Sharpe St Doomadgee 4830	02/06	25/06	20/07
Julia Creek	3.30	5	Paul Donaldson	4746 7177	PO Box 93 Julia Creek Q 4823	02/06	25/06	20/07
M'nington Is	1.10	1	Leslie-Ann Jacobus	4745 7209	Lardyl St 4871	02/06	25/06	20/07
Mt Isa	24.37	64	*Michelle Garner	4744 4416	30 Camooweal St Mt Isa Q 4825	02/06	25/06	20/07
Normanton	1.10	3	Kathryn Stock	4745 1144	PO Box 33 Normanton Q 4890	02/06	25/06	20/07
Cape York (11)		**40**	**Mary-Rose Robinson EDON**	**4082 3653**				
Aurukun	1.10	3	Ian Nugent	4060 6133	PO Aurukun 4791	02/06	25/06	20/07
Coen	1.10	1	Barbara Shepherd	4060 1166	Coen PO 4871	02/06	25/06	20/07
Cooktown	5.50	16	Marian Harrington	4043 0100	PO Box 101 Cooktown Q 4895	02/06	25/06	20/07
Hopevale	1.65	3	Jan Whitby	4060 9171	PO Hopevale Q 4895	02/06	25/06	20/07
Kowanyama	1.65	3	Dianne Dancey	4060 5133	PO Kowanyama 4871	02/06	25/06	20/07
Laura	1.10	1	Ross Little	4060 3320	Health Centre Laura Q 4871	02/06	25/06	20/07
Lockhart	1.10	1	Joel Donkin	4060 7155	Lockhart River Q 4871	02/06	25/06	20/07
Mapoon	1.10	1	Mary-Rose Robinson	4090 9174	PO Box 341 Weipa Q 4874	02/06	25/06	20/07
Napranum	1.10	1	Dianne Humes	4069 7459	PO Box 341 Weipa Q 4874	02/06	25/06	20/07
Pormpuraaw	1.10	2	Kieren Ayres	4060 4233	C/o PO Pormpuraaw Q 4871	02/06	25/06	20/07
Weipa	4.95	8	Dianne Humes	4082 3900	PO Box 341 Weipa Q 4874	02/06	25/06	20/07
Torres (2)		**15**	**Beverley Hamerton EDON**	**4069 0215**				
Bamaga	3.30	6	Maree Fort-Rushton	4069 3166	C/o PO Bamaga Q 4876	02/06	25/06	21/07
Thursday Is	4.95	9	Janis Scarlett	4069 1109	PO Box 391 Thursday Is Q 4875	02/06	25/06	21/07
Central West (5)		**25**	**Shirley Godfrey EDON**	**4652 8000**				
Alpha	1.10	3	Leona Bowers	4987 0700	PO Box 3 Alpha Q 4724	02/06	25/06	20/07
Barcaldine	1.65	5	Mark White	4650 4000	PO Box 190 Barcaldine Q 4725	02/06	25/06	20/07
Blackall	1.65	5	Frankie Calleja	4650 7700	PO Box 131 Blackall Q 4472	02/06	25/06	20/07
Longreach	2.20	8	Karen McLellan	4658 4700	PO Box 297 Longreach Q 4730	02/06	25/06	20/07
Winton	2.20	4	Jennifer Williams	4657 2700	PO Box 295 Winton Q 4735	02/06	25/06	20/07
Mackay (6)		**165**	**Julie Rampton DDNS**	**4965 9403**				
Clermont	3.30	10	Elspeth MacDonald	4983 4000	PO Box 42 Clermont Q 4721	02/06	25/06	20/07
Dysart	1.10	3	Ros Sigvart	4791 1911	PO Box 42 Dysart Q 4745	02/06	25/06	20/07
Mackay	24.37	128	Julie Rampton	4965 9403	QH Mky HSD 73 Victoria St Wide Bay Building Mky 4740	02/06	25/06	20/07
Moranbah	1.65	5	Maura Keogh	4941 4600	PO Box 99 Moranbah Q 4744	02/06	25/06	20/07
Proserpine	6.60	14	Nicola Young	4945 0400	Po Box 229 Proserpine Q 4800	02/06	25/06	20/07
Sarina	1.65	5	Sue Farrell	4943 8717	1 Hospital St Sarina Q 4737	02/06	25/06	20/07

Health Service District		No. sent	Contact Name	Phone	Courier/postal address	Date sent	F/up 1	2
Townsville (8)		**425**	**Val Tuckett EDON**	**4796 0932**				
Ayr	3.30	9	Mary Vicary	4783 0896	Po Box 971 Ayr Q 4807	02/06	25/06	21/07
Bowen	2.20	5	Pauline Maude	4786 8222	PO Box 808 Bowen Q 4805	02/06	25/06	21/07
Charters Trs	4.40	15	Andrea Wade	4787 0359	PO Box 63 Charters Twrs Q 4820	02/06	25/06	21/07
Collinsville	1.10	2	Sharon Sellars	4785 4707	PO Box 56 Collinsville Q 4804	02/06	25/06	21/07
Home Hill	1.10	1	Brenda McDowell	4790 5700	PO Box 53 Home Hill Q 4806	02/06	25/06	21/07
Ingham	3.30	8	Robert Barker	4720 3000	PO Box 367 Ingham Q 4850	02/06	25/06	21/07
Palm Island	1.10	3	Judith Sellen	4752 5101	PO Palm Island Q 4816	02/06	25/06	21/07
Townsville	28.62	382	Wendy Smyth	4796 2666	Trop Hlth Res Unit, Fl 1 TTH 100 Angus Smith Drive Douglas 4814	02/06	25/06	21/07

Health Service District		No. sent	Contact Name Phone		Courier/postal address	Date posted	F/up 1	F/up 2
S C – W Bay (14)		**675**	**Graham Wilkinson DDON Ann Schefe DDON**	5470 6602 4120 6988				
Biggenden	1.10	3	Craig Egan	4127 6400	PO Box 29 Biggenden Q 4621	02/06	25/06	20/07
Bundaberg	28.62	119	Debbie Carroll	4150 2025	Bourbong St Bundaberg Q 4670	02/06	25/06	20/07
Caloundra	28.62	44	David Johnson SC-CHS-DON	5436 8903	West Terrace Caloundra Q 4551	02/06	25/06	20/07
Childers	1.65	6	Susan Parks	4192 1133	PO Box 62 Childers Q 4660	02/06	25/06	20/07
Eidsvold	1.10	1	Tracey Hansen	4165 7100	PO Box 40, Crakow Rd Q 4627	02/06	25/06	20/07
Gayndah	1.10	3	Tracey Heron	4161 3500	PO Box 41 Gayndah Q 4625	02/06	25/06	20/07
Gin Gin	1.10	3	Jenny Hursthouse	4157 2222	Po Box 14 Gin Gin Q 4671	02/06	25/06	20/07
Gympie	28.62	52	Tracey Warhurst	5489 8405	12 Henry St Gympie Q 4570	02/06	25/06	20/07
Hervey Bay	14.31	84	*Ann Schefe	4120 6988	Cnr Nissen St & Urraween Rd P'ba Hervey Bay Q 4655	02/06	25/06	20/07
Maleny	1.10	4	Mark Sierkowski	5420 5000	Bean St Maleny Q 4552	02/06	25/06	20/07
M'borough	14.31	39	Ann Schefe	4120 6988	Cnr Nissen St & Urraween Rd P'ba Hervey Bay Q 4655	02/06	25/06	20/07
Monto	1.10	2	Tracey Pattie	4166 9300	PO Box 220 Monto Q 4630	02/06	25/06	20/07
Mundubbera	1.10	1	Jan-Adele Hotz	4165 5200	PO Box 35 Mundubbera Q 4626	02/06	25/06	20/07
Nambour	29.35	313	*Graham Wilkinson	5470 6602	Hospital Road Nambour Q 4560	02/06	25/06	20/07
South West (11)		**75**	**Chris Small DDON**	**4624 2860**				
Augathella	1.10	2	Sally Gorman	4656 7100	PO Box 84 Augathella Q 4477	02/06	25/06	20/07
Charleville	4.40	12	Emily Finlayson	4650 5000	PO Box 219 Charleville Q 4470	02/06	25/06	20/07
Cunnamulla	1.10	3	Adele Leeds	4655 8100	PO Box 78 Cunnamulla Q 4490	02/06	25/06	20/07
Dirranbandi	1.10	2	Andrew Urquart	4625 8222	PO Box 20 Dirrranbandi Q 4486	02/06	25/06	20/07
Injune	1.10	2	Janelle Harris	4626 1188	PO Box 35 Injune Q 4454	02/06	25/06	20/07
Mitchell	1.65	5	Kate Field	4623 1277	Ann St Mitchell Q 4465	02/06	25/06	20/07

Health Service District		No. sent	Contact Name Phone		Courier/postal address	Date posted	F/up 1	F/up 2
Mungindi	1.10	2	Jennifer Pompetti	02 6753 2166	Mungindi via Thallon Q 4497	02/06	25/06	20/07
Quilpie	2.20	6	Sonja McEvoy	4656 0100	PO Box 27 Quilpie Q 4480	02/06	25/06	20/07
Roma	9.90	25	Susan Freiberg	4624 2700	197-234 McDowall St PO Box 124 Roma Q 4455	02/06	25/06	20/07
St George	4.40	12	Patrice Robinson	4620 2222	PO Box 602 St George Q 4487	02/06	25/06	20/07
Surat	1.10	4	Skye MacKenzie/Vicky Alexander	4626 5166	PO Box 2 Surat Q 4417	02/06	25/06	20/07
8 Health service districts 63 locations	**$337**	**1500**						

F/up = Follow up

Appendix VII Survey administration for on-line survey

Health service district	No. emailed	Date emailed	F/up	Survey closed
Mt Isa	80	20/07	02/08	11/08
Cape York	40	20/07	02/08	11/08
Torres and NPA	15	20/07	02/08	11/08
Central West	25	20/07	02/08	11/08
Mackay	165	20/07	02/08	11/08
Townsville	425	20/07	02/08	11/08
Sunshine Coast & Wide Bay	675	20/07	02/08	11/08
Southwest	75	20/07	02/08	11/08
TOTAL	**1500**			

F/up = Follow up

Appendix VIII Statistical Package for Social Sciences (SPSS) Reports developed for this study

These reports are available from the author and not included due to size restriction.

No.	Report name	Comment
1	Frequencies	Split data 250 + 122 cases; To detect errors, all data 372 cases, split on mode
1A	Frequencies	Sections A and B not split
1B	Frequencies	Split data 124 cases
2	Frequencies	Variable view; Easier reference to variables and values
3	*Survey Monkey Report*	*Not SPSS but included in list of reports*
4	Missing value analysis	All variables, all data, 374 cases
5	Missing value analysis	Missing patterns
6	Missing value analysis	Section A Part A only, 322 cases
6A	Missing values analysis	Section D1-7 only
6B	Missing values analysis	Section D1-10
6C	Missing values analysis	Section D1-10, 374 cases
7	Missing values analysis	Section A Part A only
8	Missing values analysis	Section D only
9	Missing values analysis	Section A and D not ignorable
10	Independent groups t-test	Scale variables, mean vs mode
11	Screen for normality	Scale variables, split mode
12	Assessing normality	Scale variables
13	Assessing for normality	Kolmogorov-Smirnov
14	Chi square	Test for relatedness, Section A Parts A,B,C; D1-7
15	Chi square	Test for relatedness Section A Part C14-28
16	Assessment of normality	Scale data
17	Frequencies	Scale data
18	Frequency and bar graph	Health service district
19	Frequency and bar graph	Age
20	Frequency and bar graph	Position
21	Frequency and bar graph	Gender
22	Frequency and bar graph	Occupational stream
23	Frequency and bar graph	Time at location
24	Frequency and bar graph	Time in nursing
25	Chi square	Demographics vs survey mode
26	Frequencies and pie graph	Survey mode
27	Reliability of measures	Section B Part A1-22
27A	Reliability of measures	Section B Part A1-22, 190 cases
28	Reliability of measures	Section B 23-26
29	Reliability of measures	Section B 23-26 & Part D8-10
30	Factor analysis	Principal axis factoring Section B, Part A 1-22
31	Factor analysis	Principal components Section B, Part A 1-22 value = 0.1, varimax
31A	Factor analysis	Principal components Section B, Part A 1-22 value = 0.4, varimax
32	Factor analysis	Principal components Section B, Part A 1-22 value = 0.4, oblique rotation
33	Cronbach's alpha	Four factors from factor analysis of Part B Section A1-22
34	Factor analysis	Principal components Section B 23-26, value = 0.4, oblique rotation
35	Cronback's alpha	Performed on the derived one factor from factor analysis of Part B23-25
36	Multiple regression	Standard, independent vs dependent variables
37	Correlations	Independent and dependent 1-tailed
38	Correlations	Independent and independent 1-tailed
39	Multiple regression	Stepwise independent vs dependent
39A	Multiple regression	Stepwise independent vs dependent (re-run)
40	Correlation	Bivariate Pearson product momentum; independent vs dependent,

No.	Report name	Comment
		2-tailed
40A	Correlation	Bivariate Pearson product momentum; independent vs dependent, 1-tailed
41	MANOVA	4 separate dependent variables and 4 independent groups
42	Descriptive statistics	Descriptives for demographics D1-7
43	Descriptive statistics	Mean, SD, range and variance for independent and dependent variables
44	Descriptive statistics	Mean, SD, range and variance for remainder of variables
45	Correlations	Dependent and independent, 2-tailed
46	Correlations	Partial, for independent variables and dependent variables
47	Descriptive statistics	Mean of factor analysis groups independent and independent variables
47A	Descriptive statistics	Mean, SD, kurtosis, skewness of independent and dependent variables
48	Descriptive statistics	Independent, dependent and demographic variables
49	Correlations	Independent, dependent and demographic variables
50	Frequencies	RQ1a: Section A Part A 1-28
51	Frequencies	RQ1b: Section A Part B 1-28
52	Frequencies	RQ1c: Section A Part C 1-28
53	*Excel spread sheet*	*Not SPSS but included in list of reports*
54	Frequencies	RQ1d: Section C 1-2
55	Frequencies	Section B Part A 0
56	Frequencies	RQ2: Section B Part A 1-22
57	Multiple regression	Independents + moderating variables and dependents
58	Multiple regression	Hierarchical
59	Standardised variables	Converted to Z scores
60	Moderated multiple regression	Gen & pers, opp, strat, fair
61	Moderated multiple regression	Age & pers, opp, strat, fair
62	Moderated multiple regression	Location & pers, opp, strat, fair
63	Moderated multiple regression	Profession & pers, opp, strat, fair
64	Moderated multiple regression	Independent and moderating gender
65	Moderated multiple regression	Independent, dependent and moderating variables added in sequence, Z scores
66	Moderated multiple regression	Independent, dependent and moderating variables, 3 blocks, Z scores
66A	Moderated multiple regression	Independent, dependent and moderating variables, 3 blocks, 1 analysis
66B	Moderated multiple regression	Independent, dependent and moderating variables, 3 blocks, gender dummy
66C	Moderated multiple regression	Independent, dependent, gender (z scores)
66D	Moderated multiple regression	Independent, dependent, age (z scores)
66E	Moderated multiple regression	Independent, dependent, location (z scores)
66F	Moderated multiple regression	Independent, dependent, profession (z scores)
66G	Moderated multiple regression	Independent, dependent, gender (not z scores)
67	Mann Whitney U test	Nominal variables vs survey mode
68	Multiple regression	Stepwise independent vs dependent variables

Appendix IX University of Southern Queensland ethics application: Letter of approval

USQ
AUSTRALIA

OFFICE OF RESEARCH AND HIGHER DEGREES

Ashley Steele
Research Ethics Officer
PHONE (07) 4631 2690 | FAX (07) 4631 2955
EMAIL steele@usq.edu.au

Thursday, 27 August 2009

Cheryl Belbin
Innisfail Hospital
87 Rankin Street
Innisfail QLD 4860

Re: Ethical Clearance – Targeting employee perceptions of workforce retention strategies: Application of three motivation theories to investigate the effect on turnover intention

Dear Cheryl,

The USQ Human Research Ethics Fast Track Committee recently reviewed your application for ethical clearance. Your project has been endorsed and full ethics approval was granted 27/08/2009 subject to the following condition:

- that appropriate Queensland Health permissions be obtained

Your approval reference number is: HO9REA087 and is valid until 27/08/2010.

The Committee is required to monitor research projects that have received ethics clearance to ensure their conduct is not jeopardising the rights and interests of those who agreed to participate. Accordingly, you are asked to forward a **written report** to this office after twelve months from the date of this approval or upon completion of the project.

A questionnaire will be sent to you requesting details that will include: the status of the project; a statement from you as principal investigator, that the project is in compliance with any special conditions stated as a condition of ethical approval; and confirming the security of the data collected and the conditions governing access to the data. The questionnaire, available on the web, can be forwarded with your written report.

Please note that you are responsible for notifying the Committee immediately of any matter that might affect the continued ethical acceptability of the proposed procedure.

Yours sincerely

Ashley Steele
Research Ethics Officer
Office of Research and Higher Degrees

Appendix X Queensland Health ethics application: Letters of approval

Queensland Health requires the respective Human Resource Ethics Committees (HREC) to approve the ethics for the study, and then the District Chief Executive Officer (DCEO), or their delegate, is required to approve governance for the research to occur in their respective district.

The table below is a summary of the approvals sought and received for this research to be conducted. Full copies of the letters may be obtained from the author and have not been included due to size restriction.

Human Research Ethics Committee	Health Service District represented	Ethics Approval (HREC)	Governance Approval (DCEO) or delegate
Central Queensland	Central West	✓	✓
Cairns & Hinterland	Cape York	✓	✓
	Torres and Northern Peninsula Area	✓	✓
Townsville	Mt Isa	✓	✓
	Mackay	✓	✓
	Townsville	✓	✓
Prince Charles	Sunshine Coast and Wide Bay	✓	✓
Darling Downs	South West	✓	✓

Appendix XI Factor analysis: Correlation matrix

		1 Participation in the WRS enhanced my job security	2 The WRS was accessible in work time	3 The WRS was recognised by my Supervisor as a valued program	4 The WRS was supported by QH policy	5 The WRS was presented/ coordinated by an expert	6 The WRS encouraged interaction with peers	7 I felt some level of achievement when the WRS was completed	8 I received recognition for participating in the WRS	9 Completion of WRS increased my work responsibility
1	Participation in the WRS enhanced my job security	1.000	.319	.485	.358	.178	.338	.428	.443	.380
2	The WRS was accessible in work time	.319	1.000	.465	.360	.352	.443	.464	.399	.384
3	The WRS was recognised by my Supervisor as a valued program	.485	.465	1.000	.549	.421	.436	.518	.520	.383
4	The WRS was supported by QH policy	.358	.360	.549	1.000	.483	.346	.511	.365	.208
5	The WRS was presented/coordinated by an expert	.178	.352	.421	.483	1.000	.566	.574	.350	.170
6	The WRS encouraged interaction with peers	.338	.443	.436	.346	.566	1.000	.690	.541	.457
7	I felt some level of achievement when the WRS was completed	.428	.464	.518	.511	.574	.690	1.000	.550	.464
8	I received recognition for participating in the WRS	.443	.399	.520	.365	.350	.541	.550	1.000	.527
9	Completion of WRS increased my work responsibility	.380	.384	.383	.208	.170	.457	.464	.527	1.000
10	There is possibility of advancement having completed the WRS	.473	.351	.396	.275	.225	.398	.492	.602	.669
11	The WRS was professionally conducted	.240	.406	.492	.462	.708	.520	.660	.457	.330
12	The WRS was applicable to my work	.394	.543	.506	.454	.488	.582	.689	.464	.522
13	There is possibility of growth in my work having completed the WRS	.418	.386	.414	.298	.277	.447	.568	.596	.620
14	I invested effort when participating in the WRS	.309	.373	.399	.312	.354	.499	.595	.352	.471
15	My performance during my participation in the WRS was high	.310	.423	.446	.327	.331	.553	.558	.410	.491
16	I felt personal gain having completed the WRS	.313	.412	.509	.499	.503	.554	.774	.397	.440
17	I have an increase in my work status having completed the WRS	.378	.379	.365	.296	.318	.483	.538	.590	.641
18	I received approval and recognition from my superior/s having completed the WRS	.397	.379	.538	.338	.334	.407	.479	.753	.583
19	The opportunity to participate in the WRS was offered fairly to all staff	.225	.203	.390	.363	.405	.193	.309	.205	.172
20	Participants in the WRS were treated the same	.269	.356	.458	.443	.596	.507	.577	.369	.249
21	All participants had similar skills, knowledge and experience when they commenced the WRS	.270	.326	.203	.272	.298	.356	.342	.381	.167
22	All participants received similar achievement and recognition rewards when they completed the WRS	.228	.251	.298	.302	.413	.457	.427	.581	.284

		10 There is possibility of advancement having completed the WRS	11 The WRS was professionally conducted	12 The WRS was applicable to my work	13 There is possibility of growth in my work having completed the WRS	14 I invested effort when participating in the WRS	15 My performance during my participation in the WRS was high	16 I felt personal gain having completed the WRS
1	Participation in the WRS enhanced my job security	.473	.240	.394	.418	.309	.310	.313
2	The WRS was accessible in work time	.351	.406	.543	.386	.373	.423	.412
3	The WRS was recognised by my Supervisor as a valued program	.396	.492	.506	.414	.399	.446	.509
4	The WRS was supported by QH policy	.275	.462	.454	.298	.312	.327	.499
5	The WRS was presented/coordinated by an expert	.225	.708	.488	.277	.354	.331	.503
6	The WRS encouraged interaction with peers	.398	.520	.582	.447	.499	.553	.554
7	I felt some level of achievement when the WRS was completed	.492	.660	.689	.568	.595	.558	.774
8	I received recognition for participating in the WRS	.602	.457	.464	.596	.352	.410	.397
9	Completion of WRS increased my work responsibility	.669	.330	.522	.620	.471	.491	.440
10	There is possibility of advancement having completed the WRS	1.000	.366	.510	.808	.409	.421	.425
11	The WRS was professionally conducted	.366	1.000	.596	.391	.542	.478	.586
12	The WRS was applicable to my work	.510	.596	1.000	.647	.722	.647	.692
13	There is possibility of growth in my work having completed the WRS	.808	.391	.647	1.000	.502	.473	.523
14	I invested effort when participating in the WRS	.409	.542	.722	.502	1.000	.796	.652
15	My performance during my participation in the WRS was high	.421	.478	.647	.473	.796	1.000	.637
16	I felt personal gain having completed the WRS	.425	.586	.692	.523	.652	.637	1.000
17	I have an increase in my work status having completed the WRS	.670	.324	.542	.686	.444	.460	.474
18	I received approval and recognition from my superior/s having completed the WRS	.578	.423	.477	.604	.338	.384	.425
19	The opportunity to participate in the WRS was offered fairly to all staff	.216	.303	.223	.213	.084	.107	.256
20	Participants in the WRS were treated the same	.257	.628	.455	.257	.381	.407	.526
21	All participants had similar skills, knowledge and experience when they commenced the WRS	.147	.366	.299	.170	.232	.262	.241
22	All participants received similar achievement and recognition rewards when they completed the WRS	.332	.409	.398	.333	.386	.408	.365

		17 I received approval and recognition from my superior/s having completed the WRS	18 I received approval and recognition from my superior/s having completed the WRS	19 The opportunity to participate in the WRS was offered fairly to all staff	20 Participants in the WRS were treated the same	21 All participants had similar skills, knowledge and experience when they commenced the WRS	22 All participants received similar achievement and recognition rewards when they completed the WRS
1	Participation in the WRS enhanced my job security	.397	.397	.225	.269	.270	.228
2	The WRS was accessible in work time	.379	.379	.203	.356	.326	.251
3	The WRS was recognised by my Supervisor as a valued program	.538	.538	.390	.458	.203	.298
4	The WRS was supported by QH policy	.338	.338	.363	.443	.272	.302
5	The WRS was presented/coordinated by an expert	.334	.334	.405	.596	.298	.413
6	The WRS encouraged interaction with peers	.407	.407	.193	.507	.356	.457
7	I felt some level of achievement when the WRS was completed	.479	.479	.309	.577	.342	.427
8	I received recognition for participating in the WRS	.753	.753	.205	.369	.381	.581
9	Completion of WRS increased my work responsibility	.583	.583	.172	.249	.167	.284
10	There is possibility of advancement having completed the WRS	.578	.578	.216	.257	.147	.332
11	The WRS was professionally conducted	.423	.423	.303	.628	.366	.409
12	The WRS was applicable to my work	.477	.477	.223	.455	.299	.398
13	There is possibility of growth in my work having completed the WRS	.604	.604	.213	.257	.170	.333
14	I invested effort when participating in the WRS	.338	.338	.084	.381	.232	.386
15	My performance during my participation in the WRS was high	.384	.384	.107	.407	.262	.408
16	I felt personal gain having completed the WRS	.425	.425	.256	.526	.241	.365
17	I have an increase in my work status having completed the WRS	.673	.673	.092	.218	.146	.332
18	I received approval and recognition from my superior/s having completed the WRS	1.000	1.000	.218	.326	.254	.459
19	The opportunity to participate in the WRS was offered fairly to all staff	.218	.218	1.000	.569	.174	.232
20	Participants in the WRS were treated the same	.326	.326	.569	1.000	.375	.415
21	All participants had similar skills, knowledge and experience when they commenced the WRS	.254	.254	.174	.375	1.000	.468
22	All participants received similar achievement and recognition rewards when they completed the WRS	.459	.459	.232	.415	.468	1.000

Source: SPSS Report No. 32

Appendix XII Barriers to participation: Themes

Section C Question 3. *Are there any personal or organisational reasons or barriers that could or do prevent you from participating in any, or any other workforce retention strategy?*

Section C Questions 3a and 3b:

Case No.	Busy/ family	Not aware	Not interested	Cas/pt time	Others	No support	Not promoted	Workload	Short of staff	Bullying	Lack of l'ship	Others
	Personal barriers					**Organisational barriers**						
Posted responses												
1												
2			✓		Not always topics of interest				✓			Not able to be released form work
3												
4	✓				Busy lifestyle		✓					Don't hear about them
5	✓				Family commitments, availability							Expectation to attend in own time
6	✓				Busy with family							
7												
8				✓	Only part-time							
9					None	✓						Lack of support
10												
11		✓			Not knowing about them and no time		✓					Not well promoted
12							✓					Not aware
13							✓					Not recognised
14	✓				Busy family life							
15	✓				No time – added workload too much			✓				Increasing workload – no appreciation
16												
17	✓				Busy family life and lack of time							Minimal recognition
18				✓	Casual				✓			Short staffed
19												Manager not approachable
20										✓		Favouritism and bullying
21	✓				Busy family life							
22												
23									✓			Lack of staff
24												
25	✓				Too busy							No support
26												
27							✓					Lack of promotion
28	✓				Too busy with work demands	✓						Poor morale, lack of support
29												
30				✓	Part time	✓						No support
31	✓				Too busy		✓					Not promoted
32												
33												
34	✓				Time constraints	✓						Not supported
35												
36												

The entire table of comments is available from the author; it has not been included due to size restrictions.

Summary table of comments:

Are there any personal or organisational reasons or barriers that could or do prevent you from participating in any, or any other workforce retention strategy?

Personal reasons or barriers	Totals
Busy/family	53
Casual or part time	11
Not aware	10
Not interested	9
Organisational reasons or barriers	**Totals**
Short of staff	42
No support	37
Workload	25
Not promoted	18
Lack of leadership	6
Bullying	5

Section C question 4: *Why do you think there is staff turnover in nursing (ie: people quitting)?*

Case No.	Themes						Others
	Lack of support	Lack of leadership	Heavy workload	Short of staff	Bullying	No recognition of the role	
Posted surveys							
1			✓				Unable to get holidays
2	✓	✓	✓	✓	✓	✓	Poor rostering, poor communication
3							Shift work not family friendly
4			✓				Shift work, stress
5			✓		✓		Poor workplace morale, paperwork, tertiary e ducation not representative of job need
6			✓				Shift work, pay, run by non-clinical staff
7	✓		✓				No respect, night shift, abusive patients
8						✓	Shift work exhausting
9	✓						Not family friendly, poor rostering
10							No flexibility of shifts for mothers
11	✓					✓	Stress
12			✓				No encouragement from supervisors
13						✓	
14							Isolation, unrealistic expectation
15			✓	✓		✓	More and more expected
16							Favour some staff
17							Too focussed on higher education, RNs only desire is to provide general nursing with no aspirations of ladder climbing
18							Burnout
19	✓	✓			✓		Style of management
20							Skill mix, family friendly rosters
21			✓				
22							
23		✓			✓		Resistance to change
24	✓		✓	✓			Stress, grievances, poor skill mix
25							
26	✓						Too busy, patient abuse, senior staff replaced by new grads
27	✓	✓	✓				Dissatisfaction with conflict resolution processes
28	✓		✓				Workplace rundown, media negativity, increased patient abuse
29	✓						Lack of staff morale
30							Nothing done to encourage retention
31							Increased violence from patients, no work/life balance
32							Unfairly treated
33							Poor job satisfaction

The entire table of comments is available from the author; it has not been included due to size restrictions.

Summary table:

Why do you think there is staff turnover in nursing (ie: people quitting)?

Themes	Totals
Heavy workload	80
Lack of support	68
Bullying	67
No recognition of the role	42
Short of staff	31
Lack of leadership	25

Appendix XIV Quitting in the next 12 months: Themes

Section D Question 11: *Please list any things or happenings that may cause you to think about quitting your job in the next 12 months.*

Case No.	Lack of support	Lack of leadership	Heavy workload	Short of staff	Bullying	No recognition of the role	Others
Posted surveys							
1							
2							Stress, poor morale, pay issues
3							Personal reasons only
4							Ill health – self or family
5	✓				✓		Return of staff who are not ethical
6							Lotto, not family friendly
7							Winning a large amount of money, a better offer
8							Job with no shift work
9							None, need the money
10			✓			✓	Unrealistic workload pressures
11							
12							Too much paperwork
13			✓				
14							
15				✓		✓	Pay problems
16							Lack of respect from peers
17							Too much pressure to gain further qualifications
18							None, love my job
19	✓						Lottery, continued stress
20					✓		Manipulative behaviour
21	✓					✓	Difficulty in maintaining knowledge and confidence rturning after having children
22							
23							
24	✓		✓		✓		Stress, poor skills mix
25							Conditions in general, QH don't care about staff, working environment or good patient care
26							
27							
28			✓				Increased work related stress
29							
30							Attitude of line manager, lack of flexibility
31							Continued additional programs that add to workload
32							Pay
33	✓	✓					
34			✓				Not family friendly rosters
35							
36							Very happy, good support
37			✓	✓			Continuing staff politics
38							Happy in well run workplace

The entire table of comments is available from the author; it has not been included due to size restrictions.

Summary Table:

Please list any things or happenings that may cause you to think about quitting your job in the next 12 months.

Themes	Totals
Lack of support	26
Heavy workload	22
Bullying	18
Lack of leadership	17
Short of staff	16
No recognition of the role	11