



# Working in Long-Term Residential Care: A Qualitative Metasummary Encompassing Roles, Working Environments, Work Satisfaction, and Factors Affecting Recruitment and Retention of Nurse Aides

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## Abstract

By means of the Cumulative Index to Nursing and Allied Health Literature (CINAHL), MEDLINE, EMBASE and Ageline (AARP) database searches, the author presents a review of the literature addressing residential care aides- their roles, working environments, work satisfaction, and factors affecting recruitment and retention. Using the method of qualitative metasummary, eight broad themes emerged: job dissatisfaction, low wages, attrition and retention difficulties, threats to personal safety, the experience of hierarchy (devaluation and domination), the importance of relationships and collegial support, excessive workloads and inadequate training. Heavy reliance on American research is a limitation, but there appears to be general agreement across eight countries that residential care aide work can be arduous, demanding and demoralizing. At the same time, given the constraints that most aides work under, many aides care greatly about their clients and are very concerned about the quality of care that they are able to provide. Their voices, however, remain relatively overlooked or ignored.

**Keywords:** Nurse Aide, Metasummary, Role, Work environment, Work satisfaction, Recruitment, Retention, Long term care

## 1. Background

Over the past three decades, Canada has experienced a dramatic increase in the number of persons living beyond age 65. In 2000, life expectancy at age 65 reached 16.8 years for males and 20.5 years for females, an increase of 0.3 years and 0.2 years respectively compared with 1999 (Statistics Canada, 2002, p.52). By the year 2030, Canada's aging population is predicted to form nearly one-quarter of Canada's entire population (Statistics Canada, 2002). The change in life expectancy is anticipated to bring many economic, social, political and health care challenges but the greatest of these will be the challenge to provide quality long term nursing care to the increasing population of persons who will require it. Over the past decade, there have been dramatic shifts in staffing patterns in long term care facilities in Canada and in other countries. Nurse aides are being employed in escalating numbers. In Canada, this increase is said to be related to three important factors: the need to control health care costs, a current and projected shortage of regulated health care professionals and an ageing population which requires new approaches to health-care delivery (Canadian Nurses Association -CNA, 2008, p. 2). In the United States, aides now provide 90% of the care to residents who live in long term care facilities (Castle, 2007; Friedman, Daub, Cresci, & Keyser, 1999; Riggs, & Rantz, 2001).

In long term care institutions, aides provide basic resident care. This includes but is not limited to answering calls for assistance, assisting in all activities of daily living (bathing, dressing and grooming, serving meals and feeding residents), taking measurements such as resident's weight, blood pressure, temperature and pulse, collecting urine and stool specimens, administering suppositories and enemas, administering non prescription medications, emptying ostomies and catheters, applying prosthetics or orthotics, assisting with oxygen equipment, assisting with bi-level positive airway pressure (BIPAP) or continuous positive airway pressure (CPAP), and care of a body after death (BC Ministry of Health, 2007; Work Futures BC, 2005).

## 2. Purpose

The purpose of this qualitative metasummary is to expose tensions, map diversity and communicate the complexity of how different research traditions and investigators from different countries have contributed to our understanding of nurse aides as a whole (Greenhalgh et al., 2005, p. 427).

### 3. Qualitative Metasummary

Qualitative metasummary (also known as mixed research synthesis) is a technique developed by Sandelowski, Barroso and Voils (2007). Initially, the method was used exclusively to review and summarize qualitative findings presented in the form of surveys. In contrast to solely descriptive literature reviews, these qualitative metasummaries were analytical as well as descriptive. They reflected “a quantitative logic” (p.101) because the authors would assess the relative magnitude of each abstracted finding and then arrange and present all abstracted findings in a mathematical manner.

Throughout the process of completing several qualitative metasummaries, Sandelowski et al. observed that lists contained in qualitative reports were very similar “in form (and)...the degree of interpretation” (p.102) to lists offered in quantitative studies. In addition, the authors observed fewer “methodological differences (between qualitative and quantitative) than might be expected” (p.103). Although qualitative and quantitative studies are widely viewed as dissimilar with regards to sampling, the same authors became aware that the samples in qualitative and quantitative reports often converged in the homogeneity of composition (p.103). Therefore, they expanded their technique to include synthesis of both qualitative and quantitative reports.

The method of qualitative metasummary appears to be particularly appropriate for a review of the literature concerning nurse aides: First, the literature is mixed but predominantly quantitative. Second, the qualitative studies rely heavily on surveys or questionnaires. Third, both qualitative and quantitative studies converge in the homogeneity of the sample composition:

- more than 90% of all nurse aides world wide are women
- the majority of the studies about nurse aides report that the aides belong to minority groups
- the majority of all nurse aides world wide belong to low or lower middle income categories.

### 4. Method

#### 4.1 Extraction

Each metasummary begins with a comprehensive search using multiple strategies. For this metasummary, the electronic databases CINAHL (1982 to present), MEDLINE (1966 to present), EMBASE (1988 to present) and AARP (1978 to present) were searched using a combination of the different titles used to represent nurse aides namely: residential care attendant, certified nursing assistant, personal care aide/worker, geriatric aide, residential care aide, nurse aide, and personal support aide/worker. Searches were restricted to English language articles. Unpublished dissertations were excluded. Forty-six journal articles were identified at first. A separate search of key journals followed, and a ‘snowball’ search of references contained within all previously obtained empirical papers completed the process. A total of 138 articles and eight trade or organizational reports published between 1983 and 2007 were sampled in this way.

Of these, 16 were published in the 1980s, 60 were published in the 1990s and 68 were published from 2000 onwards. One hundred and four articles were written by American authors, 15 articles were British, thirteen were Canadian, two were Australian, five were Swedish, one was Dutch, four articles were from Taiwan and two were from the Netherlands. Twenty-six were qualitative studies, 72 were quantitative studies, six were mixed methods, ten were literature reviews and 23 were descriptive or opinion papers (including articles theorizing about the practice or modeling the practice of nurse aides). For the full contribution (origin, authors, date, methods and findings) of the different sources to the final metasummary, please refer to Table One.

In a qualitative metasummary, the bias is towards inclusion and not exclusion of reports (Sandelowski et al. 2007) therefore no report was excluded because my own “paradigmatic lens” directed me to an ‘obvious’ body of literature with a preferred methodology (Greenhalgh et al., 2005, p.427).

#### 4.2 Abstraction and Grouping

After an initial reading each primary source was annotated (reduced to a single page or less of single spaced type). This approach facilitated systematic comparison of specific issues, variables or sample characteristics (Whittemore & Knafl, 2005). The next step was “data display” (Whittemore & Knafl, 2005, p. 551). The annotations were grouped by gathering comparable studies together which allowed for “visualization of patterns and relationships within and across primary data sources (and) a starting point for interpretation” (p.551). The data display (abstraction and grouping) follows (See Table 2.).

Sandelowski et al. (2007) caution that every metasummary is subjective and negotiable because at every stage of a review, judgements have to be made regarding “what constitutes a finding, which findings are unique enough to be listed separately, which findings are similar enough to be grouped together, and what categories (they) represent” (p.109).

### 4.3 Calculating Frequency Effect Sizes

To assess the relative magnitude of the abstracted findings, the frequency effect size was calculated by “taking the number of reports containing a finding (minus any reports derived from a common parent study and representing a duplication of the same finding) and dividing this number by the total number of reports (minus any reports derived from a common parent study and representing a duplication of the same finding)” (Sandelowski et al, p.107). Frequency effect size “moves the interpretive effort from the description of patterns and relationships to higher levels of abstraction” (Whittemore & Knafl, 2005, p.551). (See Table 3.).

## 5. Interpretation of Synthesis Results

Eight broad themes emerged from the metasummary: job dissatisfaction, low wages, attrition and retention difficulties, threats to personal safety, the experience of hierarchy (devaluation and domination), the importance of relationships and collegial support, excessive workloads and inadequate training.

### 5.1 Job Dissatisfaction

Researchers in 25 studies investigated various aspects of job satisfaction. Of these studies 18 were American. In general, investigators observed that organizational factors, the working environment, facility characteristics, the supervisory style, and the aide’s feelings or beliefs all influence the degree to which care aides are satisfied with their jobs.

Multiple factors seem to promote job dissatisfaction, such as sharp divisions of labour (Grau & Wellin, 1992), inadequate staffing levels (Beck, Ortigara, Mercer, & Shue, 1999), traditional bureaucratic organizational structure (Riggs & Rantz), dismissive, demeaning supervisors (Bowers, Esmond, & Jacobson, 2003) and lack of rewards for performance (Anderson, Bailey, Corazzini & Piven, 2005). In addition, investigators point to the fact that aides often feel undervalued and unappreciated by their supervisors and perceive that their efforts are unrecognized (Ahmed & Kitson, 1993; Dewar & McCleod-Clark, 1992; Jervis, 2002a).

Aides collectively feel dissatisfied with rigid care routines and time constraints that inhibit them from providing personalized care (Brannon, Streit, & Smyer, 1992; Krovach & Krejci, 1998). They complain that they are not listened to (Moyle, Skinner, Rowe, & Gork, 2003); they complain that they are not involved in the care planning process (Beck et al. 1999); they complain that they are unable to make changes or improvements that they feel would benefit the residents because they lack any decision-making authority (Parson, Simmons, Penn, & Furlough, 2003; Monahan & McCarthy, 1992).

Burdened by minimal supervision coupled with inadequate information (Eaton, 2000) and a heavy workload (Chappell & Novak, 1992), some aides break rules out of desperation (Bowers & Becker, 1992). Others bundle tasks to accomplish several tasks at once but feel guilty about it (Bowers, Esmond, & Jacobson, 2000).

### 5.2 Low Wages

Lack of financial compensation also shapes general job dissatisfaction in the United States, where wages are less than a living wage and not competitive with the fast food industry (Harrington et al. 2003). Many American aides work extra shifts or have a second job just to cover basic expenses (Mercer, Heacock, & Beck, 1993). Some nurse aides set firm boundaries on their work: “I will do no more and no less. I’m not going up and above my way because y’all ain’t gonna pay me for it” (quote from aide, Jervis, 2002a, p.19). Low wages are associated with high turnover rates (Banaszak-Holl & Hines, 1996; Bowers et al. 2000; Caudill & Patrick, 1989; Harrington & Swan, 2003) and reduced quality of care (Jervis, 2002a). In some studies, approximately 17-20% of nurse aides report an intention to quit (Broughton & Golden, 1995; Caudill & Patrick, 1989). Harrington et al. (2003) reported that the average annual turnover rate for aides in the US in 2001 was 78%. Concern about low wages is not limited to American aides. In Taiwan, the monthly wage is also less than service industries (Hsieh & Su, 2007). In Mexico, the average salary per day is just adequate for necessities (Douglas, Meleis, Eribes, & Kim, 1996). In Canada wages vary between provinces. In British Columbia, aides currently earn \$19.73 per hour (as per the Hospital Employees Union Facilities Subsector Wage Schedule, 2008).

### 5.3 Attrition and Retention Difficulties

Care aides who leave blame inadequate staffing levels, excessive work loads, lack of training and lack of problem-solving skills necessary to cope with demands (Ahmed & Kitson, 1993; Beck et al. 1999; Lin, Yin, & Li, 2002; Riggs & Rantz, 2001). Aides often feel alone, unsupported and inadequately informed about the residents’ conditions (Ahmed & Kitson, 1993; Anderson et al. 2005; Barney, 1983; Jervis, 2002b). Foner (1994) described the everyday work of nurse aides as physically straining and emotionally wearing. Other authors have characterized the work as routine, repetitive and of low complexity (Brannon, Cohn, & Smyer, 1990; Brannon et al. 1992). The sheer physical effort of lifting and bathing multiple fragile and often immobile patients is combined with constant noise (Kristiansen, Hellzen, & Asplund, 2006), multiple, simultaneous demands (Eaton, 2000) and frequent, wide ranging complaints from residents and/or their families (Grau & Wellin, 1992; Secrest, Iorio, & Martz, 2005).

Care aides who stay employed cite being around elderly people – helping and caring for them, being part of a team, feeling valued and needed by the residents and feeling virtuous as motivational factors (Berdes & Eckert, 2001; Douglas et al. 1996; Hsieh & Su, 2007; Kristiansen et al. 2006). Research also indicates that caring relationships between aides and residents or aides and families, and collegial connections are very important motivational factors that reduce turnover rates and increase quality of care (Bowers et al. 2000; Brannon et al. 1990; Grau, Chandler, Burton, & Kolditz, 1991; Parsons et al. 2003). Several investigators found that a uniform culture (religious, ethnic, social and/or economic) between residents/families and staff contributes to harmony and/or decreased staff turnover (Berdes & Eckert, 2001; Foner, 1994; Grau & Wellin, 1992; Jervis, 2002a). Satisfied aides feel respected and supported (Grau et al. 1991; Friedman et al. 1999). They believe that they are competent and that they are able to affect residents (Parsons et al. 2003).

In summary, care aides who stay are more likely to be older (Cotton & Tuttle, 1986) and of the same social, cultural, religious or ethnic background as the residents and their families (Grau & Wellin, 1992). They become involved in care planning and decision-making (Banaszak-Holl & Hines, 1996; Broughton & Golden, 1995; Friedman et al. 1999) and they are more likely to feel that their contributions are valued and acknowledged by the residents, families and supervisors (Broughton & Golden, 1995). As a consequence, they feel that they are able to provide care in a way that is like family (Bowers et al. 2000). Feelings more strongly determine whether aides are dissatisfied than the more objective features of the job (Grieshaber, Parker, & Deering, 1995).

Although low turnover rates may appear desirable, the metasummary also revealed that very low turnover rates are undesirable. Some aides stay precisely because middle management is lacking or the supervisors are untrained (Brannon, Zinn, Mor, & Davis, 2002). Other aides stay because they have become demoralized and have developed a cynical and callous detachment to the job (Tellis-Nayak & Tellis-Nayak, 1989).

#### *5.4 Threats to Personal Safety*

There are major concerns in the literature about violence and aggression in the workplace posing a threat to the personal safety of the care aide. Nineteen articles focused specifically on nurse aides' experiences of assault by residents in long term care. Many other articles mentioned assault as a source of stress. The subject of assault is delicate one. Multiple authors describe residents who are bitter and hostile towards the aides (Brodaty, Draper, & Low, 2003; Foner, 1994; Gates, Fitzwater, & Succop, 2003; Kristiansen et al. 2006; Ramirez, Teresi, & Holmes, 2006). Psychological aggression such as shouting, name calling, threats and inappropriate sexual remarks have been found to be significantly related to nurse aides' feelings of reduced personal accomplishment and feelings of emotional exhaustion (Evers, Tomic, & Brouwers, 2002; Ramirez et al. 2006). These authors suggest that caregivers who experience aggressive behaviour feel isolated and demoralized. Several authors describe how residents or family members make demeaning racist remarks to aides (Berdes & Eckert, 2001; Foner, 1994; Mercer et al. 1993) or treat aides as servants (Grau & Wellin, 1992).

On top of this, aides endure physical violence (Burgio, Jones, Butler, & Engel, 1988; Foner, 1994; Freyne & Wrigley, 1996; Gates et al. 2003; Kristiansen et al. 2006). More than half of all aides report receiving an injury from a resident at some point during their employment (Fitzwater & Gates, 2002). The experiences of physical assault include being squeezed against a wall, pinched, scratched, spat at, hunted, hit or having objects thrown towards a person (Burgio et al. 1988; Kristiansen et al. 2006). "It is not little...not small smacks we get. They are in fact quite heavy punches and pinches and bruises...There are times when you want to scream for help" (quotes from support workers, Kristiansen et al. 2006, p. 248-249). These authors found that physical assault "was regarded as a very trying and unpleasant part of the job" (p.248) and resulted in feelings of humiliation.

Whether physical or verbal assault is intentional or not, many nurse aides regard it as violence (Gates et al. 2003) and sometimes view the residents' aberrant behaviour as deliberate (Brodaty et al. 2003). These same authors concluded that nursing home staff generally perceive residents in more negative ways than positive ways.

#### *5.5 The Experience of Hierarchy: Devaluation and Domination*

Most care aides are employed in highly structured, complex, hierarchical systems that resist change. A number of studies report very distressing findings of nurse aides' perceptions of hierarchies, leading to devaluation and domination (Helmer, Olsen, & Heim, 1993; Jervis, 2002a; Kristiansen et al. 2006). Nurse aides have been found to have feelings of humiliation, vulnerability, insignificance, invisibility, uncertainty and insecurity (Dewar & McCleod-Clark, 1992; Kristiansen et al. 2006). Kristiansen et al. (2006) refer to the "employer's meta message" (p.252) which is interpreted by nurse aides as "not feeling valued" or "confirmed" by their employer (p.252). The same authors refer to a gap "between the current economic and moral reality and the ideal moral desire, resulting in nurse aides' awareness of their own feelings of inadequacy and failure" (p.252).

Jervis (2002a) explored the relationships among nurses and nurse aides in an urban nursing home in the United States and found a militaristic paradigm for staff organization in which nurse aides served as subordinates. Nurse aides were assigned rank-specific duties and were held accountable to individuals higher in the staff hierarchy. In describing this

hierarchy, one staff member utilized a feudal system metaphor: “Nursing homes are like little principalities. You’ve got your royalty, your minor nobility, and your peasants. Everybody is trying to get in with the royalty and the peasants are getting screwed” (quote from staff member, Jervis, 2002a, p.14). The administration’s embrace of hierarchy was reflected in their choice of words such as “delegate down” and “down at the unit level” (p.14).

### 5.6 The Importance of Collegial Support

Generally, nurse aides express strong feelings of mutuality with their co-workers. “My work-mates are the most positive thing about working here...you are never alone” (quote from support worker, Kristiansen et al. 2006, p.251). Job tasks and job process are less important to institutional loyalty than the warmth, friendliness, support and caring of co-workers and superiors (Brannon et al. 1990; Grau et al. 1991). “If it wasn’t for these nurses aides socializing with one another, somebody would crack” (Quote from nurse aide, Jervis, 2002a, p. 18).

### 5.7 Excessive Workload

There is not enough time in the day for nurse aides to get everything done (Bowers et al. 2000; Krovach & Krejci, 1998). Workload is affected by a high ratio of residents to aides or a high acuity level of the residents (Garland, Oyabu, & Gipson, 1988; Mercer et al. 1993). Time saving measures include not allowing the resident to choose clothing, hurrying their dressing, cutting back on grooming, eliminating oral care and abbreviating the bath (tops and tails only) (Bowers et al. 2000). “They’ll get washed up, they’re kept dry and turned over, but they don’t get lotion, they don’t get the one on ones, they don’t get walks” (quote from aide, Bowers et al. 2000, p.60). Inadequate equipment or lack of supplies also prevents aides from doing their job effectively (Garland, Oyabu, & Gipson, 1989; Mercer, Heacock, & Beck, 1994). Experienced aides find ways to get the job done by integrating demands, maximizing efficiency through organization and knowing when to safely cut corners (Bowers & Becker, 1992).

### 5.8 Inadequate Training

Three quarters of all aides feel inadequately trained for the job (Mercer et al. 1993). Due to heavy workloads and time constraints, aides receive varied and limited orientations and limited in-service education (Banaszak-Holl & Hines, 1996; Eaton, 2000; Lin et al. 2002).

It has been well documented that most aides lack basic mental health training and the skills to understand and manage challenging behaviours (Evers, Tomic, & Brouwers, 2002; Feldt & Ryden, 1992; Grant, Kane, Potthoff, & Ryden, 1996; Teresi, Holmes, Ramires, & Kong, 1998). Aides may experience exhaustion, tension and burn-out due to turmoil and disruption (Chappell & Novak, 1994; Dougherty, Bolger, Preston, Jones, & Payne, 1992).

In the United States, a 75 hour training course and certification testing is federally mandated (Castle, Engberg, Anderson, & Men, 2007), although some states (for example, California) require up to 160 hours of training (Harrington, O’Meara, Collier, & Schnelle, 2003). Aides in Taiwan are supposed to receive 100 hours of training and a certification exam, but not all aides receive minimum training and certificates (Sung, Chang, & Tsai, 2005). In Mexico, aides receive “some on the job training” (Douglas, Meleis, Eribes, & Kim, 1996). In Canada, the length of the care aide program varies from seven weeks in Ontario (personal support worker) to 32 weeks in the Northwest Territories (long term care attendant) (Health Employers Association of British Columbia, 2000). Canadian care aides are not regulated by provincial legislation and regulations seen for other members of the nursing team (LPNs, RPNs and RNs).

## 6. Discussion

Of the total articles (138), the frequency effect size was greatest for caring relationships and/or connectedness between aides and residents or aides and families, and collegial connections which appear to be very important motivational factors that may reduce turnover rates and increase quality of care (44.8%). A number of nurse aides remain committed and motivated to remain on the job even though the working conditions appear to be deplorable. These aides are not motivated by solely by wages or the working environment but by a combination of intrinsic factors such as a belief that their job is important (Parsons et al. 2003) or a belief that they are needed (Monahan & McCarthy, 1992).

This finding was followed closely by the concern regarding lack of financial compensation and rewards which shape general job dissatisfaction (frequency effect size 38.0%), supervisory styles that are generally hierarchical, demeaning and dismissive (frequency effect size 37.3%) and violence and aggression in the workplace which pose serious threats to the personal safety of the aide (frequency effect size 36.6%). As a group, nurse aides have complained that they very little voice. They are rarely directly consulted about their opinions and experiences. They are marginalized by frequent episodes of assault and by feelings of degradation and humiliation resulting from bureaucracy. Poor working conditions lead to feelings of guilt because most genuinely care about the residents.

There is a cost to society for overlooking the work of nurse aides, portraying nurse aide work as unskilled or ignoring aides as valuable sources of information. As the population ages, the care aide role will become a pivotal issue. Aides serve a very vulnerable segment of our society therefore “some interest must be taken in (aides)...if the care provided to the elderly is truly a concern” (Atchison, 1998, p.137).

Although care aides are most commonly utilized in residential continuing care they are also now being introduced to acute care settings. Job/role descriptions are continuously being updated and rewritten as part of the process of introducing the care aide to medical and surgical nursing units (nursing service aide). These are the same aides who report not feeling valued or nourished by their organizations. "I know I am dispensable" (quote from aide, Jervis, 2002a, p. 18). "It's like you're low class as a nursing assistant, you're on the bottom – which I don't like" (quote from aide, Jervis, 2002a, p.17).

Research about nurse aides is important because there are so many qualities of care issues and so many unsolved problems in their working environments. If organizations are concerned about positive outcomes for patients in acute and long term care and if they are concerned about improving the performance of individual workers and the organizations themselves, then they should address the needs voiced by the aides (Liu, 2006, p.56). Finally, heavy reliance on American research regarding the work as arduous, demanding and often demoralizing is a limitation. Further work is required to determine if American findings are truly generalizable to other countries.

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Table 1. The Full Contribution of the Different Sources to the Final Metasummary

<b>Author(s) Year Country</b>	<b>Study Design</b>	<b>Subjects</b>	<b>Method</b>	<b>Results</b>
Advisory Committee on Health Human Resources 2000 Canada	Government sponsored report addressing nurse shortage in Canada			National absence of data about nurse aides Nurse aides are non-regulated Nurse aides are not defined as nurses Basic policy questions are unanswerable because of the absence of a national data bank. In comparison to national data banks available to US investigators
Ahmed, & Kitson 1993 England	Qualitative	2 community hospitals and 2 units for people with learning disabilities Mixed staff N=48	“a multi-method approach” Semi-structured interviews, Informal opinions, non-participant observation, field notes	To provide quality care, effective leadership and efficient teams rather than primary nursing are needed
Anderson, Ammarell, Bailey, Clon-Emeric, Corazzini, Lillie, Piven... 2005 USA	Qualitative	11 nurse aides and 89 “other” staff members	Observation and interview data	“Mother wit” guides aides who treat residents as their own children = infantilization and misinterpretations of depression and pain. The Golden rule: respond to residents as you would want someone to respond to you. Aides act without the benefit of professional interpretations. Aides possess raw data that can be interpreted by RNs. Aides should be involved in care planning.
Anderson, Bailey, Corazzini, & Piven 2005 USA	Opinion			What contributes to poor quality of care? RNs who have minimal interaction with aides, LPNs who have minimal interaction with aides, aides in small cliques, no rewards for team work, heavy reliance on rules and rule enforcement, managers who have inadequate information and managers who fail to acknowledge good behaviour
Anderson, Corazzini, & McDaniel 2004 USA	Quantitative	2317 aides in 164 nursing homes in Texas	survey	Lower turnover is dependent on interaction climate and communication. Reward based climates, communication openness and accuracy = lower turnover rates.

Anderson, Issel, & McDaniel 2003 USA	Quantitative	DONS and RNs in 164 Texas nursing homes	Surveys given to DON and RNs regarding NA patterns of behaviour	Relationship oriented leadership and less formalization resulted in decreased use of restraints, decreased incidence of fractures
Astrom, Nilsson, Norberg, Sandman, & Winblad 1991 Sweden	Quantitative	RNs, LPNs, NAs in one somatic long term care clinic and one psycho-geriatric clinic n = 358	Empathy scale, burnout measure	Staff with highest empathy rated close contact with patients as most important. Staff with lowest empathy rated improvement in patients' health and contact with colleagues as most important. Those who have less positive outcomes in work risk more burnout.
Atchison 1998 USA	Quantitative	Nurse aides N=283 in 24 nursing homes	Questionnaire 5 point Likert scale	Socialization at work is an important factor for job satisfaction
Baldwin, Roberts, Fitzpatrick, While, & Cowan 2003 British	Review of existing literature			Lack of role clarification of roles: support workers saw their work as similar to RNs. RNs saw support workers' roles as basic care
Banazak, Mickus, Averill, & Colenda 2000 USA	Review of lessons learned in implementing an education intervention	92 nurse aides, 35% attendance rate		Actual staff attendance at the in-service training was marginal due to lack of time and requirement to forgo patient care in order to attend.
Banaszak-Holl & Hines 1996 USA	Quantitative	254 nursing homes in 10 states	Telephone survey of DONs and administrators plus access data bank (RAI)	Involvement of aides in care planning can significantly reduce turnover. Intensity of work demands does not result in increased turnover. Training for aides does not reduce turnover
Barney 1983 USA	Opinion		Author spent two days doing the work of a nurse aide	Aides are well motivated. Supervision is limited. Author concludes best care given in a home with a family or social quality. Community involvement is important. Cultural homogeneity contributes to better care
Barry, Brannon, & Mor	Quantitative	Directors of nursing n=156, day shift	survey	Higher number of rewards given to nurse aides resulted in lower incidence of pressure ulcers. Nurse aides who had more influence resulted in higher

2005 USA		charge nurses n=430 In 156 facilities		social engagement for residents
Beck, Baldwin, Modlin, & Lewis 1990 USA	Quantitative	21 RNs 20 aides	Guided interview	Information on characteristics & management of aggressive behaviour. Aggression occurs more often in the morning, during dressing. Soothing, using comfort measures and reasoning were commonly used by aides to reduce aggression.
Beck, Doan, & Cody 2002 USA	Opinion/discussion			Aides provide 8 of 10 hours of paid care. Discussion of challenges (specifically organizational...hierarchical structures)
Beck, Ortigara, Mercer, & Shue 1999 USA	Literature Review			Most nursing homes organized hierarchically, aides receive few rewards for performance, aides have few opportunities to feel successful, aides minimally involved in care planning, aides are mostly African American or Hispanic and supervisors are mostly White, residents are primarily White.
Berdes & Eckert 2001 USA	Qualitative	10 residents and 10 aides in three homes (n = 60)	Face to face interviews	75% of aides experience racism on the job. Job characterized by low wages, few or no benefits, low opportunity for advancement, job instability, over-representation of minorities
Borson, Reichman, Coyne, Rovner, & Sakaue 2000 USA	Quantitative	Nursing directors of medicare certified facilities N=899	survey	Nursing directors felt that only 32% of nurse aides possessed expertise in managing residents' "disruptive behaviours"
Bowers 1989 British	Opinion			Primary nursing has some serious repercussions: over-involvement, disagreements about care strategies, divisions in nursing team, lack of communication, weakening of the team as a whole
Bowers, & Becker 1992 USA	Qualitative	Nurse aides in 3 urban nursing homes N=30	Participant observation, in-depth interviews, grounded theory	Each nurse aide develops his or her own working strategy in order to survive by cutting corners and breaking rules
Bowers, Esmond & Jacobson 2000	Qualitative	Nurse aides n = 38	Participant observation and in-depth interviewing	Relationships between nurse aides and residents are an essential determinant of quality of care. Adequate staffing is essential to allow NAs to nurture relationships with residents.

USA			Grounded theory, constant comparative	
Bowers, Esmond & Jacobson 2003 USA	Qualitative	Nurse aides, n = 41	Grounded theory dimensional analysis	Aides do not necessarily quit because of hard work or poor pay. Rather, it is the way aides are treated by their employers that accounts for their leaving. Dismissing experiences will override positive experiences. Managers must develop a culture of respect, instead of demeaning or humiliating aides.
Brannon, Cohn, & Smyer 1990 USA	Quantitative	388 aides	Employee survey of 21 Pennsylvania nursing homes	When compared with women in small organizations: aides less satisfied with pay, less satisfied with skill variety, more satisfied with co-workers, more satisfied with task significance
Brannon, Smyer, Cohn, Borhardt, Landry, Jay et al. 1988 USA	Quantitative	388 aides and 101 LPNs in 46 nursing homes in Pennsylvania	Job diagnostic survey	Aide positions have less motivating potential than LPN positions, aides receive inadequate feedback, routines and hierarchies result in self limiting contracts that inhibit motivation. Wage structure plagues staff recruitment and retention.
Brannon, Streit, & Smyer 1992 USA	Quantitative	Observation of 214 aides in 4 nursing homes	Functional job analysis technique of 3371 tasks	Orientation of tasks is not predominantly toward the residents. Complexity of tasks is low. Tasks with greatest psychosocial quality are performed less frequently
Brannon, Zinn, Mor, & Davis 2002 USA	Quantitative	308 nursing facilities in 8 states. 288 DONs	Telephone survey	Predictors of low turnover: untrained supervisors, low RN turnover, flat management structure, presence of a union. Very low turnover rates are undesirable. Predictors of high turnover: high RN turnover, training site, investor owned facility rather than non-profit
Brodady, Draper & Low 2003 Australia	Quantitative	253 staff in 12 nursing homes: no differentiation between types of "staff"	Questionnaire survey	91% of "staff" reported that they were happy in their job. 25% reported that the residents provided no job satisfaction
Broughton & Golden 1995 USA	Quantitative	Random samples from 38 nursing homes	Telephone interview	83% would value more training about managing behaviours of Alzheimer's disease. 90% interested in further training regarding dementias. 89% value a support group. Suggest acknowledge the

		Aides = 273		contributions of aides, include aides in care planning, provide support groups
Burgio, Engel, Hawkins, McCormick, & Scheve 1990 USA	Quantitative	Sampling of aide behaviours in one 223 bed nursing home, 7 times a day for 37 months		Covert sampling. Research done under the guise of incontinence research. Aides did not give consent to being observed. Most observations occurred in the hallways. LPNs were observed to be engaged in more direct care activities than aides (in the hallways).
Burgio, Fisher, Fairchild, Scilley, & Hardin 2004 USA	Between groups quasi-experimental comparison design	4 nursing homes in Alabama	Observations plus multiple tools to examine permanent versus rotating assignment	Two facilities permanent assignment versus two facilities rotating assignment: residents received higher hygiene rating in permanent assign. But residents received more meds, more psychotropic meds in permanent assign. No differences in disruptive behaviours, no differences in turnover rates, more absenteeism in permanent assignment
Burgio, Tice-Jones, Butler, & Engel 1988 USA	Quantitative	32 geriatric assistants in one nursing home	survey	22% of residents are verbally abusive, 20% are physically abusive towards geriatric assistants
Caris-Verhallen, Kerstra, & Bensing 1997 Netherlands	Literature review of research about communication with residents			Interaction with residents is low, speakers modify speech (baby talk), interaction styles are largely superficial, monotonous or routinized. Time pressure results in brief, task related interactions.
Carpiac-Claver & Levy-Storms 2007 USA	Qualitative	Video analysis of 23 aides interactions with residents	Grounded theory	Video recording of mealtimes and analysis of interactions. Communication between aides and residents is limited, lacks depth and residents not generally given enough time to respond.
Castle 2007 USA	Quantitative	72 nursing homes in 6 states Nurse aides N=1579	questionnaire	Nurse aides enjoy working with residents and co-workers but are not satisfied with pay
Castle, Engberg, Anderson, & Men 2007 USA	Quantitative	1779 aides in 72 nursing homes in 5 states	survey	Job satisfaction is related to intent to leave and turnover. Training, rewards and workload are important aspects of nurse aide work

Castle, & Myers 2006 USA	Quantitative	17,000 nursing homes	Audit of deficiency citations	RN staffing is associated with lower likelihood of being cited for deficiencies in mental health care. NA staffing associated with greater likelihood of deficiency citation in mental health care.
Caudill & Patrick 1989 USA	Quantitative			Praise by patient and family are important to aides. Belonging to a peer group and praise by charge nurse decreases turnover. Input into decisions decreases turnover
Caudill & Patrick 1991 USA	Quantitative			Nursing assistants who plan to leave their jobs are younger, had less tenure, were paid less, and were better educated. Rotating assignments resulted in more turnover than changing patient assignments weekly or never.
Chappell, & Novak 1992 Canada	Quantitative	25 long term care institutions in Winnipeg Nursing assistants N=245	Aides complete the Zarit Burden inventory, Maslach burden inventory and work stress tool	Aides who experience greater workload are more likely to feel burdened. Social support at work does not relieve the effect of workload. Aides who receive support from family and friends are less likely to burnout. Aides who have family supportive of their work experience less job pressure. Fewer family members at home results in less job pressure.
Chappell, & Novak 1994 Canada	Quantitative	25 LTC homes in Winnipeg Nursing assistants N=245	Face to face interviews	Findings point to the need to measure diagnoses and behaviours separately. Three behaviours were related to stress: being uncooperative, restless and constant crying
Cohen-Mansfield 1995 USA	Examination of literature about stress in nursing homes			Offers a comprehensive model of long term nursing care stress
Cole 1989 British	Qualitative	12 aides in one mental hospital and two elderly care hospitals	Interviews	Aides believe that they do much the same job as the RN but get little acknowledgement
Coleman, Looney, O'Brien, Zeigler, Pastorino, & Turner 2002 USA	Quantitative	Two facilities	One facility = Eden Alternative Control facility = traditional care	No significant differences after one year: no differences in infection rates, functional status, cost of care. Aide workforce at each facility remained unstable. Turnover increased during the period of implementation of Eden Alternative.
Cooper &	Quantitative	Nurse aides N	Aides given facts on	Mean score 59%. In comparison, high school

Cronin 2000 USA		= 177 in 9 nursing homes	aging quiz	graduates mean score 57%. Education and advancement of nurse aides is neglected
Cooper, Kaeser, Montgomery, & Marion 1991 USA	Quasi-experi- mental		Before and after intervention	Positive effects of permanent resident assignment, case management, resident centred schedules
Corazzini, McConnell, Rapp, & Anderson 2004 USA	A conceptual framework of the decision-mak- ing processes of aides			Aides make choices about caring for demented patients on a continuum from rational to intuitive, in part because of the working environment. Some decisions are not good decisions and may lead to decreased quality of care.
Cotton & Tuttle 1986 USA	Literature Review			Studies of employee turnover: increases in pay reduce turnover. Job satisfaction, satisfaction with co-workers are negatively related to turnover. Age, tenure, number of dependents negatively related to turnover. Women more likely to leave than men.
Dewar, & Macleod-Clar k 1992 England	Review of existing literature			There is a lack of clear definition of roles and there are mixed feelings amongst “qualified staff” to the “new helper role”
Dickson & Cole 1987 British	Opinion			Registered nurses have no clear ideas or expectations of the support workers’ roles.
Dougherty, Preston, Jones, & Payne 1992 USA	Quantitative	Varied staff at one state geriatric long term care hospital N=28	Log of exposure to aggressive behaviour for one month, semi-structured interviews, a detailed accounting of one exposure to aggressive behaviour, and questionnaire	Physical aggression was the most frequently reported form of aggression and occurred mostly in the mornings. Job satisfaction was negatively affected by exposure to aggressive behaviour but positively affected by educational level
Douglas, Meleis, Eribes, & Kim 1996 Mexico	Quantitative	Mexican nursing assistants N=59	questionnaire	Frequent stressors were interpersonal relations, anguish, work overload and work environment

Eaton 2000 USA	Literature review			Low quality of care, low quality work environments. Much of the work is invisible and not documented or measured. Training minimal. Supervision inadequate. Little information is shared. Many aides choose this work despite poor working conditions.
Edwards 1997 British	Opinion			Aides are the backbone of health services and perform the greatest part of basic care. Aides are indispensable. Aides do the work. RNs organize the work.
Evers, Tomic & Brouwers 2002 The Netherlands	Quantitative	“Staff” caring for residents in 33 homes for the elderly n=551	Two questionnaires	Physical aggression of residents was found to have a significant relationship to depersonalization (one of three dimensions of burn-out).
Farrell Miller 1997 USA	Qualitative	All staff of one dementia care unit	Interviews analyzed	Responses to physical aggression and the effects of physical aggression on caregivers and on nursing practice. Showering is the activity most likely to provoke patient aggression.
Feder, Komisar, & Nieflod 2000 USA	Literature review			Medicaid versus Medicare.
Feldt & Ryden 1992 USA	Quantitative	Educational intervention		Following educational intervention, aides report caring for cognitively impaired residents is more rewarding and less frustrating
Fitzwater & Gates 2002 USA	Quantitative	20 aides	Assault log	Educational intervention to reduce resident assaults on aides. 4 hour educational intervention resulted in reduced number of assaults and increased confidence.
Foner 1994 USA	Qualitative	200 bed nursing home in New York City	Ethnography Participant observation, 14 “formal” interviews, 20 “informal interviews	Most nurse aides are kind and helpful to residents most of the time. Many aides established relations with patients that they and the patients found gratifying. Work is physically straining and emotionally wearing. Patients are bitter and hostile. Abuse from patients.
Freyne & Wrigley 1996 Ireland	Quantitative		Review systems of recording aggressive incidents, introduce new system, review all cases	Aggression by patients is common. Staff require support and acknowledgement of their difficulties dealing with aggression. A reporting system may assist staff to highlight factors associated with aggression.
Friedman, Daub, Cresci,	Quantitative	Nurse aides in 5 nursing	Survey	Compares Nurse aides in 5 home care programs to nurse aides in 5 nursing homes. Job satisfaction is

& Keyser 1999 USA		homes and 5 home care programs N=349		higher in nurse aides in home care, probably due to increased ability to use own judgments and make own decisions
Garland, Oyabu, & Gipson 1988 USA	Opinion			Careful screening of attitudes and values of aides will reduce turnover
Gates, Fitzwater, & Meyer 1999 USA	Quantitative			Violence occurs frequently. Caregivers and nursing directors consider assaults against caregivers by residents as violence. Homes do not have enough policies or procedures in place to prevent, monitor or control violence
Gates, Fitzwater and Succop 2003 USA	Quantitative	Nurse aides N=138	Occupational stress inventory and assault log	Mean number of assaults per nurse aide per 80 hours of work was 4.69 Range 0-67 assaults per 80 hours of work
Gilloran, McKinley, McGlew, McKee, & Robertson 1994 Scotland	Quantitative	2080 staff in psychogeriatric wards, 50.1% of these were nurse aides	questionnaire	Staff nurses were more dissatisfied than nurse aides because they did not want to be assigned to a psychogeriatric ward.
Goldman 1998 USA	Quantitative	5 facilities	Survey of staff perceptions of primary versus team nursing	Staff prefer permanent assignments
Graneheim, Isaksson, Ljung, & Jansson 2005 Sweden	Qualitative	Six care providers	Narrative interviews: phenomenological hermeneutic	Interactions with people suffering from dementia and behavioural disturbances = ethical dilemmas, balancing contradictions, feeling powerless versus capable, feeling rejected versus accepted
Grant, Kane, Potthoff, & Ryden 1996 USA	Quantitative	400 nursing units in 124 facilities	Collection of baseline data about dementia specific training programs	22% of facilities had no dementia oriented training for new staff. For nursing assistants, more training increases their knowledge and skills needed to work more effectively with residents with dementia
Grau, Chandler, Burton &	Quantitative	Nurse aides N = 219	questionnaire	Quality of the social environment of the nursing home is as important as attitudes to job benefits in accounting for institutional loyalty

Kolditz 1991 USA				
Grau & Wellin 1992 USA	Qualitative	Two metropolitan nursing homes	Ethnography	Monticello versus Homehaven: Unaddressed significant cultural, sociostructural and sociodemographic characteristics shape the climate of the organization
Grieshaber, Parker, & Deering 1995 USA	Quantitative	Two nursing homes	questionnaire	Aides more likely to be dissatisfied with the working conditions than the job content. Managerial performance is key to job satisfaction. Supervisors should include aides in care planning activities to give aides an ownership stake
Hagen & Sayers 1995 USA	Quantitative			Physical aggression associated with lack of knowledge. 50% reduction in reported physical aggression from residents after a staff education program
Hare & Pratt 1988 USA	Quantitative	LPNs and RNs (n=57) and aides (n=96)	Surveys Burnout Inventory	Aides experience significantly more emotional exhaustion and significantly more depersonalization than professional nurses.
Harrington 2005 USA	Quantitative	State licensing and certification program directors	Collection of data from internet regarding state regulations plus telephone survey	Florida is the state with highest nursing home staffing levels: 3.9 hours per resident per day. A trend across the USA towards higher staffing levels. 33 states have minimum staffing levels for NAs. No federal minimum standards for NA staffing levels.
Harrington, O'Meara, Collier, & Schnelle 2003 USA	Descriptive		Examination of information on public database of 1400 California nursing homes	Aides wages are less than a living wage. 91% of all California nursing homes report nurse aide hours below the recommended 2.8 hours per resident per day. Average facility reported 2.2 hours per resident per day. Average annual turnover rate is 78%. Only 23% of California facilities comply with federal regulations
Harrington & Swan 2003 USA	Quantitative	Nursing staffing data from California cost reports 1999		Total nursing hours per resident per day averages 3.208 hours. Higher proportions of Medicare residents and lower proportions of Medicaid residents = significantly higher staffing hours. For profit facilities had less staffing hours.
Harrison, Loiselle, Duquette, & Semenic 2002 Canada	Quantitative	Aides in Quebec, n = 171	Self report questionnaires	Examine relationships between hardiness, psychological distress and work support in nursing aides compared to RNs. Aides are significantly less hardy than RNs and more vulnerable to occupational stressors and burnout
Canadian	Highlights	Uses data		Resident Assessment Instrument Minimum Data Set

Institute for Health Information: Caring for Residents with Behavioural Symptoms Canada 2008	the use of the RAI MDS 2.0 used to capture aggression and other behavioural symptoms.	submitted by 5 Nova Scotia nursing homes		(RAI MDS). 45% of residents exhibit behavioural symptoms including verbal or physical abuse, social inappropriateness, resistance to care and wandering.
Canadian Institute for Health Information: Health Care in Canada 2007 Canada	Produced with Statistics Canada to provide current information on health system and health of Canadians			Health care costs, profile of the workforce (professionals only, NOT aides), wait times for procedures, mortality statistics (cardiac, infections, mistakes etc.), life expectancy across the provinces
Health Employers Association of British Columbia 2000 Canada	Government document prepared for Health employers association of BC and association of unions.	6 sites in BC	Interviews, focus groups and surveys	Focuses mainly on LPNs. Provides recommendations for new positions, education programs, scholarship programs, and continuing education for aides and LPNs. Plans were to provide these recommendations to the Ministry of Health.
Heliker 2007 USA	Discussion/opinion		Story sharing interventions between nurse aides and residents of one long term care facility	Time allotted for reciprocity through story telling: nurse aides feeling valued (best practice)
Helmer, Olson, & Heim 1993 USA	Quantitative	Nurse aides in 40 nursing homes N=246	Survey	71% dissatisfied with wages 70% of nurse aides felt they received no respect 64% felt ignored by management
Hollinger-Samson, & Pearson 2000	Quantitative	62 cognitively intact residents in 6 nursing homes	Empathy scales, depression scales	Examines resonated / perceived nurse aide empathy (measured by empathy subscale), expressed empathy (supervisors) with self rated depressive symptoms of residents Negative nurse aide behaviour is related to

USA				negative psychological outcomes for residents.
Hsieh & Su 2007 Taiwan	Quantitative	826 aides	Survey via telephone	Major reasons for staying in LTC are personal interest in caring, good financial benefits, supportive supervisors. Reasons for leaving: low wages, heavy workloads, long hours, high levels of stress
Jackson 1997 USA	Qualitative	52 nurse aides, 5 nursing homes	Ethnography, feminist methods	Practical knowledge used to guide decision making. A major barrier to giving care is the organization of care itself. Not enough time to give adequate care. Aides not monitored or supervised. Aides not informed properly. Aides perform “invisible work”.
Janz 1992 USA	Opinion			Aides would benefit from psychological training in their programs.
Jervis 2002a USA	Qualitative	14 residents One trained medication aide, four NAs, 11 nursing department employees (administration , RNs, LPNs)	Ethnography Participant observation, semi-structured interviews, medical record reviews	The study revealed a local work environment characterized by conflict and by nurse aides resistance to nurses’ domination
Jervis 2002b USA	Qualitative	One nursing home for psychiatrically disabled clientele. 14 residents and 16 staff members	Ethnography: Participant observation Semistructured interviews	An exploration of how staff conceptualized and dealt with “problem” behaviours. Staff were cognizant of the ever-present threat of assault. Violent, serious disruptive behaviour is a serious problem. Staff resorted to informal and formal strategies.
Kettlitz, Zbib, & Motwani 1997 USA	Quantitative			To reduce turnover rates, it is important to reduce the number of poor candidates selected for employment by using a weighted application blank
Kim, & Rovner 1995 USA	Opinion			Nursing homes function as long term psychiatric hospitals for the elderly
Kitson 1987 USA	Discussion of case studies Qualitative?			The author offers a set of characteristics similar to both lay-caring and professional caring relationships and offers case studies to illustrate care-giving features.

Kiyak, Namazi, & Kahana 1984 USA	Quantitative	308 employees of 6 nursing homes and 12 community facilities	questionnaire	Intention to leave is predicated by age (younger), length of employment (shorter), job dissatisfaction and community agency.
Kovach & Krejci 1998 USA	Quantitative	Aides = 22	Card sort	50 facility factors deemed important for quality care. Staff working together as a team = #1. Having sufficient time to devote to patient care = #2. Having enough time to spend personal time with residents = #3.
Kristiansen, Hellzen & Asplund. 2006 Sweden	Qualitative: narrative interviews	2 RNs 18 support workers	Thematic content analysis	The organization and resident behaviours were seen as very negative. A positive relationship with colleagues was the primary reason for nurses continuing to work.
Lin, Yin, & Li 2002 Taiwan	Quantitative	Analysis of work stressors of 102 aides	Interview	Patient care tasks most stressful. Type of relationship with supervisor reported as least stressful.
Liu 2007 Taiwan	Quantitative, cross sectional design to explore factors that influence job satisfaction of nurse aides and the influence of job satisfaction on the clients	17 private, public and freestanding nursing homes in 3 main cities in Taiwan. Nurse aides n = 244, residents and families, n = 392.	40 item questionnaire for nurse aides, 10 item questionnaire for residents and families Likert scale, very satisfied to very dissatisfied.	Married, part time and nurse aides with long tenure tended to be less satisfied. Justice and fairness were viewed as the most important factors in work environment. No correlation between job satisfaction of NA and resident satisfaction
MacPherson, Eastley, Richards, & Mian 1994 England	Quantitative	4 long stay wards, 4 homes for elderly mentally infirm, 4 homes for elderly, 4 private nursing homes N=188 workers	All staff in each unit completed 30 item screening questionnaire designed to measure psychological distress. Additional log of assaults over previous week	Very high rates of long term sickness. A relationship between psychological disturbance and assault during the past week. Disturbed staff were likely to perceive lack of support at work and report "shouting back"

Manthey 1989 USA	Opinion			The beginnings of the nurse aide working in partnership with the RNs (as a dyad) resulting in cost savings. Suggestion to pass cost savings on to the RN in a form of salary increase. No salary increase for aides.
Mattiasson & Andersson 1997 Sweden	Quantitative	Chronically ill but cognitively well residents (n=60) in 13 homes	Questionnaires	54% of residents indicated that staff members never sat down and talked with them. Nursing homes do not offer satisfactory opportunities for social contact.
McAiney 1998 Canada	Opinion			Development of a model for nurse aide empowerment
McCarthy, Blow & Kales 2004 USA	Quantitative	9618 residents	Use of administrative data for all residents in VA nursing homes	17.9% of residents are diagnosed with a serious mental illness. Residents with a serious mental illness and without dementia exhibit more verbal disruption than residents with dementia. No differences in physical aggression or socially inappropriate behaviour.
McGillis-Hall & O'Brien-Pallas 2000 Canada	Quantitative	RNs n = 14 RPNs n = 11 Aides n = 21 Toronto, 2 nursing units		Although health care aides perform most of the direct nursing care activities, they value it the least. Aides value the performance of non-nursing tasks and perceive their job as insignificant
McGilton, O'Brien-Pallas, Darlington, Evans, Wynn, & Pringle 2003 Canada	Quasi-experimental	50 residents given questionnaires, 40 residents and 34 staff observed	Questionnaires and observations	Pre-post intervention: investigator designed education program (relationship enhancing). Care providers taught how to enhance relational skills without added staff. Residents report significant positive effects: more empathetic and more reliable.
McGrew 1999 USA	Quantitative	15 case studies of residents in long term care who are diagnosed with serious mental illness excluding dementias	Chart audit Resident interviews	Violent, disruptive behaviours, agitation, anxiety, withdrawal, conflict with staff, psychotic episodes, impaired judgement, non-compliance with care and/or facility regulations. Lack of training of staff led to inconsistent responses and "taking the behaviour personally"
Mercer, Heacock & Beck	Quantitative	27 randomly selected aides from 3 nursing	Interview	50% of aides work extra shifts just to cover basic expenses. 77.7% of aides experience discriminatory language and racist behaviours. Slurs hurt, even if

1993 USA		homes		they come from demented residents. 75% report that they need more training...feel inadequately trained for the job. 92% of aides report verbal and physical abuse from residents
Mesirow, Klopp, & Olson 1998 USA	Descriptive		Describes implications of enforcing an attendance policy for nurse aides	35% reduction of sick time as a result of implementing attendance policy
Moen & Nievaard 1997 Dutch	Qualitative	15 case studies of dismissed managers on nursing homes	Open, unstructured interviews	Managers have no early warning systems. Managers create their own reality. Dismissal is based on attitudes and competence, not on business expertise or technical skills. Managers need training in social skills.
Monahan & McCarthy 1992 USA	Qualitative	Views of aides n = 76 in seven rural nursing homes in Oregon	Interviews Content Analysis Phenomenology?	No particular reason for becoming a nurse aide Like helping and working with people. Like feeling needed, wanted, valued. Want to receive recognition. Work is physically demanding, tiring. Continue to work because need the money. Desire for more autonomy.
Moyle, Skinner, Rowe, & Gork 2003 Australian	Qualitative	9 RNs, 5 students, 13 aides	Content analysis of focus group interviews	Job satisfaction related to convenience, interaction with residents, team environment, staying beyond end of shift. Dissatisfaction related to being bullied by others, unskilled staff, tensions within role expectations, overtime, not being listened to.
National Union of Public and General Employees 2007 Canada	Discussion and presentation of funding issues for LTC. Discussion of for profit versus not for profit. Workplace conditions			Long term care not a fully insured health service in any Canadian province or territory. Provides demographics and useful facts. Monthly charges. Guaranteed income supplement (GIS), low income. System failing to provide many Canadians affordable care. Many forced to pay for medical and personal care, forced to spend assets. Poor staffing, poor working conditions
Noelker, Ejaz, Menne, Jones 2006 USA	Quantitative	Nurse aides N = 338 at 22 nursing homes	Survey data	Personal stressors have the greatest impact on satisfaction with supervision (family, financial, health concerns). Personal stressors of NAs require attention from supervisors because they affect worker satisfaction
Novak &	Quantitative	Aides n = 245	Three subscales of	Frequency of disturbed patient behaviours explains

Chappell 1994 Canada			burnout	feelings of reduced personal accomplishment. Age, minutes giving care, appraisal of work tasks, reaction to patient behaviours explains depersonalization
Nursing Workforce: Recruitment and Retention... Growing Concern USA 2001	Government document prepared for Congress Review of current literature			Discussion of shortages, current and projected supply of aides, factors contributing to shortage, government and private efforts to improve recruitment and retention of aides. Demographic, employment, wage and benefit profiles in different employment settings.
Parsons, Simmons, Penn, & Furlough 2003 USA	Quantitative	Aides from 70 nursing homes N = 550	Mail out survey	Most satisfied with closeness to residents, their affect on residents, belief that the job is important, and own competence in providing resident care. Dissatisfied with insufficient input into decision-making, pay, benefits, recognition, appreciation
Patchner & Patchner 1993 USA	Quasi-experimental		Before-after	Compares permanent assignment (primary care) to rotating assignment (teams). Rotating distributes the burden of difficult or care intensive patients. Permanent assignment resulted in decreases in behaviour problems and health outcomes and decreased employee absenteeism. However aides reported boredom and overly demanding residents
Radcliffe 1995 USA	Opinion			Increasing numbers of aides working in acute care settings. Educators need to make an effort to assess, organize, and plan activities for aides in acute care.
Ramirez, Teresi, & Holmes 2006 USA	Quantitative	22 New York State nursing homes, 104 aides	Interviews	27% of nurse assistants reported pejorative name calling by their residents. Pressure to complete task, assignment size contributed to demoralization. Support groups also contributed to demoralization (negative support system)
Reagan 1986 USA	Opinion			Each administrator must regularly review to ensure all aides have necessary training, skills and time to perform their duties effectively and efficiently.
Redfern 1994 British	Opinion			Many RNs feel threatened by increasing demand for aides (support workers). RNs exercise control over aides by delegating tasks to support workers.
Reeve 1994 British	Quantitative	RNs n = 120	Questionnaire survey of RN opinions of aides	RNs poorly informed about the role of the support worker.
Remsburg,	Quantitative			Tracking turnover without tracking stability rates

Armacost, & Bennett 1999 USA				results in an incomplete picture of aide turnover
Riggs, & Rantz 2001 USA	Review of existing literature and opinion		A model of staff support in nursing homes is proposed	An organization must provide structure and leadership to help people work together productively
Salmon, Crews, Reynolds-Sca nlon, Jang, Weber, & Oakley 1999 USA	Literature review of research, policy and practice regarding nurse aide turnover		Florida Policy Exchange Centre on Aging: sponsored government document.	Stayers are older, African American women with health and pension benefits. Wages and working environments play a major role in turnover. Should recruit older welfare to work clients and students. Focus screening on questionnaires about skills, motivations and reliability. Relationships are important to job satisfaction and turnover. Aides require clear job descriptions.
Sahyoun, Pratt, Lentzner, Dey, & Robinson 2001 USA	Profile of nursing home residents 1985-1997		Government report: Center for Disease Control and Prevention	Changing characteristics of residents. Older, more racially diverse, more circulatory diseases and cognitive and mental disorders, more mental health issues, more help with ADLs, more incontinence, increased choices of care (home care)
Schnelle, Simmons, Harrington, Cadogan, Garcia, & Bates-Jensen 2004 USA	Quantitative	Two groups of nursing homes N=21 are compared	Chart audit, Staff interviews, direct observation	Highest staffed nursing homes performed significantly better on 13 of 16 care processes implemented by nurse aides
Secret, Iorio, & Martz 2005 USA	Qualitative	Why aides stay in their jobs Aides n = 11	Indepth interviews	Work is physically demanding, poor pay, work grounded in hostility and disrespect, lack of control and physical assaults by residents. Why aides stay in long term care: a sense of connection with families, residents and co-workers, pride, being recognized for their efforts, being conscientious about details
Schnelle, Simmons, Harrington, Cadogan, Garcia, & Bates-Jensen	Quantitative	21 nursing homes in two phases of the study	Staffing information from data base, on site interviews and observations, plus chart audit	Authors describe quality of care related to 27 different care processes (16 of the care processes typically implemented by aides...feeding, incontinence care, social engagement, repositioning etc.). Highest staffed homes perform better on 13 of the 16 care processes. Aides report lower care loads

USA 2004				and provide better care in homes with highest staffing
Sheriden, White, & Fairchild 1992 USA	Quantitative	530 staff in 25 nursing homes in Florida and Texas	questionnaire	Failed homes have significantly lower scores on human relations climate dimensions and on laissez-faire climate. Management in failed homes inattentive to staff motivation, demonstrating inadequate planning and showing disdain for aides
Shaw 2004 USA	Qualitative	9 aides, 3 RNs, 3 administrators in 6 facilities	Grounded theory Semi-structured interviews	Nursing home staff responses to aggressive residents. Best practices: proactive, vigilance, being intuitive, strategizing
Sherrell, Anderson, & Buckwalter 1998 USA	Quantitative	Retrospective audit of psychological reports of 570 residents in 51 nursing homes in Chicago	Coding and categorizing of narrative data contained in reports	Nursing homes function as long term psychiatric hospitals for the elderly. High prevalence of mental disorders in nursing homes.
Stone 2004 USA	Opinion			Recruitment and retention of aides is a major problem. Policy makers must partner with providers, organizations, and researchers to work towards sustaining this workforce.
Sung, Chang, & Tsai 2005 Taiwan	Qualitative	Nurse aides N=16	Semi-structured interviews	Emotional attachment to residents, cleanliness of the environment, adequate staffing, training and equipment contributed to increased job satisfaction
Task Force on Resident/Staff Ratio in Nursing Homes 2002 Canada	Government document: Canadian Union of Public Employees and Nova Scotia Dept. of Health		Survey of nursing homes in Nova Scotia	Task force review of current nursing home staffing in Nova Scotia and examination of challenges (recruitment, increasing needs of residents, inadequate levels of staffing. No overall plan, no regular reporting of statistics. Results compared to 7 of 9 provinces: Hours of care provided in Nova Scotia generally less other provinces. All provinces identify recruitment and retention in top three issues.
Tellis-Nayak, & Tellis-Nayak 1989 USA	Qualitative	Examines two worlds of nurse aides: world in which they live and world in	ethnography	A self perpetuating negative cycle

		which they work		
Thornley 2000 British	Quantitative and opinion		Author draws from national questionnaire surveys	Aides perceive themselves as substituting for registered nurses. Aides are mature, experienced, competent. RNs should welcome aides as team members
Thorson 1989 USA	Letter to the Editor			The author responds positively to Tellis-Nayak (1989) and concurs that aides are underpaid, overworked and underappreciated. The author reflects on his experiences as an orderly in Chicago.
Wadensten 2005 Swedish	Qualitative	Nurses n = 3 Aides n = 15 Residents n = 20	Observations of interactions and field notes. Content analysis	Most common topic of conversation is sickness, focused on the body. Conversations should not focus on illness and body fixation. Staff hurry conversations due to time constraints
Waxman, Carner, & Berkenstock 1984 USA	Quantitative	335 aides in seven nursing homes	Questionnaire and various scales	Turnover would lessen with changes in management style that allow aides more involvement in the decision-making process
Weech-Malondo, Meret-Hanke, Neff, & Mor 2004 USA	Quantitative	1135 nursing homes in 5 states	Data from minimum data set (MDS) and OSCAR	Relationship between staffing and quality of care outcomes (ulcers, restraints, psychotropic medication, decline) is complex and more than a matter of minimum staffing levels
Williams, Kemper, & Humer 2003 USA	Qualitative	20 aides in 5 nursing homes attend a one hour session	Before-after analysis of tape recordings of speech	Investigation of effectiveness of brief communication program aimed at reducing patronizing speech by aides. After training, aides used fewer diminutives.
Wright 1988 USA	Opinion			Nursing home staff attitudes are inappropriately measured with scales based on negative stereotypes. Negative attitudes are not a credible explanation for poor care
Wright 2006 England	Quantitative and Qualitative	Nurse aides n = 23	Questionnaire supplied to nurse aides post study day	Study day helps nurse aides to understand their role in supporting student nurses in geriatric settings
Workman 1996 Britain	Qualitative	Eight support workers	Semi-structured interviews	RNs regarded support workers as a threat. Support workers perceived themselves as key players who support the work of the RNs
Yeatts &	Mixed	Observe	Pre-test, post-test	5 home have work teams, 5 homes give traditional

Cready 2007 USA	methods (qualitative and quantitative)	meetings n=270 in 5 pairs of nursing homes	design: observations of team meetings and comparison of nursing homes	care. Work teams have modest positive effects: increased empowerment, better aide performance, improved care and choices, improved cooperation and coordination. Possibly reduced turnover.
Yeatts, Cready, Ray, DeWitt, & Queen 2004 USA	Quasi-experi mental	5 nursing homes in Dallas-Fort Worth: comparison of self managed work teams for nurse aides versus no teams		Qualitative analysis shows positive effects of self managed work teams for nurse aides
Zinn 1993 USA	Quantitative			Facilities employ more NAs in markets where RN wages are higher

Table 2. Abstraction and Grouping

Findings	# of Reports
<u>Factors that Compromise the Aides Abilities to provide Quality Care to Residents</u>	
There is not enough time to give sufficient care to residents (Krovach & Krejci, 1998)	4
There is not enough time to have a personal relationship with residents (Krovach & Krejci, 1998)	3
Lack of interaction or communication between aides and RNs or other professionals (Anderson et al. 2005)	7
Nurse aides interacting mainly with other nurse aides resulting in small cliques (Anderson, Bailey, Corazzini, & Piven, 2005)	4
No rewards for performance (Anderson, Bailey, Corazzini, & Piven, 2005)	7
Heavy reliance on rules and enforcement of rules (Grau and Wellin, 1992)	9
Having to cutting corners (Jervis, 2002a)	3
Lack of supervision (Barney, 1983)	3
Having to work alone (Barney, 1983)	2
High turnover rate (Barry, Brannon, & Mor, 2005)	3
Recruitment difficulties (Beck, Ortigara, Mercer, & Shue, 1999)	1
Lack of involvement of aides in the care planning process (Beck, Ortigara, Mercer, & Shue, 1999)	2
Inadequate staffing levels (Beck, Ortigara, Mercer, & Shue, 1999)	3
Components of training programs differ widely (Beck, Ortigara, Mercer, & Shue, 1999)	1
Low wages (Jervis, 2002a)	1
Poor management of chronic pain (Schnell, Simmons, Harrington, Cadogan, Garcia, & Bates-Jensen, 2004)	1
Workers perceive organizational climate as laissez faire (Sheridan, White, & Fairchild, 1992)	1
Administration ignores the social history behind apathy (Tellis-Nayak & Tellis-Nayak, 1989)	2

Administration demonstrates inadequate planning (Sheridan, White, & Fairchild, 1992)	1
Administration provides inadequate resources to enhance the quality of resident care (Sheridan, White, & Fairchild, 1992)	1
Administration show disdain for lower level caregivers (Sheridan, White, & Fairchild, 1992)	4
The first priority of the aide is not high quality care, but survival in a hostile environment (Thorson, 1989)	1
Lack of depth of communication between aides and residents (Carpiac-Claver & Levy-Storms, 2007)	2
Lower levels of RN staffing related to higher mental health deficiency citations (Castle & Myers, 2006)	1
 <u>Factors that Enhance the Aides Abilities to provide Quality Care to Residents</u>	
Permanent assignment to residents (primary nursing) (Patchner & Patchner, 1993)	1
Team work assignment (Foner, 1994)	5
Wisdom gained through the experience of being a mother (Anderson et al. 2005)	1
Aides responding to residents as they would wish someone would respond to them (Anderson et al. 2005)	1
Aides possess 'raw data' that can be interpreted by RNs for the residents' benefit (Anderson et al. 2005)	1
Interactions between administration, staff, and residents have a family or social quality (Barney, 1983)	4
Aides treated fairly (Barney, 1983)	1
Aides receive rewards (Monahan & McCarthy, 1992)	3
Community involvement (the surrounding community's presence palpable in the home) (Barney, 1983)	1
Cultural homogeneity within the home (Grau, & Wellin, 1992)	3
Caring relationships between aides and residents (Bowers, Esmond, & Jacobson, 2000)	1
Management mechanisms (monitoring, measuring) (Schnell, Simmons, Harrington, Cadogan, Garcia, & Bates-Jensen, 2004)	1
Administration that is sensitive to the social needs of the nurse aide (Tellis-Nayak & Tellis-Nayak, 1989)	1
Administration that nurtures idealism (Tellis-Nayak & Tellis-Nayak, 1989)	1
Administration that fosters a family spirit (Tellis-Nayak & Tellis-Nayak, 1989)	1
Administration that boosts the self esteem of the aide (Tellis-Nayak & Tellis-Nayak, 1989)	1
Focusing less on health status in conversation with residents, and more on resident as person (Wadensten, 2005)	1
Higher levels of RN staffing reduce the likelihood of receiving a mental health deficiency citation (Castle & Myers, 2006)	1
 <u>Characteristics of the Role</u>	
Task diversity (Dewar & McCleod-Clark, 1992)	2
Working without a clear job description (Ahmed & Kitson, 1993)	3
Working with only minimal supervision (Eaton, 2000)	3
Doing more than what is on the job description (Dewar & McCleod-Clark, 1992)	2
Feelings of depersonalization or devaluation (Bowers, Esmond, & Jacobson, 2003)	4
Feelings of domination (Dewar & McCleod-Clark, 1992)	1
Dog's body (Dewar & McCleod-Clark, 1992)	1
Multiple simultaneous demands (Eaton, 2000)	3
Equipment and essential supplies frequently unavailable (Eaton, 2000)	1
Minimal information sharing (Eaton, 2000)	1
Multiple components of invisible work (neither measured nor documented) (Eaton, 2000)	2
Inadequate time to complete care (Eaton, 2000)	7
Physically straining work (Foner, 1994)	4
Emotionally wearing (Foner, 1994)	3

Having to cope with physical or psychological abuse (Foner, 1994)	4
Repetitive work (Brannon et al. 1988)	1
Status hierarchies (Brannon et al. 1988)	6

#### Turnover

Average annual turnover rate for aides 1996 (in US) is 32% (Banaszak-Holl & Hines, 1996)	1
Average annual turnover rate for aides 2001 (in US) is 78% (Harrington, O'Meara, Collier, & Schnelle, 2003)	1
Average annual turnover rate for aides (California) is 78% (Harrington, O'Meara, Collier, & Schnelle, 2003)	1
5% of homes have 75% annual turnover rate for aides (Banaszak-Holl & Hines, 1996)	1

#### Organizational Factors

62% of homes use primary resident care assignment (Banaszak-Holl & Hines, 1996)	1
No federal standards for minimum levels of nurse aide staffing (in US) (Harrington, 2005)	1
Thirty three states have state minimum levels of nurse aide staffing (in US) (Harrington, 2005)	1
Florida is the state with the highest minimum levels of nurse aide staffing (Harrington, 2005)	1
The labour market for nurse aides is wage sensitive (Harrington & Swan, 2003)	1
44% of California nursing homes fail to meet state minimum standards for nurse aide staffing (Harrington, O'Meara, Collier, & Schnelle, 2003)	1
62% of homes in California 1999 -2002 had serious deficiencies not in compliance with federal regulations (Harrington, O'Meara, Collier, & Schnelle, 2003)	1

#### Training

Minimal training (Eaton, 2000)	6
Working without any formal training (Dewar & McCleod-Clark, 1992)	2
Orientation to the job: (in US) average less than one week (Banaszak-Holl & Hines, 1996)	1
75% feel inadequately trained for the job (Mercer, Heacock, & Beck, 1993)	1
Federally mandated 75 hour initial training course in US (Castle, Engberg, Anderson, & Men, 2007)	3
160 hours training and examination in California (Harrington, O'Meara, Collier, & Schnelle, 2003)	1
Taiwan: minimum 100 hours of training and certification exam (Sung, Chang, & Tsai, 2005)	1
Taiwan: not all aides receive minimum training and certificates (Sung, Chang, & Tsai, 2005)	1
Some on the job training (Mexico) (Douglas, Meleis, Eribes, & Kim, 1996)	1

#### Wages

Less than a living wage, not competitive with fast food industry (in US) (Harrington, O'Meara, Collier, & Schnelle, 2003)	3
Having to work extra shifts or having a second job to cover basic expenses (Mercer, Heacock, & Beck, 1993)	1
1991 US hourly wage in New York City \$9.16 (Grau, Chandler, Burton, & Kolditz, 1991)	1
1993 average US net weekly income \$301.00 (Mercer, Heacock, & Beck, 1993)	1
1993 average US hourly wage \$4.29 (Mercer, Heacock, & Beck, 1993)	1
1995 average US hourly wage \$5.60 (Banaszak-Holl & Hines, 1996)	1
1995 average US yearly income < \$10,000 (Banaszak-Holl & Hines, 1996)	1
2001 average US hourly wage \$ 9.57 (California) (Harrington, O'Meara, Collier, & Schnelle, 2003)	1
1994 salary before taxes (Canada) \$1000.00 to \$1249.00 (Chappell & Novak, 1994)	1
1996 average salary per day (Mexico) \$4.50 US dollars just adequate for necessities (Douglas, Meleis, Eribes, & Kim, 1996)	1

Taiwan: foreign workers will work for ½ to 2/3 of the salary paid to Taiwanese workers (Sung, Chang, & Tsai, 2005)	1
Taiwan: foreign workers work for 12 hours per day compared to 8 hours for Taiwanese workers (Sung, Chang, & Tsai, 2005)	1
2002 Taiwan monthly wage \$571 US dollars to \$857 US dollars (less than service industries) (Hsieh & Su, 2007)	1
Twenty five 10 hour days per month with 4-5 days off per month (Taiwan) (Hsieh & Su, 2007)	1
<u>Demographics</u>	
93% women (Canada) (Chappell & Novak, 1994)	1
83% women (Taipei) (Hsieh & Su, 2007)	1
Average age 48 years (Taipei) (Hsieh & Su, 2007)	1
80% education less than high school (Taipei) (Hsieh & Su, 2007)	1
35% of aides report health problems (Canada) (Chappell & Novak, 1994)	1
55% of aides report at least one sick day in bed over the past 6 months (Canada) (Chappell & Novak, 1994)	1
47% of aides use analgesics in the past week (Canada) (Chappell & Novak, 1994)	1
In US: largely African-American or Hispanic (Banaszak-Holl & Hines, 1996)	1
In Taiwan: mainly from the Philippines and Indonesia (Sung, Chang, & Tsai, 2005)	1
<u>Aspects of Experience of Assault</u>	
Most assaults occur during basic care activities (Gates, Fitzwater, & Succop, 2003)	3
More than half of aides report receiving an injury from a resident at some point in employment (Fitzwater & Gates, 2002)	1
Mean number of assaults per 80 hours work is 4.69 (Gates, Fitzwater, & Succop, 2003)	1
5% of assaults result in an injury (nature not specified) (Gates, Fitzwater, & Succop, 2003)	1
55% of assaults result in bruises, abrasions or scratch marks (Freyne & Wrigley, 1996)	1
In 61% of assaults on aides, no specific action is taken after the incident (Freyne & Wrigley, 1996)	1
Younger aides experience more assaults (Gates, Fitzwater, & Succop, 2003)	1
Aides with negative attitudes experience more assaults (Gates, Fitzwater, & Succop, 2003)	1
Aides with complaints of physical illnesses or poor self care habits experience more assaults (Gates, Fitzwater, & Succop, 2003)	1
Aides with more state anger (angry feelings, perceiving unfair treatment) experience more assaults (Gates, Fitzwater, & Succop, 2003)	1
Residents with mental illnesses (but without dementia) exhibit more verbal disruption than residents with dementia (and without mental illness) (McCarthy, Blow, & Kales, 2004)	1
Training helps aides feel more confident in ability to prevent assaults (Fitzwater & Gates, 2002)	2
Education can decrease the number of assaults against caregivers (Fitzwater & Gates, 2002)	1
<u>Factors Specifically Pertaining to Increased Job Satisfaction</u>	
Teamwork (being a member of a team) (Krovach & Krejci, 1998)	3
A network of interpersonal (collegial) relationships (Brannon, Cohn, & Smyer, 1990)	5
Working in a community based program rather than in a facility (Friedman, Daub, Cresci, & Keyser, 1999)	1
Administrative support (Krovach & Krejci, 1998)	1
Relationships with residents (Bowers, Esmond, & Jacobson, 2000)	6
Being able to provide care in a way that is like family (Bowers, Esmond, & Jacobson, 2000)	2
Feeling that one is performing a service (Douglas, Meleis, Eribes, & Kim, 1996)	3

Belief that one is able to affect residents (Parsons, Simmons, Penn, & Furlough, 2003)	1
Belief that one is competent in providing care (Parsons, Simmons, Penn, & Furlough, 2003)	1
Flexible shifts that allow for better family life (Moyle, Skinner, Rowe, & Gork, 2003)	1
Habitually staying beyond the end of the shift (Moyle, Skinner, Rowe, & Gork, 2003)	1
Being formally recognized as supporting students and training students (Wright, 2006)	1
Homes with higher daily aide hours per resident (Anderson, Corazzini, & McDaniel, 2004)	1
Variety in the work (Friedman, Daub, Cresci, & Keyser, 1999)	1
Involvement in care planning activities (Friedman, Daub, Cresci, & Keyser, 1999)	2
Having less formal education (Grau, Chandler, Burton, & Kolditz, 1991)	1
Being older (Grau, Chandler, Burton, & Kolditz, 1991)	2
Lower annual household income (Grau, Chandler, Burton, & Kolditz, 1991)	1
Agreeable working conditions more important than job content (Grieshaber, Parker, & Deering, 1995)	2
 <u>Factors Specifically Pertaining to Reduced Job Satisfaction</u>	
Permanent assignment to residents (primary nursing) results in boredom (Patchner & Patchner, 1993)	2
Families who direct the work of the nurse aides (Grau & Wellin, 1992)	1
Nurse aides perceive that RNs do not recognize their contributions (Ahmed & Kitson, 1993)	3
Low wages (Brannon, Cohn, & Smyer, 1990)	6
Low skill variety (Brannon, Cohn, & Smyer, 1990)	1
Care routines that tend toward mass production (Brannon, Streit, & Smyer, 1992)	1
Being unable to customize care for residents (Brannon, Streit, & Smyer, 1992)	1
Feeling under-recognized or underappreciated (Jervis, 2002a)	3
Feeling over-monitored (Jervis, 2002a)	1
No involvement in decision-making or making changes or improvements (Parsons, Simmons, Penn, & Furlough, 2003)	4
Lack of benefits (Parsons, Simmons, Penn, & Furlough, 2003)	2
Low rewards (Lui, 2007)	2
Lack of control (Monahan & McCarthy, 1992)	1
Lack of autonomy (Monahan & McCarthy, 1992)	1
Being bullied by other staff members (Moyle, Skinner, Rowe, & Gork, 2003)	1
Working with unskilled or inappropriately trained staff (Moyle, Skinner, Rowe, & Gork, 2003)	1
Laborious documentation (Moyle, Skinner, Rowe, & Gork, 2003)	1
Tensions within role expectations (Moyle, Skinner, Rowe, & Gork, 2003)	1
Increased need to be available for overtime (Moyle, Skinner, Rowe, & Gork, 2003)	1
Exposure to physical aggression by residents (Dougherty, Preston, Jones, & Payne, 1992)	3
Exposure to verbal aggression by residents (Dougherty, Preston, Jones, & Payne, 1992)	3
Deficiencies in communication from supervisors (Grieshaber, Parker, & Deering, 1995)	1
 <u>Factors Considered to be Necessary for Care of Demented Persons</u>	
Personal characteristics such as kindness, flexibility, patience, calm manner (Krovach & Krejci, 1998)	1
Increased amount of training (Krovach & Krejci, 1998)	8
Reduced regimentation and routinization (Beck, Ortigara, Mercer, & Shue, 1999)	1
Presence of a support group for workers (Broughton & Golden, 1995)	2
Adequate levels of emotional, psychological and moral support from employer (Kristiansen, Hellzen, & Asplund, 2006)	1

Factors that Increase Job Strain

Permanent assignment to residents (primary nursing) results in residents becoming overly demanding (Patchner & Patchner, 1993)	1
Tense, distrustful relationships between family members and nurse aides (Grau & Wellin, 1992)	1
Presence of conflicting subcultures (religious, ethnic) within the nursing home (Grau & Wellin, 1992)	3
Status hierarchy between nurse aides and family members (aides seen as servants) (Grau & Wellin, 1992)	1
Racist remarks by family directed at nurse aides (Grau & Wellin, 1992)	2
Racist remarks by residents directed at nurse aides (Berdes & Eckert, 2001)	2
Being unable to develop an organizational style that keeps the nurse aide out of trouble (Bowers & Becker, 1992)	1
Cutting corners but not preplanning the cuts (Bowers & Becker, 1992)	1
Breaking rules inadvertently or out of desperation (Bowers & Becker, 1992)	1
Being concerned about the quality of care provided to the residents (Bowers & Becker, 1992)	1
Bundling tasks to accomplish several tasks at once but feeling guilty about it (Bowers, Esmond, & Jacobson, 2000)	1
Greater workload result in aides more likely to feel burdened (Chappell & Novak, 1992)	1

Factors that Reduce Job Strain

Uniform culture (religious, ethnic) within the nursing home (Grau & Wellin, 1992)	2
Family members have cultural connections with nurse aides (Grau & Wellin, 1992)	2
Organizational style of the nurse aide that works for them (keeps them out of trouble) (Bowers & Becker, 1992)	1
Cutting corners deliberately (pre-planning cuts) (Bowers & Becker, 1992)	1
Being selective about which rules are broken (Bowers & Becker, 1992)	1
Bundling tasks in order to accomplish several tasks at once (Bowers, Esmond, & Jacobson, 2000)	1
Cutting corners in a way that is invisible to supervisors (Bowers, Esmond, & Jacobson, 2000)	1
Not reporting unacceptable care to supervisors (Bowers, Esmond, & Jacobson, 2000)	1
Giving the appearance of following orders while doing otherwise (Jervis, 2002a)	1
Refusal to attend meetings or events (Jervis, 2002a)	1
Aides who have greater numbers of family members supportive of their work (Chappell & Novak, 1992)	1
Aides who had fewer individuals living with them in the same household (Chappell & Novak, 1992)	1

Most Desirable Aspects of the Job

Being around/helping elderly people (Berdes & Eckert, 2001)	3
Being able to care for/help somebody (Berdes & Eckert, 2001)	1
Being a part of a team, with co-workers (Berdes & Eckert, 2001)	1
Relationship with residents (Parsons, Simmons, Penn, & Furlough, 2003)	2
Feeling valued and needed by residents (Kristiansen, Hellzen, & Asplund, 2006)	2

Least Desirable Aspects of the Job

Low pay (Berdes & Eckert, 2001)	1
Emotional distress of being in proximity to people who are in pain or dying (Berdes & Eckert, 2001)	1
Emotionally demanding job (Monahan & McCarthy, 1992)	1
Physically demanding job (heavy lifting) (Berdes & Eckert, 2001)	3
Distasteful tasks (Lin, Yin, & Li, 2002)	1
Inappropriate sexual or elimination behaviour (Burgio, Jones, Butler, & Engel, 1988)	3
Residents who have activity/sleep disturbances (Burgio, Jones, Butler, & Engel, 1988)	2

Residents who self injure (Burgio, Jones, Butler, & Engel, 1988)	1
Residents who are agitated (Burgio, Jones, Butler, & Engel, 1988)	3
Residents who exhibit excess disability (medical condition alone cannot account for the degree of disability observed in the resident)(Burgio, Jones, Butler, & Engel, 1988)	1
Family members as a source of hostility towards aides (Secrest, Iorio, & Martz, 2005)	1
Physical assault by resident (Kristiansen, Hellzen, & Asplund, 2006)	3
Verbal assault by resident (Kristiansen, Hellzen, & Asplund, 2006)	3
Residents destroying property (Burgio, Jones, Butler, & Engel, 1988)	2
Residents spitting on caregivers (Burgio, Jones, Butler, & Engel, 1988)	2
Lack of control related to time and decision-making (Secrest, Iorio, & Martz, 2005)	1
Inability to attend to details they feel are important (Secrest, Iorio, & Martz, 2005)	1
Overwhelmed by noise (Kristiansen, Hellzen, & Asplund, 2006)	1
Fatigue (Kristiansen, Hellzen, & Asplund, 2006)	2
Feeling insignificant (Kristiansen, Hellzen, & Asplund, 2006)	2
Feeling humiliated (Kristiansen, Hellzen, & Asplund, 2006)	1
Feeling dissatisfied (Kristiansen, Hellzen, & Asplund, 2006)	1
Feeling guilty (Kristiansen, Hellzen, & Asplund, 2006)	1
 <u>Factors Specifically Pertaining to Increased Job Stress</u>	
Distasteful tasks (Lin, Yin, & Li, 2002)	1
Being a foreigner (Lin, Yin, & Li, 2002)	1
Too many residents assigned to one nurse aide (Lin, Yin, & Li, 2002)	1
Centralized decision making (Grau & Wellin, 1992)	1
Sharp divisions of labour across all departments (Grau & Wellin, 1992)	1
Frequent, wide ranging complaints from residents and/or their families (Grau & Wellin, 1992)	1
Insufficient explanations given to nurse aides by RNs (Ahmed & Kitson, 1993)	1
Limited training that does not equip the nurse aide for the responsibilities (Ahmed & Kitson, 1993)	2
Performing work that they are not qualified to perform (Ahmed & Kitson, 1993)	2
Role ambiguity (Ahmed & Kitson, 1993)	3
Status hierarchies between RNs and aides (Ahmed & Kitson, 1993)	4
RNs spending much of their time on administrative duties (Ahmed & Kitson, 1993)	2
LPNs spending much of their time on medication administration (Anderson, Bailey, Corazzini, & Piven, 2005)	1
Workload (Ahmed & Kitson, 1993)	2
Nurse aides perceive lack of support from supervisors (Ahmed & Kitson, 1993)	2
Threat of assault by resident (Jervis, 2002b)	2
Conflicts with residents who have mental illnesses (McGrew, 1999)	4
Verbal or physical assault by resident (MacPherson, Eastley, Richards, & Mian, 1994)	1
Cigarettes as a source of irritation between staff and residents (Jervis, 2002b)	1
Lack of help during a behavioural crisis (Jervis, 2002b)	1
Residents who are mentally ill in addition to other co-morbidities (Jervis, 2002b)	3
Feeling uncertain about whether or not the residents could actually control themselves in certain situations (Kristiansen, Hellzen, & Asplund, 2006)	1
Not attending care conferences or reading care plans (McGrew, 1999)	2
Conflicts with residents who are addicted to cigarettes (McGrew, 1999)	1
Aides who perceive lack of rewards at work are more likely to experience burnout (Chappell & Novak, 1992)	1

Aides less hardy, more vulnerable to occupational stressors and burnout than RNs (Harrison, Loiselle, Duquette, & Semenic, 2000)	1
Chronic minor assaults (Freyne & Wrigley, 1996)	1
<u>Factors Specifically Pertaining to Reduced Job Stress</u>	
Feeling confident in and supported by colleagues (Lin, Yin, & Yi, 2002)	4
On the job training (Lin, Yin, & Yi, 2002)	2
Shared decision making (Grau & Wellin, 1992)	1
Tasks and responsibilities overlap within and across departments (Grau & Wellin, 1992)	1
Aides who receive dementia training less likely to experience burnout (Chappell & Novak, 1992)	1
Aides who receive support for their work from family and friends less likely to experience burnout (Chappell & Novak, 1992)	1
<u>Factors Found to Increase Aide Turnover</u>	
Failure of management to recognize social and cultural differences between the aides and the residents and their families (Grau & Wellin, 1992)	3
Role ambiguity (Baldwin, Roberts, Fitzpatrick, While, & Cowan, 2003)	3
Lack of a defined career pathway (Baldwin, Roberts, Fitzpatrick, While, & Cowan, 2003)	2
Aides not present at care planning meetings (Banaszak-Holl & Hines, 1996)	1
Being able to provide care in a way that is like family (Bowers, Esmond, & Jacobson, 2000)	1
Feeling of being disrespected by supervisors (Bowers, Esmond, & Jacobson, 2000)	1
Unpredictable absence policies (Bowers, Esmond, & Jacobson, 2000)	2
Low pay (Bowers, Esmond, & Jacobson, 2000)	5
Low morale (Bowers, Esmond, & Jacobson, 2000)	2
High RN turnover (Brannon, Zinn, Mor, & Davis, 2002)	1
Facility is a training site (Brannon, Zinn, Mor, & Davis, 2002)	1
Facility is for profit (investor owned) (Brannon, Zinn, Mor, & Davis, 2002)	2
Evening shift workers (Burgio, Fisher, Fairchild, Scilley, & Hardin, 2004)	1
Conflicts in relationships between RNs and aides (Jervis, 2002a)	1
Unrewarding role of nurse aide (Jervis, 2002a)	1
Traditional bureaucratic organizational structure (Riggs & Rantz, 2001)	3
Lack of multi-channelled open-communication (Riggs & Rantz, 2001)	2
Supervisors symbolically distinguishing themselves from subordinates (Jervis, 2002a)	1
Supervisors responding to all rule infractions with strict discipline (Jervis, 2002a)	2
Lack of problem-solving skills needed to cope with demands (Riggs & Rantz, 2001)	1
Excessive work load (Riggs & Rantz, 2001)	4
Perception that other employment opportunities are available (Riggs & Rantz, 2001)	2
Sheer effort and determination to seek a way out of an oppressive lifestyle (Tellis-Nayak & Tellis-Nayak, 1989)	1
Written competency examinations (Thorson, 1989)	1
Feeling dismissed, invisible or insignificant (Bowers, Esmond, & Jacobson, 2003)	2
Supervisors demeaning or humiliating aides (Bowers, Esmond, & Jacobson, 2003)	1
Implementation of a new program (Eden Philosophy) lead to increased turnover (Coleman et al. 2002)	1
Female gender (Cotton & Tuttle, 1986)	1
Managerial style authoritarian (Waxman, Erwin, Carner, & Berkenstock, 1984)	1

Factors Found to Reduce Aide turnover

Permanent assignment (primary nursing) (Patchner & Patchner, 1993)	1
Uniform culture (religious, ethnic) between nurse aides and residents and their families (Grau & Wellin, 1992)	3
Involve aides in care planning meetings (Banaszak-Holl & Hines, 1996)	2
Discuss care plans with aides and ask for advice and suggestions (Banaszak-Holl & Hines, 1996)	2
Untrained supervisors (Brannon, Zinn, Mor, & Davis, 2002)	1
Low RN turnover (Brannon, Zinn, Mor, & Davis, 2002)	1
Flatter management structure (less middle management) (Brannon, Zinn, Mor, & Davis, 2002)	1
Presence of a union contract governing managerial relations (Brannon, Zinn, Mor, & Davis, 2002)	2
Acknowledgement of contributions of nurse aides (Broughton & Golden, 1995)	2
Formation of support groups for nurse aides (Broughton & Golden, 1995)	1
Relationship with residents (Parsons, Simmons, Penn, & Furlough, 2003)	4
Focus on the personal needs of the aides (Riggs & Rantz, 2001)	1
Administration and supervisors model effective interactions and respectful communication (Riggs & Rantz, 2001)	1
Benefits that will decrease personal stressors (flexible scheduling, child care etc.) (Riggs & Rantz, 2001)	3
Personalized incentives and rewards (Riggs & Rantz, 2001)	1
A sense of connection with co-workers (Secrest, Iorio, & Martz, 2005)	1
A sense of connection with families (Secrest, Iorio, & Martz, 2005)	1
Taking pride in their work (Secrest, Iorio, & Martz, 2005)	2
Practicing charity and accumulating virtue (Hsieh & Su, 2007)	2
Feeling in control by being conscientious about details (Secrest, Iorio, & Martz, 2005)	1
Mutual decision making for policies and practices that directly affect the aides (Secrest, Iorio, & Martz, 2005)	1
Pay for coverage of the unit for conference time (Secrest, Iorio, & Martz, 2005)	2
Psychological nourishment obtained through solidarity, fellowship, collegial support (Kristiansen, Hellzen, & Asplund, 2006)	1
Monetary rewards including scholarships, tuition fee reimbursement (Sung, Chang, & Tsai, 2005)	4
Compassion for residents/personal interest in residents (Sung, Chang, & Tsai, 2005)	2
Cleanliness of the facility (Sung, Chang, & Tsai, 2005)	1
Adequate staffing (Sung, Chang, & Tsai, 2005)	1
Good equipment (Sung, Chang, & Tsai, 2005)	1
Initial training program for new aides (Sung, Chang, & Tsai, 2005)	1
The work is personally rewarding and fulfilling (Sung, Chang, & Tsai, 2005)	1
Callous detachment...a passionless game (Tellis-Nayak & Tellis-Nayak, 1989)	1
Cynicism (Tellis-Nayak & Tellis-Nayak, 1989)	1
Nursing homes with reward based administration climate (Anderson, Corazzini, & McDaniel, 2004)	1
Nursing homes with higher levels of communication openness (Anderson, Corazzini, & McDaniel, 2004)	1
Administration that emphasizes relationship and concern for employees (Anderson, Corazzini, & McDaniel, 2004)	1
Administration that fosters self organization (people mutually adjust behaviours to cope with changing external environmental demands (Anderson, Corazzini, & McDaniel, 2004)	1
Homes with higher daily aide hours per resident have lower annual turnover (Anderson, Corazzini, & McDaniel, 2004)	1
Overall job satisfaction (Cotton & Tuttle, 1986)	1
Increasing age of employee (Cotton & Tuttle, 1986)	2
Tenure of employee decreases turnover (Cotton & Tuttle, 1986)	1
Increasing number of dependents (Cotton & Tuttle, 1986)	1

Expectations are met (Cotton & Tuttle, 1986) 1  
 Increased diversity of training methods (workshops, seminars, videos etc.) (Grant, Kan, Potthoff, & Ryden, 1996) 1

#### Findings Related to Burnout

Aides are at the higher risk for burnout when compared to LPNs or  
 RNs (Astrom, Nilsson, Norberg, & Winblad, 1990) 1  
 Higher rates of burnout for morning shift workers (Burgio, Fisher, Fairchild, Scilley, & Hardin, 2004) 1  
 Exposure to physical and psychological aggressive behaviour by residents (Evers, Tomic, & Brouwers, 2002) 1  
 Aides experience more burnout than RNs (Hare & Pratt, 1988) 1

#### Findings Related to Empathy

Aides caring for demented patients have lower mean empathy scores than RNs caring for demented  
 patients (Astrom, Nilsson, Norberg, & Winblad, 1990) 1  
 Cognitively intact residents who perceive empathy from nurse aides have reduced rates of depression  
 (Hollinger-Samson & Pearson, 2000) 1  
 Difficulty being empathetic when it is believed that an assault is purposeful and resident knows what he or she is doing  
 (Jervis, 2002b) 1  
 Reliance on inaccurate or stigmatizing folk conceptions of mental illness (Jervis, 2002b) 1

#### Factors Found to Increase Absenteeism

Primary nursing (permanent assignment) results in significantly more absenteeism  
 (Burgio, Fisher, Fairchild, Scilley, & Hardin, 2004) 1  
 Morning shift workers (Burgio, Fisher, Fairchild, Scilley, & Hardin, 2004) 1  
 Working full time (Chappell & Novak, 1994) 1  
 Aides caring for multiple residents with gross mental impairments (Chappell & Novak, 1994) 1  
 Aides caring for constantly restless residents (Chappell & Novak, 1994) 1  
 Aides caring for multiple residents with mental illnesses (Chappell & Novak, 1994) 1

#### Factors Found to Reduce Absenteeism

Permanent assignment to residents (primary nursing) (Patchner & Patchner, 1993) 1  
 Team nursing would lead to more discussions about absenteeism and  
 lateness (Yeatts, Cready, Ray, DeWitt, & Queen, 2004) 1

#### Discussions Regarding Primary nursing versus Team nursing

Primary nurses may become over-involved or over-identified with a patient (Bowers, 1989) 1  
 Primary nursing may lead to disagreements about care strategies (Bowers, 1989) 1  
 Primary nursing may lead to divisions within the nursing team (Bowers, 1989) 1  
 Primary nurses may be unsure of the boundaries of their work (Bowers, 1989) 1  
 Primary nursing may lead to decreased communication within the nursing team (Bowers, 1989) 1  
 Primary nursing (permanent assignment) residents prescribed more medications  
 (Burgio, Fisher, Fairchild, Scilley, & Hardin, 2004) 1  
 Primary nursing residents prescribed more psychotropic medications  
 (Burgio, Fisher, Fairchild, Scilley, & Hardin, 2004) 1  
 Primary nursing residents received higher ratings for personal appearance and hygiene  
 (Burgio, Fisher, Fairchild, Scilley, & Hardin, 2004) 1

Same residents day after day magnify tensions (Foner, 1994)	2
Team nursing leads to improved interpersonal relationships between nurse aides (Yeatts, Cready, Ray, DeWitt, & Queen, 2004)	1
Team nursing leads to better coordination of resident care (Yeatts, Cready, Ray, DeWitt, & Queen, 2004)	1
Team nursing leads to increased information sharing (Yeatts, Cready, Ray, DeWitt, & Queen, 2004)	1

#### Factors Negatively Affecting Morale

Nurse aides are not defined as nurses (Advisory Committee on Health Human Resources, 2000)	1
Low occupational status (Berdes & Eckert, 2001)	3
Low wages (Berdes & Eckert, 2001)	5
Low opportunities for advancement (Berdes & Eckert, 2001)	2
Job instability (Berdes & Eckert, 2001)	2
Physical difficulties of short staffing (Bowers, Esmond, & Jacobson, 2000)	1
Supervisors disrespectful of aides (Jervis, 2002a)	1
Supervisors not committed to keeping aides on staff (Jervis, 2002a)	1
Constant reprimands (Jervis, 2002a)	1
Offensive or disturbing language from residents (Ramirez, Teresi, & Holmes, 2006)	2
Racial abuse from residents (Mercer, Heacock, & Beck, 1993)	1
Administrators and supervisors perceived as racially biased (Mercer, Heacock, & Beck, 1993)	1
Being required to attend support groups (Ramirez, Teresi, & Holmes, 2006)	1
Not feeling valued by employer (Kristiansen, Hellzen, & Asplund, 2006)	1
Feeling that the job is insignificant (McGillis-Hall & O'Brien-Pallas, 2000)	1
Elaborate extended family networks necessary to assist with finances and childcare (Mercer, Heacock, & Beck, 1993)	1
Having to work extra shifts or take a second job to cover basic finances (Mercer, Heacock, & Beck, 1993)	1
Feeling inadequately trained for the job (Mercer, Heacock, & Beck, 1993)	1
Absenteeism of other workers (Mesirow, Klopp, & Olson, 1998)	1
Lack of teamwork (Monahan & McCarthy, 1992)	1
The experience of psychological aggressive behaviour (Evers, Tomic, & Brouwers, 2002)	1
Aide positions have less motivating potential than LPN positions (Brannon et al. 1988)	1

#### Factors affecting basic policy questions about regulation, supply, deployment and movement of nurse aides

Absence of a national (Canadian) data bank (Advisory Committee on Health Human Resources, 2000)	2
Nurse aides (in Canada) are non-regulated (Advisory Committee on Health Human Resources, 2000)	1

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Note: To conserve space, only the first author is listed

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Table 3. Formatting and Calculating Frequency Effect Sizes (ES) of Findings (total articles 138)	ES%
Aides collectively feel dissatisfied with organizational factors that inhibit them from providing excellent care	20.1%
The supervisory style is generally hierarchical, demeaning and dismissive	37.3%
Aides collectively feel undervalued and unappreciated	17.2%
Lack of financial compensation and rewards shape general job dissatisfaction	38.0%
Work loads are perceived as excessive	21.6%
Aides lack the training and problem-solving skills necessary to cope with demands	26.8%
Lack of communication results in aides who are inadequately informed about their residents' conditions	14.9%
Aides collectively prefer to be involved in care planning and decision-making	14.9%
Caring relationships and/or connectedness between aides and residents or aides and families, and collegial connections are very important motivational factors that reduce turnover rates and increase quality of care	44.8%
Violence and aggression in the workplace poses serious threats to the personal safety of the aide	36.6%

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