Assessing the Determinants of Quality in Ontario’s Long-Term Care Homes: Relationships Between Staff and Resident Satisfaction

by

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A thesis submitted in conformity with the requirements for the degree of Master of Science
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Abstract

This thesis aimed to test the relationship between resident satisfaction and staff satisfaction. Using a cross-sectional design, administrators, staff and residents from 24 LTC homes were surveyed. Logistic regression models predicting high resident satisfaction were developed with a primary focus on the relationship to direct care staff satisfaction, while controlling for facility, staff and resident characteristics (and facility-level clustering). Regression models were developed for overall staff satisfaction and three other domains of job satisfaction. The odds of high overall resident satisfaction decreased by 27% and 31% for each 1-unit increase in overall job satisfaction and satisfaction with workload, respectively. In contrast, the odds of high overall resident satisfaction increased by 5.56 times for each 1-unit increase in mean staff satisfaction with work content. LTC homes may be able to improve staff and resident experiences concurrently by encouraging direct care staff to enter into meaningful relationships with residents.
We need to encourage caregivers to enter into appropriate but real relationships with those they serve, relationships which both validate the client and transform the caregiver. – Jean Vanier
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List of Abbreviations

CCAC – Community Care Access Centre
CNA – Certified Nursing Assistant
IOM – Institute of Medicine
IMCHB – Interaction Model of Client Health Behaviour
LHIN – Local Health Integration Network
LTC – Long-term care
LTCHA – Long-Term Care Homes Act, 2007
MJS – Measure of Job Satisfaction
MOHLTC – Ministry of Health and Long-Term Care
NHCAHPS – Nursing Home Consumer Assessment of Health Providers and Systems
PSW – Personal Support Worker
QOC – Quality of Care
QOL – Quality of Life
RSQ – Resident Satisfaction Questionnaire
VIF – Variance Inflation Factor
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Chapter 1
Introduction

1.1 Motivation for the Thesis

As Canada’s population ages, facility-based long-term care (LTC) is becoming an increasingly important component of the health care system. Ontario’s LTC facilities serve as homes for approximately 76,000 residents (many of whom are frail and are vulnerable to multiple functional and cognitive impairments). Ensuring that residents receive quality care and experience high quality of life is a concern expressed by residents and their families, health care providers, and policymakers.

According to the Institute of Medicine, LTC is both a health and social program. From the resident’s perspective, measures of quality should evaluate their clinical care and important socio-psychological aspects of their experience. Resident satisfaction surveys capture these aspects of LTC and the resident’s unique voice.

Ontario’s LTC homes also serve as workplaces to nearly 40,000 direct and indirect care staff. Staff outcomes, such as job satisfaction, are important measures of organizational effectiveness because LTC is a labour-intensive service industry that experiences exceptionally high levels of turnover and staff burnout.

Academics and practitioners often treat positive resident and staff outcomes, such as satisfaction, as separate goals. But this is not necessarily the case. Staff-patient interactions are the central component of health services. There are four elements that define these interactions: provision of information, affective support, professional/technical competencies and client expectations for decisional control. But due to the nature of LTC, affective support is thought to be the primary component of staff-resident interactions and customer service.

It has been hypothesized that the quality with which these components are delivered may be modified by a number of staff outcomes, including morale, motivation and stress. For example, the quality of affective support is related to the display of appropriate attitudes and emotions (e.g. empathy), which are promoted by positive mood states. Job satisfaction is, therefore, believed to promote staff capacity or willingness to provide quality care. Staff experiencing low
levels of satisfaction from work may reduce inputs, through negative behaviours and attitudes, in order to maintain their perceived level of equity. The end result is that less satisfied staff may lead to lower resident satisfaction, and vice versa.

The primary focus of this thesis was the relationship between resident satisfaction and direct care staff job satisfaction in Ontario LTC homes. There are no previous studies examining this relationship in Ontario LTC homes. Research from other jurisdictions, however, suggests a positive relationship between resident satisfaction and staff satisfaction. These results are not actionable; there is a paucity of quality scientific research relating specific elements of job satisfaction with specific domains of resident satisfaction. As a result, it is unclear which specific elements of job satisfaction, if improved, could lead to better resident outcomes. This thesis, therefore, had three objectives. These were:

1. Determine whether the positive overall staff-resident satisfaction linkage described in the scientific literature was present in a sample of Ontario LTC homes, measured using overall direct care staff job satisfaction aggregated to the LTC home-level, and individual-level overall resident satisfaction scores.

2. Determine whether the staff-resident satisfaction linkage was consistent for the domain of resident satisfaction with staff (which is a more direct measure of the quality of staff-resident interactions than is overall resident satisfaction).

3. Determine whether the staff-resident satisfaction linkage was consistent for multiple content and context elements of direct care staff job satisfaction.

1.2 Structure of the Thesis

Chapter 2 provides an overview of LTC in Ontario. It describes the types of LTC services available in Ontario, the legislation governing LTC homes and changes to the demand and supply of LTC.

Chapter 3 provides an overview of quality of LTC in Ontario. Quality is described from the resident perspective and from the staff perspective. The importance of satisfaction as a measure of the resident and staff experience in LTC is described, as are the determinants of quality from each perspective.
Chapter 4 introduces the relationship between resident and staff experiences, measured using satisfaction instruments. Literature is reviewed to describe the basis for and current evidence of this relationship in health care. The conceptual model used in this study is also presented.

Chapter 5 describes the measures and methods used in this thesis. Analyses include summary statistics, bivariate tests of association and logistic regression. Results of these analyses are presented in Chapter 6, while Chapter 7 provides a discussion of these results.
Chapter 2
Overview of LTC in Ontario

This chapter provides an overview of LTC in Ontario. The types of LTC services available in Ontario, the legislation governing LTC homes, and changes to the demand and supply of LTC are described.

2.1. Distinguishing the Types of LTC Services

Fourteen Community Care Access Centres (CCACs), located throughout Ontario, provide single-entry assessments and arrange for LTC services. There are two types of LTC services: 1) home and community support services and 2) facility-based services. Home and community support services are designed to ensure individuals remain in their homes adequately and safely. These services range from meal delivery to help with dressing and bathing to in-home nursing and other medical and social services. Facility-based LTC services are available to those who require more comprehensive services and are unable to remain in their own homes (Ministry of Health and Long-Term Care 2010c).

In Ontario, publicly funded facility-based LTC consists of supportive housing and LTC homes. Supportive housing is available for people who require minimal to moderate levels of aide. These facilities allow residents to maintain an independent lifestyle by providing personal care and support – such as routine hygiene, dressing and washing – and homemaking help. Supportive housing accommodations may be partially subsidized and personal care services are government-funded (Ministry of Health and Long-Term Care 2010c).

Alternatively, the elderly who require minimal to moderate levels of aide may enter retirement homes, which are not under the purview of CCACs. Retirement homes are privately owned and operated facilities that do not receive any funding from the Ontario Ministry of Health and Long Term Care (MOHLTC). Additional health services may be available, but these facilities are not

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1 This thesis only considers those facilities that are here described as LTC homes. For the purposes of this paper, however, LTC home and LTC facility or institution are considered synonymous and are used interchangeably.
generally for people who require 24-hour nursing care (Ministry of Health and Long-Term Care 2010c).

LTC homes provide services to those who cannot live independently and who require high levels of daily personal care (Ministry of Health and Long-Term Care 2010c). One of the largest populations residing in LTC homes are those with dementia and the types of care offered are often dictated by the needs of these patients who are prone to falls and fractures, which require complex care (Baines 2007). Services offered include 24-hour nursing care or supervision, and emergency and regular physician care. Most residents require assistance with activities of daily living including bathing, toileting and dressing. Because these facilities are the places of most residents’ daily living, LTC facilities also provide social and recreational services. The MOHLTC provides funding for care in LTC homes, but residents are required to pay a co-payment for their accommodation (Ministry of Health and Long-Term Care 2010c).

LTC homes are governed by a single piece of legislation – the *Long-Term Care Homes Act, 2007* (LTCHA) – which received approval and became effective July 1, 2010. With the proclamation of the LTCHA, the pieces of legislation that governed LTC homes at the time of this study – the *Nursing Homes Act, Charitable Institutions Act*, and *Homes for the Aged and Rest Homes Act* – were repealed and the accompanying regulations revoked (Ministry of Health and Long-Term Care 2010b). In addition to setting standards of care, the MOHLTC conducts annual inspections of homes, the reports from which are available to consumers.

There are three types of LTC home owners/operators in Ontario, which reflect the three historical origins of the above now-repealed acts. The three types of LTC homes operating in Ontario are nursing homes, municipal homes for the aged and charitable homes for the aged (Berta, Laporte & Valdmanis 2005). Nursing homes are private mostly for-profit facilities. Municipal and charitable homes for the aged are not-for-profit facilities. Despite differences in ownership and therefore mission, all three types of LTC homes receive the same amount of funding from the provincial government for care provision and are paid a standard amount for accommodation by residents (Ministry of Health and Long-Term Care 2010c, Berta, Laporte & Valdmanis 2005). In addition to differences in ownership, LTC homes vary based on chain affiliation, size, geographic location, and staffing and resident characteristics.
2.2. Demand and Supply of LTC in Ontario

Canada’s population is expected to age rapidly from 2009 to 2031, by which time all of Canada’s baby boomers will be over 65 years of age. In addition to the maturation of the baby boomer generation, the life expectancy of seniors is increasing. This will lead to an increase in both the absolute number of seniors and the proportion of elderly in the entire population. By 2036 seniors will account for 23-25% of the total population; nearly double their current representation (Statistics Canada 2010b). The number of very elderly, those over 80 years old, will increase by a factor of 2.5 (Statistics Canada 2010b). Ontario’s total population is expected to be among the fastest growing and will maintain a lower median age than the national level (Statistics Canada 2010b). Nevertheless, with the maturation of the baby boomer generation and the increasing life expectancy, facility-based LTC will likely become a larger component of Ontario’s health care system (Kruzich, Clinton & Kelber 1992).

At present, there are 622 LTC homes listed by the MOHLTC (Ministry of Health and Long-Term Care 2008a) with over 76,000 LTC beds in Ontario (Matthews 2010). Over 8,300 new beds have been opened since 2003, with an additional 1,600 beds opening in the next three years (Matthews 2010). These increases are part of a 1998 program to build 20,000 new LTC beds. In addition to increasing the number of new LTC beds, the MOHLTC has implemented a plan to redevelop 35,000 LTC beds over the next decade (Ministry of Health and Long-Term Care 2010a).

The LTC home workforce is comprised of slightly fewer than 40,000 direct and indirect care staff (Ministry of Health and Long-Term Care 2007a). From 2004 to 2007, almost 4,900 new staff, including 1,101 new nurses, were hired (Ministry of Health and Long-Term Care 2007b). From 2003 to 2007, the budget for LTC homes increased by $740 million annually (Ministry of Health and Long-Term Care 2007a). An investment of $57.7 million in annual funding was promised in 2007 to create 1,200 additional positions for Registered Practical Nurses in LTC homes (Ministry of Health and Long-Term Care 2007b).
Chapter 3
Quality of LTC

While the increase in LTC infrastructure may address some of the growing demand for LTC, it does not address the question of the quality of resident or staff experiences. These two critical themes dominate the literature on nursing homes and are most often viewed as separate problems by academics and practitioners (Eaton 2000). Before addressing the link between these themes, as is the purpose of this thesis, the following two subsections examine the quality of LTC first from the residents’ perspective followed by that of LTC staff. In each section, the measures used to evaluate each of these themes and their determinants are discussed.

3.1. Quality of the Resident Experience

Ensuring residents receive high quality care and service is a concern expressed by residents and their families, providers and LTC policy makers. A recently released investigation of LTC in Ontario, started in July 2008, found numerous systematic problems. The investigation found residents who had been left in soiled diapers, who had not received the minimum two baths per week, and who did not have a toothbrush. There was inconsistent monitoring of LTC homes. And when problems were detected, there was poor follow-up and poor enforcement of the suggested improvements (CTV Toronto 2010).

This was not the first time that a quality chasm in LTC was identified. The quality of LTC was highlighted as an area for policy action by the parliamentary assistant to the Ontario MOHLTC in 2004, who recommended increased inspections, staffing levels and staff training (Smith 2004). Calls for improved quality were met by the passing of the Long-Term Care Homes Act, 2007. The news release published by the McGuinty government following the passing of this new legislation highlighted five measures to ensure high quality in LTC. They were: 1) establishing staffing and care standards; 2) whistle-blowing protections for those who report abuse or neglect; 3) a policy limiting the use of restraints; 4) enhancing an enforceable Residents’ Bill of Rights; and 5) strengthening requirements to develop individualized interdisciplinary plans of care for LTC residents (Ministry of Health and Long-Term Care 2007b). These legislative changes and the launch of the Residents First quality improvement program by Health Quality Ontario (Health Quality Ontario 2011) highlight the continuing focus on the quality of LTC.
3.1.1. Defining Quality

The Institute of Medicine (IOM) defined quality as: “the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge” (Institute of Medicine 1990). The idiom “desired health outcomes” reflects the importance not only of medical outcomes of disease but also people’s ability to function in their daily lives. The IOM’s Committee on Improving Quality in Long-Term Care concluded that LTC is both a health and social program (Wunderlich, Kohler 2000). Because LTC facilities are the milieu of residents’ daily living, non-medical care and services, which aim to maximize the capability and productivity of the lives of people with functional and cognitive impairments, are important components of LTC. The inclusion of non-medical aspects of LTC in measures of quality of care has been emphasized in Ontario. The first theme of the MOHLTC’s report on its LTC quality consultation was to create an environment that promotes quality of life for residents with an emphasis on resident-centered care and the resident experience (Ministry of Health and Long-Term Care 2008b).

3.1.2. Measures of Quality of the Resident Experience

The above definition of quality includes the phrase “increase[s] the likelihood” because despite the best possible care, poor outcomes may still result. Ensuring that appropriate processes of care are occurring is an equally important measure of quality. Donabedian’s paradigm for the evaluation of medical services separates quality measures into three domains: structure, process and outcome (Donabedian 2005). Structure measures reflect the setting or system where care is provided. These include staffing levels, staff training and organization of the facility. Process measures describe the care that patients actually receive. Deficiencies in processes of care can be divided into overuse, underuse and misuse of health services (Wunderlich, Kohler 2000).

Outcome measures describe what happens to the patient. In LTC, quality of care has most often been evaluated using clinical outcome measures charted in the Minimum Data Set, such the presence or absence of pressure ulcers, falls, restraint use, weight loss, incontinence, activity loss and behavioural problems (Bostick 2004, Rantz et al. 1999). Nurses have indicated that the most relevant of these measures are falls and pressure ulcers (Mueller, Karon 2004). These clinical outcome measures do not, however, capture important socio-psychological aspects of LTC, including relationships and interactions between residents and staff, and they fail to consider residents’ voices (Wunderlich, Kohler 2000, Kane et al. 2003). Residents provide different
information on quality of care than that which is provided by the above quality indicators or from their families (Duffy, Duffy & Kilbourne 2001) or from staff (Berlowitz et al. 1995 in Ejaz, Castle 2007). To capture these important aspects of quality, resident satisfaction instruments have been developed.

3.1.3. Defining Satisfaction

Satisfaction implies a person’s positive evaluation of the context, process and result of the service experience (Sikorska-Simmons 2006, Pascoe 1983, Jimmieson, Griffin 1998). According to the marketing literature, satisfaction decisions involve a complex evaluative process. Atkins et al. (Atkins, Marshall & Javalgi 1996) writes that patient satisfaction is a “measure of how effective the provider has been in meeting the patient’s needs and expectations.” This quote describes the disconfirmation paradigm, that when customers rate their satisfaction with a service, they consider both the perceived service characteristics and their expectations for quality (Oliver 1980). From this paradigm it may be concluded that if the consumer’s expectations are met or exceeded they will be satisfied and vice versa (Duffy, Duffy & Kilbourne 2001).

There is agreement in the literature that expectations are a component of satisfaction decisions in most service contexts (Oliver 1980). It has been proposed, however, that satisfaction decisions in health care are a special case. In health care, expectancy disconfirmation has been shown to not have an impact on satisfaction (Alford 1998, Jayanti 1996). Rather, consumer affective response appears to exert significant influence on satisfaction with the service encounter (Alford 1998, Jayanti 1996). Due to the technical nature of medical care, patients may not have the knowledge to make a cognitive appraisal of the service and, thus, rely on an affective response to make satisfaction decisions (Alford 1998). Because LTC consists of both medical and non-medical services, satisfaction decisions are likely a combination of affective response and expectancy disconfirmation.

To further complicate things, the expectation construct in LTC is different from other service industries. In LTC, the expectation construct may be translated from “what should be” to “what can be” because residents’ extensive experience with the service gives them firsthand knowledge of what is possible given the constraints in LTC (Duffy, Duffy & Kilbourne 2001). In addition to previous experience with the service, four other antecedents of expectations have been identified (Zeithaml, Berry & Parasuraman 1993). These include personal factors impacting physical or
psychological well-being, perceived service alternatives, perceived self-service role and factors perceived to be out of the service provider’s control. Expectations are dynamic, changing over time with these antecedents (Fisk et al. 1990, Clow, Kurtz & Ozment 1998).

Resident satisfaction decisions in LTC involve a complex evaluation of the expectations and perceptions of the service encounter and an affective response to the experience. Expectations are fluid and will change with time in the home but are a good measure of both the clinical and socio-psychological aspects of LTC. A variety of resident satisfaction instruments have, therefore, been developed.

3.1.4. Measures of Satisfaction

There has been some hesitation to the use of satisfaction surveys in LTC (Straker et al. 2007). LTC home residents are frail and are vulnerable to multiple functional and cognitive impairments. In fact, a recent systematic review determined that dementia had a prevalence of 58% in the LTC population, with 78% of LTC residents experiencing behavioural and psychological symptoms of dementia (Seitz, Purandare & Conn 2010). As a result of LTC residents’ multiple impairments, there was a commonly held presumption that residents would not be able to evaluate the quality of their LTC experience (Ejaz, Castle 2007). Since the late 1990s, however, evidence refuting this assumption has been presented in the scientific literature (Van De Water et al. 2003, Simmons et al. 1997). It is now generally understood that residents with up to moderate dementia are considered the gold standard for informing on their own subjective states, such as their quality of life and satisfaction with care, rather than proxy measures including staff and families.

Resident satisfaction instruments evaluate residents’ perceptions, expectations and feelings about various domains of their experience and/or the overall experience. Resident satisfaction tools may measure both quality of life (QOL) and quality of care (QOC). QOL is a subjective state of being that is considered the outcome of care delivery (Sangl et al. 2007). QOL measures include privacy, respect, autonomy and personhood. QOC, as measured in satisfaction surveys, refers to a person’s evaluation of the health care process (Sangl et al. 2007). QOC measures include perceptions of medical and non-medical aspects of LTC services. Many of the domains included in QOC instruments may relate to QOL; for instance, whether providers communicate with courtesy and respect.
3.1.5. The Determinants of Resident Satisfaction

It is not only important to measure the quality of LTC, but research should also focus on its determinants; improvements may then be made to address the factors that are most pertinent to quality. The determinants of resident satisfaction have most often been researched in terms of the socio-demographic and predispositional characteristics of residents (Jimmieson, Griffin 1998). The factors impacting quality of resident experiences are, however, hypothesized to include: organizational determinants, staff determinants and resident determinants. Organization factors include size, profit status and care model (e.g. institutional or resident-centered). Staff factors include professional development, staffing levels and the overall work-life experience. Resident factors include level of dependency, age and sex.

3.1.5.1. Organizational Determinants of Resident Satisfaction

There are three types of LTC home owners/operators in Ontario – nursing homes, charitable homes for the aged and municipal homes for the aged. Nursing homes may be operated on a for-profit or not-for-profit basis. A study by Berta et al. (Berta, Laporte & Valdmanis 2005) provides descriptive statistics of LTC facilities operating in Ontario between 1996 and 2002. Proprietary for-profit nursing homes dominated the Ontario LTC landscape. The facility ownership profile did not change over the period studied, however, the proportion of for-profit LTC beds increased. Research relating clinical measures of quality of care with ownership have proven ambiguous (Harrington et al. 2002, Lemke, Moos 1989, Zinn, Aaronson & Rosko 1993, Hillmer et al. 2005, McGregor et al. 2006, Comondore et al. 2009). It is not clear whether for-profit motivation leads to “corner cutting” in order to realize profits or whether for-profit facilities, which are often a part of large chains, are able to realize economies of scale that may allow them to maintain quality while turning a profit. Studies relating ownership and resident satisfaction have also produced conflicting results. Residents of not-for-profit facilities were significantly more satisfied with the environmental comfort and had more independence and a greater voice in decision making (Lemke, Moos 1989). Lucas et al. (Lucas et al. 2007), however, reported no significant relationship between overall resident satisfaction and ownership type. They did determine that non-chain affiliated facilities, a second determinant, were associated with significantly higher resident satisfaction. Chain affiliated facilities may be able to realize economies of scale, but these savings are not necessarily invested in capital for clinical, staffing or environmental improvements. In addition, chain facilities may have a higher propensity for a
one-size-fits-all institutional culture (Lucas et al. 2007). The above studies failed to distinguish between the impact of ownership and chain affiliation. By not doing so, it may not be possible to distinguish between the impact of for-profit motivations and chain economies of scale.

A third facility factor that is thought to affect quality is size. In 2002, the average number of beds in Ontario’s LTC facilities was 123 (Berta, Laporte & Valdmanis 2005). The average number of beds increased from 1996 to 2002, reportedly due to low subsidy levels and the increasing stringency of regulations that favoured larger facilities (Berta, Laporte & Valdmanis 2005). The disadvantages of smaller facilities – inability to meet costly standards including reporting on finances and facility upgrades, and an inability to meet new staffing requirements – have been observed in other industries and in LTC in other jurisdictions (Banaszak-Holl, Zinn & Mor 1996, Baum 1996). Winn and McCaffree (Winn, McCaffree 1976) found that larger facilities have more extensive treatment resources, an indicator of quality of care. Smaller facilities may be managed by a single administrator whose time is spent dealing with immediate operational or clinical problems (Berta, Laporte & Valdmanis 2005). As a result, strategic planning and the expansion of services may be neglected in smaller facilities. By contrast, Banaszak-Holl et al. (Banaszak-Holl et al. 2004) found that smaller LTC facilities had higher quality of care, measured by staff ratios, proportion of specialty services, restraint usage and frequency of health deficiencies. Facility size may also impact resident isolation and satisfaction. Weihl’s (Weihl 1981) study found that feelings of loneliness and a lack of socially rewarding relationships were associated with smaller institutions. Greenwald and Linn (Greenwald, Linn 1971 in Curry, Ratliff 1973) by contrast, suggested that patients experience lower satisfaction, reduced activity and decline in larger homes for the aged. Focusing on the social impacts of facility size, Curry (Curry, Ratliff 1973) supported the results of Greenwald and Linn. The number of friendships within the institution was negatively associated with the size of the facility. In another study, the relationship was non-significant (Kruzich, Clinton & Kelber 1992).

Facility-age may impact quality of care and resident satisfaction because newer facilities have more up-to-date amenities (Chou, Boldy & Lee 2003). This relationship, however, has not been supported by a number of studies (Chou, Boldy & Lee 2003, Greene, Monahan 1981, Levey, Ruchlin & Stotsky 1973). It is possible that facilities were undergoing renovations and redevelopment, as is the case in Ontario. In this case, facility-age may not have an impact on quality of care and resident satisfaction.
It is possible that discrepancies in the levels of resources of rural and urban centres could lead to differences in the quality of LTC in these geographic locations. According to Lucas et al. (Lucas et al. 2007), however, there has been little research done assessing the relationship between location and resident satisfaction in LTC. Bivariate associations showed significantly lower satisfaction scores among residents of urban LTC facilities compared to smaller cities, towns and isolated locations (Lucas et al. 2007). In Chou’s study on the determinants of resident satisfaction in LTC, the relationship between location and resident satisfaction was not significant after controlling for resident and other organizational variables (Chou, Boldy & Lee 2003).

Quality may also be impacted by home culture. The traditional institutional or medical model of LTC care often emphasizes safety, uniformity and medical issues (White-Chu et al. 2009). There is a chain of command with strict practices for all residents. By contrast, a new philosophy and practice of resident-centered LTC promotes resident choice and decentralizing decision making (White-Chu et al. 2009). Elderly residents of LTC care homes with institutional cultures experience feelings of homelessness (Carboni 1990 in White-Chu et al. 2009). By changing LTC culture, residents’ feelings of homelessness may be reduced. The features of resident-centered cultures include the following: resident-direction, a homelike atmosphere, close relationships, staff empowerment, collaborative decision making and quality improvement processes. A Commonwealth Fund study by Grant (Grant 2008) examined the culture change initiative at Golden Living, formerly Beverly Enterprises. Resident-centered care was shown to be associated with improved quality of life for residents. Two measures were used to determine resident quality of life: resident choice/autonomy and resident dignity. Grant’s study failed to describe the extent to which these measures were actually indicators of quality of life. Furthermore, resident-centered care was implemented at LTC facilities that were previously identified as high performing – those with greater compliance with state and federal regulatory standards and stable and competent leadership – because the pilot phase of Grant’s study found that the consequences of culture change were not transferable to lesser performing facilities.

3.1.5.2. Staff Determinants of Resident Satisfaction

LTC is a labour intensive service industry requiring many different types of service providers – from direct care staff such as nurses, personal support workers (PSWs), therapists and doctors to
indirect care staff including those working in housekeeping and meal preparation – all of which impact residents. Some researchers are of the opinion that staff are themselves the service (Zeithaml, Bitner 2000 in Wilson, Frimpong 2004) because of the high levels of direct client contact in LTC. Staff-related factors that improve or increase these interactions may, therefore, be associated with the quality of the LTC experience and resident satisfaction. And unlike most organization and resident level determinants of LTC quality and resident satisfaction, some of the staffing determinants are modifiable because they may be under the purview of LTC home administrators.

Higher staffing levels are related to better resident outcomes. Linn, Gurel and Linn (Linn, Gurel & Linn 1977) found that nursing home residents in homes with higher staffing levels had better clinical outcomes and better kept medical records. Chou et al. (Chou, Boldy & Lee 2003) used care hours adjusted for resident dependency as an indicator of the facility’s staffing level, staff workload and time available with residents. They determined that this measure had minimal relation to overall satisfaction levels but did have a direct positive impact on one resident satisfaction component – satisfaction with the home. Other studies have found positive relationships between staffing levels and resident satisfaction with certain aspects of home life including ratings of staff treatment (Nyman 1988, Sainfort, Ramsay & Monato 1995). Staff continuity is also associated with greater resident satisfaction (Kruzich, Clinton & Kelber 1992). Staff turnover and retention may therefore also be related to resident satisfaction.

Factors impacting professional/technical competencies, including experience and ongoing professional development may be related to better resident outcomes. According to Chou et al. (Chou, Boldy & Lee 2003), however, professional development activities were found to have an insignificant and indirect impact on resident satisfaction via improved job satisfaction. The impact of professional development activities on job satisfaction is thought to be dependent on the day-to-day applicability of the education (Marriott, Sexton & Staley 1994). It is possible that with improved ongoing education, the indirect impact of ongoing professional development on resident outcomes could improve. In another health care setting, nurse’s mean age, an indicator of experience, was found to be associated with higher client satisfaction (Weisman, Nathanson 1985). In LTC, older and more experienced staff are likely to relate better with older clientele. This relationship was confirmed by Kruzich et al. (Kruzich, Clinton & Kelber 1992).
Greater staff job satisfaction may also lead to improved resident outcomes. Because LTC services are highlighted by the interpersonal relationships between staff and residents, staff with more appropriate attitudes and behaviours may lead to better resident outcomes. For a more detailed description of the theoretical model and current evidence of this relationship see Chapter 4.

3.1.5.3. Resident Determinants of Resident Satisfaction

The literature on the determinants of resident satisfaction focuses predominantly on resident characteristics, mainly socio-demographic and predispositional factors including expectations, health status and psychological attitudes (Jimmieson, Griffin 1998).

Predispositional factors include expectations, health status and psychological attitudes. Resident satisfaction is a person’s positive evaluation of the LTC services (Sikorska-Simmons 2006, Pascoe 1983, Jimmieson, Griffin 1998) and is a measure of how well their expectations of these services were met (Oliver 1980). People with lower expectations may be more satisfied because these will be easier to meet and vice versa. Because resident satisfaction is a subjective evaluation, it is influenced by the psychological well-being of the resident (Owens, Batchelor 1996). Psychological well-being may hinder residents’ cognitive abilities to evaluate services, as well as their affect during their appraisals of these services (Sikorska-Simmons 2006). Dissatisfaction among depressed or cognitively impaired residents does not, therefore, necessarily indicate poor quality service. By contrast, self-reported health may directly impact residents’ view of the services – more dependent residents may use different criteria to evaluate services and because they are more dependent, dissatisfaction may indicate that they are not receiving proper services (Sikorska-Simmons 2006).

Lucas et al. (Lucas et al. 2007) found that residents with the following characteristics had higher levels of satisfaction: white (versus non-white), female (versus male), older, good/very good/excellent self reported health (versus poor or fair), functionally independent, shorter length of stay and participation in the decision to relocate. Kruzich et al. (Kruzich, Clinton & Kelber 1992) found the same associations for all of the above factors except for age and race. In addition, they found that the number of years of education was positively related to satisfaction. With each of these characteristics, however, there are studies that fail to show a relationship with client satisfaction with health care services (Jimmieson, Griffin 1998).
3.2. Quality of the Staff Experience

According to Eaton (Eaton 2000) there are two predominant themes in the LTC literature, the quality of resident experiences and those of staff. And these are most often treated as separate goals by academics and practitioners (Eaton 2000). The quality of the resident experience, as measured using resident satisfaction surveys, was considered above in section 3.1. The quality of the staff experience, measured using job satisfaction tools, is the focus of this section. This section includes a discussion of job satisfaction as a measure of the quality of the staff experience and of the determinants of job satisfaction. In Chapter 4, the link between these themes, which is the focus of this thesis, is conceptualized and the literature is reviewed.

Workers in LTC homes include direct (physicians, registered nurses, registered practical nurses, allied health professionals and PSWs) and indirect (dietary, laundry, cleaning and clerical) care staff, 90% of whom are women (Baines 2007). Training of direct care staff varies substantially, from 4-year university degrees for registered nurses to in-service training of some PSWs. Unregulated PSWs provide the majority of resident care (Berta et al. 2006). The status and credibility of this occupation, however, continues to be undermined by recommendations, by the Health Professions Regulatory Advisory Council in 2006, that PSWs should not be a regulated profession under the Regulated Health Professions Act and that a registry of PSWs should not be created (Baines 2007).

Health human resources have been identified as a top priority for research and action in Canada (Koehoorn et al. 2002). LTC is a labour-intensive service industry that experiences very high levels of staff turnover compared to other types of industries (Banaszak-Holl, Hines 1996, Castle, Engberg 2005). Direct care workers are faced with constant human contact, which may lead to stress from reduced control over resident outcomes, greater emotional demands and socially distressing situations (Banaszak-Holl, Zinn & Mor 1996), with few material rewards (low wages) (Miles-Tapping 1992). In LTC, the demands are intensified by the inability of some residents to communicate with staff and the limited autonomy of PSWs (Banaszak-Holl, Zinn & Mor 1996).

Turnover may be costly to the organization. Solomon (Solomon 1988) estimated separation, replacement and training costs at 1.5 to 2 times the annual salary of each person who quits, depending on their job. Other researchers have estimated that the direct cost to employers to
recruit, screen and train LTC staff at $2,500 for each staff member that departs the organization (Bishop et al. 2008). Turnover is also costly with respect to the quality of care provided to residents. Service industry employees play a critical role of in the delivery of quality services; Zeithaml and Bitner (Zeithaml, Bitner 2000 in Wilson, Frimpong 2004) asserted that due to the interactive nature of service jobs, employees are the “service”, “the organization” and “the marketers”. Departing staff take with them the knowledge of the needs and preferences of the residents they cared for (Bishop et al. 2008). In addition to being associated with lower turnover, job satisfaction has been associated with lower absenteeism and tardiness and better customer service, performance and productivity (Arnold, Feldman 1982, Anderson, Aird & Haslam 1991, Dahlke 1996, de Jong et al. 1999, Gifford, Zammuto & Goodman 2002, Castle, Degenholtz & Rosen 2006).

3.2.1. Measures of the Quality of the Staff Experience

Turnover is the result of a number of factors and chief among them for direct care workers is job dissatisfaction (Ejaz et al. 2008). Job satisfaction is a measure of organizational effectiveness and the quality of the staff experience (Scott, Shortell 1983 in Weisman, Nathanson 1985). Job satisfaction is an affective orientation that staff has towards their work experience. Locke (Locke 1976) defined job satisfaction as “a pleasurable or positive emotional state resulting from the appraisal of ones job or job experiences.” It depends not only on the nature of the job but also whether it meets their expectations (Lu, While & Louise Barriball 2005).

Similar to resident satisfaction, job satisfaction may be considered as an overall measure of the employee’s feelings about multiple domains of their work. To determine which domains of work are components of job satisfaction, van Saane et al. performed a review of meta-analyses and literature reviews, and determined that work content, autonomy, growth/development, financial rewards, promotion, supervision, communication, co-workers, meaningfulness, workload and work demands are all domains of job satisfaction (van Saane et al. 2003).

3.2.2. Determinants of Job Satisfaction

Job satisfaction is a multidimensional process and may impacted by the work environment (contextual and structural characteristics of the facility) and staff demographic characteristics. Many of these determinants of LTC staff job satisfaction are also determinants of resident quality
of care. The determinants of job satisfaction may be divided into organization level characteristics and staff level characteristics. These are described in the following two subsections.

3.2.2.1. Organizational Determinants of Job Satisfaction

The organizational determinants of job satisfaction include contextual elements of the organization such as ownership, size, location, staffing levels and home culture, all of which are also thought to be determinants of resident satisfaction. Anderson et al. (Anderson et al. 1997) found that greater demands are placed on staff in for-profit facilities due to staffing and working conditions in these facilities. Staffing levels impact work load and have been found to be relate to ratings of job satisfaction (Morgan et al. 2002). Staff working in rural LTC homes may face increased occupational stress because facilities tend to be smaller, have fewer specialized personnel, resources and continuing education programs, and less mobility and other employment opportunities (Morgan et al. 2002). In a study by Coward et al. (Coward et al. 1995), job satisfaction did not differ between urban and rural LTC facilities. Because all of the small facilities in this study were in rural locations it was not possible to isolate the independent effects of size and location on job satisfaction.

Additional aspects of the work environment, for instance employee empowerment, group cohesion and leadership, also impact job satisfaction. These organizational supports are referred to as the components of internal service quality in the Management literature. Studies show that homes that promote staff autonomy and authority rather than top-down decision making have more satisfied staff (Weisman, Nathanson 1985, Lucas 1991, Kuo, Yin & Li 2008, Tourangeau et al. 2010). Respecting staff individuality and empowering them to make decisions are characteristics of homes adopting a person-centered workplace (Tellis-Nayak 2007). These characteristics are also the foundation of resident centered-care (Tellis-Nayak 2007). It has been shown that adopting a resident-centered model of care, instead of the traditional or medical model, improved staffresident interactions and promoted positive staff outcomes, including lower staff turnover and fewer feelings of frustration (White-Chu et al. 2009, Koren 2010).

In addition, low levels of conflict between coworkers and management and high levels of support from supervisors regarding family, financial and health concerns are viewed as factors promoting job satisfaction (Weisman, Nathanson 1985, Noelker et al. 2006). A recent study
involving Ontario LTC homes, however, found that leadership practices were not significantly related to nursing and other staff job satisfaction (Tourangeau et al. 2010). A larger study of organizational supports in Ontario LTC homes, found that having a culture oriented to quality improvement, communication and supervisory support were the organizational supports that were the most highly related to job satisfaction (Wodchis 2010).

3.2.3. Staff Determinants of Job Satisfaction

Various sources of stress affect job satisfaction. Background characteristics, including sex, age, race and emotional well-being, have an impact on levels of stress (Coward et al. 1995, Aneshensel et al. 1995). Additional personal stressors, for instance financial insecurity and family worries, may be carried over into the workplace thereby impacting job satisfaction (Stone, Weiner 2001). Job-related stressors may also impact job satisfaction. In addition to the above organizational variables, job-related stressors include low-pay and poor benefits, inadequate training, and a lack of job stability (Ejaz et al. 2008). The nature of the job may also be stressful due to the demand for emotional labour (the display of appropriate attitudes and emotions) and the significance of interpersonal relationships with frail and cognitively impaired individuals (Rakovski, Price-Glynn 2010).
Chapter 4
Staff-Resident Satisfaction Linkages

The quality of LTC is often studied from one of two perspectives – from that of consumers or that of staff (Eaton 2000). Even though these are often considered separate entities, as introduced in section 3.1.5.2 there is a proposed link between the staff experience, measured with job satisfaction tools, and that of residents in LTC, measured with resident satisfaction instruments. This chapter: 1) describes the theoretical basis for the staff-resident satisfaction linkage; 2) examines the current evidence for this relationship in the health care industry; and 3) provides a conceptual model for these linkages. The final section highlights the three objectives of this thesis.

4.1. Staff Satisfaction – Service Interaction – Consumer Satisfaction

Service industries, including health care, are distinguished by their high levels of staff interactions directly with clients. According to Cox’s interaction model of client health behaviour, there are four elements to client-professional interactions (Cox 1982). These are provision of information, affective support, professional/technical competencies, and client expectations for decisional control. Cox’s model proposes that it is these elements, in combination with the singularity of the client, that impact health outcomes including satisfaction. The relative importance of each of these elements during client-professional interactions depends on the client, staff and organization. In LTC, where patients are often cognitively impaired and many of the services provided by direct care staff are to help residents with the activities of daily living, affective support becomes a more significant component of the client-professional interaction. The inclusion of affective support highlights the importance of not only providing clinical information/services during client-professional interactions but also attending to the client’s emotional needs. This reflects the importance not only of what is said and done during interactions but also how information and services are delivered. For instance, professionals who practice emotional labour – the display of appropriate attitudes and emotions in order to induce positive feelings in others – may increase the quality of service encounters, specifically the affective support element of the interaction.

Emotional labour has also been linked with job satisfaction. The social psychology literature reveals that prosocial (e.g. empathy) and helpful behaviours are promoted by positive mood states (Berkowitz, Connor 1966, Aderman 1972, Levin, Isen 1975). Job satisfaction has also been found to relate positively to organizational citizenship behaviours (employee behaviours that are not formally required) (Organ 1988, Smith, Organ & Near 1983). This led George (George 1991) to theorize that job satisfaction may induce prosocial and helpful behaviours through increased happiness at work, which may then lead to improved client satisfaction. The relationship between employee job satisfaction and client satisfaction has been demonstrated in a number of industries, including health care (Atkins, Marshall & Javalgi 1996). In health care, satisfied providers may interact more effectively with the patient leading to greater patient-satisfaction. Service employees play a critical role in the delivery of services and their satisfaction is hypothesized to relate to customer satisfaction subsequent to the improved quality of their interactions.

The theory that satisfied professionals deliver high quality services has been coined the job satisfaction-service performance/quality thesis (Wilson, Frimpong 2004). The model suggests that job satisfaction leads to service orientated behaviours, which in turn result in better outcomes such as client satisfaction subsequent to professional-client interactions. Furthermore, the model proposes that the relationship between service professional job satisfaction and client satisfaction is a cyclical or mutual linkage whereby staff satisfaction is reinforced by positive outcomes. In this model, job satisfaction is categorized into two distinct dimensions – content and context. Content elements are intrinsic to the work (challenge, interest in job, achievement, recognition). Context elements are extrinsic to the work (organizational policies, interpersonal relations with co-workers, working conditions, salary, security). Wilson and Frimpong (Wilson, Frimpong 2004) argue that context and content elements will impact service-orientated
behaviours and therefore, consumer satisfaction differently. Because the context elements of job satisfaction are removed from the object of service performance, these elements will be less predictive of service-orientated behaviours. By contrast, content factors are better predictors of service-orientated attitudes because they are directly related to the object of service-performance. The job satisfaction-service performance/quality thesis considers the impact of the professional’s personal factors and job-related factors, what Wilson and Frimpong (Wilson, Frimpong 2004) call micro moderators, and elements of the external environment including societal conditions, called macro moderators. These directly and indirectly impact employee work behaviour, and therefore client-professional interactions, respectively.

The job satisfaction-service performance/quality thesis did not consider the direct and indirect impacts of client characteristics on satisfaction, as were considered in Cox’s model. These characteristics include demographic characteristics (race, age, sex, education), influence of the client’s social group, previous health care experience, environmental resources (personal financial resources and availability of health care facilities) and psychological attributes, such as cognitive ability (client’s perceptions of reality) and affect (Cox 1982). These elements of client singularity, as the resident characteristics were coined by Cox, experience a feedback relationship with the client-professional relationship and are therefore called dynamic variables (Cox 1982). Jimmieson (Jimmieson, Griffin 1998) considers health status as a final element of client singularity.

4.2. Evidence of Staff-Resident Satisfaction Linkages

Employee-customer satisfaction linkages have been discovered in bank, insurance, retail and health care settings (Atkins, Marshall & Javalgi 1996). The following section reviews the evidence for this linkage in institutional health care settings. The limited evidence of this linkage in LTC is presented first, followed by some of the evidence from the inpatient context.

The three studies that are most pertinent to this thesis are Chou et al. (Chou, Boldy & Lee 2003), Liu (Liu 2007) and Metlen et al. (Metlen, Eveleth & Bailey 2005). Chou et al. (Chou, Boldy & Lee 2003) studied the determinants of resident satisfaction in Residential Aged Care in Australia. Using a cross-sectional design, data from the Resident Satisfaction Questionnaire (RSQ) and the Measure of Job Satisfaction (MJS) instruments were collected from 70 facilities including 36 hostels and 26 nursing homes. The RSQ included room, home, social interaction, meals service,
staff care and resident involvement domains. The MJS measured personal satisfaction, satisfaction with workload, team spirit, training and professional support. A composite score was determined to measure overall job satisfaction. Using structural equation modeling, Chou et al. (Chou, Boldy & Lee 2003) found positive coefficients for the relationship between overall staff satisfaction and resident satisfaction with meals, the home, their room and staff. Chou et al. concluded that when staff perceived negative outcomes at work, one way to maintain equity was to “reduce inputs through withdrawal behaviour such as absenteeism and poor customer service” leading to lower resident satisfaction (Chou, Boldy & Lee 2003).

This conclusion, however, may be flawed. Staff satisfaction had the greatest impact on the resident satisfaction domains that were not related to the interactions between resident and staff. Staff satisfaction had the strongest direct relationship with the Home domain, which asked residents to rate the home’s design, accessibility, lounge area, dinning room and outside areas. It is likely that when residents rate the home environment highly, that it is also a satisfactory work environment for staff. Thus, this result was not indicative of a causal relationship. The study was also limited by the measures selected. This study only considered an overall measure of job satisfaction. Failing to consider the impact of multiple domains of staff job satisfaction on resident satisfaction, limited the actionability of this study. Furthermore, the MJS, like most job satisfaction instruments, was not designed for measurement in LTC. Work factors in LTC facilities may be different than in other health and non-health related workplaces because of the predominance of patients with chronic disease and the home-like nature of LTC facilities. Evidence should, therefore, have been presented to validate this job satisfaction instrument within this setting. The study was also limited by sampling bias. The authors did not formally assess residents’ mental state, opting for a review of medical records, the advice of staff and researcher’s personal judgment. This may have led to the exclusion of some cognitively able residents. And finally, this study was limited by its geographical base. Cultural, economic and organizational differences likely exist between Ontario’s and Australia’s LTC industries. In addition, consumer expectations of health care are known to vary by geography (Duffy, Duffy & Kilbourne 1997).

Liu (Liu 2007) studied the influence of 5 dimensions of certified nursing assistants’ (CNA) job satisfaction on the satisfaction of nursing home residents. This small study involved only 17 nursing homes with 244 CNAs and 392 residents and families. Liu used a cross-sectional design
and developed two instruments. The CNA questionnaire addressed five domains of satisfaction including work competence and leadership, work performance and rewards, work environment and job content, feedback and interpersonal relations, and recreation and job benefits. The resident satisfaction questionnaire consisted of 10 items and assessed two aspects of their satisfaction: perceptions of CNA attitudes and willingness to provide services, and perceptions of the content, duration and skill of services received. Spearman correlation analysis was used to assess the relationship between resident and staff satisfaction. Resident satisfaction was found to increase consistently with each of the five domains of job satisfaction, but only the relationship between the domain of staff satisfaction with feedback from residents and families and interpersonal relationships with coworkers, and the domain of resident satisfaction with the content and duration of services and the skill of the providers was statistically significant. This study was limited by its geographical base, the limited number of items included in the resident survey and the inclusion of family members as proxies and most importantly, the failure to control for confounders.

Similar to Chou et al., Metlen et al. (Metlen, Eveleth & Bailey 2005) used structural equation modeling to assess the relationship between resident and staff satisfaction in skilled nursing facilities. This study found that two of the three domains of employee satisfaction, satisfaction with their autonomy and work relations, were significantly directly related to consumer satisfaction. The third domain of employee satisfaction, satisfaction with the availability of resources, was not significantly directly related to consumer satisfaction. The authors surveyed 630 nursing assistants from 45 facilities. In addition to measuring a variety of internal support (staff supports) domains and their levels of satisfaction with autonomy, work relations and resource availability, staff were asked to rate their own effectiveness and their residents’ satisfaction. This is the major limitation of this study. Staff are not adequate proxies of resident satisfaction (Berlowitz et al. 1995 in Ejaz, Castle 2007).

Sikorska-Simmons (Sikorska-Simmons 2006) used multivariate analysis to link resident satisfaction to staff perceptions of their work environment in assisted living. Residents in facilities with higher aggregate staff satisfaction and more positive views of organizational culture experienced greater resident satisfaction. This study did not highlight the causal pathways by which staff job satisfaction and organizational culture impact resident satisfaction. The results of this study may represent “correlates” rather than determinants or the relationship could be
spurious. The study also suffers from sampling bias because it only included residents who were considered cognitively intact and functionally independent and may not be representative of all assisted living residents. This population is unlikely to be indicative of that of facility-based LTC where residents are more impaired. While 43 facilities were assessed, there was only an average of 8 resident responses from each facility leading to low reliability of the sample mean resident satisfaction. Finally, the study did not include all of the possible confounders, most notably resident psychological well-being and functional ability.

In an exploratory study by Tzeng and Ketefian (Tzeng, Ketefian 2002), some components of nurses’ job satisfaction and happiness were found to relate with some aspects of inpatient satisfaction with nursing care. Nurses’ general job satisfaction and general happiness were most strongly related to patient satisfaction with nurses’ ability to manage pain and discomfort. Nurses’ general happiness was also correlated with patient satisfaction with explanation of care, art of care, and arrangement for home care and follow-up. Specific components of nurse job satisfaction were not generally associated with patient satisfaction. This study used a cross-sectional design and had a very small sample size with only 34 valid patient responses. In addition, it did not use multivariate analyses, focusing solely on Pearson correlation.

A study by Atkins et al. (Atkins, Marshall & Javalgi 1996) examined the relationship between nurse job satisfaction with patient satisfaction in a tertiary care hospital using correlational analysis. Strong positive relationships were found between overall job satisfaction and a patient’s recommending the hospital and repeat purchase behaviour. This study, however, took place in a single institution and did not control for confounders. In addition, this study did not shed any light on the relationships between specific domains of patient and nurse satisfaction.

4.3. Conceptual Model

A conceptual model was created based on the common determinants of resident and staff satisfaction and the theoretical underpinnings described above. The conceptual model is displayed in Figure 1. The elements of this model that are in bold are those that will be measured in this thesis. It shows the association between direct care staff job satisfaction and resident satisfaction via the elements of direct care staff-resident interactions in LTC in Ontario. The conceptual model also includes possible facility level, staff level and resident level confounders.
This model is based on both Cox’s interaction model of client health behaviour and the job satisfaction-service performance/quality thesis.

Multiple domains of staff job satisfaction are considered in this model, including both content and context elements of job satisfaction. The content factors included in the conceptual model are: satisfaction with work content (representing the complexity and challenges of the work), work demands (representing resources and demands of the job) and quality of care (representing the care given to residents and the impact they have on residents’ lives). The following work context domains are included in the conceptual model: workload (representing time pressures/schedule), work skills (representing preparation for the position), co-workers (representing relationships with other workers in the facility) and rewards (representing financial benefits and advancement possibilities). Staff attitudes and behaviours and the elements of the resident-direct care staff interactions are not measured directly in this thesis. As a result, the mechanism by which job satisfaction impacts resident satisfaction may not be confirmed.

Similarly multiple domains of resident satisfaction, along with an overall measure of resident satisfaction, are considered in the conceptual model. These include satisfaction with staff, satisfaction with relationships and satisfaction with dignity. Each of these domains consists of items pertaining to resident’s satisfaction with their interactions with staff.

The model includes multiple confounding variables that must be controlled for in order to strengthen the evidence for the relationship between staff job satisfaction and resident satisfaction. These variables are described in sections 3.1.5 and 3.2.2. Contextual (ownership, chain affiliation, size, age, location) and cultural elements of LTC organizations impact both staff job satisfaction and resident satisfaction and must be adjusted for.

Staff background characteristics, personal stressors and job-related factors, including staffing levels/retention/turnover, work experience and training, are related directly to staff satisfaction. They are also directly related to the quality of the direct care staff-resident interaction. These must be controlled for in the analysis.

The conceptual model includes three of Cox’s (Cox 1982) elements of resident singularity (demographic characteristics, previous health care experience and psychological attributes). The conceptual model also includes health status, as was recommended by Jimmieson (Jimmieson,
Griffin 1998). These are all antecedents of the expectation construct (Zeithaml, Berry & Parasuraman 1993) and, therefore, impact appraisals of satisfaction. These elements may also affect the staff-resident interactions, thereby impacting resident satisfaction indirectly through the quality of these interactions, and confounding the staff-resident satisfaction linkage. Cox (Cox 1982) considered two additional background elements of client singularity, social influence and environmental resources, which are not a part of the conceptual model in the context of LTC in Ontario. Social influence will not be measured but because the LTC facility is the milieu of most of the resident’s living and socializing, social influence is not likely to deviate significantly between residents. Because LTC is funded and regulated by the MOHLTC, environmental resources (e.g. personal finances) are not considered a major source of confounding in Ontario’s LTC context.
Elements of Resident-Direct Care Staff Interactions

- Affective Support
- Health Information
- Decisional Control
- Professional/technical competencies

Elements of LTC Organization

- Contextual Variables
- Culture/Resident Centeredness

Direct Care Staff Job Satisfaction

- Overall Job Satisfaction
  - Content Elements of Job Satisfaction
    - Work Demands
    - Quality of Care
  - Context Elements of Job Satisfaction
    - Workload
    - Work skills
    - Co-workers
    - Rewards

Elements of Staff Singularity

- Staff Background Characteristics
- Staff Personal Stressors
- Job-Related Stressors

Elements of Resident Singularity

- Demographic Characteristics
- Health Status
- Previous Health Care Experience
- Psychological Attributes

Resident Satisfaction

- Overall Satisfaction
- Staff
- Relationships
- Dignity

Staff Attitude and Behaviour
4.4. Study Aims

The purpose of this thesis is to use the above conceptual model to determine whether resident satisfaction is associated with direct care staff job satisfaction in a sample of Ontario’s LTC homes.

In comparison to the extent of research conducted on the determinants of patient satisfaction in acute care settings, there is a paucity of research on the determinants of resident satisfaction in LTC (Chou, Boldy & Lee 2003). Despite its impact in other service industries (Atkins, Marshall & Javalgi 1996), very few studies of the determinants of resident satisfaction in LTC have highlighted the importance of staff satisfaction.

Those studies that have examined this determinant of resident satisfaction have limitations. One of the largest gaps in Chou et al.’s study was that the strongest associations, which were found between overall staff satisfaction and resident satisfaction with their physical environment and with food, had no theoretical basis for a causal relationship. Furthermore, despite being the first study to consider the simultaneous impact resident, staff and facility characteristics on multiple domains of resident satisfaction, Chou et al.’s (Chou, Boldy & Lee 2003) study did not consider specific domains of staff job satisfaction. Results from studies using overall measures of job satisfaction are less actionable. It is not clear which specific elements of job satisfaction, if improved could lead to better resident satisfaction.

There is a second disadvantage to overall measures of job satisfaction. Overall measures of job satisfaction include staff perceptions of a variety of elements of work content but also include contextual elements (e.g. financial rewards), which are not directly related to the object of service performance. Overall measures of job satisfaction may, therefore, be less predictive of resident satisfaction than measures of staff satisfaction with content elements. Studies that only include overall measures may fail to see important relationships. Liu’s (Liu 2007) study included multiple domains of job satisfaction. These were not divided based on content and contextual elements, but rather included multiple items from each; thereby defeating one of the advantages
of including multiple domains of job satisfaction. In addition, Liu’s study did not adjust for confounding variables.

Metlen et al.’s study was the final paper on staff-resident satisfaction linkages in LTC that was identified in the literature review. This study analyzed the relationship between resident satisfaction and multiple domains of job satisfaction, but used staff ratings of consumer satisfaction as a proxy for resident satisfaction. The results are suspect because previous researchers found that staff did not provide valid proxy ratings for resident satisfaction (Berlowitz et al. 1995 in Ejaz, Castle 2007).

All of the above studies were conducted outside of Ontario. Additional research on the relationship between consumer and staff satisfaction has been conducted in other service industries. It is important to examine the determinants of resident satisfaction in different industries and jurisdictions because demographic, cultural, economic and organizational differences likely exist. Furthermore, there is evidence both in the LTC environment and in other industries that expectations and perceptions of services differ by region (Gallup 1991 in Duffy, Duffy & Kilbourne 1997). Because satisfaction is determined, at least partially, by the gap between expectations and perceptions, the relationship between staff job satisfaction and resident satisfaction may not be the same in all jurisdictions.

It was therefore the objective of this thesis to:

1. Determine whether the positive overall staff-resident satisfaction linkage described in the scientific literature was present in a sample of Ontario LTC homes, measured using overall direct care staff job satisfaction aggregated to the LTC home-level, and individual-level overall resident satisfaction scores.

2. Determine whether the staff-resident satisfaction linkage was consistent for the domain of resident satisfaction with staff (which is a more direct measure of the quality of staff-resident interactions than is overall resident satisfaction).

3. Determine whether the staff-resident satisfaction linkage was consistent for multiple content and context elements of direct care staff job satisfaction.
Chapter 5
Methodology

The following chapter describes the methodology used to achieve the three aims described in section 4.4. This chapter starts by describing the research design and participants in section 5.1, followed by the instruments and measures used to test the three aims in section 5.2. Section 5.2.1 describes the two outcome variables (overall resident satisfaction and resident satisfaction with staff). The main exposure variables, the four job satisfaction domains (overall job satisfaction, satisfaction with work content, satisfaction with workload and satisfaction with quality of care), are described in section 5.2.2. This is followed by a description of the confounding variables and the instruments used to measure these variables. The final section of this chapter describes the statistical analyses (descriptive, bivariate and multivariate) used to achieve the three aims of this thesis.

5.1. Research Design and Participants

A cross-sectional survey design was used to collect data from administrators and directors of care, staff and residents in LTC homes across Ontario between July 2008 and June 2009. A sampling frame is presented in Figure 2. Survey participants included three different LTC home populations – 1) administrators and directors of care, 2) staff and 3) residents. Data from the administrators and directors of care, and staff surveys were originally collected as part of a study assessing the organization and staff determinants of quality in Ontario LTC homes. The resident satisfaction data was originally collected for a separate study commissioned by the MOHLTC to recommend a resident satisfaction tool.

5.1.1. Administrators and Directors of Care

Online surveys were sent to all LTC home Administrators and Directors of Care in Ontario in July 2008. 353 homes responded representing all of Ontario’s Local Health Integration Networks (LHINs) and each ownership type. The online administrator survey collected contextual information on ownership, chain affiliation, size, age, location and staffing level. Other
information collected by this survey was not used in this thesis. The administrator survey is attached in Appendix A.

As part of the administrator survey, respondents were asked if they would be interested in participating in a subsequent staff survey. From 218 homes that agreed, a proportional (to ownership) random sample of 100 was selected, stratified by ownership type. These homes were contacted to request participation in the staff survey. Twenty homes declined, primarily citing recent or current competing staff surveys for research and accreditation as reasons for not participating.

5.1.2. Direct Care Staff

Staff surveys were distributed to 80 LTC facilities. Four homes did not distribute the surveys as planned and there were fewer than five responses from four homes, which were subsequently removed from the study, leaving a representative sample, by size, geography and ownership, of 72 homes considered participants. All full time and part-time staff in all employment categories were eligible to receive a survey. A total of 2,513 surveys were returned. Despite distributing surveys to both direct and indirect care staff, this thesis was only concerned with responses from direct care staff (registered nurses, registered practical nurses and PSWs). There were 1,516 staff surveys completed by direct care staff in the sample of 72 LTC homes.

The staff survey was composed of previously developed and validated measures of components of the LTC home staff experience. The survey included sections on ‘home culture’, ‘supervisory support’, ‘leadership practices’, ‘communication’, ‘quality improvement’, ‘resident care’, ‘involvement in planning and practice’, ‘intent to change jobs’, ‘continuity of care’, ‘emotional health’, ‘work environment’ and ‘demographic information’. The staff survey is attached in Appendix B.

5.1.3. Residents

Resident surveys were completed via interviews by research staff in 30 LTC homes. Resident interviews were conducted in a convenience sample of homes within reasonable proximity (within 2 hours driving distance to Ottawa or Toronto) to the core study team or an airport. To identify and exclude residents with severe cognitive impairment, homes had to have adopted the Minimum Data Set Resident Assessment Instrument. To ensure adequate target resident samples,
target homes had to have at least 80 English-speaking residents. Researchers attempted to conduct these interviews in homes that had participated in the above staff survey. 40 target homes met these eligibility criteria, from which 30 were selected for the survey. Of the 30 homes selected, 6 refused to participate and were replaced by randomly selected homes from the remaining 10 target homes.

There were 1357 residents interviews completed in the 30 homes, with an average of 45.2 respondents per home (range 25 to 62). LTC home staff pre-screened residents for inclusion in the study. Residents were excluded if they had severe cognitive impairment (CPS 5 and 6) measured using the Minimum Data Set Cognitive Performance Score. Residents had to be English speaking and must have agreed to be approached by study interviewers to explain the study and obtain informed consent. Home Administrators compiled a list of eligible residents, which was used to randomly select a target of 60 residents per home. Random substitution was used to replace any refusals.

Two different resident surveys were being compared in the original study commissioned by the MOHLTC – the Smaller World Survey of Resident Satisfaction (Teare, Rashkovan 2003) and the Nursing Home Consumer Assessment of Health Providers and Systems (NHCAHPS) (Sangl et al. 2007). Approximately half of the residents in each home completed the Smaller-World Survey of Resident Satisfaction (n = 676) and the other half completed the NHCAHPS (n = 681). Each survey was supplemented with a core set of common items taken from other tools. One of the two resident satisfaction measures used in this study was composed from the core set of common items. The other measure of resident satisfaction was composed of items from the NHCAHPS. The NHCAHPS was selected over the Smaller-World Survey of Resident Satisfaction because it has been more widely used internationally and Wodchis’ report on resident satisfaction for the MOHLTC identified the NHCAHPS as having greater discriminative validity (Wodchis, Ceccato & Murray 2009). The NHCAHPS with core items questionnaire is attached in Appendix C.
Figure 2. Sampling Frame

353 homes completed the administrator survey

Is your facility interested in participating in a staff survey?

135 No

218 Yes

100 homes were randomly selected stratified by ownership type

Staff surveys were distributed to 80 homes

20 declined to participate

72 homes considered participants – 2513 staff surveys were returned

8 homes removed due to incorrect or inadequate survey completion

40 target homes were identified for the resident survey including 5 homes that were not part of the staff survey

30 randomly selected, 6 refused and were replaced by random selection from the remaining 10 homes

676 respondents completed the Smaller-World Survey of Resident Satisfaction

681 respondents completed NHCAHPS
Resident surveys were conducted in five homes that did not participate in the staff survey and in one home that did not have sufficient staff participation. As a result, the sample of resident, staff and administrative data used for this thesis was limited to 24 homes. 1073 staff surveys were completed in the 24 homes; nurses and PSWs, who are the focus of this thesis, completed 637 of these surveys. 1055 resident interviews were conducted in these 24 LTC homes.

5.2. Instruments and Measures

The instruments and measures used are discussed in the following sections. The measures are displayed in Table 1.

Table 1. Variables Used in the Multivariate Analysis

<table>
<thead>
<tr>
<th>Outcome Variables</th>
<th>Exposure Variables</th>
<th>Other Independent Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Resident Satisfaction</td>
<td>Overall Staff Job Satisfaction</td>
<td><strong>Organization-Level:</strong></td>
</tr>
<tr>
<td>Resident Satisfaction with Staff</td>
<td>Staff Satisfaction with Content</td>
<td>Ownership</td>
</tr>
<tr>
<td></td>
<td>Staff Satisfaction with Workload</td>
<td>Chain Affiliation</td>
</tr>
<tr>
<td></td>
<td>Staff Satisfaction with Quality of Care</td>
<td>Size</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Location</td>
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<td></td>
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<td>Bed Class</td>
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<td></td>
<td></td>
<td>Culture</td>
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<td></td>
<td>Resident-centered Care</td>
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<tr>
<td></td>
<td></td>
<td>Staffing Level</td>
</tr>
<tr>
<td><strong>Staff-Level:</strong></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Resident-Level:</strong></td>
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</tr>
</tbody>
</table>

5.2.1. Outcome Variable – Resident Satisfaction

5.2.1.1. Overall Resident Satisfaction

The outcome variable of interest to accomplish the first and third aims of this thesis was overall resident satisfaction. This measure was composed of four items collected from 909 residents in...
24 LTC homes. Respondents were asked “would you recommend this long-term care home to others”, “overall, how would you rate the quality of care and services in this home”, “are you ever unhappy with the care you get at this home” and “do you get the care you need at this home”. These items were common to numerous other validated satisfaction instruments that were evaluated for the MOHLTC by Wodchis et al. (Wodchis, Ceccato & Murray 2009).

Interval scales were used for each item. Residents rated their satisfaction during the interviews using visual representations of these scales (see Appendix C). Because visual representations were used during interviews, it was assumed that the intervals between each ordered category were equidistant. All scales were then scaled from 0 to 100 and were assumed to be continuous.

The overall satisfaction of each respondent was calculated by taking the mean of these items. Respondents must have answered a minimum of 60% of items to be included (this cutoff was applied to all resident and staff survey domains). Confirmatory principal components factor analysis was used to verify that the items reflected a single domain. The results of this analysis are included in section 6.1.1.

5.2.1.2. Resident Satisfaction with Staff

The outcome variable of interest to accomplish the second and third aims of this thesis was resident satisfaction with staff. This outcome variable was comprised of four items from the NHCAHPS (see Table 2). Similar adjustments were made to the scaling of these items. The mean of these four items was taken to determine each resident’s satisfaction with staff on a continuous scale from 0 to 100.

The NHCAHPS was first developed to focus exclusively on QOC, highlighting interpersonal aspects of care processes (Sangl et al. 2007). To identify QOC domains that were important to nursing home residents, a review of the literature was conducted, and LTC and methodology experts were consulted. Most importantly, focus groups were conducted in three States to verify that the domains found in the first step covered the most important aspects of resident satisfaction. The issues that were of greatest concern to residents were cleanliness, noise, food, training and competency of staff, language issues, continuity of staff and receiving correct medication. Residents did not consider “safety” or “communication with doctors” as important. Partway through the development of the NHCAHPS, it was merged with a subset of questions
from Kane’s QOL tool that were not already covered by the existing QOC questions (Sangl et al. 2007).

Multiple rounds of cognitive interviews were conducted to ensure that the QOC and QOL items of the survey were consistently understood and that responses reflected what residents actually wished to say about the topic (Sangl et al. 2007). This qualitative method does not provide psychometric statistics on the instrument but allows researchers to understand how questions were received and answered by respondents (Sangl et al. 2007). Confirmatory principal components factor analysis was performed as part of this thesis to ensure that items were representative of the underlying construct. The results of this analysis are included in section 6.1.1.

**Table 2. The Items Comprising the Resident Satisfaction Domains**

<table>
<thead>
<tr>
<th>Domain</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Resident Satisfaction (Scale 0-100)</td>
<td>Would you recommend this Long Term Care home to others?</td>
</tr>
<tr>
<td></td>
<td>Overall, how would you rate the quality of care and services in this home?</td>
</tr>
<tr>
<td></td>
<td>Are you ever unhappy with the care you get at this home?</td>
</tr>
<tr>
<td></td>
<td>Do you get the care you need in this home?</td>
</tr>
<tr>
<td>Resident Satisfaction with Staff (Scale 0-100)</td>
<td>Overall, what number would you use to rate the care you get from the staff?</td>
</tr>
<tr>
<td></td>
<td>Do the staff who care for you change too often?</td>
</tr>
<tr>
<td></td>
<td>Can you remember, did the staff make you feel welcome when you first came to the home?</td>
</tr>
<tr>
<td></td>
<td>What number would you use to rate how well the staff explain things in a way that is easy to understand?</td>
</tr>
</tbody>
</table>
5.2.2. Exposure Variable – Staff Job Satisfaction

To accomplish the first two aims of this thesis, the main exposure variable of interest was overall job satisfaction of direct care staff. This variable was measured as part of the work environment section of the staff survey. This section used the Nursing Home Certified Nurse Assistant Job Satisfaction Questionnaire (NH-CNA-JSQ) developed by Castle (Castle 2010). This instrument included two questions addressing respondents’ overall job satisfaction ratings. In addition to the two overall job satisfaction items, the work environment section of the staff survey included nineteen items, comprising seven domains of job satisfaction, from the NH-CNA-JSQ. Three of these domains (satisfaction with work content, satisfaction with workload and satisfaction with quality of care) were required to accomplish the third aim of this thesis. These items are presented in Table 3.

Respondents were asked to rate their agreement with each statement on a 10-point scale ranging from disagree (value = 1) to agree (value = 10). An overall domain score was determined by averaging the respondent’s answers to these questions. Despite the validity evidence presented by Castle (Castle 2010) and summarized below, confirmatory principal components factor analysis was performed to validate the NH-CNA-JSQ in the current population. Results are presented in section 6.1.2.

Castle (Castle 2010) interviewed 35 CNAs to determine which work factors contributed the most (least) to job satisfaction in LTC. A further survey of 135 CNAs, who were asked to rate the top five domains from a list of fifteen, provided a list of seven domains that were most pertinent to CNA job satisfaction. These were coworkers, work demands, work content, workload, work skills, rewards and quality of care. Generic job satisfaction tools were then reviewed, items were rewritten to conform to scaling requirements, to be relevant to CNAs and to be relevant to the nursing home context and three relevant items were selected by experts and practitioners in survey development, gerontology, geriatrics and LTC to fit these seven job satisfaction domains (Castle 2010).

The internal structure of the NH-CNA-JSQ was evaluated by Castle (Castle 2010) using exploratory factor analysis. The primary factor loadings for each domain exceeded the minimum cutoff (Castle 2010). It was concluded that the items were representative of the underlying factors. Eigenvalues were greater than 1.0 indicating a single factor solution for each domain.
(Castle 2010). Criterion validity was also evaluated by Castle (Castle 2010). Using a sample of CNAs who completed both the MJS and the NH-CNA-JSQ, Castle found that the overall correlation between the two instruments was high at 0.77.

**Table 3. The Items Comprising the Staff Job Satisfaction Domains**

<table>
<thead>
<tr>
<th>Domain</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Staff Job Satisfaction (Scale 1-10)</td>
<td>Rate how satisfied you are with your job.</td>
</tr>
<tr>
<td></td>
<td>Rate how highly you would recommend working at this facility.</td>
</tr>
<tr>
<td>Staff Satisfaction with Content (Scale 1-10)</td>
<td>Rate how much you enjoy working with residents.</td>
</tr>
<tr>
<td></td>
<td>Rate how closely you feel to residents.</td>
</tr>
<tr>
<td>Staff Satisfaction with Workload (Scale 1-10)</td>
<td>Rate your satisfaction with your workload.</td>
</tr>
<tr>
<td></td>
<td>Rate how much you like your work schedule.</td>
</tr>
<tr>
<td></td>
<td>Rate whether you have enough time to do your job.</td>
</tr>
<tr>
<td>Staff Satisfaction with Quality of Care (Scale 1-10)</td>
<td>Rate the care given to residents in this Home.</td>
</tr>
<tr>
<td></td>
<td>Rate whether you have an effect on residents’ lives.</td>
</tr>
</tbody>
</table>

5.2.3. Other Independent Variables – Facility, Staff and Resident Characteristics

5.2.3.1. Facility Characteristics

5.2.3.1.1. Context

As described in the conceptual framework, contextual facility characteristics, which were collected as part of the administrator survey, had to be controlled for during the regression analyses to avoid confounding the staff-resident satisfaction linkages.
Contextual variables included ownership, chain affiliation, size, location and bed class (as an indicator of home age/redevelopment). Ownership was either for-profit or not-for-profit. Chain affiliation consisted of chain affiliated, affiliated with a hospital and non-chain affiliated. Size was divided into small (< 150 beds), medium (150 – 205 beds) and large (> 205 beds). The populations of the LTC homes’ locations, determined using the latest Statistics Canada census information (Statistics Canada 2010a), were used to categorize location into town (< 300,000 people), city (300,000 – 600,000 people) and metropolis (> 600,000 people). New beds have been built since 1998 to current design standards, are fully accessible and have a maximum of 32 beds per resident home area, Class A LTC beds were built prior to 1998 and have up to 40 beds per resident home area, Class B LTC beds significantly exceed 1972 standards but do not meet A criteria (have 4 bed rooms and less access to common space), Class C LTC beds meet 1972 standards (4 bed rooms, inaccessible washrooms and limited dining and program space) and Class D LTC beds fail to meet 1972 standards (hallway washrooms, poor accessibility and smaller rooms) (Ministry of Health and Long-Term Care 2009).

5.2.3.1.2. Culture

Similarly, measures of facility culture had to be controlled for to avoid confounding the staff-resident satisfaction linkages. Home culture was measured as part of the staff survey. The items that form the culture variables are presented in Table 4.

Home culture was measured using Zammuto and Krakower’s questionnaire of Organizational Culture (Zammuto, Krakower 1991). This questionnaire, as it was included in the staff survey, consisted of 12 questions focusing on three aspects of the facility (home character, home managers and home cohesion). Zammuto and Krakower’s survey was based on Quinn and Kimberly’s original competing-values typology (Quinn, Kimberly 1984). This framework assesses the flexibility/control and external/internal orientation of an organization. Zammuto and Krakower’s questionnaire focused on four cultural types: group culture (based on values of team work, affiliation and participation), developmental culture (based on taking risks and innovation), hierarchical culture (based on bureaucracy) and rational culture (based on task and goal accomplishment). This questionnaire has been applied to “define the beliefs, norms, values and behaviors of organization members relative to the characteristic way in which work is approached and conducted” (Shortell et al. 2000). It has been found to be a reliable and valid
measure of cultural type in acute care hospitals (Shortell et al. 2000, Shortell et al. 1995). Shortell et al. (Shortell et al. 2000, Shortell et al. 1995) asked respondents to distribute 100 points between the four items, each representing a different cultural type, comprising each aspect of the facility. To reduce possible confusion, the current survey of LTC staff however, asked respondents to rate how strongly they agreed with each statement on a ten point scale from “1 - least like this home” to “10 - most like this home”.

Despite being originally conceived as a competing-values framework, it has been reported that an emphasis on group and developmental cultures both promote quality and quality improvement (Shortell et al. 2000, Shortell et al. 1995). Because home culture was not the primary measure of interest, the interpretability of the measured effect of this variable was not as important as an accurate, yet simple, way of summarizing the confounding effect of home culture. Confirmatory principal components factor analysis was performed to provide evidence on the validity of the combined measures of group/developmental and hierarchical/rational culture.

Following confirmatory principal components factor analysis, this scale was converted such that, for each of the three aspects of LTC, the sum of the four cultural types equaled 10. Staff ratings of group, developmental, hierarchical and rational culture were determined by taking the mean of the corresponding items for the three aspects of LTC. Ratings of group and developmental culture were summed to create the single group/developmental index. Similarly, ratings of hierarchical and rational culture were summed to create the single hierarchical/rational index. Home-level measures of group/developmental and hierarchical/rational cultures were calculated by taking the mean of these staff ratings.

5.2.3.1.3. Resident Centered-Care

Facility processes, including assessing resident needs and addressing complaints, may also confound the relationship between resident and staff satisfaction. These processes are considered part of resident centered-care, a variable measured on the staff survey. The items that comprise the resident centered-care variable are presented in Table 4.

Resident-centered care was measured using the Customer Satisfaction instrument presented by Shortell et al. (Shortell et al. 2000, Shortell et al. 1995). This instrument was a subsection of a questionnaire developed based on the National Malcolm Baldrige Quality Award criteria. These
criteria have been used to distinguish organizations based on quality level in health care and non-health care related economic sectors around the globe (Shortell et al. 2000). Shortell et al. (Shortell et al. 2000, Shortell et al. 1995) used this scale to measure hospitals’ ability to determine and satisfy patient and provider needs. It was reported to be a reliable and valid measure (Shortell et al. 2000, Shortell et al. 1995). In the context of the current study, the resident centered-care instrument consisted of 5 items assessing the ability of Ontario LTC homes to assess resident needs and to implement changes based on resident feedback. Respondents were asked to rate their level of agreement with statements such as “this home does a good job of assessing resident needs and wishes”. All items were measured using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). Confirmatory principal components factor analysis was performed to validate the use of this scale in this setting. A home-level measure of resident centered care was calculated by taking the mean of the staff ratings.

5.2.3.2. Staff Characteristics

Additional staff-level variables were also controlled for to avoid confounding. As described in the conceptual framework, these included staff demographic variables and stressors, staffing level, professional development and experience. Demographic variables and experience were collected in the staff satisfaction survey. Data on staffing levels were collected in the LTC administrator survey. Staffing level was defined as the number of hours per bed per day worked by direct care staff. This measure was derived from data from the MOHLTC Long-Term Care Home Staffing Report and the administrator survey. Data on staffing levels were not available from enough homes to be included in the multivariate analyses. But it is reported in the descriptive and bivariate analyses.

5.2.3.3. Resident Characteristics

As is described in the conceptual model, additional resident-level variables may confound the relationship between resident and staff satisfaction. In addition to collecting resident satisfaction data, the resident survey collected demographic measures and measures of resident affect and health that were controlled for in the analysis. These include age, gender, education level, length of stay, self-reported health and emotional well-being (see Table 4 for the items forming this domain).
Table 4. The Items Comprising the Other Independent Variables

<table>
<thead>
<tr>
<th>Measure</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Culture (Scale 1-10)</td>
<td>The Home is a very personal place. It is a lot like an extended family. People seem to share themselves.</td>
</tr>
<tr>
<td></td>
<td>The management team in this Home are warm and caring. They encourage us to do our best and help to guide us.</td>
</tr>
<tr>
<td></td>
<td>The glue that holds this Home together is loyalty and tradition. Commitment to this Home is very high.</td>
</tr>
<tr>
<td>Developmental Culture (Scale 1-10)</td>
<td>This Home is a very lively and innovative place. People are willing to stick their necks out and take risks.</td>
</tr>
<tr>
<td></td>
<td>The management team in this Home are risk-takers. They encourage employees to take risks and be innovative.</td>
</tr>
<tr>
<td></td>
<td>The glue that holds this home together is commitment to new ideas. Being a leading-edge Home is important.</td>
</tr>
<tr>
<td>Hierarchical Culture (Scale 1-10)</td>
<td>This home is very formalized and a structured place. Bureaucratic procedures generally govern what people do.</td>
</tr>
<tr>
<td></td>
<td>The management team in this Home are rule-enforcers. They expect employees to follow established rules, policies and procedures.</td>
</tr>
<tr>
<td></td>
<td>The glue that holds this Home together is formal rules and policies. Maintaining a smooth running operation is important here.</td>
</tr>
<tr>
<td>Rational Culture (Scale 1-10)</td>
<td>This Home is very production oriented and completion of tasks is most important. People aren’t very personally involved.</td>
</tr>
<tr>
<td></td>
<td>The management team in this Home coordinate and coach staff. They help employees meet the Home’s goals and objectives.</td>
</tr>
<tr>
<td></td>
<td>The glue that holds this Home together is the emphasis on tasks and goal accomplishment. A production orientation is commonly shared.</td>
</tr>
<tr>
<td>Measure</td>
<td>Items</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Resident-Centered Care (Scale 1-5)</td>
<td>This Home does a good job of assessing resident needs and wishes.</td>
</tr>
<tr>
<td></td>
<td>Home employees promptly resolve resident complaints.</td>
</tr>
<tr>
<td></td>
<td>Residents’ complaints are studied to identify patterns and prevent same problems from recurring.</td>
</tr>
<tr>
<td></td>
<td>This Home uses reports about residents to improve services.</td>
</tr>
<tr>
<td></td>
<td>This Home uses the results of resident and family surveys when planning new services.</td>
</tr>
</tbody>
</table>

| Resident Emotional Well-being (0-100) | How often do you feel worried?                                                                                                         |
|                                      | How often do you feel happy?                                                                                                          |
|                                      | How often do you feel bored here?                                                                                                     |
|                                      | How often do you feel lonely here?                                                                                                     |

### 5.3. Statistical Analysis

All statistical analyses were performed using STATA version 8.

#### 5.3.1. Descriptive Analyses

Summary statistics were used to describe organization, staff and resident characteristics. The mean value and standard deviation or counts and percent (%) of total of organization, staff and resident level variables are presented.

Individual staff survey responses were aggregated to the facility level. To validate the grouping of staff responses, we tested the independence of LTC homes with respect to the variables measured in the staff survey prior to aggregation. Pearson’s chi-squared was used to test for the independence of homes with respect to each categorical variable. ANOVA was used to test the equality of means of continuous variables across LTC homes so long as parametric assumptions...
were met. The nonparametric Kruskal-Wallis test was used where indicated, to test the independence of LTC homes. All tests used a 15% level of significance.

The skew and kurtosis of each continuous variable, as well as histograms and normal quantile plots, were used to test the normality of the continuous variables.

5.3.2. Bivariate Analyses

Following these initial descriptive analyses, the non-normal dependent variables – overall resident satisfaction and resident satisfaction with staff – were transformed. Transformation using square root, natural log, inverse, zero-skew and Box-Cox did not adequately address these issues. Histograms of these variables revealed two distinct groups (Appendix D). Two-level categorical variables were created. Residents who rated their overall satisfaction above 93.5 out of 100 were considered highly satisfied. The threshold for high resident satisfaction with staff was 89 out of 100. All additional analyses were performed using these two satisfaction thresholds.

Bivariate analyses were performed to examine the relationships between resident, staff and facility variables, and the two domains of resident satisfaction. A 5% level of significance was used to determine whether the observed associations were statistically significant.

5.3.3. Multivariate Analyses

Missing values were imputed for continuous response variables (resident age, years since admittance and emotional well-being). 13 missing resident age values (1.23% of observations), 19 missing years since admittance values (1.80% of observations) and 94 missing emotional well-being values (8.91% of observations) were imputed. Imputations were performed using the resident characteristics (age, gender, education, years since admittance, self-reported health and emotional well-being).

Logistic regression was used to accomplish the three aims of this thesis. Robust standard errors were used to account for the aggregation of data subjects within LTC homes. Facility and staff variables were aggregated to the home-level. Individual resident satisfaction ratings were then linked to these aggregated characteristics using the LTC home identification number. Residents were nested within facilities forming a hierarchical data structure, which could have led to mis-
estimation of analysis of variance estimates if not accounted for by using robust standard errors (Jimmieson, Griffin 1998).

Logistic regression models were run with either overall resident satisfaction or resident satisfaction with staff as the outcome variable of interest. For both of these outcome variables, logistic regressions were conducted with overall staff job satisfaction, staff satisfaction with work content, staff satisfaction with workload and staff satisfaction with quality of care as the main exposure variable of interest.

Confounding variables were selected to avoid multi-collinearity and variance inflation factors (VIFs) were computed to confirm that the multivariate models were not subject to serious levels of multi-collinearity. The VIFs for the group/developmental culture and resident-centered care variables were both above the recommended cutoff of 10 (Menard 1995, Hair et al. 1995, Neter, Wasserman & Kutner 1989, Marquardt 1970). Given that staff empowerment, a value espoused by homes with a group culture, has been reported to be the foundation of resident-centered care (Tellis-Nayak 2007), and that flexibility, a characteristic of homes with a developmental culture, promotes change (Shortell et al. 1995) including going from the traditional medical model of care to a resident-centered model of care, it is possible that the home culture and resident-centered care variables are measuring the same thing. Resident-centered care was therefore excluded from the multivariate analyses. Following the removal of resident-centered care, home culture’s VIF dropped below 10.

For multivariate analyses of overall resident satisfaction, the categorical resident characteristics were limited to gender, education and self-reported health. The indicator variables for these characteristics were male, completed post-secondary degree/diploma and poor/fair/good self-reported health, respectively. Continuous resident characteristics included age, years since admittance and emotional well-being. Staff characteristics included experience (percent 30-59 years), experience (percent 60+ years), sex (percent female), happiness (percent happy/very happy), position (percent PSW), hours (part-time) and continuing education (percent yes in last year). The only continuous facility characteristic included in the model was group/developmental culture, but there were a number of categorical facility characteristics. These included home size, location, chain affiliation, profit status and bed class. The indicator variables were small homes
(<150 beds), metropolis (+ 600,000 people), non-chain affiliated, for-profit and new/Class A beds, respectively.

The logistic regression equation for overall resident satisfaction with overall job satisfaction and numerous resident, staff and facility confounders is found below:

\[
\text{Logit}\{\text{Overall Resident Satisfaction}\} = \beta_0 + \beta_{\text{Overall Staff Job Satisfaction}_1} + \beta_{\text{Age}_R1} + \beta_{\text{Gender}_R2} + \beta_{\text{Education Level}_R3} + \beta_{\text{Years Since Admittance}_R4} + \beta_{\text{Self-Reported Health}_R5} + \beta_{\text{Emotional Well-being}_R6} + \beta_{\text{Experience (Percent 30-59 Years)}_S1} + \beta_{\text{Experience (Percent 60+ Years)}_S2} + \beta_{\text{Sex (Percent Female)}_S3} + \beta_{\text{Happiness (Percent Happy/Very Happy)}_S4} + \beta_{\text{Position (Percent PSW)}_S5} + \beta_{\text{Hours (Percent Part-Time)}_S6} + \beta_{\text{Continuing Education (Percent Yes in Last Year)}_S7} + \beta_{\text{Home Size}_F1} + \beta_{\text{Home Location}_F2} + \beta_{\text{Chain Affiliation}_F3} + \beta_{\text{Profit Status}_F4} + \beta_{\text{Bed Class}_F5} + \beta_{\text{Home Culture}_F6} + \alpha + e
\]

Subscript “R” represents variables that are resident characteristics. Subscript “S” represents staff characteristics aggregated to the facility level and those with subscript “F” are facility characteristics. The multivariate logistic regression for resident satisfaction with staff included all of the above variables.

\(\beta\) coefficients were used to calculate odds ratios for each of the resident, staff and facility characteristics. Odds ratios were interpreted as the change in odds of high resident satisfaction associated with either the indicator variable or a 1-unit increase in the continuous independent variable, holding all other explanatory variables constant. A 5% level of significance was used to determine whether the observed associations were statistically significant.

The predictive ability of each logistic regression model was determined. The concordance index was used to quantify the discriminative ability of each model. Values over 0.8 indicate very high predictive probability. Models with a concordance index between 0.7 and 0.8 were deemed sufficiently discriminative. Model reliability was determined using Brier’s score; the Brier’s score is 0 when reliability is perfect.
Chapter 6
Results

The following chapter reports the results of the descriptive, bivariate and multivariate analyses. Descriptive analyses are presented first for resident characteristics, followed by staff characteristics and facility characteristics. Bivariate analyses are first presented for overall resident satisfaction and the numerous resident, staff and facility characteristics. The results of the bivariate analyses of resident satisfaction with staff and the numerous resident, staff and facility characteristics are then presented. Multivariate logistic regression is presented first for overall resident satisfaction and second for resident satisfaction with staff. A summary of the evidence with respect to the three aims of this thesis is presented in section 6.4.

6.1. Descriptive Analyses

6.1.1. Resident Characteristics

Resident characteristics are presented in Table 5. 1055 residents were surveyed in 24 LTC homes. The mean age of respondents was 82.99 years old and more than 70% of these residents were female. 20.78% of residents had completed some form of post-secondary education while 43.35% had only finished primary school. The mean number of years since admittance was 3.40 years. 47.34% of respondents rated their health as very good or excellent and the mean rating of respondent’s emotional health was 62.39 out of 100.

Confirmatory factor analysis was performed to assess the properties of the resident satisfaction variables in Ontario LTC homes. For the overall satisfaction measure, only one factor had an eigenvalue greater than 1. The primary factor loadings of the four items included in this measure of satisfaction ranged from 0.69 – 0.76. Cronbach’s alpha was 0.67. For the satisfaction with staff domain, only one factor had an eigenvalue greater than 1. The primary factor loadings for the four items included in this measure of satisfaction ranged from 0.39 – 0.85. This domain had a Cronbach’s alpha of 0.41. Confirmatory factor analysis was again conducted but with “do the staff who care for you change too often?”, the item that had a primary factor loading below 0.4, removed. The following items remained in the satisfaction with staff domain: “overall, what number would you use to rate the care you get from the staff”, “can you remember, did the staff make you feel welcome when you first came to the home” and “what number would you use to
rate how well the staff explain things in a way that is easy to understand?”. The eigenvalue for the single factor solution of this new 3-item scale was greater than 1. The primary factor loadings ranged from 0.61 – 0.88 and the Cronbach’s alpha was 0.66. This 3-item scale was used for all subsequent analyses.

The mean resident satisfaction ratings were 81.40 and 85.98 out of 100 for overall and staff domains respectively. All of the resident satisfaction domains were significantly negatively skewed and were significantly kurtosed at the 0.1% level of significance. These distributions were confirmed by the histograms and normal quantile plots found in Appendix D.

**Table 5. Resident Characteristics**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Counts (Percent) or Mean (Standard Deviation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years) (n = 1042)</td>
<td>82.99 (10.70)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>281 (27.07 %)</td>
</tr>
<tr>
<td>Female</td>
<td>757 (72.93 %)</td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>Completed Post-Secondary Degree/Diploma</td>
<td>197 (20.78 %)</td>
</tr>
<tr>
<td>Completed Secondary School</td>
<td>340 (35.86 %)</td>
</tr>
<tr>
<td>Completed Primary School</td>
<td>411 (43.35 %)</td>
</tr>
<tr>
<td>Years Since Admittance (n = 1036)</td>
<td>3.40 (3.25)</td>
</tr>
<tr>
<td>Self-Reported Health</td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>20 (2.31 %)</td>
</tr>
<tr>
<td>Fair</td>
<td>71 (8.2 %)</td>
</tr>
<tr>
<td>Good</td>
<td>365 (42.15 %)</td>
</tr>
<tr>
<td>Very Good</td>
<td>276 (31.87 %)</td>
</tr>
<tr>
<td>Excellent</td>
<td>134 (15.47 %)</td>
</tr>
<tr>
<td>Emotional Well-Being (n = 961) (Scale 0-100)</td>
<td>62.39 (23.42)</td>
</tr>
<tr>
<td>Resident Satisfaction</td>
<td></td>
</tr>
<tr>
<td>Overall Satisfaction (n = 909) (Scale 0-100)</td>
<td>81.40 (19.79)</td>
</tr>
</tbody>
</table>
| Satisfaction with Staff (n = 428) (Scale 0-100) | 85.98 (17.41) | 6.1.2. **Staff Characteristics**

637 nurses and PSWs from 24 LTC homes completed the staff survey. The survey collected data on staff demographics and backgrounds. Staff responses to these questions were aggregated to the facility-level. Tests of independence (Pearson’s chi-squared) were used to validate these
clusters. At the 15% level of significance, there was a significant difference between LTC facilities with respect to each of these staff characteristics except for health (see Appendix E). Health was therefore not included in any further analyses.

The mean proportion of staff that reported they were 40-49 years old was the highest at 0.33 and was closely followed by 50-59 years old at 0.31. The mean percent of staff that reported they were female was 93.4%. The mean proportion of staff that reported they were happy was 0.56 and very happy was 0.22. The mean proportion of direct care staff that reported they were a PSW, worked part-time and had completed continuing education within the past year were 0.66, 0.56 and 0.68 respectively. These results are presented in Table 6.

The staff survey also collected data on staff job satisfaction using the NH-CAN-JSQ. Confirmatory principal components factor analysis was performed to assess the properties of four of the NH-CNA-JSQ’s satisfaction domains in Ontario LTC homes. Eigenvalues indicated a single factor solution for each of the job satisfaction domains. All of the primary factor loadings (minimum 0.67; maximum 0.94) exceeded the minimum cutoff (> 0.4) suggested by Castle (Castle 2010). Cronbach’s alphas were 0.87, 0.79, 0.77, and 0.62 for the overall, work content, workload, work demands and quality of care domains respectively. Despite the moderate reliability of the quality of care domains, it was concluded that the items were representative of the underlying factors for all 4 domains of job satisfaction.

Similar to the above demographic and background characteristics, individual staff ratings of their job satisfaction were aggregated to the home-level. The Kruskal-Wallis test for independence revealed significant (p < 0.05) differences between the LTC homes with respect to overall job satisfaction, satisfaction with work content, satisfaction with workload and satisfaction with quality of care (see Appendix E). The mean of the home-level job satisfaction scores were 7.46, 8.97, 6.70 and 8.52 for overall, work content, workload and quality of care respectively. Staff satisfaction was highest with respect to work content – they enjoyed working with residents and believed they had close relationships with residents. The standard deviation of this domain was the smallest. By contrast, staff were the least satisfied with the workload domain of job satisfaction and the standard deviation of this domain was the largest.

Table 6. Staff Characteristics
### Variable Mean (Standard Deviation)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 30 Years</td>
<td>0.079</td>
<td>(0.073)</td>
</tr>
<tr>
<td>30-39 Years</td>
<td>0.19</td>
<td>(0.090)</td>
</tr>
<tr>
<td>40-49 Years</td>
<td>0.33</td>
<td>(0.099)</td>
</tr>
<tr>
<td>50-59 Years</td>
<td>0.31</td>
<td>(0.12)</td>
</tr>
<tr>
<td>60+ Years</td>
<td>0.089</td>
<td>(0.067)</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>0.066</td>
<td>(0.072)</td>
</tr>
<tr>
<td>Female</td>
<td>0.93</td>
<td>(0.072)</td>
</tr>
<tr>
<td><strong>Happiness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Unhappy</td>
<td>0.017</td>
<td>(0.033)</td>
</tr>
<tr>
<td>Unhappy</td>
<td>0.035</td>
<td>(0.042)</td>
</tr>
<tr>
<td>Neither Happy nor Unhappy</td>
<td>0.17</td>
<td>(0.081)</td>
</tr>
<tr>
<td>Happy</td>
<td>0.56</td>
<td>(0.093)</td>
</tr>
<tr>
<td>Very Happy</td>
<td>0.22</td>
<td>(0.11)</td>
</tr>
<tr>
<td><strong>Position</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSW</td>
<td>0.66</td>
<td>(0.12)</td>
</tr>
<tr>
<td>Nurse</td>
<td>0.34</td>
<td>(0.12)</td>
</tr>
<tr>
<td><strong>Continuing Education in Last Year</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>0.68</td>
<td>(0.12)</td>
</tr>
<tr>
<td>No</td>
<td>0.32</td>
<td>(0.12)</td>
</tr>
<tr>
<td><strong>Hours</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full Time</td>
<td>0.44</td>
<td>(0.13)</td>
</tr>
<tr>
<td>Part-Time</td>
<td>0.56</td>
<td>(0.13)</td>
</tr>
<tr>
<td><strong>Job Satisfaction (scale 1-10)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>7.46</td>
<td>(0.89)</td>
</tr>
<tr>
<td>Work Content</td>
<td>8.97</td>
<td>(0.33)</td>
</tr>
<tr>
<td>Workload</td>
<td>6.70</td>
<td>(0.96)</td>
</tr>
<tr>
<td>Quality of Care</td>
<td>8.52</td>
<td>(0.42)</td>
</tr>
</tbody>
</table>

6.1.3. Facility Characteristics

Facility-level descriptive statistics are presented in Table 7. 50.00% of homes were for-profit and the majority (58.33%) of homes were affiliated with a nursing home chain. 13 homes had between 150 and 205 beds, 11 were located in a metropolis and the majority (58.33%) contained new or Class A beds.

The administrative survey also collected data on staffing level (hours per day per bed). Data was only available from 11 LTC homes. The mean and standard deviation of this variable is found in
Home culture and resident centeredness, the final two facility characteristics, were measured by the staff survey. 637 staff responded to the survey. Confirmatory principal components factor analysis was used to verify the single factor solutions for the measures of group/developmental culture, hierarchical/rational culture and resident centered care. Each of these variables had eigenvalues greater than 1.0. The primary factor loadings of these variables ranged from 0.57 to 0.87. They therefore all exceeded the minimum cutoff (> 0.4) suggested by Castle (Castle 2010). Cronbach’s alphas were 0.88, 0.81, and 0.88 for the measures of group/developmental culture, hierarchical/rational culture and resident centered care respectively. Reliability of these variables was high. It was concluded that the items were representative of the underlying factors for each of these domains.

Staff responses were grouped to the facility-level. To verify the validity of these aggregations, the independence of LTC homes with respect to each variable was analyzed. Using the Kruskal-Wallis test of independence for nonparametric data, there was significant evidence at the 5% level of significance of a difference among LTC facilities with respect to the home culture and resident centered care variables. See Appendix F for results of these tests. Responses for home culture were converted such that the total equaled 10. Resident centered care was rated on a scale from 1 to 5. The mean rating of group/developmental culture was 4.73 and hierarchical/rational was 5.27. Resident centered care had a mean rating of 3.88 out of 5.

Table 7. Facility Characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Counts (Percent) or Mean (Standard Deviation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ownership</td>
<td></td>
</tr>
<tr>
<td>For-Profit</td>
<td>12 (50.00 %)</td>
</tr>
<tr>
<td>Not-for-Profit</td>
<td>12 (50.00 %)</td>
</tr>
<tr>
<td>Chain Affiliation</td>
<td></td>
</tr>
<tr>
<td>Chain</td>
<td>14 (58.33 %)</td>
</tr>
<tr>
<td>Hospital</td>
<td>4 (16.67 %)</td>
</tr>
<tr>
<td>Non-Chain</td>
<td>6 (25.00 %)</td>
</tr>
<tr>
<td>Size</td>
<td></td>
</tr>
<tr>
<td>Variable</td>
<td>Counts (Percent) or Mean (Standard Deviation)</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Small (&lt; 150 beds)</td>
<td>8 (33.33 %)</td>
</tr>
<tr>
<td>Medium (150-205 beds)</td>
<td>13 (54.17 %)</td>
</tr>
<tr>
<td>Large (&gt;205 beds)</td>
<td>3 (12.50 %)</td>
</tr>
<tr>
<td>Location</td>
<td></td>
</tr>
<tr>
<td>Town (&lt; 300,000 people)</td>
<td>8 (33.33 %)</td>
</tr>
<tr>
<td>City (300,000 – 600,000 people)</td>
<td>5 (20.83 %)</td>
</tr>
<tr>
<td>Metropolis (&gt; 600,000 people)</td>
<td>11 (45.83 %)</td>
</tr>
<tr>
<td>Bed Class</td>
<td></td>
</tr>
<tr>
<td>New, A</td>
<td>14 (58.33%)</td>
</tr>
<tr>
<td>B, C, D</td>
<td>10 (41.67%)</td>
</tr>
<tr>
<td>Staffing Level (n = 11) (hours/day/bed)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2.97 (0.56)</td>
</tr>
<tr>
<td>Professional Nurse</td>
<td>0.84 (0.12)</td>
</tr>
<tr>
<td>PSW</td>
<td>2.13 (0.52)</td>
</tr>
<tr>
<td>Full-time</td>
<td>1.49 (0.39)</td>
</tr>
<tr>
<td>Part-time</td>
<td>1.42 (0.35)</td>
</tr>
<tr>
<td>Agency</td>
<td>0.052 (0.054)</td>
</tr>
<tr>
<td>Culture (Sum to10)</td>
<td></td>
</tr>
<tr>
<td>Group/Developmental Culture</td>
<td>4.73 (0.38)</td>
</tr>
<tr>
<td>Hierarchical/Rational Culture</td>
<td>5.27 (0.38)</td>
</tr>
<tr>
<td>Resident Centered Care (Scale 1-5)</td>
<td>3.88 (0.33)</td>
</tr>
</tbody>
</table>

* Shaded cells are not included in the regression models

6.2. Bivariate Analyses

6.2.1. Overall Resident Satisfaction

Based on a threshold of 93.5/100, 352 residents were classified as having high overall satisfaction, while 557 residents were classified as having low overall satisfaction.

6.2.1.1. Resident Characteristics

The bivariate relationships between overall resident satisfaction and the resident characteristics are found in Table 8.

Residents with high overall satisfaction were significantly older, had resided in LTC for a significantly shorter period of time, and had significantly higher ratings of emotional well-being than residents with low overall satisfaction. Residents with high overall satisfaction were also
significantly more likely to have reported very good or excellent self-reported health, and to have not completed post-secondary education than residents with low overall satisfaction.

Based on bivariate analyses, only resident gender was not statistically significantly related to overall resident satisfaction.

**Table 8. Bivariate Relationships between Overall Resident Satisfaction and Resident Characteristics**

<table>
<thead>
<tr>
<th>Resident Characteristic</th>
<th>Counts (Percent) or Mean (Standard Deviation) for Residents with High Overall Satisfaction</th>
<th>Counts (Percent) or Mean (Standard Deviation) for Residents with Low Overall Satisfaction</th>
<th>Test Value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>84.11 (9.06)</td>
<td>81.85 (11.86)</td>
<td>t = -3.23</td>
<td>0.0013</td>
</tr>
<tr>
<td>Years Since Admittance</td>
<td>3.07 (2.69)</td>
<td>3.60 (3.49)</td>
<td>t = 2.58</td>
<td>0.010</td>
</tr>
<tr>
<td>Self-Reported Health</td>
<td></td>
<td></td>
<td>X² = 89.61</td>
<td>0.000</td>
</tr>
<tr>
<td>Poor/Fair</td>
<td>11 (3.46 %)</td>
<td>69 (14.29 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>94 (29.56 %)</td>
<td>241 (49.90 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Good</td>
<td>129 (40.57 %)</td>
<td>130 (26.92 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excellent</td>
<td>84 (26.42 %)</td>
<td>43 (8.90 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional Well-being</td>
<td>73.64 (19.29 %)</td>
<td>57.26 (22.32)</td>
<td>t = -11.72</td>
<td>0.0000</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td>X² = 0.50</td>
<td>0.48</td>
</tr>
<tr>
<td>Male</td>
<td>91 (26.38 %)</td>
<td>157 (28.55 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>254 (73.62 %)</td>
<td>393 (71.45 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td>X² = 6.66</td>
<td>0.036</td>
</tr>
<tr>
<td>Completed Post-Secondary Degree/Diploma</td>
<td>52 (15.81 %)</td>
<td>118 (23.14 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completed Secondary School</td>
<td>123 (37.39 %)</td>
<td>173 (33.92 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completed Primary School</td>
<td>154 (46.81 %)</td>
<td>219 (42.94 %)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6.2.1.2. Staff Characteristics

The bivariate relationships between overall resident satisfaction and staff characteristics are found in Table 9.

The mean overall direct care staff job satisfaction for the group of residents reporting high overall satisfaction was higher than that for the group of residents reporting low overall satisfaction. This result was not statistically significant at the 5% level of significance; only one
The mean home-level direct care staff satisfaction with workload for the group of residents reporting high overall satisfaction was significantly lower than that of the group of residents with low overall satisfaction. The mean home-level staff satisfaction ratings with work content and quality of care were also lower for the group of resident reporting high overall satisfaction, but not to a statistically significant level.

The mean proportions of “unhappy” and “neither happy nor unhappy” direct care staff were higher for the group of residents with high overall satisfaction. This difference was statistically significant for the “neither happy nor unhappy” category. The mean proportions of “happy” and “very happy staff” were lower for the group of residents with high overall satisfaction, but not to a statistically significant level.

Differences in staff age, sex, position, hours and continuing education between the high and low overall resident satisfaction groups were not statistically significant.

**Table 9. Bivariate Relationships between Overall Resident Satisfaction and Staff Characteristics**

<table>
<thead>
<tr>
<th>Staff Characteristic</th>
<th>Mean (Standard Deviation) for Residents with High Overall Satisfaction</th>
<th>Mean (Standard Deviation) for Residents with Low Overall Satisfaction</th>
<th>Test Value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Satisfaction</td>
<td></td>
<td></td>
<td>t = 1.43</td>
<td>0.15</td>
</tr>
<tr>
<td>Overall</td>
<td>7.48 (0.90)</td>
<td>7.39 (0.89)</td>
<td>t = 1.47</td>
<td>0.14</td>
</tr>
<tr>
<td>Work Content</td>
<td>8.94 (0.31)</td>
<td>8.97 (0.30)</td>
<td>t = 1.47</td>
<td>0.14</td>
</tr>
<tr>
<td>Workload</td>
<td>6.54 (0.99)</td>
<td>6.69 (0.97)</td>
<td>t = 2.18</td>
<td>0.029</td>
</tr>
<tr>
<td>Quality of Care</td>
<td>8.48 (0.42)</td>
<td>8.53 (0.42)</td>
<td>t = 1.75</td>
<td>0.0812</td>
</tr>
<tr>
<td>Age (Percent of Total)</td>
<td></td>
<td></td>
<td>t = -1.20</td>
<td>0.23</td>
</tr>
<tr>
<td>Under 30 Years</td>
<td>0.0874 (0.0764)</td>
<td>0.0814 (0.0661)</td>
<td>t = -1.20</td>
<td>0.23</td>
</tr>
<tr>
<td>30-39 Years</td>
<td>0.188 (0.0813)</td>
<td>0.192 (0.0828)</td>
<td>t = 0.80</td>
<td>0.42</td>
</tr>
<tr>
<td>40-49 Years</td>
<td>0.334 (0.0100)</td>
<td>0.340 (0.0908)</td>
<td>t = 0.95</td>
<td>0.34</td>
</tr>
<tr>
<td>50-59 Years</td>
<td>0.298 (0.120)</td>
<td>0.299 (0.111)</td>
<td>t = 0.15</td>
<td>0.88</td>
</tr>
<tr>
<td>60+ Years</td>
<td>0.0927 (0.0657)</td>
<td>0.0867 (0.0605)</td>
<td>t = -1.40</td>
<td>0.16</td>
</tr>
<tr>
<td>Sex (Percent of Total)</td>
<td></td>
<td></td>
<td>t = 0.63</td>
<td>0.53</td>
</tr>
<tr>
<td>Female</td>
<td>0.937 (0.0629)</td>
<td>0.940 (0.0627)</td>
<td>t = 0.63</td>
<td>0.53</td>
</tr>
<tr>
<td>Happiness (Percent of Total)</td>
<td></td>
<td></td>
<td>t = 0.44</td>
<td>0.66</td>
</tr>
<tr>
<td>Very Unhappy</td>
<td>0.0162 (0.0280)</td>
<td>0.0170 (0.0317)</td>
<td>t = 0.44</td>
<td>0.66</td>
</tr>
<tr>
<td>Unhappy</td>
<td>0.0383 (0.0384)</td>
<td>0.0336 (0.0375)</td>
<td>t = -1.82</td>
<td>0.069</td>
</tr>
<tr>
<td>Neither Happy nor Unhappy</td>
<td>0.179 (0.073)</td>
<td>0.167 (0.0748)</td>
<td>t = -2.44</td>
<td>0.015</td>
</tr>
<tr>
<td>Happy</td>
<td>0.561 (0.0861)</td>
<td>0.571 (0.0837)</td>
<td>t = 1.80</td>
<td>0.071</td>
</tr>
<tr>
<td>Very Happy</td>
<td>0.205 (0.0993)</td>
<td>0.211 (0.106)</td>
<td>t = 0.82</td>
<td>0.41</td>
</tr>
</tbody>
</table>
### Staff Characteristic

<table>
<thead>
<tr>
<th>Staff Characteristic</th>
<th>Mean (Standard Deviation) for Residents with High Overall Satisfaction</th>
<th>Mean (Standard Deviation) for Residents with Low Overall Satisfaction</th>
<th>Test Value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position (Percent of Total)</td>
<td></td>
<td></td>
<td>t = 0.87</td>
<td>0.38</td>
</tr>
<tr>
<td>PSW</td>
<td>0.638 (0.121)</td>
<td>0.645 (0.113)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hours (Percent of Total)</td>
<td></td>
<td></td>
<td>t = -1.47</td>
<td>0.14</td>
</tr>
<tr>
<td>Part-Time</td>
<td>0.454 (0.120)</td>
<td>0.442 (0.126)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuing Education (Percent of Total)</td>
<td></td>
<td></td>
<td>t = 0.97</td>
<td>0.33</td>
</tr>
<tr>
<td>Yes</td>
<td>0.690 (0.113)</td>
<td>0.697 (0.108)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 6.2.1.3. Facility Characteristics

The bivariate relationships between overall resident satisfaction and facility characteristics are found in Table 10.

LTC home profit status and staffing level were statistically significantly related to overall resident satisfaction. Residents with high overall resident satisfaction were significantly more likely to reside in for-profit LTC homes than were residents with low overall resident satisfaction. The mean staffing level for the group of residents with high overall satisfaction was significantly lower than the mean staffing level of the group of residents with low overall satisfaction.

Home size, location, chain affiliation, bed class, culture and resident-centered care were not significantly related to overall resident satisfaction.

#### Table 10. Bivariate Relationships between Overall Resident Satisfaction and Facility Characteristics

<table>
<thead>
<tr>
<th>Facility Characteristic</th>
<th>Counts (Percent) or Mean (Standard Deviation) for Residents with High Overall Satisfaction</th>
<th>Counts (Percent) or Mean (Standard Deviation) for Residents with Low Overall Satisfaction</th>
<th>Test Value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Size</td>
<td>X² = 1.23</td>
<td></td>
<td>0.54</td>
<td></td>
</tr>
<tr>
<td>Small ( &lt; 150 beds)</td>
<td>105 (29.83 %)</td>
<td>148 (26.57 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium (150-205 beds)</td>
<td>195 (55.40 %)</td>
<td>327 (58.71 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large (&gt;205 beds)</td>
<td>52 (14.77 %)</td>
<td>82 (14.72 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home Location</td>
<td>X² = 2.43</td>
<td></td>
<td>0.30</td>
<td></td>
</tr>
<tr>
<td>Town (&lt; 300,000 people)</td>
<td>119 (33.81 %)</td>
<td>182 (32.68 %)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Facility Characteristic | Counts (Percent) or Mean (Standard Deviation) for Residents with High Overall Satisfaction | Counts (Percent) or Mean (Standard Deviation) for Residents with Low Overall Satisfaction | Test Value | p-value
--- | --- | --- | --- | ---
City (300,000 – 600,000 people) | 86 (24.43 %) | 116 (20.83 %) |  |  
Metropolis (> 600,000 people) | 147 (41.76 %) | 259 (46.50 %) |  |  
Chain Affiliation |  |  | $X^2 = 3.28$ | 0.19
Chain | 202 (57.39 %) | 327 (58.71 %) |  |  
Hospital | 51 (14.49 %) | 99 (17.77 %) |  |  
Non-Chain | 99 (28.12 %) | 131 (23.52 %) |  |  
Profit Status |  |  | $X^2 = 7.14$ | 0.008
For-Profit | 207 (58.81 %) | 277 (49.73 %) |  |  
Not-For-Profit | 145 (41.19 %) | 280 (50.27 %) |  |  
Bed Class |  |  | $X^2 = 1.42$ | 0.23
New, A | 197 (55.97 %) | 334 (59.96 %) |  |  
B, C, D | 155 (44.03 %) | 223 (40.04 %) |  |  
Group/Developmental Culture | 4.73 (0.39) | 4.74 (0.38) | $t = 0.35$ | 0.73
Resident Centered Care | 3.86 (0.31) | 3.88 (0.32) | $t = 0.76$ | 0.45
Staffing Level (n = 11) | 2.91 (0.48) | 3.023 (0.56) | $t = 2.13$ | 0.034

* Shaded cells are not included in the regression models

6.2.2. Resident Satisfaction with Staff

Based on a threshold of 89/100, 245 residents were classified as having high satisfaction with staff, while 183 residents were classified as having low satisfaction with staff.

6.2.2.1. Resident Characteristics

The bivariate relationships between resident satisfaction with staff and resident characteristics are found in Table 11.

Only two of the six resident characteristics proved to be significantly related to resident satisfaction with staff. Residents with high satisfaction with staff had significantly higher ratings of emotional well-being and were more likely to report very good or excellent health than residents with low satisfaction. The null hypotheses for each of the other resident characteristics failed to be rejected at the 5% level of significance.
### Table 11. Bivariate Relationships between Resident Satisfaction with Staff and Resident Characteristics

<table>
<thead>
<tr>
<th>Resident Characteristic</th>
<th>Counts (Percent) or Mean (Standard Deviation) for Residents with High Satisfaction with Staff</th>
<th>Counts (Percent) or Mean (Standard Deviation) for Residents with Low Satisfaction with Staff</th>
<th>Test Value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>82.31 (11.18)</td>
<td>81.79 (11.14)</td>
<td>t = -0.48</td>
<td>0.63</td>
</tr>
<tr>
<td>Years Since Admittance</td>
<td>3.42 (2.92)</td>
<td>3.35 (2.51)</td>
<td>t = -0.27</td>
<td>0.79</td>
</tr>
<tr>
<td>Self-Reported Health</td>
<td></td>
<td></td>
<td>X² = 36.20</td>
<td>0.000</td>
</tr>
<tr>
<td>Poor/Fair</td>
<td>13 (5.88 %)</td>
<td>24 (14.55 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>78 (35.29 %)</td>
<td>84 (50.91 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Good</td>
<td>73 (33.03 %)</td>
<td>48 (29.09 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excellent</td>
<td>57 (25.79 %)</td>
<td>9 (5.45 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional Well-being</td>
<td>69.49 (20.27)</td>
<td>52.43 (21.74)</td>
<td>t = -8.35</td>
<td>0.0000</td>
</tr>
<tr>
<td>Gender</td>
<td>X² = 0.075</td>
<td>0.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>65 (26.97 %)</td>
<td>51 (28.18 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>176 (73.03 %)</td>
<td>130 (71.82 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>X² = 1.071</td>
<td>0.59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completed Post-Secondary Degree/Diploma</td>
<td>49 (21.30 %)</td>
<td>42 (24.14 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completed Secondary School</td>
<td>81 (35.22 %)</td>
<td>65 (37.36 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completed Primary School</td>
<td>100 (43.48 %)</td>
<td>67 (38.51 %)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 6.2.2.2. Staff Characteristics

The bivariate relationships between resident satisfaction with staff and staff characteristics are found in Table 12.

Three of the four direct care staff satisfaction categories were significantly related to resident satisfaction with staff. The mean overall direct care staff satisfaction, mean satisfaction with work content, and mean satisfaction with quality of care for the group of residents with high satisfaction with staff were statistically significantly lower than for the group of residents with low satisfaction with staff. The relationship between staff satisfaction with workload and resident satisfaction with staff followed a similar direction but the null hypothesis, of equal means, failed to be rejected.

The mean proportions of “unhappy” and “neither happy nor unhappy” direct care staff were both statistically significantly higher for the group of residents with high satisfaction with staff.
mean proportions of “happy” and “very happy staff” for the group of residents with high satisfaction with staff were lower than those for the group of residents with low satisfaction with staff; this difference was statistically significant for the “very happy” category.

The mean proportion of staff who had undergone continuing education within the past year was statistically significantly lower for the group of residents with high satisfaction with staff than for the group of residents with low satisfaction.

Differences between the high and low resident satisfaction with staff groups for staff age, sex, position and hours were not statistically significant.

Table 12. Bivariate Relationships between Resident Satisfaction with Staff and Staff Characteristics

<table>
<thead>
<tr>
<th>Staff Characteristic</th>
<th>Mean (Standard Deviation) for Residents with High Satisfaction with Staff</th>
<th>Mean (Standard Deviation) for Residents with Low Satisfaction with Staff</th>
<th>Test Value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>7.41 (0.90)</td>
<td>7.58 (0.87)</td>
<td>t = 2.026</td>
<td>0.043</td>
</tr>
<tr>
<td>Work Content</td>
<td>8.94 (0.30)</td>
<td>9.0056 (0.29)</td>
<td>t = 2.32</td>
<td>0.021</td>
</tr>
<tr>
<td>Workload</td>
<td>6.61 (1.0040)</td>
<td>6.77 (0.92)</td>
<td>t = 1.71</td>
<td>0.088</td>
</tr>
<tr>
<td>Quality of Care</td>
<td>8.48 (0.027)</td>
<td>8.57 (0.031)</td>
<td>t = 2.20</td>
<td>0.028</td>
</tr>
<tr>
<td>Age (Percent of Total)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 30 Years</td>
<td>0.0843 (0.0733)</td>
<td>0.0817 (0.0668)</td>
<td>t = -0.38</td>
<td>0.70</td>
</tr>
<tr>
<td>30-39 Years</td>
<td>0.187 (0.0778)</td>
<td>0.192 (0.0818)</td>
<td>t = 0.60</td>
<td>0.55</td>
</tr>
<tr>
<td>40-49 Years</td>
<td>0.332 (0.0948)</td>
<td>0.343 (0.934)</td>
<td>t = 1.26</td>
<td>0.21</td>
</tr>
<tr>
<td>50-59 Years</td>
<td>0.302 (0.118)</td>
<td>0.296 (0.105)</td>
<td>t = -0.56</td>
<td>0.58</td>
</tr>
<tr>
<td>60+ Years</td>
<td>0.0954 (0.0655)</td>
<td>0.0880 (0.0600)</td>
<td>t = -1.20</td>
<td>0.23</td>
</tr>
<tr>
<td>Sex (Percent of Total)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>0.934 (0.0683)</td>
<td>0.945 (0.0591)</td>
<td>t = 1.76</td>
<td>0.079</td>
</tr>
<tr>
<td>Happiness (Percent of Total)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Unhappy</td>
<td>0.0136 (0.0264)</td>
<td>0.0167 (0.0324)</td>
<td>t = 1.056</td>
<td>0.29</td>
</tr>
<tr>
<td>Unhappy</td>
<td>0.0385 (0.0390)</td>
<td>0.0300 (0.0363)</td>
<td>t = -2.30</td>
<td>0.022</td>
</tr>
<tr>
<td>Neither Happy nor Unhappy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happy</td>
<td>0.566 (0.0900)</td>
<td>0.572 (0.0810)</td>
<td>t = 0.76</td>
<td>0.45</td>
</tr>
<tr>
<td>Very Happy</td>
<td>0.201 (0.100)</td>
<td>0.223 (0.109)</td>
<td>t = 2.18</td>
<td>0.030</td>
</tr>
<tr>
<td>Position (Percent of Total)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSW</td>
<td>0.656 (0.123)</td>
<td>0.640 (0.108)</td>
<td>t = -1.43</td>
<td>0.15</td>
</tr>
<tr>
<td>Hours (Percent of Total)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part-Time</td>
<td>0.446 (0.132)</td>
<td>0.442 (0.120)</td>
<td>t = -0.33</td>
<td>0.74</td>
</tr>
<tr>
<td>Continuing Education (Percent of Total)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6.2.2.3. Facility Characteristics

The bivariate relationships between resident satisfaction with staff and facility characteristics are found in Table 13.

None of the facility characteristics were statistically significantly related to resident satisfaction with staff. The direction of the relationship between staffing level and resident satisfaction with staff was the same as that reported for overall resident satisfaction, but the direction of the relationship between profit status and resident satisfaction with staff was opposite that reported above for overall resident satisfaction.

**Table 13. Bivariate Relationships between Resident Satisfaction with Staff and Facility Characteristics**

<table>
<thead>
<tr>
<th>Facility Characteristic</th>
<th>Counts (Percent) or Mean (Standard Deviation) for Residents with High Satisfaction with Staff</th>
<th>Counts (Percent) or Mean (Standard Deviation) for Residents with Low Satisfaction with Staff</th>
<th>Test Value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Size</td>
<td></td>
<td></td>
<td>X² = 1.12</td>
<td>0.57</td>
</tr>
<tr>
<td>Small (&lt; 150 beds)</td>
<td>74 (30.20 %)</td>
<td>47 (25.68 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium (150-205 beds)</td>
<td>134 (54.69 %)</td>
<td>105 (57.38 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large (&gt;205 beds)</td>
<td>37 (15.10 %)</td>
<td>31 (16.94 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home Location</td>
<td></td>
<td></td>
<td>X² = 1.46</td>
<td>0.48</td>
</tr>
<tr>
<td>Town (&lt; 300,000 people)</td>
<td>82 (33.47 %)</td>
<td>54 (29.51 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>City (300,000 – 600,000 people)</td>
<td>53 (21.63 %)</td>
<td>48 (26.23 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metropolis (&gt; 600,000 people)</td>
<td>110 (44.90 %)</td>
<td>81 (44.26 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chain Affiliation</td>
<td></td>
<td></td>
<td>X² = 0.99</td>
<td>0.61</td>
</tr>
<tr>
<td>Chain</td>
<td>136 (55.51 %)</td>
<td>108 (59.02 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital</td>
<td>41 (16.73 %)</td>
<td>32 (17.49 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Chain</td>
<td>68 (27.76 %)</td>
<td>43 (23.50 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profit Status</td>
<td></td>
<td></td>
<td>X² = 2.85</td>
<td>0.091</td>
</tr>
<tr>
<td>For-Profit</td>
<td>107 (43.67 %)</td>
<td>95 (51.91 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not-For-Profit</td>
<td>138 (56.33 %)</td>
<td>88 (48.09 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bed Class</td>
<td></td>
<td></td>
<td>X² = 1.52</td>
<td>0.22</td>
</tr>
<tr>
<td>Facility Characteristic</td>
<td>Counts (Percent) or Mean (Standard Deviation) for Residents with High Satisfaction with Staff</td>
<td>Counts (Percent) or Mean (Standard Deviation) for Residents with Low Satisfaction with Staff</td>
<td>Test Value</td>
<td>p-value</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
<td>------------</td>
<td>---------</td>
</tr>
<tr>
<td>New, A</td>
<td>134 (54.59 %)</td>
<td>111 (60.66 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B, C, D</td>
<td>111 (45.31 %)</td>
<td>72 (39.34 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group/Developmental Culture</td>
<td>4.73 (0.41)</td>
<td>4.76 (0.34)</td>
<td>t = 1.087</td>
<td>0.28</td>
</tr>
<tr>
<td>Resident Centered Care</td>
<td>3.87 (0.31)</td>
<td>3.89 (0.31)</td>
<td>t = 0.88</td>
<td>0.38</td>
</tr>
<tr>
<td>Staffing Level (n = 11)</td>
<td>2.92 (0.45)</td>
<td>3.06 (0.59)</td>
<td>t = 1.75</td>
<td>0.082</td>
</tr>
</tbody>
</table>

* Shaded cells are not included in the regression models

6.3. Multivariate Analyses

6.3.1. Overall Resident Satisfaction

The results of the logistic regression of overall resident satisfaction and the four domains of job satisfaction, while controlling for additional resident, staff and facility characteristics, are found in Table 14.

For each 1-unit increase in overall job satisfaction, the odds of high overall resident satisfaction decreased by 27%. This decrease was statistically significant at the 5% level of significance, adjusted for a variety of resident, staff and facility characteristics.

There were five resident characteristics – age, years since admittance, self reported health, emotional well-being and education level – that were significantly related to overall resident satisfaction at the 5% level of significance after adjusting for overall job satisfaction and a variety of resident, staff and facility characteristics. Positive relationships were observed between overall resident satisfaction, and age and emotional well-being. The odds of high overall resident satisfaction were decreased the longer residents had resident in the LTC home, and if residents reported poor/fair/good health and if they had completed post-secondary education.

There were five staff characteristics – sex, happiness, position, hours and continuing education – that were significantly related to overall resident satisfaction at the 5% level of significance after adjusting for overall job satisfaction and a variety of resident, staff and facility characteristics. Negative relationships were observed between overall resident satisfaction, and percent of female staff, percent happy/very happy, percent PSW and percent part-time. A greater percent of
staff who had completed continuing education within the last year increased the odds of high overall resident satisfaction.

There were four facility characteristics – location, chain affiliation, profit status and bed class – that were significantly related to overall resident satisfaction at the 5% level of significance after adjusting for overall job satisfaction and a variety of resident, staff and facility characteristics. The odds of high overall resident satisfaction were lower for residents residing in homes in metropolises (+600,000 people), that were non-chain affiliated and that contained new/A bed classes. The odds of high overall resident satisfaction were higher for residents residing in for-profit LTC homes.

Of the three other domains of job satisfaction, both work content and workload were significantly related to overall resident satisfaction, but in opposite directions, at the 5% level of significance after adjusting for a variety of resident, staff and facility characteristics. The odds of high overall resident satisfaction increased by 5.56 times for each 1-unit increase in mean staff satisfaction with work content. By contrast, the odds of high overall resident satisfaction decreased by 31% for each 1-unit increase in satisfaction with workload.

Each of the logistic regression models were sufficiently discriminative and reliable.
Table 14. Logistic Regression of Overall Resident Satisfaction on Resident, Staff and Facility Characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Overall</th>
<th>Work Content</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Odds Ratio</td>
<td>95% Confidence Interval</td>
</tr>
<tr>
<td>Domain of Job Satisfaction</td>
<td>0.73</td>
<td>0.54 - 0.98</td>
</tr>
<tr>
<td>Resident Characteristics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>1.02</td>
<td>1.001 - 1.03</td>
</tr>
<tr>
<td>Years Since Admittance</td>
<td>0.92</td>
<td>0.87 - 0.97</td>
</tr>
<tr>
<td>Self-Reported Health (Poor/Fair/Good)</td>
<td>0.34</td>
<td>0.24 - 0.49</td>
</tr>
<tr>
<td>Emotional Well-Being</td>
<td>1.04</td>
<td>1.03 - 1.05</td>
</tr>
<tr>
<td>Gender (Male)</td>
<td>0.992</td>
<td>0.74 - 1.34</td>
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<tr>
<td>Education (Completed Post-Secondary Degree/Diploma)</td>
<td>0.62</td>
<td>0.41 - 0.94</td>
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<tr>
<td>Staff Characteristics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience (Percent 30-59 Years)</td>
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<td>0.98 – 1.02</td>
</tr>
<tr>
<td>Experience (Percent 60+ Years)</td>
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<td>0.997 – 1.09</td>
</tr>
<tr>
<td>Sex (Percent Female)</td>
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<td>0.87 – 0.97</td>
</tr>
<tr>
<td>Happiness (Percent Happy/Very Happy)</td>
<td>0.97</td>
<td>0.96 – 0.99</td>
</tr>
<tr>
<td>Position (Percent PSW)</td>
<td>0.98</td>
<td>0.96 – 0.99</td>
</tr>
<tr>
<td>Hours (Percent Part-Time)</td>
<td>0.98</td>
<td>0.97 – 0.99</td>
</tr>
<tr>
<td>Continuing Education (Percent Yes in Last Year)</td>
<td>1.03</td>
<td>1.01 – 1.05</td>
</tr>
<tr>
<td>Facility Characteristics</td>
<td></td>
<td></td>
</tr>
<tr>
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<td>1.09</td>
<td>0.83 - 1.43</td>
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<tr>
<td>Home Location (Metropolis (+ 600,000 people))</td>
<td>0.38</td>
<td>0.19 – 0.75</td>
</tr>
<tr>
<td>Chain Affiliation (Non-Chain)</td>
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<td>0.39 – 0.73</td>
</tr>
<tr>
<td>Profit Status (For-Profit)</td>
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<td>1.14 – 2.06</td>
</tr>
<tr>
<td>Bed Class (New, A)</td>
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<td>0.35 - 0.62</td>
</tr>
<tr>
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<td>2.21</td>
<td>0.99 – 4.93</td>
</tr>
<tr>
<td><strong>n</strong></td>
<td><strong>729</strong></td>
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</tr>
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<td><strong>Wald Χ² (Prob &gt; Χ²)</strong></td>
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<tr>
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<td>Variable</td>
<td>Workload</td>
<td>Quality of Care</td>
</tr>
<tr>
<td>----------</td>
<td>----------</td>
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</tr>
<tr>
<td></td>
<td>Odds Ratio</td>
<td>95% Confidence Interval</td>
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<tr>
<td>Domain of Job Satisfaction</td>
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</tr>
<tr>
<td><strong>Resident Characteristics</strong></td>
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<td></td>
</tr>
<tr>
<td>Age</td>
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<td>1.001 - 1.03</td>
</tr>
<tr>
<td>Years Since Admittance</td>
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<td>0.88 - 0.97</td>
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<td>0.24 - 0.49</td>
</tr>
<tr>
<td>Emotional Well-Being</td>
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<td>1.03 - 1.05</td>
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<tr>
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<td>0.72 - 1.33</td>
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<td></td>
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<tr>
<td>Experience (Percent 30-59 Years)</td>
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<td>0.98 - 1.04</td>
</tr>
<tr>
<td>Experience (Percent 60+ Years)</td>
<td>1.05</td>
<td>1.006 - 1.09</td>
</tr>
<tr>
<td>Sex (Percent Female)</td>
<td>0.92</td>
<td>0.88 - 0.97</td>
</tr>
<tr>
<td>Happiness (Percent Happy/Very Happy)</td>
<td>0.98</td>
<td>0.96 - 0.99</td>
</tr>
<tr>
<td>Position (Percent PSW)</td>
<td>0.98</td>
<td>0.97 - 0.99</td>
</tr>
<tr>
<td>Hours (Percent Part-Time)</td>
<td>0.98</td>
<td>0.97 - 0.99</td>
</tr>
<tr>
<td>Continuing Education (Percent Yes in Last Year)</td>
<td>1.02</td>
<td>1.01 - 1.03</td>
</tr>
<tr>
<td><strong>Facility Characteristics</strong></td>
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<td></td>
</tr>
<tr>
<td>Home Size (Small (&lt;150 beds))</td>
<td>1.20</td>
<td>0.96 - 1.50</td>
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<tr>
<td>Home Location (Metropolis (+ 600,000 people))</td>
<td>0.44</td>
<td>0.27 – 0.71</td>
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<tr>
<td>Chain Affiliation (Non-Chain)</td>
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<td>0.41 – 0.73</td>
</tr>
<tr>
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<td>1.48</td>
<td>1.12 - 1.96</td>
</tr>
<tr>
<td>Bed Class (New, A)</td>
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<td>0.38 - 0.68</td>
</tr>
<tr>
<td>Home Culture (Hierarchical Culture)</td>
<td>2.29</td>
<td>1.11 – 4.74</td>
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<table>
<thead>
<tr>
<th>n</th>
<th>729</th>
<th>729</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wald $\chi^2$ (Prob &gt; $\chi^2$)</td>
<td>818.82 (0.0000)</td>
<td>895.28 (0.0000)</td>
</tr>
<tr>
<td>Concordance Index</td>
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</tr>
<tr>
<td>Brier's Score</td>
<td>0.1803</td>
<td>0.1808</td>
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</table>
6.3.2. Resident Satisfaction with Staff

The results of the logistic regression of resident satisfaction with staff and the four domains of job satisfaction, while controlling for additional resident, staff and facility characteristics, are found in Table 15.

For each 1-unit increase in overall job satisfaction, the odds of high resident satisfaction with staff increased by 3%, but this increase was not statistically significant at the 5% level of significance, adjusted for a variety of resident, staff and facility characteristics.

There were two resident characteristics – self-reported health and emotional well-being – that were significantly related to resident satisfaction with staff at the 5% level of significance after adjusting for overall job satisfaction and a variety of resident, staff and facility characteristics. The odds of high resident satisfaction with staff were lower for residents that reported poor/fair/good health. By contrast, the odds of high resident satisfaction increased with emotional well-being.

There was one staff characteristic – happiness – that was significantly related to resident satisfaction with staff at the 5% level of significance after adjusting for overall job satisfaction and a variety of resident, staff and facility characteristics. The odds of high resident satisfaction decreased with percent of staff reporting to be happy/very happy.

None of the facility characteristics were significantly related to resident satisfaction with staff at the 5% level of significance, even after adjusting for a variety of resident, staff and facility characteristics.

Of the three other domains of job satisfaction, only staff satisfaction with work content was significantly related to resident satisfaction with staff at the 5% level of significance, after adjusting for a variety of resident, staff and facility characteristics. The odds of high resident satisfaction with staff increased by 79.07 times for each 1-unit increase in satisfaction with work content. The robust standard error of the staff satisfaction with work content variable was large. The resulting confidence interval was, therefore, considerably wider than other confidence intervals.
Each of the logistic regression models were sufficiently discriminative and reliable.
Table 15. Logistic Regression of Resident Satisfaction with Staff on Resident, Staff and Facility Characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Overall</th>
<th>Work Content</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Odds Ratio</td>
<td>95% Confidence Interval</td>
</tr>
<tr>
<td>Domain of Job Satisfaction</td>
<td>1.03</td>
<td>0.63 – 1.69</td>
</tr>
<tr>
<td><strong>Resident Characteristics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.99</td>
<td>0.97 – 1.01</td>
</tr>
<tr>
<td>Years Since Admittance</td>
<td>0.998</td>
<td>0.91 – 1.09</td>
</tr>
<tr>
<td>Self-Reported Health (Poor/Fair/Good)</td>
<td>0.39</td>
<td>0.24 – 0.63</td>
</tr>
<tr>
<td>Emotional Well-Being</td>
<td>1.039</td>
<td>1.02 – 1.05</td>
</tr>
<tr>
<td>Gender (Male)</td>
<td>0.99</td>
<td>0.53 – 1.82</td>
</tr>
<tr>
<td>Education (Completed Post-Secondary Degree/Diploma)</td>
<td>0.71</td>
<td>0.31 – 1.61</td>
</tr>
<tr>
<td><strong>Staff Characteristics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience (Percent 30-59 Years)</td>
<td>0.99</td>
<td>0.96 – 1.02</td>
</tr>
<tr>
<td>Experience (Percent 60+ Years)</td>
<td>1.0001</td>
<td>0.94 – 1.07</td>
</tr>
<tr>
<td>Sex (Percent Female)</td>
<td>0.98</td>
<td>0.92 – 1.05</td>
</tr>
<tr>
<td>Happiness (Percent Happy/Very Happy)</td>
<td>0.96</td>
<td>0.93 – 0.996</td>
</tr>
<tr>
<td>Position (Percent PSW)</td>
<td>1.01</td>
<td>0.98 – 1.04</td>
</tr>
<tr>
<td>Hours (Percent Part-Time)</td>
<td>1.02</td>
<td>0.9998 – 1.03</td>
</tr>
<tr>
<td>Continuing Education (Percent Yes in Last Year)</td>
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<td>0.99 – 1.02</td>
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<td><strong>Facility Characteristics</strong></td>
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<td></td>
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<tr>
<td>Home Size (Small (&lt;150 beds))</td>
<td>1.36</td>
<td>0.82 – 2.23</td>
</tr>
<tr>
<td>Home Location (Metropolis (+ 600,000 people))</td>
<td>1.18</td>
<td>0.62 – 2.23</td>
</tr>
<tr>
<td>Chain Affiliation (Non-Chain)</td>
<td>1.11</td>
<td>0.68 – 1.82</td>
</tr>
<tr>
<td>Profit Status (For-Profit)</td>
<td>1.38</td>
<td>0.79 – 2.39</td>
</tr>
<tr>
<td>Bed Class (New, A)</td>
<td>0.84</td>
<td>0.48 – 1.49</td>
</tr>
<tr>
<td>Home Culture (Hierarchical Culture)</td>
<td>1.14</td>
<td>0.38 – 3.42</td>
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<td>360</td>
<td>360</td>
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<td><strong>Wald X^2 (Prob &gt; X^2)</strong></td>
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<td>0.7676</td>
<td>0.7730</td>
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<tr>
<td>Variable</td>
<td>Workload</td>
<td>Quality of Care</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>----------</td>
<td>-----------------</td>
</tr>
<tr>
<td></td>
<td>Odds Ratio</td>
<td>95% Confidence Interval</td>
</tr>
<tr>
<td>Domain of Job Satisfaction</td>
<td>0.77</td>
<td>0.44 – 1.34</td>
</tr>
<tr>
<td>Resident Characteristics</td>
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<td></td>
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<tr>
<td>Age</td>
<td>0.99</td>
<td>0.97 - 1.01</td>
</tr>
<tr>
<td>Years Since Admittance</td>
<td>0.99</td>
<td>0.91 - 1.09</td>
</tr>
<tr>
<td>Self-Reported Health (Poor/Fair/Good)</td>
<td>0.40</td>
<td>0.25 - 0.64</td>
</tr>
<tr>
<td>Emotional Well-Being</td>
<td>1.04</td>
<td>1.02 - 1.05</td>
</tr>
<tr>
<td>Gender (Male)</td>
<td>0.98</td>
<td>0.53 - 1.82</td>
</tr>
<tr>
<td>Education (Completed Post-Secondary Degree/Diploma)</td>
<td>0.70</td>
<td>0.31 – 1.60</td>
</tr>
<tr>
<td>Staff Characteristics</td>
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<td></td>
</tr>
<tr>
<td>Experience (Percent 30-59 Years)</td>
<td>1.002</td>
<td>0.96 – 1.04</td>
</tr>
<tr>
<td>Experience (Percent 60+ Years)</td>
<td>1.01</td>
<td>0.95 – 1.08</td>
</tr>
<tr>
<td>Sex (Percent Female)</td>
<td>0.96</td>
<td>0.90 – 1.02</td>
</tr>
<tr>
<td>Happiness (Percent Happy/Very Happy)</td>
<td>0.97</td>
<td>0.93 – 1.01</td>
</tr>
<tr>
<td>Position (Percent PSW)</td>
<td>1.02</td>
<td>0.98 – 1.05</td>
</tr>
<tr>
<td>Hours (Percent Part-Time)</td>
<td>1.02</td>
<td>0.998 – 1.03</td>
</tr>
<tr>
<td>Continuing Education (Percent Yes in Last Year)</td>
<td>1.004</td>
<td>0.98 – 1.03</td>
</tr>
<tr>
<td>Facility Characteristics</td>
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<td></td>
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<tr>
<td>Home Size (Small (&lt;150 beds))</td>
<td>1.29</td>
<td>0.77 – 2.15</td>
</tr>
<tr>
<td>Home Location (Metropolis (+ 600,000 people))</td>
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<td>0.53 – 1.83</td>
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<tr>
<td>Chain Affiliation (Non-Chain)</td>
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<td>0.59 – 1.50</td>
</tr>
<tr>
<td>Profit Status (For-Profit)</td>
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<td>0.79 – 2.56</td>
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<tr>
<td>Bed Class (New, A)</td>
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<td>0.50 – 1.58</td>
</tr>
<tr>
<td>Home Culture (Hierarchical Culture)</td>
<td>1.84</td>
<td>0.58 – 5.81</td>
</tr>
<tr>
<td>n</td>
<td>360</td>
<td></td>
</tr>
<tr>
<td>Wald $X^2$ (Prob &gt; $X^2$)</td>
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</tr>
<tr>
<td>Concordance Index</td>
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<td></td>
</tr>
<tr>
<td>Brier’s Score</td>
<td>0.1930</td>
<td></td>
</tr>
</tbody>
</table>
6.4. Summary of Results

As stated in section 4.4, this thesis aimed to address three questions. These three aims and a brief summary of the results addressing each question are described below.

1. Determine whether the positive overall staff-resident satisfaction linkage described in the scientific literature was present in a sample of Ontario LTC homes, measured using overall direct care staff job satisfaction aggregated to the LTC home-level, and individual-level overall resident satisfaction scores.

The unadjusted mean overall direct care staff job satisfaction for the group of residents with high overall satisfaction was not significantly different than that for the group of residents with low overall satisfaction. This relationship proved to be confounded by a number of resident, staff and facility characteristics. Multivariate logistic regression revealed that the odds of high overall resident satisfaction decreased significantly with higher overall direct care staff job satisfaction.

Multivariate analyses revealed 14 resident, staff and facility characteristics that were statistically significant determinants of resident satisfaction. Resident characteristics included age, years since admittance, self-reported health, emotional well-being and education level. Staff characteristics included sex, happiness, position, hours and continuing education. Facility characteristics included location, chain affiliation, profit status, and bed class.

2. Determine whether the staff-resident satisfaction linkage was consistent for the domain of resident satisfaction with staff (which is a more direct measure of the quality of staff-resident interactions than is overall resident satisfaction).

Although the unadjusted mean overall direct care staff job satisfaction for the group of residents with high satisfaction with staff was statistically significantly lower than it was for the group of residents with low satisfaction, multivariate logistic regression revealed no significant relationship between overall staff satisfaction and resident satisfaction with staff.

Multivariate analyses revealed 3 resident and staff characteristics that were statistically significant determinants of resident satisfaction with staff. Resident characteristics included self-reported health and emotional well-being. Staff happiness was the only staff characteristic that
was significantly related to resident satisfaction with staff. Based on the multivariate analyses, none of the facility characteristics were significantly related to resident satisfaction with staff.

3. Determine whether the staff-resident satisfaction linkage was consistent for multiple content and context elements of direct care staff job satisfaction.

Based on the multivariate logistic regressions, two of the three domains of job satisfaction tested, staff satisfaction with work content and satisfaction with workload, were significantly related to overall resident satisfaction at the 5% level of significance. The odds of high overall resident satisfaction increased by 5.56 times for each 1-unit increase in staff satisfaction with work content, but decreased by 31% for each 1-unit increase in staff satisfaction with workload.

Based on the multivariate logistic regressions, only the work content domain of staff satisfaction was significantly related to resident satisfaction with staff at the 5% level of significance. The odds of high overall resident satisfaction increased by 79.07 times for each 1-unit increase in staff satisfaction with work content.
Chapter 7
Discussion

7.1. Discussion of Each Aim

It was the purpose of this thesis to address three gaps in the current knowledge regarding the relationship between staff and resident satisfaction. A discussion of each aim is found below.

1. Determine whether the positive overall staff-resident satisfaction linkage described in the scientific literature was present in a sample of Ontario LTC homes, measured using overall direct care staff job satisfaction aggregated to the LTC home-level, and individual-level overall resident satisfaction scores.

The mean overall direct care staff job satisfaction for the group of Ontario LTC residents sampled with high overall satisfaction was higher than it was for the group of residents with low overall satisfaction, though this difference failed to be significant. This relationship proved to be confounded by a number of resident, staff and facility characteristics; based on the multivariate analyses, overall job satisfaction was significantly negatively associated with overall resident satisfaction. This result is in contrast to previous studies in the LTC environment, where higher job satisfaction was shown to be associated with higher resident satisfaction (Liu 2007, Metlen, Eveleth & Bailey 2005, Chou, Boldy & Lee 2002). These studies failed account for many of the confounding variables included in the current study.

It has also been shown, in other service industries, that job satisfaction promotes emotional labour and citizenship behaviours (Berkowitz, Connor 1966, Aderman 1972, Levin, Isen 1975, Organ 1988, Smith, Organ & Near 1983) and, in turn, client satisfaction (Grove, Fisk 1983 in Wilson, Frimpong 2004, Grove, Fisk & Dorsch 1998, Solomon et al. 1985, Bitner 1990, Bitner, Booms & Tetreault 1990). Jenkins and Allen (Jenkins, Allen 1998), who assessed the quality of the interactions between staff and residents in a residential care setting, found that positive staff outcomes increased the rate of high quality staff-resident interactions. Given this, it seems unlikely that the observed negative association between overall staff satisfaction and overall resident satisfaction constituted a causal relationship.
Resident ratings of overall satisfaction likely incorporated their appraisal of multiple components LTC, including the quality of their interactions with staff, their physical environment, food and social involvement. It is not clear which of these components were most important to resident ratings of overall satisfaction. Despite controlling for many environmental differences, it is possible that residents weighed other non-care/service related aspects of LTC more heavily when determining their overall satisfaction score and that staff satisfaction, therefore, did not impact overall resident satisfaction or its impact was overwhelmed by other factors. This is why researchers have recommended a multidimensional approach, which recognizes the different components of service delivery, to client satisfaction research (Jimmieson, Griffin 1998).

Similarly, staff ratings of their overall job satisfaction likely incorporated their appraisal of multiple components of their jobs. These likely included content elements, which are believed to be better predictors of service-orientated attitudes because they are directly related to the object of service-performance, and context elements, which are removed from the object of service performance and are, therefore, less predictive of service-orientated behaviours (Wilson, Frimpong 2004). It is not clear which of these elements were most important to overall staff satisfaction. It is possible that staff weighed context elements more heavily during their appraisals of their overall satisfaction. Because these elements are not as predictive of service-orientated attitudes and behaviours, it is possible that the negative relationship between overall staff and resident satisfaction was not causal and that higher overall staff satisfaction did not lead to lower quality staff-resident interactions and lower resident satisfaction.

The resident characteristics that were found to be significantly associated with overall resident satisfaction, in adjusted analysis, included: age, years since admittance, self-reported health, emotional well-being and level of education. Lucas et al. reported that older residents have higher levels of satisfaction; a relationship confirmed by the above results. The positive relationships between overall resident satisfaction and resident emotional well-being and self-reported health confirm results from Lucas et al. (Lucas et al. 2007) and Kruzich et al. (Kruzich, Clinton & Kelber 1992). The negative relationships between overall resident satisfaction and length of stay and education level are at odds with the associations reported by Lucas et al. (Lucas et al. 2007) and Kruzich et al. (Kruzich, Clinton & Kelber 1992), respectively. It is unlikely that the LTC experience of more educated residents differs from that of less educated residents. Residents who have completed post-secondary education may have had higher
expectations of LTC, which were more difficult to meet, and were, therefore, less satisfied than less educated residents.

Expectations have also been posited as an explanation for the relationship between resident satisfaction and time spent in LTC. Clow et al. (Clow, Kurtz & Ozment 1998) and Fisk (Fisk et al. 1990) reported that consumer expectations are fluid. It has been postulated that with experience in LTC, residents’ expectation constructs go from “what should be” to “what can be” (Duffy, Duffy & Kilbourne 2001). Based on this literature, holding other antecedents constant, resident satisfaction should increase with time spent in LTC. The present study found the opposite result; the longer residents had resided in LTC, the lower their satisfaction was. Over time, resident physical and psychological well-being are likely to deteriorate. As antecedents to expectations, this could impact satisfaction. Residents may become increasingly unhappy as they become less independent and continue to lose contact with old friends from outside of the home. Given that resident emotional well-being was controlled for, however, it is unlikely that resident “affect” accounts for the discrepancy described above. Residents were also asked to report on their relative health, which is likely to deteriorate during their stay in LTC facilities. This variable was controlled for as well in the present analysis. Other antecedents of expectations include perceived service alternatives, perceived self-service role and factors perceived to be out of the service provider’s control (Zeithaml, Berry & Parasuraman 1993). These other antecedents of expectations were not controlled for and, in combination with residual confounding of the other antecedents of expectations, could help to explain the relationship between resident satisfaction and length of time residing in LTC.

The staff characteristics that were found to be significantly associated with high overall resident satisfaction were: a higher percent of male staff, a higher percent of staff who were very unhappy, unhappy or neither happy nor unhappy, a higher percent of RNs/RPNs, a higher percent of full-time staff and a greater percent of staff who had completed continuing education within the last year. Given that resident gender (male) was controlled for, it is possible that staff-resident interactions are improved if resident gender and staff sex are congruent. The literature suggests that staff who are happier may have a greater capacity/ability to provide prosocial and helpful attitudes and behaviours (Berkowitz, Connor 1966, Aderman 1972, Levin, Isen 1975), thereby improving resident satisfaction. This is in contrast to the result of this thesis; the odds of residents reporting high satisfaction decreased as the percent of happy or very happy staff
increased. It appears from this study, that registered nursing staff were associated with higher overall resident satisfaction, as were full-time staff. Full-time staff likely had better relationships with residents because they had spent more time at the home. Staff who had completed continuing education may have had more clinical care knowledge and may have been able to provide higher quality care, thereby meeting residents’ expectations for quality.

The facility characteristics that were significantly related to high overall resident satisfaction were: located in a city or town of fewer than 600,000 people, chain or hospital affiliation, for-profit status and D/C/B bed class. Chain and hospital affiliated homes may be able to pool resources and realize economies of scale that allow them to increase quality. In contrast to Lemke and Moos (Lemke, Moos 1989), who reported that resident satisfaction was lower in for-profit facilities, the current study found that residents were more likely to report high overall satisfaction in for-profit facilities. It is possible that for-profit facilities are more motivated to attract residents to their facilities than are not-for-profit facilities. Because Ontario LTC homes are not differentiated by cost, it is possible that for-profit homes differentiate themselves by providing nicer environments and improved care and services. Similarly, older homes with D/C/B class beds may improve other components of LTC to remain competitive with newer facilities. These other components may be more important to resident appraisals of overall satisfaction.

2. Determine whether the staff-resident satisfaction linkage was consistent for the domain of resident satisfaction with staff (which is a more direct measure of the quality of staff-resident interactions than is overall resident satisfaction).

The mean overall direct care staff job satisfaction for the group of Ontario LTC residents sampled with high overall satisfaction was significantly lower than it was for the group of residents with low overall satisfaction, at the 5% level of significance. Multivariate analyses confirmed the negative direction of the relationship between overall staff satisfaction and resident satisfaction with staff, although the null hypothesis failed to be rejected after adjusting for resident, staff and facility characteristics. Overall direct care staff satisfaction did not appear to be related to resident ratings of satisfaction with staff. It is also possible that despite using a more direct measure of the quality of staff-resident interactions, that there was no significant relationship because overall ratings of staff satisfaction may not be closely related to the object
of service-performance, and do not lead to improved staff attitudes and behaviours during service delivery. Alternatively, this result may have failed to be significant because of the smaller sample of residents that responded to the satisfaction with staff domain.

Only three resident and staff characteristics were significantly related to resident satisfaction with staff. The variables that were significantly related to resident satisfaction with staff included resident self-reported health and emotional well-being, and staff happiness. It is possible that many of the resident, staff and facility characteristics that were significantly related to overall resident satisfaction, were related to components of LTC that were not measured by the resident satisfaction with staff measure. Alternatively, the reduced number of significant resident, staff and facility characteristics may have been due to the lower number of resident responses to this domain of satisfaction.

3. Determine whether the staff-resident satisfaction linkage was consistent for multiple content and context elements of direct care staff job satisfaction.

Overall resident satisfaction was significantly positively related to staff satisfaction with work content, but was significantly negatively related to staff satisfaction with workload. A similar relationship was discovered between resident satisfaction with staff and direct care staff satisfaction with work content. Staff satisfaction with quality of care was not significantly related to either overall resident satisfaction or resident satisfaction with staff.

**Satisfaction with Work Content**

As stated above, staff satisfaction with work content was positively associated with overall resident satisfaction and resident satisfaction with staff. It is not possible to conclude whether staff satisfaction with work content leads to resident satisfaction subsequent to improved staff-resident interactions. But positive responses from residents were more likely if they resided in homes where the staff enjoyed working with residents and were close to residents and their families.

The social psychology literature reveals that prosocial (e.g. empathy) attitudes and helpful behaviours are promoted by positive mood states (Berkowitz, Connor 1966, Aderman 1972, Levin, Isen 1975) and that these attitudes and behaviours produce positive client outcomes.
(Grove, Fisk 1983 in Wilson, Frimpong 2004, Grove, Fisk & Dorsch 1998, Solomon et al. 1985, Bitner 1990, Bitner, Booms & Tetreault 1990). Jenkins and Allen (Jenkins, Allen 1998) found that positive staff outcomes increased the rate of high quality staff-resident interactions in the residential care setting. It is possible that staff satisfied with work content offered improved affective responses (the display of appropriate prosocial attitudes and helpful behaviours) during staff-resident interactions, and that resident satisfaction increased due to the higher quality interactions.

**Satisfaction with Workload**

Staff satisfaction with workload was negatively related to overall resident satisfaction but not resident satisfaction with staff, after adjusting for a variety of resident, staff and facility characteristics. This study did not control for staffing level. It is unlikely, however, that differences in staffing level accounted for this negative association because higher staffing levels have been found to relate positively to resident satisfaction (Nyman 1988, Sainfort, Ramsay & Monato 1995) and staff satisfaction (Morgan et al. 2002).

Wilson and Frimpong (Wilson, Frimpong 2004) predicted that context elements of job satisfaction, such as workload, would be less predictive of service oriented behaviours because they do not directly correspond to the object of service performance quality. Based on the results of this analysis, as predicted, staff satisfaction with workload did not appear to improve service oriented attitudes and behaviours, and the quality of staff-resident interactions.

The conceptual model posited that changes to staff behaviour and attitude would be subsequent to their feelings of satisfaction. Due to the cross-sectional design of this study, this may not be confirmed. It is possible that after providing emotional labour and citizenship behaviours, staff felt overworked and thus reported lower satisfaction with workload, but that emotional labour and citizenship behaviours none the less improved the quality of staff-resident interactions and resident satisfaction.

**7.2. Strengths and Limitations**

Despite the observed associations being limited to correlations because of the cross-sectional design, this study included a conceptual model that proposed causal pathways between direct
care staff job satisfaction and resident satisfaction, and resident, staff and organizational characteristics. The quality of the elements of the staff-resident interactions were not measured. Therefore it cannot be determined whether the observed associations between resident and staff satisfaction were in fact due to the quality of the direct care staff-resident interactions. This thesis was also limited by its failure to consider all of the possible confounders and was biased in its exclusion of severely cognitively impaired individuals.

One of the strengths of this study was that high quality data was collected; the study used instruments that were designed for use in LTC and that were further validated in the Ontario LTC context. A large number of resident and staff responses were collected and included multiple domains of direct care staff job satisfaction and resident satisfaction. Policy makers, managers and practitioners may use this information in order to enhance the salient components of job satisfaction (i.e. those that relate positively to resident satisfaction).

### 7.3. Implications

Results from this thesis may have important implications for policy, practice and research.

It is the goal of policy makers and practitioners to improve both the resident and staff experiences in LTC. It has been proposed that by improving the staff experience, resident satisfaction with LTC can be improved subsequent to higher staff satisfaction.

In Ontario’s LTC homes, supervisory support and staff communication have been found to be amongst the organizational supports that are most determinant of overall direct care staff job satisfaction (Wodchis 2010). While improvements to communication among LTC home workers, and support provided by immediate supervisors are important goals, given the results described above, these supports may not necessarily translate into improved resident satisfaction. Wodchis’s study only considered overall job satisfaction. Of the variables examined in this thesis, only staff satisfaction with work content was positively related to resident satisfaction. If both staff and resident satisfaction are to be promoted, only determinants of satisfaction with work content are likely to achieve both goals.

Caring and meaningful relationships between staff and residents should be fostered in order to promote staff satisfaction with work content. Following a preliminary study, Heliker and Nguyen
Heliker, Nguyen 2010) recommended a staff-resident exchange of day-to-day experiences and meaningful life events in order to improve staff-resident relationships. This story sharing intervention improved staff-resident understanding, respect and connection with each other. Staff who feel closer to residents and who enjoy working with residents may be more likely to provide citizenship behaviours and emotional labour resulting in more satisfied residents. Other researchers report improved relationships and higher staff satisfaction when staff have better communication skills (Kiely et al. 2000, Parsons et al. 2003).

This thesis also has important implications for researchers. Overall ratings of satisfaction incorporate staff/resident appraisals of multiple components of their experience in LTC. If researchers are interested in the quality of staff-resident interactions, overall measures of satisfaction may not be adequate. Rather, more direct measures of the impact of staff-resident interactions, for instance resident satisfaction with staff and staff satisfaction with work content, should be considered. This study also highlights the importance of sample size in studies of resident satisfaction.

In conclusion, staff satisfaction with work content was positively related to overall resident satisfaction and resident satisfaction with staff, after controlling for a variety of resident, staff and facility characteristics. Based on the conceptual model, it is possible, though it may not be concluded based on this study, that staff who feel closer to residents and who enjoy their work display more appropriate attitudes and behaviours during interactions with residents leading to higher resident satisfaction.
References


Castle, N. & Engberg, J. 2005, "Staff Turnover and Quality of Care in Nursing Homes", Medical care, vol. 43, no. 6, pp. 616.


CTV Toronto 2010, Better Insight of care homes needed: Ombudsman, CTV Toronto.


Gallup 1991, American Society for Quality Control: looking for quality in a world market place, ASQI, Milwaukee, WI.


Ministry of Health and Long-Term Care 2007b, *McGuinty government ensuring high quality long-term care - residents to benefit from standards of care and bill of rights.,* Ministry of Health and Long-Term Care, Ontario, Toronto.


Smith, M. 2004, "Commitment to Care: A Plan for Long-Term Care in Ontario" in Care MoHaLTC, ed. Queen's Printer for Ontario,.


Tellis-Nayak, V. 2007, "A Person-Centered Workplace: The Foundation for Person-Centered Caregiving in Long-Term Care", *Journal of the American Medical Directors Association*, vol. 8, no. 1, pp. 46-54.


Wunderlich, G.S. & Kohler, P. 2000, Improving the quality of long-term care, Institute of Medicine, Washington DC.


Appendices

Appendix A – Administrator Online Survey
Determinants of Quality in LTC Homes

1. Thank you for agreeing to participate in this survey!

This survey is the first phase of a two-part research project. Phase 1 (this survey) is directed to LTC Home Administrators and Directors of Care/Directors of Nursing in Ontario. In this phase, we are particularly interested in knowing Administrator perceptions of the organization and so, it is important that the Administrator complete sections A to I of this survey. Section J and K focus on clinical issues and might be best completed by the Director of Care/Director of Nursing.

Please note it is possible to leave and re-enter the survey at any time to update/complete your responses. Clicking on the link in your e-mail will open the survey and allow editing. If you choose to exit prior to completion, upon return, you will re-enter at the question after you last clicked the "Next Page" button.

In order to complete the survey, you must hit the "Completed" button on the final page.

While we prefer you complete this survey electronically, we can provide a paper version of the survey (and postage paid return envelope). Simply contact the Principal Investigator for this study, Dr. Walter Wolchis at (416)946-7387 or ltcsurvey@utoronto.ca.

If you wish to print this survey, you can use the printing options on your web browser (print icon on the top of your toolbar). Please note you must print each page individually using this approach.

This survey takes approximately 45 minutes of your time to complete.

Thank you in advance for your participation!

* 1.

In Phase 2 of this project, we will be surveying staff of LTC Homes in Ontario. The research team will visit approximately 90 homes in the province to conduct surveys with all staff in the Home (due to resource constraints at this time we cannot visit every home in the province). If you are selected to participate in the second phase, we will contact you in a few months to obtain your permission and schedule a time (at your convenience) to visit your facility. Our visit to your facility will involve explaining our study and distributing the surveys to your staff. The staff surveys will take less than 30 minutes to complete and staff will be asked to return completed surveys directly to research personnel (either immediately or afterwards by mail to the Principal Investigator). The staff survey will ask about staff satisfaction, emotional stress and sense of organizational support. By linking the two sources of information (Administrator and Staff surveys) together, we will be able to determine whether there is a relationship between your organization’s practices and staffing outcomes.

Please check the box below that indicates your willingness to participate in the second phase of this project (in-home survey).

- [ ] Yes, I am willing to participate in the in-home staffing survey.
- [ ] No, I am not willing to participate in the in-home staffing survey. (You are still requested to complete this Administrator Survey.)
## Determinants of Quality in LTC Homes

### 2. Section A: Home Corporate Characteristics

1. Name of your Long-Term Care (LTC) Home:

   [Redacted]

2. Ministry of Health LTC ID (Home Number):

   [Redacted]
3. Section B: Management Background and Training

Please note this section requires information about the background and training of the Administrator at this Home.

1. What is your age range?

2. What is your sex?
   - Male
   - Female

3. What is your first (native) language?
   - English
   - French
   - Other (please specify)

4. In what country were you born?
   - Canada
   - United States
   - Other (please specify)

5. Administrator Qualifications
   A. How many years have you (Administrator) been working in LTC?
   B. How many years have you (Administrator) been working as an LTC administrator?
   C. How many years have you been working as Administrator at this LTC Home?

6. What is the highest degree that you hold?
   - High school
   - College
   - Baccalaureate
   - Masters (Business or Health Administration)
   - Other Masters
   - Other (please specify)
Determinants of Quality in LTC Homes

7. Have you (Administrator) completed certification/accreditation (check all that apply)?

☐ Ryerson LTC Administration
☐ Canadian Healthcare Association (CHA) Long Term Care (Senior) Management
☐ Canadian College of Health Services Executives (CCHSE) Certified Health Executive
☐ OAHHS Administrator Certification
☐ OLTCA Administrator Certification
☐ Have not completed any of the above
☐ Other (please specify)
### Determinants of Quality in LTC Homes

#### 4. Section B: Management Background and Training

1. **In what MONTH and YEAR was the most recent (re-)certification obtained (MM/YYYY)?**
   (e.g. 02/2000)

<table>
<thead>
<tr>
<th>Certification Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ryerson LTC Administration</td>
<td></td>
</tr>
<tr>
<td>Canadian Healthcare Association (CHA) Long Term Care</td>
<td></td>
</tr>
<tr>
<td>(Senior) Management</td>
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<tr>
<td>Canadian College of Health Services Executives (CCHSE)</td>
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<tr>
<td>Certified Health Executive</td>
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<tr>
<td>OANHSS Administrator Certification</td>
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<tr>
<td>OLTCA Administrator Certification</td>
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<tr>
<td>Other</td>
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</tbody>
</table>
Determinants of Quality in LTC Homes

5. Section C: Quality Improvement Activities

INSTRUCTIONS

In this section you are asked to assess your Home's efforts to improve the quality of care and services it provides. Please read each statement below carefully. Indicate the extent to which you agree or disagree that the statement characterizes your Home by clicking on the button that corresponds with the most appropriate response. In answering the questions, you should think about what the Home is actually like now, not how you think it might be in the future or how you might wish it to be. If you do not have enough information to answer a question, please click on the "Do not Know" option.

GLOSSARY/SPECIAL INSTRUCTIONS

Quality of Care and Services:
Throughout the survey you are asked to make judgments about the "quality of care and services provided." In these questions, "quality of care and services" refers to how well the home performs the many activities and functions involved in resident care. This includes how well you can provide quality clinical care and care tailored to resident needs.

Senior Management:
In general, the senior executives have the overall responsibility for home operation and administration. CEO, Executive Director, Administrator, Director of Care/Nursing, Director of LTC/Seniors Services, Program Manager, Director of Food services etc. are some of the titles held by people who occupy senior executive positions.

Middle Managers:
Middle managers include first line supervisors that are not a part of the senior executive staff including nurses responsible for managing personal support workers.

1. EMPLOYER

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree Nor Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Do not Know</th>
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</thead>
<tbody>
<tr>
<td>A. This Home treats its staff well.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>B. In our geographic area, this Home is generally seen as an &quot;employer of choice&quot;.</td>
<td>☐</td>
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<tr>
<td>C. This Home really believes that its staff are its most important asset.</td>
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<td>☐</td>
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</tbody>
</table>
## Determinants of Quality in LTC Homes

### 2. INVOLVEMENT

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<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree Nor Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Do not Know</th>
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<tbody>
<tr>
<td>D.</td>
<td>The senior executives provide highly visible leadership in maintaining an environment that supports quality improvement.</td>
<td></td>
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<tr>
<td>E.</td>
<td>The senior executives consistently participate in activities to improve the quality of care and services.</td>
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<tr>
<td>F.</td>
<td>The senior executives have demonstrated an ability to manage the changes (e.g., organizational, technological) needed to improve the quality of care and services.</td>
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<td>G.</td>
<td>The senior executives act on suggestions to improve the quality of care and services.</td>
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<tr>
<td>H.</td>
<td>The senior executives generate confidence that efforts to improve quality will succeed.</td>
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<td>I.</td>
<td>Members of the governance body (Board or Council) participate in quality improvement initiatives in this home.</td>
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<td>J.</td>
<td>The governance body is critical to the success of quality improvement initiatives in this home.</td>
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</table>

### 3. PLANNING

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree Nor Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Do not Know</th>
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<tbody>
<tr>
<td>K.</td>
<td>This Home follows an organized process for implementing quality improvement initiatives.</td>
<td></td>
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<tr>
<td>L.</td>
<td>Home employees are involved in developing plans for improving quality.</td>
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<tr>
<td>M.</td>
<td>Middle managers (e.g., department heads, program directors, and first line supervisors) are playing a key role in setting priorities for quality improvement.</td>
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<td>N.</td>
<td>Home employees have the authority to correct problems in their area when quality standards are not being met.</td>
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<td>O.</td>
<td>Home employees are supported when they take necessary risks to improve quality.</td>
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<td>P.</td>
<td>This Home has an effective system for employees to make suggestions to management on how to improve quality.</td>
<td></td>
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</table>
## Determinants of Quality in LTC Homes

### 4. RESOURCES

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<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree Nor Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Do not Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q.</td>
<td>Home employees are given education and training in how to identify and act on quality improvement opportunities.</td>
<td>☐</td>
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<td>R.</td>
<td>Home employees are given education and training in statistical and other quantitative methods that support quality improvement.</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>S.</td>
<td>Home employees are given the needed education and training to improve job skills and performance.</td>
<td>☐</td>
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<td>T.</td>
<td>Home employees are rewarded and recognized (e.g., financially and/or otherwise) for improving quality.</td>
<td>☐</td>
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### 5. SATISFACTION

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<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree Nor Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Do not Know</th>
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<tbody>
<tr>
<td>U.</td>
<td>This Home does a good job of assessing current resident needs and expectations.</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>V.</td>
<td>Home employees promptly resolve resident complaints.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<td>☐</td>
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<tr>
<td>W.</td>
<td>Residents’ complaints are studied to identify patterns and prevent the same problems from recurring.</td>
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<td>☐</td>
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<tr>
<td>X.</td>
<td>This Home uses data from residents to improve services.</td>
<td>☐</td>
<td>☐</td>
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<td>☐</td>
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<tr>
<td>Y.</td>
<td>This Home uses data on customer expectations and/or satisfaction when designing new services.</td>
<td>☐</td>
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</tbody>
</table>
### Determinants of Quality in LTC Homes

#### 6. Section C: Quality Improvement Activities (Governance and Faciliation)

The following questions will ask you information about your Home’s governance and facilitation.

1. **Is this Home part of a larger organization?**
   - [ ] Yes, a nursing home chain
   - [ ] Yes, affiliated with a hospital
   - [ ] No, not part of a larger organization
   - **Other (please specify)**
     - 

2. If you answered yes, to the above question (question #1 on this page), please provide the name of the organization your Home is a part of in the space below:
   - 

3. **Is this Home managed by an organization other than the owner?**
   - [ ] No
   - [ ] Yes

4. **What type of governance structure does this Home have in place?**
   - [ ] Private Owner
   - [ ] Corporate Board of Directors
   - [ ] Charitable/Non-profit Board of Directors
   - [ ] District Board of Directors
   - [ ] Board of Management and/or Municipal Council
   - **Other (please describe)**
     - 

5. **How would you describe the involvement of your Board or Governance Body in quality improvement activities in this Home? (Check all that apply)**
   - [ ] The focus of our Board/governing body is strategic, and members are not directly, actively involved in the quality improvement activities of our Home
   - [ ] The Board/governing body has established a quality improvement committee and a Committee representative reports the Committee’s progress to the Board with some regularity
   - [ ] The focus of our Board/governing body is operational, and members are directly, actively involved in the quality improvement activities of our Home
   - [ ] The Board/governing body is involved in/guides the quality improvement activities of our Home (please specify)
     - 

6. **During their working time, do staff at this Home use a library and/or librarian with current information regarding clinical practices?**
   - [ ] No
   - [ ] Yes
Determinants of Quality in LTC Homes

7. During their working time do staff at this Home use a computer to obtain clinical reports and/or clinical research relevant to caring for residents?
   ☐ No  ☐ Yes

8. Does this LTC Home use clinical consultants/experts who are based within your Home, your group of Homes (if one of two or more Homes is owned and operated by the same company/organization) or outside your organization for quality improvement initiatives?
   ☐ Never  ☐ Rarely  ☐ Sometimes  ☐ Often  ☐ Always

9. Does this Home have a person responsible for quality improvement initiatives?
   ☐ No  ☐ Yes
## Determinants of Quality in LTC Homes

### 7. Section C: Quality Improvement Activities (Governance and Facilitation)

1. What proportion of time does the person responsible for quality improvement have dedicated to this task?

[ ] □
## Determinants of Quality in LTC Homes

### 8. Section C: Quality Improvement Activities (Additional Activities)

The following question(s) require information about quality improvement activities that occur within your Home.

1. **Does this facility collect resident satisfaction data using a survey?**
   - [ ] No
   - [ ] Yes
## Determinants of Quality in LTC Homes

### 9. Section C: Quality Improvement Activities (Additional Activities)

1. **What is the source of the resident satisfaction survey that you use?**
   - [ ] NRC+Picker
   - [ ] Smaller World
   - [ ] Our Home/Organization/Corporation developed its own
   - [ ] Other (please specify)
**Determinants of Quality in LTC Homes**

**10. Section D: Quality Improvement Implementation Culture**

The following section you refer to the quality improvement implementation culture in your Home. Please read each statement below carefully. Indicate the extent to which you agree or disagree that the statement characterizes your Home by clicking on the button that corresponds with the most appropriate response. In answering the questions, you should think about what the Home is actually like now, not how you think it might be in the future or how you might wish it to be. If you do not have enough information to answer a question, please click on the "Do not Know." option.

1. Please indicate your level of agreement with the following statements:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree Nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Do not Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. The environment of this Home encourages new ideas</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>B. Staff are encouraged to develop new ways to deliver resident care and services</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>C. There is a commitment to education and training in this Home</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>D. This Home uses interdepartmental teams to solve problems</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>E. Line staff actively participate in quality improvement efforts in this Home</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>F. Job expectations are understood by all care teams</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>G. We measure the effectiveness of our care and services</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>H. A system to monitor quality is in place in this Home</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I. Our Home continuously evaluates our care and services to change future care and services</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>J. We use data to identify what our Home is doing well</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>K. The data we collect help us to identify problems with services</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>L. We continually try to improve how we use data</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>M. This Home supports the career development of staff</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Determinants of Quality in LTC Homes

11. Section D: Quality Improvement Implementation Culture

Please read each statement below carefully. Indicate the extent to which you agree or disagree that the statement characterizes your Home by clicking on the button that corresponds with the most appropriate response. In answering the questions, you should think about what the Home is actually like now, not how you think it might be in the future or how you might wish it to be. If you do not have enough information to answer a question, please click on the “Do not Know.” option.

1. Please indicate your level of agreement with the following statements:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree Nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Do not Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>N. This Home educates and trains people on how to identify and solve</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O. This Home is committed to supporting resident-directed care</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>P. Our leadership staff encourages all employees to participate in</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>resident-directed care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q. This Home is committed to supporting staff training and development</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
## Determinants of Quality in LTC Homes

### 12. Section E: LTC Home Culture

**INSTRUCTIONS:**

The questions in Section E relate to the type of Home that your organization is most like. Each question (statement) below contains four descriptions of homes. Please distribute 100 points among the four descriptions depending on how similar the description is to your Home. None of the descriptions is any better than the others; they are just different. For each statement, please use all 100 points.

**For example:**

In question 1, if Home A seems very similar to yours, B seems somewhat similar, and C and D do not seem similar at all, you might give 70 points to A and the remaining 30 points to B.

### 1. Home Character (Please distribute 100 points)

A. This Home is a very personal place. It is a lot like an extended family. People seem to share a lot of themselves.

B. This Home is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks.

C. This Home is a very formalized and structured place. Bureaucratic procedures generally govern what people do.

D. This Home is very production oriented. A major concern is with getting the job done. People aren’t very personally involved.

### 2. Home’s Managers (Please distribute 100 points)

A. The management team in this Home are warm and caring. They seek to develop employees’ full potential and act as their mentors or guides.

B. The management team in this Home are risk-takers. They encourage employees to take risks and be innovative.

C. The management team in this Home are rule-enforcers. They expect employees to follow established rules, policies, and procedures.

D. The management team in this Home are coordinators and coaches. They help employees meet the home’s goals and objectives.

### 3. Home Cohesion (Please distribute 100 points)

A. The glue that holds this Home together is loyalty and tradition. Commitment to this Home runs high.

B. The glue that holds this Home together is commitment to innovation and development. There is an emphasis on being first.

C. The glue that holds this Home together is formal rules and policies. Maintaining a smooth running operation is important here.

D. The glue that holds this Home together is the emphasis on tasks and goal accomplishment. A production orientation is commonly shared.
Determinants of Quality in LTC Homes

13. Section E: LTC Home Culture

INSTRUCTIONS:
The questions in Section E relate to the type of Home that your organization is most like. Each question (statement) below contains four descriptions of homes. Please distribute 100 points among the four descriptions depending on how similar the description is to your Home. None of the descriptions is any better than the others; they are just different. For each statement, please use all 100 points.

For example:
In question 1, if Home A seems very similar to yours, B seems somewhat similar, and C and D do not seem similar at all, you might give 70 points to A and the remaining 30 points to B.

1. Home Emphases (Please distribute 100 points)
   A. This Home emphasizes human resources. High cohesion and morale in the organization are important.
   B. This Home emphasizes growth and acquiring new resources. Readiness to meet new challenges is important.
   C. This Home emphasizes permanence and stability. Efficient, smooth operations are important.
   D. This Home emphasizes competitive actions and achievement. Measurable goals are important.

2. Home Rewards (Please distribute 100 points)
   A. This Home distributes its rewards fairly equally among its staff. It's important that everyone from top to bottom be treated as equally as possible.
   B. This Home distributes its rewards based on individual initiative. Those with innovative ideas and actions are most rewarded.
   C. This Home distributes rewards based on rank. The higher you are, the more you get.
   D. This Home distributes rewards based on the achievement of objectives. Individuals who provide leadership and contribute to attaining the home's goals are rewarded.
### Determinants of Quality in LTC Homes

14. **Section F: Training Opportunity & Participation**

1. Which of the staff groups in your organization receive reimbursement for participating in continuing education courses (provided by or paid for by the organization)?

<table>
<thead>
<tr>
<th></th>
<th>Full Payment</th>
<th>Partial Payment</th>
<th>Payment Support is Not Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Senior Management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Professional Nursing (RN, RPN)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Other Professional Staff (e.g. social worker, allied health, dietician)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. PSWs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Other Staff (e.g. food service worker, activity aide, housekeeper)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Which of the staff groups in your organization receive reimbursement for obtaining an advanced degree (provided by or paid for by the organization)?

<table>
<thead>
<tr>
<th></th>
<th>Full Payment</th>
<th>Partial Payment</th>
<th>Payment Support is Not Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Senior Management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Professional Nursing (RN, RPN)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Other Professional Staff (e.g. social worker, allied health, dietician)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. PSWs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Other Staff (e.g. food service worker, activity aide, housekeeper)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Which of the staff groups in your organization receive bursaries/scholarships for continuing education or professional development support (provided by or paid for by the organization)?

<table>
<thead>
<tr>
<th></th>
<th>Full payment</th>
<th>Partial payment</th>
<th>Payment Support is Not Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Senior Management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Professional Nursing (RN, RPN)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Other Professional Staff (e.g. social worker, allied health, dietician)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. PSWs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Other Staff (e.g. food service worker, activity aide, housekeeper)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Determinants of Quality in LTC Homes

#### 4. Which of the following staff groups in your organization receive paid time off work to take a course (provided by or paid for by the organization)?

<table>
<thead>
<tr>
<th>Staff Group</th>
<th>Full payment</th>
<th>Partial payment</th>
<th>Payment Support Is Not Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Senior Management</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>B. Professional Nursing (RN, RPN)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>C. Other Professional Staff (e.g. social worker, allied health, dietician)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>D. PSWs</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>E. Other Staff (e.g. food service worker, activity aide, housekeeper)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

#### 5. Which of the following staff groups in your organization receive flexible scheduling to take courses (provided by or paid for by the organization)?

<table>
<thead>
<tr>
<th>Staff Group</th>
<th>Full support</th>
<th>Partial support</th>
<th>This Support Is Not Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Senior Management</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>B. Professional Nursing (RN, RPN)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>C. Other Professional Staff (e.g. social worker, allied health, dietician)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>D. PSWs</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>E. Other Staff (e.g. food service worker, activity aide, housekeeper)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

#### 6. Which of the following staff groups in your organization participate in on-line distance education courses (provided by or paid for by the organization)?

<table>
<thead>
<tr>
<th>Staff Group</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Senior Management</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>B. Professional Nursing (RN, RPN)</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>C. Other Professional Staff (e.g. social worker, allied health, dietician)</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>D. PSWs</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>E. Other Staff (e.g. food service worker, activity aide, housekeeper)</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

#### 7. In the past 12 months, what is the total spending on Training and Education in this Home (dollar value)?

[ ]
### Determinants of Quality in LTC Homes

#### 15. Section F: Training Opportunity & Participation

The following questions refer to training participation among the nursing staff (RNs, RPNs, PSWs) at your facility.

1. **In the last year, what percentage of the following staff groups in your organization participated in on-site courses conducted by Home staff or external experts (provided by or paid for by the organization)?**

   This was not

<table>
<thead>
<tr>
<th>Offered in the last year</th>
<th>0-24%</th>
<th>25-49%</th>
<th>50-74%</th>
<th>75-100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Senior Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Professional Nursing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(RN, RPN)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Other Professional Staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e.g. social worker, allied health, dietician)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. PSWs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Other Staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e.g. food service worker, activity aide, housekeeper)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. **In the last year, what percent of your Professional Nursing Staff (i.e. RN, RPN) participated in continuing education activities (e.g. formal in-service programs, internal/external courses and conferences) supported by your organization?**

   This was not

<table>
<thead>
<tr>
<th>Offered in the last year</th>
<th>0-24%</th>
<th>25-49%</th>
<th>50-74%</th>
<th>75-100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Team building</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Quality improvement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Care management practice (e.g. MDS/RAT)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Clinical care training (e.g. PIECES, U-FIRST)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Leadership development</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F. Identifying and managing adverse events</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G. Orientation for newly hired staff in a clinical setting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H. Formal mentorship program</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Determinants of Quality in LTC Homes

3. In the last year, what percent of your Personal Support Worker (PSW) Staff participated in continuing education activities (e.g. formal in-service programs, internal/external courses and conferences) supported by your organization?

This was not offered in the last year

<table>
<thead>
<tr>
<th>Activity</th>
<th>0-24%</th>
<th>25-49%</th>
<th>50-74%</th>
<th>75-100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Team building</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>B. Quality improvement</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>C. Care management practice (e.g. MDS/RAI)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>D. Clinical care training (e.g. PIECES, U-FIRST)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>E. Leadership development</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>F. Identifying and managing adverse events</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>G. Orientation for newly hired staff in a clinical setting</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>H. Formal mentorship program</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
### Determinants of Quality in LTC Homes

#### 16. Section G: Human Resources Retention Strategies

1. Which of the following recruitment/retention incentives or strategies are currently implemented for the listed staff groups at your organization (Please check all that apply)?

<table>
<thead>
<tr>
<th></th>
<th>Professional Nursing (RN, RPN)</th>
<th>Other Professional Staff (e.g. social worker, allied health, dietician)</th>
<th>Other Staff (e.g. food service worker, housekeeper, activity aide)</th>
<th>Not Implemented for any of these Staff Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Availability/use of employee assistance programs</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>B. Recognition programs such as special awards for excellence or accomplishments</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>C. Opportunities for advanced education supported by the Home and/or Home foundation</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>D. Daycare program</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>E. Allowance for personal leave (e.g. time off for family)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>F. Staff wellness program</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>G. Flex-scheduling or self-scheduling</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>H. Staff satisfaction survey (in past 12 months)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
## Determinants of Quality in LTC Homes

### 17. Section H: Human Resources Evaluation

The following questions are designed to understand the extent to which skills/competencies descriptions have been developed in your facility and currently address the listed categories of resident care needs (identified above) within your Home.

To assist you, definitions for **Resident Care Needs** are listed in the left hand column of this page. Please refer to these as needed when answering questions 1 and 2 on this page.

**A. Complex Medical Care Interventions:**
Advanced care technologies for wound care; breathing (e.g., tracheostomy, ventilator); feeding (e.g., gastrostomy tube); IV therapy, peripherally inserted central catheter, etc.

**B. Challenging/Responsive Behaviours:**
Behaviour responses that are a result of mental illness, dementia etc., and create a real or potential risk of harm for self, other residents and/or staff.

**C. Palliative Care/End of Life Care Needs:**
Pain management and comfort; spiritual needs; decision-making needs (e.g., Advanced Care Directives), etc.

**D. Dementia:**
Observable, irreversible decline in mental abilities.

**E. Chronic Mental Illness:**
Clinically significant behavioural or psychological pattern that occurs in an individual usually associated with distress, disability, or increased risk of suffering.

**F. Functional Dependency:**
Needs may include the following: mobility/re-positioning, task segmentation (help in breaking tasks down into smaller steps using verbal and physical cues)

**G. Rehabilitation:**
Need for therapy services (e.g., PT, OT, SLP) adapted to lower physical tolerance/endurance levels, ongoing exercise, and nursing that supports residents maintaining/achieving highest level of functional independence that residents desire.

**H. Psychosocial Support for Chronic/Degenerative Condition:**
Needs may include adjustment to new self views, expectations, or outlooks; need for empowerment; information needs; need for meaningful participation; need for redefined ways to contribute to the community etc.

**I. Needs Relating to Acute Illness or Acute Change of Chronic Condition:**
Needs may include management of acute symptoms; functional enhancement after exacerbation etc.

**J. Supporting Communal Living:**
Needs may arise regarding learning to live with diversity in culture, gender, age abilities.

**K. Family/Friend Support/Relationships:**
Need for long-term supportive relationships between staff and resident/family. Need for families to be an ongoing member of the care team.

**L. Culturally Specific Needs:**
Needs relating to continuity of cultural values, language, food preferences; cultural celebrations, rituals, etc.

**M. Environmental:**
Need for appropriate equipment and devices.

**N. Nutritional Care:**
Specific nutritional problems and conditions that affect or could affect the resident’s health or functional status. Treatments may include supplements between meals, therapeutic diets and weight change programs.

**O. Recreational Programming:**
Needs relating to involvement in the life of the home, participation in various social and recreational programs, including solitary
### Determinants of Quality in LTC Homes

**P. Spiritual**
Needs relating to individualized devotional activities and/or organized religious services.

#### 1. Does your Home have written descriptions for required skill/competencies for ALL direct care staff (RN, RPN, PSW)?

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Complex medical care interventions</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>B. Challenging/ responsive behaviour</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>C. Palliative care/ End of life care needs</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>D. Dementia</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>E. Chronic mental illness</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>F. Functional dependency</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>G. Rehabilitation</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>H. Psychosocial support for chronic/ Degenerative condition</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I. Needs relating to acute illness or acute change of chronic condition</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>J. Supporting communal living</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>K. Family/Friend support/ Relationships</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>L. Culturally specific needs</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>M. Environmental</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>N. Nutritional care</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>O. Recreational programming</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>P. Spiritual</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
## Determinants of Quality in LTC Homes

2. Are the following areas of resident care need explicitly and separately part of individual evaluations for **ALL** direct care staff (RN, RPN, PSW)?

<table>
<thead>
<tr>
<th>Area</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Complex medical care interventions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Challenging/responsive behaviour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Palliative care/End of life care needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Dementia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Chronic mental illness</td>
<td></td>
<td></td>
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<tr>
<td>F. Functional dependency</td>
<td></td>
<td></td>
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<tr>
<td>G. Rehabilitation</td>
<td></td>
<td></td>
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<tr>
<td>H. Psychosocial support for chronic/Degenerative condition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. Needs relating to acute illness or acute change of chronic condition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Supporting communal living</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K. Family/Friend support/Relationships</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L. Culturally specific needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M. Environmental</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N. Nutritional care for the elderly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O. Recreational programming</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P. Spiritual needs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Determinants of Quality in LTC Homes

18. Section H: Human Resources Evaluation

Please refer to the Resident Care Needs definitions on this page to accurately respond to the question below regarding direct care staff (RN, RPN, PSW) skills and competencies.

A. Complex Medical Care Interventions:
Advanced care technologies for wound care, breathing (e.g. tracheostomy, ventilator); feeding (e.g. gastrostomy tube); IV therapy, peripherally inserted central catheter, etc.

B. Challenging/Responsive Behaviour:
Behaviour responses that are a result of mental illness, dementia etc., and create a real or potential risk of harm for self, other residents and/or staff.

C. Palliative Care/End of Life Care Needs:
Pain management and comfort; spiritual needs; decision-making needs (e.g. Advanced Care Directives), etc.

D. Dementia:
Observable, irreversible decline in mental abilities.

E. Chronic Mental Illness:
Clinically significant behavioural or psychological pattern that occurs in an individual usually associated with distress, disability, or increased risk of suffering.

F. Functional Dependency:
Needs may include the following: mobility/repositioning, task segmentation (help in breaking tasks down into smaller steps using verbal and physical cuing)

G. Rehabilitation:
Need for therapy services (e.g. PT, OT, SLD) adapted to lower physical tolerance/endurance levels, ongoing exercise, and nursing that supports residents maintaining/achieving highest level of functional independence that residents desire.

H. Psychosocial Support for Chronic/Degenerative Condition:
Needs may include adjustment to new self views, expectations, or outlooks; need for empowerment; information needs; need for meaningful participation; need for redefined ways to contribute to the community etc.

I. Needs Relating to Acute Illness or Acute Change of Chronic Condition:
Needs may include management of acute symptoms; functional enhancement after exacerbation etc.

J. Supporting Communal Living:
Needs may arise regarding learning to live with diversity in culture, gender, age, abilities.

K. Family/Friend Support/Relationships:
Need for long-term supportive relationships between staff and resident/family. Need for families to be an ongoing member of the care team.

L. Culturally Specific Needs:
Needs relating to continuity of cultural values, language, food preferences; cultural celebrations, rituals, etc.

M. Environmental:
Need for appropriate equipment and devices.

N. Nutritional Care:
Specific nutritional problems and conditions that affect or could affect the resident's health or functional status. Treatments may include supplements between meals, therapeutic diets and weight change programs.

O. Recreational Programming:
Needs relating to involvement in the life of the home, participation in various social and recreational programs, including solitary pursuits.

P. Spiritual:
Needs relating to individualized devotional activities and/or organized religious services.
### Determinants of Quality in LTC Homes

1. **What percentage (0-100%)** of your direct care staff (RN, RPN, PSW) currently meet or exceed expected skills or competencies as described for your Home.

   - A. Complex medical care interventions
   - B. Challenging/responsive behaviour
   - C. Palliative care/end of life care needs
   - D. Dementia
   - E. Chronic mental illness
   - F. Functional dependency
   - G. Rehabilitation
   - H. Psychosocial support for chronic/Degenerative condition
   - I. Needs relating to acute illness or acute change of chronic condition
   - J. Supporting communal living
   - K. Family/Friend support/Relationships
   - L. Culturally specific needs
   - M. Environmental
   - N. Nutritional care
   - O. Recreational programming
   - P. Spiritual
Determinants of Quality in LTC Homes

19. Section H: Human Resources Evaluation

Use of Skills/Competencies Descriptions:
Please indicate how skills/competencies descriptions are incorporated into hiring, staff development and training within your LTC services.

1. Skills/competencies descriptions are incorporated into, or form the basis of (Please check all that apply):

☐ Job posting/job descriptions
☐ Interview questions
☐ Required qualifications at the time of hire (or to be attained within the first year of employment)
☐ Planning program orientation sessions
☐ Prioritizing program orientation sessions
☐ Program goal setting for staff and training development
☐ Training partnerships with colleges and universities
☐ Individual staff development goals
☐ Other (Please specify)

2. Staff Evaluation Using Descriptions: Do your LTC services have an ongoing process to evaluate staff against what is identified in your skills/competencies descriptions?

☐ Yes
☐ No
☐ Staff evaluations occur but not using skills/competencies descriptions

3. Are performance evaluations implemented within your Home for the following staff groups?

<table>
<thead>
<tr>
<th>Staff Group</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Senior Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Professional Nursing (RN, RPN)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Other Professional Staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e.g., social worker, allied health, dietician)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. PSWs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Other Staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e.g., food service worker, activity aide, housekeeper)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Determinants of Quality in LTC Homes

4. How frequently are performance evaluations currently implemented within your Home for the following staff groups?

The evaluations are currently performed:

A. Senior Management
B. Professional Nursing (RN, RPN)
C. Other Professional Staff (e.g. social worker, allied health, dietitian)
D. PSWs
E. Other Staff (e.g. food service worker, activity aide, housekeeper)

5. Which staff at this Home are represented by a union? (check all that apply)

- Nursing Staff (RN and RPN)
- Other Professional Staff (e.g. dieticians, physiotherapists)
- Personal Support Workers
- Other Staff (e.g. housekeeping, maintenance)
- No Staff are part of a union
## Determinants of Quality in LTC Homes

### 20. Section I: Staffing

Please complete the following sections using numerical data from staffing/human resource records.

Please note:

A **missed shift** occurs whenever the staff complement is less than planned and on-site staff must cover for responsibilities of absent staff (regardless of reason for reduced staff complement).

A **full shift missed** means that no replacement was available for a full shift length.

A **partial shift missed** means either that the shift was a short shift (e.g., half), or that a replacement was called in before the end of the shift.

1. During the past week (past 7 days), how many Professional Nursing (RN, RPN) shifts were missed in this Home?

<table>
<thead>
<tr>
<th>Full shifts missed</th>
<th>Partial shifts missed</th>
</tr>
</thead>
</table>

2. During the past week (past 7 days), how many Other Professional Staff (e.g., social worker, allied health, dietician) shifts were missed in this Home?

<table>
<thead>
<tr>
<th>Full shifts missed</th>
<th>Partial shifts missed</th>
</tr>
</thead>
</table>

3. During the past week (past 7 days), how many PSW shifts were missed in this Home?

<table>
<thead>
<tr>
<th>Full shifts missed</th>
<th>Partial shifts missed</th>
</tr>
</thead>
</table>

4. During the past week (past 7 days), how many Other Staff (e.g., food service worker, activity aide, housekeeper) shifts were missed in this Home?

<table>
<thead>
<tr>
<th>Full shifts missed</th>
<th>Partial shifts missed</th>
</tr>
</thead>
</table>

5. What is the usual length of a staff shift (in hours)?

   A. Professional Nursing (RN, RPN)
   B. Other Professional Staff (e.g., social worker, allied health, dietician)
   C. PSWs
   D. Other Staff (e.g., food service worker, activity aide, housekeeper)

6. Over the past 3 years, how many Administrators and/or Directors have left this Home?

<table>
<thead>
<tr>
<th>Administrators</th>
<th>Directors of Care/Directors of Nursing</th>
</tr>
</thead>
</table>
Determinants of Quality in LTC Homes

7. Over the past 12 months, has any staff member in any class of employment terminated their employment? Please include voluntary and involuntary terminations (e.g. retired, dismissed, resigned). Do not include contract/agency workers.

- [ ] No employees have terminated employment over the past 12 months
- [ ] Yes, employees have terminated their employment over the past 12 months
Determinants of Quality in LTC Homes

21. Section 1: Staffing

The following questions are intended to identify the number of employees of different types (e.g. Professional Nursing, Administrator) terminating their employment.

All questions below require the inclusion of both voluntary and involuntary terminations (e.g. retired, dismissed, resigned). Do not include contract/agency workers in your calculations for the questions below.

1. Over the past 12 months, how many Professional Nurses (RN, RPN) have terminated their employment?
   - Full time employees
   - Part time employees

2. Over the past 12 months, how many "Other Professional Staff" (e.g. social worker, allied health, dietician) have terminated their employment?
   - Full time employees
   - Part time employees

3. Over the past 12 months, how many PSWs have terminated their employment?
   - Full time employees
   - Part time employees

4. Over the past 12 months, how many "Other Staff" (e.g. food service worker, activity aide, housekeeper) have terminated their employment?
   - Full time employees
   - Part time employees
Determinants of Quality in LTC Homes

22. Section I: Staffing (Complement and Workload)

Data requested in this section is similar to data provided to the MOHLTC Long Term Care Homes Staffing Report. Instead of completing this section, you may provide permission for the researchers to access the data provided to the MOHLTC by checking the box below.

* 1. By checking this box you confirm that you are an authorized signing officer for the approved operator as provided for in the MOHLTC LTC Homes staffing report and you hereby provide permission for the researchers to obtain your facility’s submission to the MOHLTC Long Term Care Home Staffing Report. As with all parts of this survey, staffing data will be considered strictly confidential and results will not be made available to anyone other than you and the research team.

☐ No

☐ Yes, as the authorized signatory completing this section, please type your name in the space below:

[Space for signature]
Determinants of Quality in LTC Homes

23. Section I: Staffing (Complement and Workload)

For the following questions, please count the number of different staff regardless of the number of shifts worked.

For each employee type, write the number in each box. If “no” shift was worked, or the Home does not employ a type of staff, please enter “0”

1. During the past week (last 7 days), how many full-time (FT), part-time (PT), and agency Professional Nursing (i.e. RN, RPN) staff worked in this home?

   FT employees
   PT employees
   Agency/Contract staff

2. During the past week (last 7 days), how many full-time (FT), part-time (PT), and agency Other Professional staff (e.g. social worker, allied health, dietician) worked in this home?

   FT employees
   PT employees
   Agency/Contract staff

3. During the past week (last 7 days), how many full-time (FT), part-time (PT), and agency PSW staff worked in this home?

   FT employees
   PT employees
   Agency/Contract staff

4. During the past week (last 7 days), how many full-time (FT), part-time (PT), and agency Other staff (e.g. food service worker, activity aide, housekeeper) worked in this home?

   FT employees
   PT employees
   Agency/Contract staff
Determinants of Quality in LTC Homes

24. Section 1: Staffing Complement and Workload

The following questions are asking to provide a count of the number of shifts worked for each employee type. Please count the number of shifts worked. For each employee type, write the number in each box. If "no" shift was worked, or the Home does not employ a type of staff, please enter "0".

1. During the past week (last 7 days), how many full-time (FT), part-time (PT), and agency Professional Nursing (i.e. RN, RPN) staff shifts were worked in this home?

<table>
<thead>
<tr>
<th>FT employees</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PT employees</td>
<td></td>
</tr>
<tr>
<td>Agency/Contract staff</td>
<td></td>
</tr>
</tbody>
</table>

2. During the past week (last 7 days), how many full-time (FT), part-time (PT), and agency Other Professional (e.g. social worker, allied health, dietician) staff shifts were worked in this home?

<table>
<thead>
<tr>
<th>FT Employees</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PT Employees</td>
<td></td>
</tr>
<tr>
<td>Agency/Contract Staff</td>
<td></td>
</tr>
</tbody>
</table>

3. During the past week (last 7 days), how many full-time (FT), part-time (PT), and agency PSW staff shifts were worked in this home?

<table>
<thead>
<tr>
<th>FT Employees</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PT Employees</td>
<td></td>
</tr>
<tr>
<td>Agency/Contract Staff</td>
<td></td>
</tr>
</tbody>
</table>

4. During the past week (last 7 days), how many full-time (FT), part-time (PT), and agency Other staff (e.g. food service worker, activity aide, housekeeper) shifts were worked in this home?

<table>
<thead>
<tr>
<th>FT Employees</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PT Employees</td>
<td></td>
</tr>
<tr>
<td>Agency/Contract Staff</td>
<td></td>
</tr>
</tbody>
</table>
1. As the Administrator of this facility, if you have any additional comments on what activities your Home does to ensure and improve quality, please provide them in the space provided below:

This ends the Administrator sections of the survey. Thank you very much for your participation!

Please note the Director of Care (DOC) is required to complete the following sections (Section J and K).

You may wish to save your responses and return to the survey if the DOC is not available at this time.
The survey will automatically save your responses up to the last time you click "next page". You will re-enter the survey at the page last saved however, you may go to previous pages completed if required.

In addition, you may also forward the e-mail invitation (we sent you containing the link for this survey) to the Director of Care/Director of Nursing where they will be able to open the survey (by clicking on the same link) and submit upon completion. When the DOC opens the survey, they will enter at the point left off by the Administrator.

Finally, it is also possible to print off the Director of Care/Director of Nursing pages (Section J and K) of this survey, allowing the DOC to complete on paper (to be inputted on-line by either you (Administrator) or the Director of Care/Director of Nursing by re-entering the survey at a later time).

If you wish to print this section (or other parts of the survey), you can use the printing options on your web browser (print icon on the top of your toolbar). Please note you must print each page individually using this approach.
Determinants of Quality in LTC Homes

26. Section J: Director of Care Information

1. What is your age range?

2. What is your sex?
   ○ Male  ○ Female

3. What is your first (native) language?
   ○ English  ○ French
   ○ Other (please specify)

4. In what country were you born?
   ○ Canada  ○ United States
   ○ Other (please specify)

5. Director of Care/Director of Nursing Qualifications
   How many years have you (Director of Care) worked in LTC?
   How many years have you (Director of Care) worked as a Director of Care?
   How many years have you been working as Director of Care at this LTC Home?

6. What is the highest degree the Director of Care holds?
   ○ High School  ○ Baccalaureate
   ○ College  ○ Masters (Business or Health Administration)
   ○ Other (please specify)
## Determinants of Quality in LTC Homes

### 27. Section K: Resources and Evidence-Based Practice: Use of Practice Guideline...

For each of the following clinical issues, an organization may have more than one practice guideline to address different aspects of an issue (e.g. for diabetes, guidelines may exist for diabetes education, foot complications, and/or glucose control). For the purposes of this question, mostly broad clinical issues are listed. A Home may claim to have a guideline in place if more than just one narrow aspect of the issue is covered by the guideline.

1. For each of the following clinical issues or conditions, to what extent are practice guidelines currently available for resident care within your LTC Home?

<table>
<thead>
<tr>
<th></th>
<th>Is in development</th>
<th>Is used in the care for only selected residents with this clinical issue</th>
<th>Is used in the care of most eligible residents with this clinical issue</th>
<th>Is expected to be used in the care of all eligible residents with this clinical issue</th>
<th>No practice guideline is available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of physical restraints</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Use of anti-psychotic drugs</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Behaviours</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Dementia</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Wound/Ulcer/Skin Care</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Pain</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Falls</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Incontinence</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Respiratory infection</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Antibiotic resistant infection</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Delirium</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Depression</td>
<td>☐</td>
<td>☐</td>
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</tr>
</tbody>
</table>
Determinants of Quality in LTC Homes

28. Section K: Quality Improvement in 4 Areas

The following section of questions refer to quality improvement in 4 areas of clinical care. These include: pressure ulcer prevention, falls prevention, resident response behaviours, and medication safety.

These 4 clinical areas were selected to address quality improvement because: 1) they are specific areas of clinical/bedside activity impacting the care of LTC Home residents, 2) literature reviews and stakeholder consultations support these as prominent issues, 3) these areas have specific evidence-based practice items around them.

Pressure Ulcer Care: The following questions will be related to pressure ulcer care.

1. Does this Home have an active pressure ulcer prevention team/program?

   ☐ Yes  ☐ No
## Determinants of Quality in LTC Homes

### 29. Section K: Pressure Ulcer Care Continued

1. Who participates **always or nearly always** in the pressure ulcer prevention team/program meetings?
   - [ ] RN or RPN Staff
   - [ ] Physican
   - [ ] Dietician
   - [ ] Enteralcal Therapist
   - [ ] PSW Staff
   - [ ] Director of Care/Director of Nursing
   - [ ] Administrator
   - [ ] Board Member
   - [ ] Wound Care Nurse
   - [ ] No Team/Program Meetings Occur

2. How frequently are pressure ulcer prevention team meetings held at your Home (please select the option that most closely matches your Home’s)?

3. Which of the following activities are **always or nearly always** included in the prevention activities (Please check all that apply)?
   - [ ] Risk Assessment
   - [ ] Nutritional Assessment for all at-risk residents
   - [ ] Repositioning Program
   - [ ] Consultation with a Wound Specialist
   - [ ] Specialized Mattress
   - [ ] Other (please specify)

4. If you use risk assessment, please specify the **Risk Assessment Scale** used
   - [ ] Braden
   - [ ] Norton
   - [ ] MDS
   - [ ] No risk assessment scale is used
   - [ ] Other (please specify)

5. If applicable, please specify how often residents at risk for pressure ulcer’s are repositioned at your Home (e.g. every 4 hours):
Determinants of Quality in LTC Homes

6. If applicable, please specify the type of specialized mattress used in this Home for prevention of pressure ulcers:

☐ Foam overlay
☐ High-specification mattress
☐ No specialized mattresses are used for pressure ulcer prevention

☐ Other (please specify)
**Determinants of Quality in LTC Homes**

### 30. Section K: Quality Improvement Activities in 4 Areas (Falls Prevention)

**Falls Prevention**

The following questions refer to Fall Prevention.

1. **Does this Home have an active falls prevention team/program?**

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<th>Yes</th>
<th>No</th>
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</table>
Determinants of Quality in LTC Homes

31. Section K: Quality Improvement in 4 Areas (Fall Prevention)

1. Who participates always or nearly always in team/program meetings?
   - RN or RPN Nursing staff
   - Dietician
   - PSW staff
   - Administrator
   - Physiotherapist
   - Physician
   - Pharmacist (including contract or consultant)
   - Director of Care/Director of Nursing
   - Board Member
   - No team/program meetings occur

2. How frequently are fall prevention team meetings held at your Home (Please select the option that most closely matches your Home’s)?
   - [ ]

3. Which of the following activities are always or nearly always considered in the fall prevention activities? (Please check all that apply.)
   - Risk Assessment
   - Reactivation Program
   - Medication Management
   - Physical Restraint Use
### Determinants of Quality in LTC Homes

#### 32. Section K: Quality Improvement Activities in 4 Areas (Responsive Behaviours...)

1. **Does this Home have an active prevention team or program for resident responsive behaviours?**
   - [ ] Yes
   - [ ] No
### Determinants of Quality in LTC Homes

#### 33. Section K: Quality Improvement Activities in 4 Areas (Resident Responsive Behaviors)

1. Who participates *always or nearly always* in resident responsive behaviours team/program meetings?

   - [ ] RN or RPN Staff
   - [ ] Dietician
   - [ ] PSW Staff
   - [ ] Administrator
   - [ ] Physician
   - [ ] Pharmacist (including contract or consultant)
   - [ ] Director of Care/Director of Nursing
   - [ ] Board Member
   - [ ] No Team/Program Meetings Occur

2. How frequently are resident responsive behaviours prevention team/program meetings held at your Home (please select the option that most closely matches your Home’s)?

   - [ ]

3. Which of the following activities are *always or nearly always* included in the resident responsive behaviours activities? (Please check all that apply)

   - [ ] Client aggression management program
   - [ ] An open, non-punitice violence reporting process
   - [ ] An interdisciplinary team that examines root causes and implements changes in processes where there may be undesirable employee or resident risks
   - [ ] Regular reporting and feedback to staff regarding incidents of violence
134. **Determination of Quality in LTC Homes**

**34. Section K: Quality Improvement Activities in 4 Areas (Medication Safety)**

1. **Does this Home have an active medication safety team/program?**

   ☐ Yes  ☐ No
Determinants of Quality in LTC Homes

35. Section K: Quality Improvement in 4 Key Areas (Medication Safety Continued)

1. Who participates always or nearly always in team/program medication safety meetings?
   - [ ] RN or RPN Staff
   - [ ] Dietician
   - [ ] PSW Staff
   - [ ] Administrator
   - [ ] Physician
   - [ ] Pharmacist (including contract or consultation)
   - [ ] Director of Care/Director of Nursing
   - [ ] Board Member
   - [ ] No Team/Program Meetings

2. How frequently are medication safety team meetings held at your Home (Please select the option that most closely matches your Home’s)?
   - [ ]

3. Does this Home use a computer-generated or electronic Medication Administration Record (MAR) that shares a common database with the pharmacy system to guide and document medication administration?
   - [ ] Yes
   - [ ] No

4. In which of the following instances do staff undertake a medication review that includes:

   i. Create the most complete and accurate list possible of all current medications for each resident - Best Possible Medication History (BPMH)
   ii. Compare the BPMH against physician’s orders
   iii. Identify and bring any discrepancies to the attention of the physician and, if appropriate, make changes to the orders.

<table>
<thead>
<tr>
<th>Initial admission from</th>
<th>Full review (all 3 items)</th>
<th>Partial review</th>
<th>No review</th>
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<tr>
<td>Acute Hospital</td>
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<td>Admission from</td>
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<td>Admission from other</td>
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<td>Quarterly (Every 3 months)</td>
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<tr>
<td>Return From Acute Hospital</td>
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<tr>
<td>Discharge to other LTC Home</td>
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<tr>
<td>Other</td>
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If "Other" was selected, please specify:
1. As the Director of Care/Director of Nursing for this facility, if you have any additional comments on what activities your Home does to ensure and improve quality, please provide them in the space provided below:

Thank you for taking the time to complete this survey!

The information you provided is invaluable to this study's success!

Please note, when you hit the "Completed!" button, the survey is complete and you may exit the website with your responses saved correctly.

THANK YOU!!!
Appendix B – Staff Survey
Alpha Hospital

Thank you for agreeing to participate in this staff survey. The purpose of the survey is to understand your experiences as a staff member at this LTC home.

We need to make sure we have the best information possible. Please read each question carefully and completely fill in your answer according to the instructions provided in each section. If you want to change an answer, cross it out with an "X" and mark the correct response. Make sure it is clear which answer you want to count.

It is important to note that:
- No one will ever see your responses to this survey because results will only be shared after they are combined with others' responses.
- Do not sign the survey. If you want to enter the draw, complete and tear off the draw entry portion on the cover letter and place it in the envelope with your completed survey.
- If you are currently employed at another LTC home in addition to this one, refer to this home only when responding.
- If you start but are unable to finish the survey, please send in what you have completed in the envelope provided. Those answers will be counted.

Home Culture
The questions in this section give different descriptions about the atmosphere or environment in your LTC Home.
Please fill in the oval next to the appropriate number where 1 means least similar to this LTC Home and 10 means that the description is most like this Home.
For question 1, 2 and 3, please read all options before you fill in the ovals.

1. Home Character
   a. This Home is a very personal place. It is a lot like an extended family. People seem to share a lot of themselves.
      1 Least like this Home  2  3  4  5  6  7  8  9  10 Most like this Home
   b. This Home is a very lively and innovative place. People are willing to stick their necks out and take risks.
      1 Least like this Home  2  3  4  5  6  7  8  9  10 Most like this Home
   c. This Home is very formalized and a structured place. Bureaucratic procedures generally govern what people do.
      1 Least like this Home  2  3  4  5  6  7  8  9  10 Most like this Home
   d. This Home is very production oriented and completion of tasks is most important. People aren't very personally involved.
      1 Least like this Home  2  3  4  5  6  7  8  9  10 Most like this Home

2. Home Managers
   a. The management team in this Home are warm and caring. They encourage us to do our best and help to guide us.
      1 Least like this Home  2  3  4  5  6  7  8  9  10 Most like this Home
2. Home Managers
   b. The management team in this Home are risk-takers. They encourage employees to take risks and be innovative.

   1 Least like this Home  2  3  4  5  6  7  8  9  10 Most like this Home

   c. The management team in this Home are rule-enforcers. They expect employees to follow established rules, policies, and procedures.

   1 Least like this Home  2  3  4  5  6  7  8  9  10 Most like this Home

   d. The management team in this Home coordinate and coach staff. They help employees meet the Home’s goals and objectives.

   1 Least like this Home  2  3  4  5  6  7  8  9  10 Most like this Home

3. Home Cohesion
   a. The glue that holds this Home together is loyalty and tradition. Commitment to this Home is very high.

   1 Least like this Home  2  3  4  5  6  7  8  9  10 Most like this Home

   b. The glue that holds this Home together is commitment to new ideas. Being a leading-edge Home is important.

   1 Least like this Home  2  3  4  5  6  7  8  9  10 Most like this Home

   c. The glue that holds this Home together is formal rules and policies. Maintaining a smooth running operation is important here.

   1 Least like this Home  2  3  4  5  6  7  8  9  10 Most like this Home

   d. The glue that holds this Home together is the emphasis on tasks and goal accomplishment. A production orientation is commonly shared.

   1 Least like this Home  2  3  4  5  6  7  8  9  10 Most like this Home

Supervisory Support
When answering the questions below, please refer to the supervisor (e.g. the charge nurse) who is most often in charge when you work your shift. Fill in the oval that corresponds to your feelings about your supervisor.

4. Supervisory Support
   a. My supervisor recognizes my ability to give good care.

   Never  Seldom  Sometimes  Often  Always

   b. My supervisor tries to meet my needs.

   c. My supervisor knows me well enough to know when I have concerns about resident care.

   d. My supervisor tries to understand my point of view when I speak to them.

   e. My supervisor tells me what she/he expects of me in my work with my residents.

   f. I can rely on my supervisor when I ask for help, for example, if things are not going well between myself and my co-workers or between myself and residents and/or their families.

   g. My supervisor keeps me informed of any major changes in the work environment or organization.
4. **Supervisory Support**

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<th>Seldom</th>
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**Leadership Practices**

The following questions ask about your Home's Administrator or Senior management team. Fill in the oval that corresponds to your feelings about the **Senior Management at this Home**.

5. **The Administrator or Senior Managers...**

<table>
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<tr>
<th></th>
<th>Never</th>
<th>Seldom</th>
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**Communication**

The following questions ask about communication in this Home including the accuracy and timeliness of information. Please fill in the oval that most closely matches your level of agreement with the following statements.

6. **Communication**

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree or Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
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<td>a.</td>
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</table>
6. Communication

c. I find it enjoyable to talk with other workers in this Home.
d. When people talk to each other in this Home, we understand each other.
e. The accuracy of information passed among the workers in this Home leaves much to be desired.
f. It is easy to ask advice from any worker in this Home.
g. I feel certain that others don't completely understand the information they receive.
h. The information I receive is often inaccurate.
i. I get information on the status of residents when I need it.
j. When a resident's status changes, I get relevant information regarding their care.
k. There are needless delays in relaying information regarding resident care.
l. In matters pertaining to resident care, nurses call physicians in a timely manner.
m. The people I work with have goals that are different than my own.

Quality Improvement

The following questions ask about how quality improvement happens at this Home. For each statement, show how much you agree or disagree that the statement is true for this Home (fill in the corresponding oval). You should think about what the Home is like now, not how you think it might be in the future or how you wish it to be.

7. Quality Improvement

a. The environment of this Home encourages new ideas.
b. Staff are encouraged to develop new ways to deliver resident care and services.
c. We work with staff from different units and teams to solve problems.
d. There is a commitment to education and training in this Home.
e. All staff are actively involved in improving quality in this Home.
f. Job expectations are understood by all members of the care team.
g. We measure how good our care and services are.
h. A system to monitor quality is in place in this Home.
i. Our Home continuously evaluates our care and services to change future care and services.
j. This Home supports the career development of staff.

Resident Care

Please fill in the oval that most closely matches your agreement with each of the following 5 statements.

8. Resident Care

a. This Home does a good job of assessing resident needs and wishes.
b. Home employees promptly resolve resident complaints.
c. Residents’ complaints are studied to identify patterns and prevent same problems from recurring.
d. This Home uses reports about residents to improve services.
e. This Home uses the results of resident and family surveys when planning new services.
Involvement in Planning and Practice
We are interested in knowing how much you participate in planning how your work gets done and the future plans for the Home as a whole. Please fill in the oval that most closely matches your agreement with each of the following statements.

9. Involvement in Planning and Practice
   a. I am involved in setting the goals for this Home.
   b. I am asked for my input when changes are planned.
   c. I have the freedom to decide how to do my job.
   d. I am involved in decisions that affect me on the job.
   e. I am involved in creating our vision of the future.
   f. My ideas and inputs are valued at work.

Intent to Change Jobs
Please indicate your level of agreement with each of the following statements below by filling in the oval that most closely matches.

10. Intent to Change Jobs
    a. I will probably look for a new job in the next year.
    b. I often think about quitting.
    c. Right now, I could find a job with another employer with about the same pay and benefits.

Continuity of Care
These two questions ask about staffing practices related to continuity of care. Please indicate how you are assigned shifts at this Long-Term Care Home.

11. Continuity of Care
    a. In a typical month how often are you assigned to work on the same unit in the Home?
    b. When you are assigned to a unit, do you usually care for the same group of residents on the unit?

Emotional Health
Please read each statement carefully and decide if you ever feel this way about your job at this LTC Home. If you have never had this feeling, fill in the oval under "Never." If you have had this feeling, fill in the oval that best describes how often you feel this way.

12. Emotional Health
    a. I feel emotionally drained from my work.
    b. I feel used up at the end of the workday.
    c. I feel tired when I get up in the morning and have to face another day on the job.
    d. Working with people all day is really a strain for me.
    e. I feel burned-out from my work.
    f. I feel frustrated by my job.
    g. I feel I'm working too hard on my job.
    h. Working directly with people puts too much stress on me.
    i. I feel like I am at the end of my rope.
Rate Your Work Environment

Please rate how you feel about each part of your job listed below. On a scale from 1 to 10, fill in the oval that matches your rating where 1 is the lowest or worst and 10 is highest or best score. In this section, sometimes 10 will mean that you're really happy with this aspect of your job and sometimes 10 means that you agree with the statement.

13. Rate Your Work Environment

a. Rate whether you feel part of a team effort.
   Disagree  2  3  4  5  6  7  8  9  Agree
   
   b. Rate your satisfaction with your workload.
   1 Lowest Rating  2  3  4  5  6  7  8  9  10 Highest Rating
   
   c. Rate the level of cooperation among staff.
   1 Lowest Rating  2  3  4  5  6  7  8  9  10 Highest Rating
   
   d. Rate your overall impression of the people you work with.
   1 Lowest Rating (disagree)  2  3  4  5  6  7  8  9  10 Highest Rating (agree)
   
   e. Rate whether you have had enough training to do your job.
   1 Lowest Rating (disagree)  2  3  4  5  6  7  8  9  10 Highest Rating (agree)
   
   f. Rate whether you get support from others when doing your job.
   1 Lowest Rating (disagree)  2  3  4  5  6  7  8  9  10 Highest Rating (agree)
   
   g. Rate whether you have chances to talk about your concerns.
   1 Lowest Rating (disagree)  2  3  4  5  6  7  8  9  10 Highest Rating (agree)
   
   h. Rate how much you enjoy working with residents.
   1 Lowest Rating  2  3  4  5  6  7  8  9  10 Highest Rating
   
   i. Rate how close you feel to residents.
   1 Lowest Rating  2  3  4  5  6  7  8  9  10 Highest Rating
   
   j. Rate how much you like your work schedule.
   1 Lowest Rating  2  3  4  5  6  7  8  9  10 Highest Rating
   
   k. Rate whether residents' demands on you are reasonable.
   1 Lowest Rating (disagree)  2  3  4  5  6  7  8  9  10 Highest Rating (agree)
13. Rate Your Work Environment
   l. Rate whether family members' demands on you are reasonable.
      1 Lowest Rating (disagree) 2 3 4 5 6 7 8 9
      10 Highest Rating (agree)
   m. Rate whether you have enough time to do your job.
      1 Lowest Rating (disagree) 2 3 4 5 6 7 8 9
      10 Highest Rating (agree)
   n. Rate whether your skills are good enough to do your job.
      1 Lowest Rating (disagree) 2 3 4 5 6 7 8 9
      10 Highest Rating (agree)
   o. Rate your chances for more training supported by the Home.
      1 Lowest Rating 2 3 4 5 6 7 8 9
      10 Highest Rating
   p. Rate the care given to residents in this Home.
      1 Lowest Rating 2 3 4 5 6 7 8 9
      10 Highest Rating
   q. Rate whether you have an effect on residents' lives.
      1 Lowest Rating (disagree) 2 3 4 5 6 7 8 9
      10 Highest Rating (agree)
   r. Rate how fairly you are paid.
      1 Lowest Rating 2 3 4 5 6 7 8 9
      10 Highest Rating
   s. Rate your chances for advancement.
      1 Lowest Rating 2 3 4 5 6 7 8 9
      10 Highest Rating
   t. Rate how satisfied you are with your job.
      1 Lowest Rating 2 3 4 5 6 7 8 9
      10 Highest Rating
   u. Rate how highly you would recommend working at this facility to a friend.
      1 Lowest Rating 2 3 4 5 6 7 8 9
      10 Highest Rating

Demographic Information

14. What is the name (or number) of the unit you usually work on:
   ________________________________

15. How many LTC Homes do you currently work at?
   o 1  2  3  4 or more

16. At this home are you...
   o Part Time  o Full Time
17. What is your age range (in years)?
   - Under 24
   - 25-29
   - 30-34
   - 35-39
   - 40-44
   - 45-49
   - 50-54
   - 55-59
   - 60+

18. What is your sex?
   - Female
   - Male

19. What language do you speak at home?
   - English
   - French
   - Italian
   - Spanish
   - Chinese
   - Other Asian (e.g., Japanese, Hindi)
   - African Language
   - Creole
   - Russian or other Slavic Language
   - German, Dutch or other Western or Northern European Language
   - Other

20. Do most residents and staff in this LTC Home speak the same language that you speak at home?
   - Yes
   - No

21. What part of the world are you from?
   - Canada
   - United States
   - Western Europe or Scandinavia
   - Russia or Eastern Europe
   - Africa
   - Caribbean
   - China or Hong Kong
   - South-East Asia (e.g., Cambodia, Vietnam, etc.)
   - South Asia (India, Pakistan, Sri Lanka, etc.)
   - West Asia (Iran, Afghanistan, etc.)
   - Other

22. How long have you been working in LTC Homes?
   - Less than 1 year
   - 1-2 years
   - 3-4 years
   - 5 or more

23. How long have you been working at this LTC Home?
   - Less than 1 year
   - 1-2 years
   - 3-4 years
   - 5 or more

24. What is your current position in this Home?
   - Management (non-clinical role)
   - Registered Nurse
   - Registered Practical Nurse
   - Personal Support Worker/health care aide
   - Dietician (Non-management position)
   - Nutrition supervisor
   - Food Service Worker
   - Housekeeper or Laundry
   - Maintenance worker
   - Social Worker
   - Other
   - Other

25. What is the highest level of school that you completed?
   - Elementary school
   - Undergraduate University Degree
   - High School
   - Masters (Business, Nursing or Health Admin)
   - College Diploma
   - Other Masters

26. In the past year have you taken any training directly related to your work that was offered by your workplace or through your workplace, or externally at a university or college? Fill in all that apply.
   - None
   - Workplace
   - Other Employer Sponsored
   - University or College

27. In general, how would you rate your overall happiness?
   - Very Unhappy
   - Unhappy
   - Neither Happy nor Unhappy
   - Happy
   - Very Happy

28. In general, how would you rate your overall health?
   - Poor
   - Fair
   - Good
   - Very Good
   - Excellent

Thank you for taking the time to complete this questionnaire. Please place your questionnaire in the postage paid envelope provided and put it in the mail. If you would like to participate in the draw, please remember to tear off the bottom part of the cover letter and include it in the envelope. It will go directly to NRC Picker Canada.
Appendix C – Resident Interview Questionnaire and Visual Representations of Scales
ABC Agency
*12345
Home No. 123ABC

(RESEARCH INTERVIEW - A)

INTERVIEWER NOTE:
- A COPY OF THE 'LONG-TERM CARE HOME RESIDENT INFORMATION SHEET' TO BE LEFT WITH
THE RESIDENT.
- 'LTC RESIDENT CONSENT FORM' IS TO BE SIGNED AND RETURNED TO NRC.

1. RES ID: [space]
   YES

2. TIME NOW (Please enter in Military Time): [space]
   YES

We are interviewing residents today to learn what you think about the care and services provided here.
The information will tell us how to improve Ontario LTC homes.

3. Do you understand and agree to participate in the survey? [space]
   YES/NO

Throughout the interview I will be asking you questions which require you to answer with either "Yes", "Sometimes" or "No" (Show board). I have this board which lists the responses. I will keep this board where you can see it.

I have another board which may also help us with the interview. For some of the questions I may ask you to rate the service. This board shows you a different rating scale of "Excellent", "Very Good", "Good", "Fair", or "Poor" (Show board).

So let's get started.

[SHOW RESPONSE CARD (RESEARCH SURVEY A): YES / SOMETIMES / NO]

4. Is the area around your room quiet at night? [space]
   YES

5. Are you bothered by noise in the Home during the day? [space]
   YES

6. If you have a visitor, can you find a place to visit in private? [space]
   YES

[INTERVIEWER NOTE: This can be a room if they feel it is "private"]

7. Do you visit a doctor for medical care outside the Home? [space]
   YES

8. Do you see any doctor for medical care inside the Home? [space]
   YES

9. Is a doctor available to you when needed? [space]
   YES
**Observational Screener:** Is resident able to move around alone - not in a wheelchair? (Ask if not sure)

10. Are you able to move around alone - not in a wheelchair? [35872]
   1. Yes (Go to #13)  2. No  3. NA  4. Do not know

11. If you wanted to, can you turn yourself over in bed without help from another person? [35873]
   1. Yes (Go to #13)  2. Sometimes  3. No  4. NA  5. Do not know

12. Are you ever left sitting or laying in the same position so long that it hurts? [35874]
   1. Yes  2. Sometimes  3. No  4. NA  5. Do not know

13. Are you able to move your arms to reach things that you want? [35875]
   1. Yes  2. Sometimes  3. No  4. NA  5. Do not know

14. We'd like to find out about whether you can reach the things you need to in your room. Can you reach the call button by yourself? [35876]
   1. Yes  2. Sometimes  3. No  4. NA  5. Do not know

15. Is there a pitcher of water or something to drink where you can reach it by yourself? [35877]
   1. Yes  2. Sometimes  3. No  4. NA  5. Do not know

16. Do the staff help you with any of the following: to dress, take a shower, or bathe? [35878]
   1. Yes  2. No (Go to #16)  3. NA (Go to #16)  4. Do not know

17. Do the staff make sure you have enough personal privacy when you dress, take a shower, or bathe? [35879]
   1. Yes  2. Sometimes  3. No  4. NA  5. Do not know

18. Can you choose what time you go to bed? [35880]
   1. Yes  2. Sometimes  3. No  4. NA  5. Do not know

   1. Yes  2. Sometimes  3. No  4. NA  5. Do not know

20. Can you choose what activities you do here? [35882]
   1. Yes  2. Sometimes  3. No  4. NA  5. Do not know

21. Are there enough organized activities for you to do on the weekends? [35883]
   1. Yes  2. Sometimes  3. No  4. NA  5. Do not know

22. Are there enough organized activities for you to do during the week? [35884]
   1. Yes  2. Sometimes  3. No  4. NA  5. Do not know

**Thinking about this facility...**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>Sometimes</th>
<th>No</th>
<th>NA</th>
<th>Do not know</th>
</tr>
</thead>
<tbody>
<tr>
<td>23. Do you have periods of happiness here? [35789]</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>24. Are you satisfied with how you spend your time at this home? [35790]</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>25. Is this home a comfortable place to live? [35791]</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>26. Do you feel at home here? [35792]</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>27. Do you feel your possessions are safe at this home? [35793]</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>28. Do your clothes get lost or damaged in the laundry? [35794]</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>29. Do you feel safe and secure? [35795]</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>30. Are people working here interested in the things you’ve done in your life? [35796]</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>31. Do the people who work here know you as a person? [35797]</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
32. Do the staff who care for you change too often? [3979]

33. Are you ever unhappy with the care you get at this home? [3979]

34. Do you feel free to speak up to staff when you are unhappy with your care? [3990]

35. Do you get the care you need at this home? [3991]

Now let's talk about how you feel about things at this Home and how you feel about the care you get. Remember, when you answer, you can use any number from 0 to 10 where 0 is the worst possible, and 10 is the best possible.

[SHOW RESPONSE CARD (RESIDENT SURVEY A): 0 WORST POSSIBLE... 10 BEST POSSIBLE]

36. First, what number would you use to rate the food here at this Home? [3940]

37. Do you ever eat in the dining room (or communal area)? [3950]

38. When you eat in the dining room (or communal area), what number would you use to rate how much you enjoy mealtimes? [3981]

39. What number would you use to rate how comfortable the temperature is in this Home? [3982]

Now think about all the different areas of the Home.

40. What number would you use to rate how clean this Home is? [3983]

41. What number would you use to describe how safe and secure you feel in this Home? [3984]

Now think about all the different kinds of medicine that help with aches or pain. This includes medicine prescribed by a doctor, as well as aspirin and Tylenol.

42. Do you ever take any medicine to help with aches or pain? [3985]

43. What number would you use to rate how well the medicine worked to help with aches and pain? [3986]
44. What number would you use to rate how well the staff help you when you have pain?*  
   0 Worst Possible | 1 2 3 4 5 6 7 8 9 | 10 Best Possible | NA  
   1 2 3 4 5 6 7 8 9 10 11 12  

45. What number would you use to rate how quickly the staff come when you call for help?*  
   0 Worst Possible | 1 2 3 4 5 6 7 8 9 | 10 Best Possible | NA  
   1 2 3 4 5 6 7 8 9 10 11 12  

46. Do the staff help you with any of the following: to dress, bathe, shower or go to the toilet?  
   1 Yes  2 No (Go to #48)  3 NA (Go to #48)  4 Do not know  

47. What number would you use to rate how gentle the staff are when they’re helping you?  
   0 Worst Possible | 1 2 3 4 5 6 7 8 9 | 10 Best Possible | NA  
   1 2 3 4 5 6 7 8 9 10 11 12  

48. What number would you use to rate how respectful the staff are to you?  
   0 Worst Possible | 1 2 3 4 5 6 7 8 9 | 10 Best Possible | NA  
   1 2 3 4 5 6 7 8 9 10 11 12  

49. What number would you use to rate how well the staff listen to you?  
   0 Worst Possible | 1 2 3 4 5 6 7 8 9 | 10 Best Possible | NA  
   1 2 3 4 5 6 7 8 9 10 11 12  

50. What number would you use to rate how well the staff explain things in a way that is easy to understand?  
   0 Worst Possible | 1 2 3 4 5 6 7 8 9 | 10 Best Possible | NA  
   1 2 3 4 5 6 7 8 9 10 11 12  

51. Overall, what number would you use to rate the care you got from the staff?  
   0 Worst Possible | 1 2 3 4 5 6 7 8 9 | 10 Best Possible | NA  
   1 2 3 4 5 6 7 8 9 10 11 12  

52. Overall, what number would you use to rate this Home?  
   0 Worst Possible | 1 2 3 4 5 6 7 8 9 | 10 Best Possible | NA  
   1 2 3 4 5 6 7 8 9 10 11 12  

[SHOW RESPONSE CARD (RESIDENT SURVEY A): YES / NO / CAN’T REMEMBER]  
53. Can you remember, did staff make you feel welcome when you first came to the home?  
   1 Yes  2 No  3 Can’t remember  

[SHOW RESPONSE CARD (RESIDENT SURVEY A): YES / NO / MAYBE]  
54. Would you recommend this Long Term Care home to others?  
   1 Yes  2 No  3 Maybe  4 Do not know  

[SHOW RESPONSE CARD (RESIDENT SURVEY A): EXCELLENT / VERY GOOD / GOOD / FAIR / POOR]  
55. Overall, how would you rate the quality of care and services in this home?  
   1 Excellent  2 Very Good  3 Good  4 Fair  5 Poor  6 Do not know
These next few questions are about you.

56. Compared to other people living here, how would you rate your overall health? [0-10]

SHOW RESPONSE CARD (RESIDENT SURVEY A): 0 WORST POSSIBLE... 10 BEST POSSIBLE

57. First we want to know how you feel about your life now. Use any number from 0 to 10 where 0 is the worst possible and 10 is the best possible. What number would you use to rate your life now? [0-10]
   0 Worst possible     1     2     3     4     5     6     7     8     9     10 Best possible   NA

Now I'd like you to use this list of answer choices - Often, Sometimes, Rarely or Never

SHOW RESPONSE CARD (RESIDENT SURVEY A): OFTEN / SOMETIMES / RARELY / NEVER

58. How often do you feel worried? [0-5]

59. How often do you feel happy? [0-5]

60. How often do you feel bored here? [0-5]

61. How often do you feel lonely here? [0-5]

And finally, I would like to record some basic information about you.

62. In total, about how long have you lived in this home? [0-11]
   1. Less than 1 month    2. 1 to almost three months    3. 3 months to almost 6 months
   4. 6 months to almost a year    5. One year or more    6. Don't remember

[Q. 63 FIELD CODED - ONLY READ CHOICES IF NEEDED]

63. What is the highest level of school that you have completed? [0-12]
   1. Grade school or some high school    2. Completed high school
   3. Completed college diploma    4. Completed university degree
   5. Post-secondary technical school    6. Post-graduate degree (Ph.D or MD)
   7. Some university or college    8. Do not know

64. Were you born in Canada? [0-13]
   1. Yes    2. No

65. What is your ethnic or cultural background? (Please print)

GENDER: (DO NOT ASK IF OBVIOUS)

66. GENDER [0-15]
   1. Male    2. Female

67. In what year were you born? (or What is your age?) [0-16]
   1. (Year) 

68. (Age): [0-17]
   1. (Age) 

[ASK IF NOT OBSERVED]

69. Do you currently have a roommate? [0-17]
   1. Yes    2. No    3. Do not know
70. Do you have any additional comments, concerns, or issues about your care in this Home? If so, please explain.

That brings us to the end of the interview. Thank you very much.
Yes

No

Sometimes
Excellent

Very Good

Good

Fair

Poor
Best possible

Worst possible
Appendix D – Resident Satisfaction (Transformed) (Histograms and Normal Quantile Plots)
Vertical line represents the resident satisfaction threshold

Vertical line represents the resident satisfaction threshold
Counts

Resident Satisfaction with Staff (Reflected)

Resident Satisfaction with Staff (Square Root Transformed)

Inverse Normal

Resident Satisfaction with Staff (Square Root Transformed)
Appendix E – Staff Characteristics (Histograms, Normal Quantile Plots and Tests of Independence of LTC Homes)
<table>
<thead>
<tr>
<th>Variable</th>
<th>Test of Independence of LTC Facilities</th>
<th>p-value</th>
<th>Skewness; Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>$X^2 = 207.90$</td>
<td>0.11</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>$X^2 = 32.16$</td>
<td>0.097</td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>$X^2 = 98.07$</td>
<td>0.313</td>
<td></td>
</tr>
<tr>
<td>Happiness</td>
<td>$X^2 = 110.63$</td>
<td>0.090</td>
<td></td>
</tr>
<tr>
<td>Position</td>
<td>$X^2 = 30.66$</td>
<td>0.131</td>
<td></td>
</tr>
<tr>
<td>Continuing Education in Last Year</td>
<td>$X^2 = 33.82$</td>
<td>0.068</td>
<td></td>
</tr>
<tr>
<td>Hours</td>
<td>$X^2 = 31.60$</td>
<td>0.109</td>
<td></td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall (n = 618)</td>
<td>$X^2 = 94.34$</td>
<td>0.0001</td>
<td>-0.82 $^<em>$; 2.91 $^</em>$</td>
</tr>
<tr>
<td>Work Content (n = 625)</td>
<td>$X^2 = 38.82$</td>
<td>0.021</td>
<td>-1.17 $^<em>$; 4.35 $^</em>$</td>
</tr>
<tr>
<td>Workload (n = 631)</td>
<td>$X^2 = 136.07$</td>
<td>0.0001</td>
<td>-0.45 $^<em>$; 2.54 $^</em>$</td>
</tr>
<tr>
<td>Quality of Care (n = 614)</td>
<td>$X^2 = 56.06$</td>
<td>0.0001</td>
<td>-1.22 $^<em>$; 4.88 $^</em>$</td>
</tr>
</tbody>
</table>

^ Tested the independence of the variable with respect to LTC facility using Pearson’s chi-squared test.

+ Tested the independence of the variable with respect to LTC facility using the Kruskal-Wallis test of independence.

* Reject the null hypothesis that skewness and kurtosis were normally distributed at the 5% level of significance.
Appendix F – Facility Characteristics (Histograms, Normal Quantile Plots and Tests of Independence of LTC Homes)
<table>
<thead>
<tr>
<th>Variable</th>
<th>Test of Independence of LTC Facilities</th>
<th>p-value</th>
<th>Skewness; Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group/Developmental Culture (n = 626) (Scale 1-10) *</td>
<td>$X^2 = 95.97$</td>
<td>0.0001</td>
<td>-0.19; 7.49 *</td>
</tr>
<tr>
<td>Resident Centered Care (n = 628) (Scale 1-5) *</td>
<td>$X^2 = 125.12$</td>
<td>0.0001</td>
<td>-0.53; 3.31</td>
</tr>
</tbody>
</table>

* Reject the null hypothesis that skewness and kurtosis were normally distributed at the 5% level of significance.

* Tested the independence of the variable with respect to LTC facility using the Kruskal-Wallis test of independence.